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TECHNICAL REPORT

EMIS 2010: The European Men-Who-Have-Sex-With-Men Internet Survey

Findings from 38 countries

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All information on the European MSM Internet Survey, including this report, community reports, national reports, media coverage, scientific publications, answers to FAQs and the applied questionnaire is available through the project webpage: http://www.emis-project.eu

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Errata:
On 12 June 2013 the following corrections were made:
On p. 23 the second footnote has been changed. In Fig. 8.8 the percentage of respondents born abroad has been changed to 13.8. In Fig. 8.10 the legend on the horizontal axis has been changed.

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- International Gay and Lesbian Organization (ILGA)
- European AIDS Treatment Group (EATG)
- PlanetRomeo.com
- Manhunt and Manhunt Cares

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AI	anal intercourse
AIDS	acquired immune deficiency syndrome
AOR	adjusted odds ratio
AP	associated partner (funded as part of EMIS)
CI	confidence interval
CP	collaborating partner (not funded as part of EMIS)
ECDC	The European Centre for Disease Prevention and Control
EFTA	European Free Trade Association
EMIS	European MSM Internet Survey
EU	European Union
GUM	genito-urinary medicine
HBV	hepatitis B virus
HCV	hepatitis C virus
HSV	herpes simplex virus
HPV	human papilloma virus
HIV	human immunodeficiency virus
HIV-RS	HIV-related stigma
IH	internalised homonegativity
LGV	lymphogranuloma venereum
MSM	men who have sex with men
ncUAI	non-concordant UAI
OR	odds ratio
PEP	post-exposure prophylaxis
STI	sexually transmitted infection
UAI	unprotected anal intercourse
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session
VL	viral load
WHO	World Health Organization

Country codes

The most widely used country codes are two-letter codes published by the International Organization for Standardization (ISO) as ISO-3166-1 alpha-2. They are also the basis for the country code top-level domains (ccTLD) on the Internet. As EMIS was an online survey covering 38 countries, the EMIS Network decided to use ccTLD to identify countries in tables and figures.

at	Austria
ba	Bosnia & Herzegovina
be	Belgium
bg	Bulgaria
by	Belarus
ch	Switzerland
cy	Cyprus
cz	Czech Republic
de	Germany
dk	Denmark
ee	Estonia
es	Spain
fi	Finland
fr	France
gr	Greece
hr	Croatia
hu	Hungary
ie	Republic of Ireland
it	Italy
lt	Lithuania
lu	Luxembourg
lv	Latvia
md	Moldova
mk	The former Yugoslav Republic of Macedonia
mt	Malta
nl	Netherlands
no	Norway
pl	Poland
pt	Portugal
ro	Romania
rs	Serbia
ru	Russia
se	Sweden
si	Slovenia
sk	Slovakia
tr	Turkey
ua	Ukraine
uk	United Kingdom

Executive Summary

Executive Summary

Introduction

The European Men-Who-Have-Sex-With-Men (MSM) Internet Survey (EMIS) was planned as a multi-country survey with 22 participating countries. As soon as the project was funded other countries expressed their interest in taking part. Organisations and institutions actively cooperated in 33 countries and more than 100 men participated in 38 countries, making a total sample of over 180 000 across Europe. EMIS is the largest transnational survey among MSM ever conducted – in terms of the number of participants, the number of countries covered by the survey, and the number of different language versions of the survey.

The response from MSM in Europe to a survey that focused on knowledge about HIV and sexually transmitted infections (STIs), sexual behaviour and the use of services for HIV and sexual health is a strong indication that MSM in Europe care about HIV and sexual health issues. The overall response was large, despite a wide variation in participation rates across countries. This may reflect different levels of household access to the Internet and national variations in the role of gay websites for MSM.

Results show considerable differences among the 38 national samples of MSM in the survey with respect to: age, level of education, residence in urban or rural settings, self-reported sexual orientation and identity, the proportion of migrants, the levels of testing for HIV, the proportion of HIV-positive men, the experience of gay-related and HIV-related stigma and discrimination. This variability reflects the existing diversities within Europe, especially with respect to cultural and legal conditions that affect MSM. Moreover, it reflects differences in the levels of response, posing challenges for data analysis and cross-country comparisons. For example, demographic characteristics of national samples can be important confounders when analysing and comparing behaviour variables.

This joint technical report presents the results of mainly descriptive analyses of the survey variables. As such, it represents a first, essential step towards making the rich data set accessible for further in-depth analysis. Scientists who are interested in the data are invited to collaborate with the EMIS Network for further analysis of the dataset.

The national distribution of most variables is presented in summary tables at the end of each chapter. Since it would have been almost impossible to describe and compare all the findings and results for 38 countries, the countries have been grouped into nine different European sub-regions, defined by geographic, cultural, political, and historic characteristics. From these nine sub-regions others can be constructed within the European Union (EU) area and the World Health Organization (WHO) European Region. The regional analysis has proven to be useful as it has revealed important differences within larger sub-regions like WHO or EU regions. Nevertheless, national differences do exist within these nine sub-regions.

The nine sub-regions of Europe used in this report consist of four western and five eastern sub-regions:

Western sub-regions:

- **West** – Belgium (be), France (fr), Republic of Ireland (ie), the Netherlands (nl) and the United Kingdom (uk)
- **North-West** – Denmark (dk), Finland (fi), Norway (no) and Sweden (se)
- **Central-West** – Austria (at), Switzerland (ch), Germany (de) and Luxembourg (lu)
- **South-West** – Spain (es), Italy (it), Portugal (pt), and Greece (gr).

Eastern sub-regions:

- **North-East** – Estonia (ee), Lithuania (lt) and Latvia (lv)
- **Central-East** – The Czech Republic (cz), Hungary (hu), Poland (pl), Slovenia (si) and Slovakia (sk)
- **South-East (EU)** – Bulgaria (bg), Cyprus (cy), Romania (ro) and Malta (mt)
- **South-East (non-EU)** – Bosnia and Herzegovina (ba), Croatia (hr), the former Yugoslav Republic of Macedonia (mk), Serbia (rs) and Turkey (tr)
- **East** – Belarus (by), Moldova (md), Russia (ru) and Ukraine (ua).

Socio-demographic characteristics

The median age of MSM differed between the western and eastern parts of Europe. In the four western sub-regions, the median age exceeded 30 years, with the highest median age of 35 years in West Europe. In the five eastern sub-regions the median age was below 30 years, with the lowest median age in Central-East and South-East Europe. Over 10% of respondents from West, North-West, and Central-West Europe were 50 years and older, compared with less than 5% of the participants from South-East, Central-East and East Europe.

Over half of the respondents in seven of the nine sub-regions lived in settlements of less than 500 000 inhabitants, indicating that MSM in smaller cities, towns, and villages could also be reached via the internet. Only in East and non-EU South-East Europe did about two thirds of respondents live in larger cities. Since the overall participation rates in these regions were among the lowest, along with the proportions of households with Internet access, this suggests that a more preselected urban MSM population has been reached in these countries. A further indication of a stronger selection bias of the samples in non-EU eastern and South-Eastern European countries

was the higher proportion (>70%) of respondents who were highly educated.

Across all regions and countries, slightly more than a half of all respondents were in full-time employment. Unemployment rates ranged between 4.3% and 8.1% by sub-region, with higher rates in South-West and non-EU South-East Europe. In Central-East and South-East Europe more than 20% of the samples were students, which reflected the younger median ages. Higher proportions (>1%) of respondents in the western sub-regions who had retired from work reflect the higher median age in these regions. Higher proportions (>2%) on long-term sick leave or medically retired in West and North-West Europe also reflect the higher prevalence of HIV infection in countries where the HIV epidemic started earlier.

Responses concerning sexual attraction, sexual identity, and the gender of sexual partners all showed a similar picture. Larger proportions of respondents in the eastern sub-regions (apart from Central-East, which was more similar to the western sub-regions) reported also feeling attracted to women; having a sexual identity other than homosexual; having steady and non-steady female partners; being married to a woman; having fewer friends who were also attracted to men and being less likely to have told their families and friends about having male sexual partners (out).

The extent to which the socio-demographic differences identified between sub-regions – mainly between western and eastern sub-regions – reflect real differences or should be attributed to sampling bias, or a combination of both, remains to be investigated. Differences in age range may reflect differences in access to and familiarity with the internet, as well as differences in the extent to which MSM feel affected by HIV, which might reflect the difference in the length of time since the start of the HIV epidemic among MSM and the emergence of visible gay communities.

A high percentage of men who completed the survey lived in large cities, and this was most striking in South-East and East Europe where homosexuality is socially more stigmatised. In such a situation, migration to large cities can offer a means of escape from close social control in order to find safety, friendship, and social support. Nevertheless, while more respondents in eastern sub-regions lived in large cities, fewer of them were out, or considered themselves to be gay or bisexual. At the same time, big cities may provide more opportunities to meet other men and to be out (due to less stigma or lower levels of conservatism). The environment may be less gay-friendly in eastern than in western European sub-regions (even in large cities), but the high proportion of respondents in South-East and East Europe living in large cities may also reflect more widespread Internet access in larger cities within these sub-regions.

EMIS respondents had a higher level of education than the general population. This may be related to having internet access and/or using gay websites, and the fact that better educated men are more willing to take part in surveys. East and South-East Europe had the highest levels of education, which suggests that EMIS disproportionately attracted respondents with a higher level of education in these sub-regions. In Central-West Europe, where the participation rates were among the highest, levels of education were lower. This partly reflects differences in the educational systems of the countries, but it also suggests that, as levels of participation rise, the bias that favours participation of men with higher educational achievements – inherent in this kind of survey – falls.

Data on sexual orientation and sexual identity further suggest differences not only between western and eastern European sub-regions but also between those with lower and higher levels of education. Sexual orientation and sexual identity are less dichotomised in lower social strata than in higher strata. Experience of sexual orientation differed among the sub-regions of Europe (North, West, Central-West, South-West, and Central-East), South-East (both EU and non-EU) and East. In the East, gay communities and gay commercial venues are more newly established than their counterparts in the West and men from those countries still have to deal with higher levels of prejudice, stigma and discrimination towards homosexuality.

Almost all EMIS respondents had visited a gay website in the last seven days, regardless of the country of residence. In contrast, large differences were found with regard to attendance at gay venues. Gay community centres were the least frequently visited venues for MSM, while social venues such as gay bars and cafés and sex venues were more popular. In general, these places seemed to be visited less in almost all eastern European sub-regions, which may reflect a lack of such venues in those sub-regions. The data on feelings of loneliness and socio-sexual characteristics suggested that many MSM in the eastern sub-regions hide their sexual identity, which may be in response to the social climate towards homosexuality.

Many MSM indicated that they had the possibility to live alone or to live with a male partner. Living with one or both parents was more common in South-West, South-East and East Europe, reflecting the younger median age of the samples, and probably also to some extent higher unemployment rates among younger respondents.

Migration

In the EMIS survey, migrants were defined as men who were born in another country than their current country of residence. According to this definition, across Europe a median of 11.9% of respondents were migrants. Luxembourg was the country with the highest proportion of migrants (50%). The highest proportion of migrants by sub-region (22%) was in West Europe, where the UK (28%) and the Netherlands (23%) were the countries with the highest proportions. North-East Europe included some of the countries with the lowest proportions of migrants (3–6%).

In most sub-regions, the largest proportion of migrants came from the same sub-region, however in South-West the largest proportion of migrants was from Latin America and in North-East Europe the largest proportion of migrants was from the countries of the former Soviet Union.

Compared with non-migrants, migrants were more likely to be over 25 years of age, live in a large city, have a higher university degree, be more open about their sexual orientation and feel lonely. In addition, migrants more commonly reported having more partners in the last 12 months, using more drugs associated with sex and parties, and having been diagnosed with HIV/STIs in the last 12 months.

Differing cultures and difficulties integrating into the country of residence may contribute to higher risk behaviour among migrant MSM. Among migrants, associations were found between certain types of risk behaviour that might increase the danger of their acquiring HIV infection and STIs. Indeed, a higher self-reported prevalence of HIV and STIs among migrant MSM together with lower access to free or affordable HIV and STI testing services suggests that prevention interventions should be tailored towards this group. Social support could be included in these specific interventions since studies demonstrated an association between social isolation and sexual risk behaviour among MSM.

Sexual unhappiness

Over a third of EMIS respondents indicated that they were not happy with their sex life and at country level a median proportion of 47% were unhappy with their sex life. Sexual unhappiness was more common among MSM whose sexual attraction was unknown by people in daily contact with them; MSM who did not identify themselves as gay or bisexual; MSM who lived in smaller settlements; MSM who had never been tested for HIV; MSM with a medium level of education and among younger and older MSM. Sexual unhappiness appeared to vary more in relation to the particular home country than individual characteristics. It was particularly common in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Cyprus.

The most common reason for sexual unhappiness among MSM across Europe was not having a regular sexual partner, a situation reported by on average 25% of single and unhappy men. Various aspects of a sex life were regarded as important by respondents, to differing degrees, but emotionally meaningful relationships were the most commonly valued feature.

Sexual health programmes could be encouraged to include sexual happiness in the programme objectives. Programmes intended to reduce sexual unhappiness among MSM need to involve men outside the typical gay and bisexual scenes, those not living in large urban centres and those who have not used sexual health services. The internet is an appropriate medium for reaching these men.

Programmes concerned with reducing sexual unhappiness among MSM should focus on promoting, maintaining and supporting regular partnerships. Services for MSM should be concerned with the emotional and interpersonal aspects alongside safety and technique. They should consider national or structural factors that contribute to sexual unhappiness as well as trying to work with individuals through direct services.

HIV testing

In general, respondents reported that they had access to free or affordable HIV testing except in some countries. It may not be a coincidence that countries with lower perceived access to HIV testing ranked high in terms of gay-related stigmatisation and weak gay communities. Testing appeared to be more accessible in urban than in rural settings. Testing rates were lower among young MSM and MSM who did not visit gay social or sex venues and they were lower in rural settings.

HIV testing varied widely between and within the regions, but the demographic associations were similar in all regions. It suggested that MSM with lower education were both less likely to test for HIV and more likely to test positive. Migrants were more likely than non-migrants to test for HIV and to be diagnosed with HIV infection.

EMIS results suggest that only a minority of respondents were tested for HIV following episodes of unprotected anal intercourse (UAI) with partners of unknown HIV status. However, results also suggest that men who had never been tested for HIV did not report more UAI with non-steady partners than men who had had a negative test. In contrast, within steady partnerships the proportion of men not using condoms was consistently higher, irrespective of HIV status knowledge. Thus, men should be encouraged to check and mutually disclose their HIV status with a steady partner before abandoning condoms.

Interventions such as skills building and risk reduction counselling in the context of HIV testing are underutilised. Testing carried out in hospitals or private practices that did not specialise in sexual health was poor in terms of taking sexual histories and counselling specifically for MSM. Counselling skills in these settings need to be improved or alternative sites considered for testing and counselling with skilled staff available.

Social discrimination and exclusion of gay men appears to be a major barrier preventing MSM from taking an HIV test. Young MSM and men who are not open about their sexual preference may have particular difficulties overcoming this barrier. HIV-related stigma, which is expected not only from the general population but also from MSM, is another barrier to HIV testing.

Repeated HIV testing for people with continuous risk of infection should be promoted and testing should be accompanied by the discussion of sexual practices, partner selection strategies and risk reduction counselling.

Self-reported HIV prevalence and incidence

The prevalence of self-reported HIV infection and the median number of years living with an HIV diagnosis varied considerably across Europe, reflecting the different starting points of the HIV epidemic among MSM. Variety in HIV prevalence rates among national samples should be interpreted with caution as the proportion of sexually active MSM in the adult male population may differ across Europe, with higher

proportions in northern and western parts of Europe and lower proportions in eastern and southern parts.

Newly diagnosed HIV infections – defined as the proportion of men diagnosed with HIV among all men tested in the last 12 months – varied between 2% and 4% in the most affected age group (25–39 years). In countries with younger epidemics, the peaks were seen in younger men, and in countries with older epidemics, they were seen in older age groups. Migrants reported both higher HIV prevalence rates and higher proportions of newly diagnosed HIV infection. This increased vulnerability needs further investigation to inform the planning and implementation of prevention intervention programmes.

Growth rates of the HIV epidemic among MSM were higher in Central-East, South-East and East Europe than in all western sub-regions of Europe. Growth rate was defined as the proportion of individuals diagnosed with HIV in the last 12 months from all individuals ever diagnosed with HIV.

Strong correlations were found between the number of newly diagnosed HIV infections and the number of newly diagnosed STIs, supporting a link between STI and increased vulnerability to HIV infection and/or parallels in underlying risk behaviour. In the western European sub-regions, a strong negative correlation was found between the proportions of (self-reported) HIV positive men who are on antiretroviral treatment (ART) and the epidemic growth rates. Such a correlation was not detected in the eastern sub-regions, which may indicate low levels of HIV testing, diagnosis and access to treatment in these sub-regions.

HIV care and antiretroviral therapy

In most European countries over 92% of respondents diagnosed with HIV infection reported having access to medical care and monitoring. In eastern and south-eastern regions of Europe this proportion was lower.

In many countries in the western sub-regions of Europe over two thirds of the men diagnosed with HIV infection reported receiving ART. Slightly lower proportions (between 50% and 66%) were reported by men in Belgium, Luxembourg and Norway. In contrast, less than 50% of men with HIV infection reported receiving ART in Russia, Ukraine, Latvia and Hungary.

Treatment seemed to be less effective in a number of Member States that joined the EU after 2004[1] and in eastern European non-EU countries. A combination of outdated treatment guidelines, lower treatment literacy, less convenient treatment regimens, higher HIV-related stigma and lower perceived affordability and availability of treatment resulted in lower treatment rates and less preventive effect (e.g. treatment failure and risk of developing resistance to ART). Self-reported treatment effectiveness at an individual level was lower in younger men, those who were less educated and among men living in smaller cities, possibly indicating a lower level of adherence to treatment. At country level, treatment coverage correlated strongly with the Human Development Index (life expectancy, education and gross domestic product).

1 EU Member States joining in 2004 were Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic and Slovenia and in 2007 Bulgaria and Romania.

Post Exposure Prophylaxis (PEP)

The efficacy and cost-effectiveness of PEP after sexual exposure remain unclear and there was a large variation across Europe with respect to reported use of PEP. The high cost of PEP may be a major obstacle to its prescription. Awareness of PEP and perceived access to PEP was reported to be low among MSM in most European countries, indicating that PEP is not a first-line prevention intervention. MSM need to be informed of all potential interventions, including PEP.

Testing for Sexually Transmitted Infections (STIs)

STI testing rates differed across Europe. In most countries, men reported uncertainty regarding access to and affordability of STI testing: 20–50% of MSM in all European sub-regions did not know whether they had access to free STI testing in their country. An estimated 50–80% of MSM were not tested for STIs on a yearly basis.

Furthermore, in most European countries, STI testing policies appeared not to be tailored to MSM. In all countries, at least 80% of STI services included blood tests, but this kind of testing can only detect HIV, syphilis and viral hepatitis. Sexual health consultations for MSM in most countries did not include basic physical examinations or procedures to diagnose other STI such as (rectal) gonorrhoea, chlamydia, or genital warts. In 33 of the 38 participating countries, less than 40% of STI consultations included an inspection of the anal and penile areas; over 50% of European countries did not provide this examination in more than 80% of STI consultations.

In 32 countries less than 40% of STI consultations included an anal swab, and in two thirds of European countries more than 80% of consultations did not include anal swabbing. It is therefore highly likely that anal warts, genital warts, rectal chlamydia and rectal gonorrhoea remain significantly under-diagnosed. This is partly a consequence of poor communication between patients and healthcare providers. The recording of a sexual history in a non-judgmental manner is crucial to the provision of the services needed.

Most European countries could consider improving and tailoring the STI and sexual health services for MSM in order to provide services that match the health needs of gay, bisexual and other men who have sex with men. Under-diagnosis of STIs has serious implications for the individual MSM, for the onward transmission of STI and acquisition of HIV infection.

Results suggest that the focus in STI prevention messages should differ from that in HIV prevention messages as STI testing rates need to be driven by the number of sexual partners, regardless of condom use. Gay-friendly,

non-judgmental, easily-accessed and affordable services are contributing to higher STI testing rates among MSM. The UK, Ireland, Sweden and the Netherlands are examples of countries where this has been accomplished across different healthcare settings.

With regard to hepatitis B, at least 40% of MSM reported not having been vaccinated against hepatitis B. In many European countries, particularly in a number of Member States that joined the EU after 2004 and non-EU countries, this proportion was substantially higher. By way of contrast, in other EU Member States, the proportion of vaccinated MSM was high due to universal (or MSM targeted) vaccination programmes.

Hepatitis C virus infection (HCV) was reported more often by MSM who reported a history of injecting drug use (IDU) and, in the absence of a history of IDU, mainly by HIV positive MSM. Hepatitis C seems to be associated with drug use in South-West, North-East, South-East, and East Europe, while in West, North-West, and Central-West Europe HCV seems to be transmitted between HIV-positive MSM. Access to specific care for HCV was reported to be particularly low outside the EU.

Sexual behaviour

Half of the respondents had had their first same-sex experience before the age of 18 (median) and their first experience of anal intercourse before they were 20 (with some variation between sub-regions). This suggests that sexual education in schools should include issues on sexual diversity and sexual health.

Overall, 58% of respondents reported having had a steady partner in the last 12 months, of which 67% had had UAI (i.e. 39% of all respondents reported UAI with a steady partner). Twenty-two per cent of men with a steady partner had non-concordant UAI – UAI with a partner of unknown or discordant HIV status – with that partner (i.e. 13% of all respondents). These results indicate that many men take their HIV status and that of their partner into account when deciding on the use of condoms for anal intercourse. It also suggests that prevention efforts to promote mutual HIV testing and disclosure of HIV status in steady relationships should be continued. Special attention is needed for young MSM (<25 years) and MSM with a lower level of education, as they reported significantly higher levels of non-concordant UAI with steady partners.

Overall, 67% of respondents reported having had one or more non-steady partners in the last 12 months, of which 39% reported UAI with at least one non-steady partner (i.e. 26% of all respondents reported UAI with a non-steady partner in the last 12 months). Twenty-five per cent of those with non-steady partners had non-concordant UAI with a non-steady partner (17% of all respondents).

After adjusting for seroconcordance in the multivariate analyses, age and settlement size were not related to non-concordant UAI with non-steady partners; educational level was related only when examining unadjusted UAI. HIV status, on the other hand, was strongly related to non-concordant UAI, suggesting that almost twice as many HIV positive MSM reported UAI with non-steady sex partners as HIV negative and untested men. In addition, more than half of the MSM reported not having disclosed their HIV status to their last non-steady partner when having UAI. HIV positive men were slightly more likely to have disclosed than HIV negative and untested men (47% vs. 42%). However, these figures do not necessarily imply high risk of HIV transmission, since most HIV positive MSM were receiving antiretroviral treatment and reported having had an undetectable viral load. Nevertheless, the results do indicate that prevention strategies should continue to address the promotion of less new sexual partners, non-penetrative sexual practices and condom use, while also focussing on HIV testing and status disclosure.

With regard to results at sub-regional and country level, MSM from Central-West Europe, France and Belgium reported the lowest rates of non-concordant UAI with any male partner while MSM from North-East and South-East Europe reported the highest rates. The results at country level are slightly different. Countries with a score below the 25th percentile were Austria, Belgium, Germany, Finland, France, Greece, Luxembourg, Slovenia and Switzerland (i.e. countries in West, North-West, Central-West and South-West Europe). Countries with a score above the 75th percentile were Belarus, Bulgaria, Croatia, Lithuania, Latvia, Moldova, Romania, Slovakia and Turkey. (It should be noted that some of the countries in the latter group had relatively small numbers of respondents.)

In conclusion, there appears to be a West-East divide in rates of UAI. The proportion of MSM who reported no condom at last anal intercourse, had had any UAI in the past year and reported non-concordant UAI with non-steady partners increased from the west (EU/EEA countries) towards the EU countries in central Europe (those having joined the EU after 2004) and on to non-EU countries. Further investigation is required to ascertain whether access to HIV testing and healthcare, exposure to prevention activities, discrimination and social and gay community support had an impact on the frequency on UAI as the findings will inform prevention intervention policies.

Sex abroad

The median proportion of MSM who reported sex abroad in the last 12 months was 26%. The highest rates were reported for West and North-West Europe. Older men (≥ 25 years), those with higher education, those living in larger cities and HIV positive men were more likely to report sex abroad.

The countries within Europe most commonly cited as destinations for sex abroad were Spain and Germany. Outside Europe, Thailand was the most common destination for sex abroad.

The most common way to meet men for sex when abroad was via the internet: In total, 32% reported having met their last sexual partner abroad through the internet. Other places for meeting sexual partners abroad varied substantially depending on the country visited.

Among men who had had sex abroad in the last 12 months, 62% (country median) reported having had anal intercourse with their last sexual partner abroad. Of these, a median of 25% reported having had UAI the last time they had sex abroad. Men with lower levels of education and HIV positive men were more likely to report UAI during sex abroad.

Buying and selling sex

In all regions, older and higher educated MSM reported having bought sex; younger and less educated men reported having sold sex. The median proportion of men who had bought sex in the last 12 months was 7% and the median proportion of men who had sold sex was 5%. However, among those who sold sex the vast majority had done so only once or twice, suggesting that these were opportunistic exchanges rather than sex work. The highest proportions of men buying sex were reported from Switzerland, Cyprus, Russia and Belgium; the lowest proportions were reported from North-West and Central-East Europe. The proportion of men selling sex varied little between sub-regions: the highest percentages were reported from The former Yugoslav Republic of Macedonia, Turkey, Italy and Moldova. In EU countries having joined the EU before 2004 and in EEA countries, non-migrants were more likely to buy sex and migrants were more likely to sell sex, while in non-EU countries a reverse trend was found.

The median proportion of MSM who reported having bought sex last time they were abroad was 4%, and the median for men having sold sex last time they were abroad was 2%. In general, MSM who reported buying as well as selling sex did so in both the country of residence and abroad.

MSM who are paid for sex are an important at-risk population because they are more likely to engage in risk behaviour, e.g. drug use, large numbers of non-steady partners and UAI with both steady and non-steady partners.

Apart from being older, MSM who paid for sex were more likely to have a sexuality which was clandestine (many reported a female partner).

Substance use

More than a third of MSM had drunk alcohol in the last 24 hours: the highest proportion was reported from the Netherlands, where half the MSM had drunk alcohol the day before, and the lowest was in Serbia (22%). In general, the sub-regions with the lowest consumption of alcohol were in the south of Europe, while those with the highest were in the northern and western parts. Respondents' concern about their alcohol consumption did not mirror this pattern, however, maybe because the question about recent alcohol consumption did not ask what or how much had been drunk. It is suggested that further research into drinking behaviour in EU countries might help to establish whether the observed discrepancies resulted from low awareness of the dangers of alcohol abuse or from different daily drinking patterns in terms of the amount and type of alcohol consumed.

Around 5% of the MSM reported having ever injected recreational drugs or anabolic steroids, with the highest proportion (9%) being reported from eastern Europe. Data on the reported monthly use of heroin or crack cocaine confirmed the relatively limited use of these drugs, not exceeding 0.4% of men at sub-regional level.

Whereas both lifetime injection of drugs and monthly use of heroin and crack cocaine were low, the use of other recreational drugs in the last four weeks was reported to be high, especially poppers (inhaled nitrites), followed by cannabis and party and sex drugs.

In EU countries having joined before 2004 and in EEA countries, significant associations were found between drug use, age and education. Injecting drugs (other than steroids) was more common among older men and those with lower education, while using sex and party drugs was more common among younger men and highly educated men.

The EMIS results relating to the consumption of recreational drugs among MSM are relevant as these drugs may play a role in reducing safe sex behaviour, although respondents were not asked directly if they used drugs during or immediately before sex. EMIS data did show that those who reported recent use of drugs also indicated reduced control over the sex they have (reduced control over the safe sex they would like to have or reduced capacity to say 'No' to the sex they do not want), and engaged more often in UAI during the same period. This might suggest that efforts to reduce drug consumption in the context of sexual encounters may contribute to reduction of associated risk behaviour, although the causality of the association remains to be demonstrated. Associations found between age, places visited and drugs taken may be used to guide health promotion strategies. Prevention of the use of recreational drugs could be targeted by age, especially for poppers (used more by older MSM), cannabis and heroin/crack (used more by younger MSM). No age difference was determined for 'party drugs'.

Respondents' concerns about their own drug use may help in designing the content of communications intended to inform about the risks associated with drug consumption during or before sex. Although poppers are widely used and perceived as less dangerous than heroin/crack, EMIS data indicated some concerns that their use might make unsafe or unwanted sex more likely to occur. Communication strategies are likely to work better if they address the concerns of their target audience.

HIV-related stigma, discrimination and internalised homonegativity

'Disclosure concerns' expressed through disclosure avoidance and concerns that others might react negatively to disclosure were reported and may play a large role in the stigmatisation process.

When the associations between 'HIV-related disclosure concerns' and 'HIV-related enacted stigma' subscales and disclosure to non-steady sexual partners were assessed, only the former was found to be significant. This could be interpreted in two ways: anxiety about refusal, stigmatisation, or negative reactions (rather than having experienced such reactions) may affect decisions about disclosure before or during sex. Alternatively, MSM who in general disclose their positive HIV status are more likely to disclose it during or before sex with non-steady partners.

The observed association between general disclosure concerns and the disclosure to non-steady sexual partners before sex suggests that efforts could be improved to promote a cultural and social climate to reduce stigmatisation and to make disclosure easier.

Self-stigma among gay and bisexual individuals (related to sexual orientation, not to HIV), (defined as 'internalised homonegativity' – IH), is a kind of sexual stigma in which the gay person directs negative social attitudes inwardly, leading to a devaluation of the self. In EMIS, a cross-culturally validated scale measured respondents' IH, where a higher score reflected an increased manifest score. The IH varied significantly across the nine European sub-regions, with the lowest scores in North and Central-West Europe, and the highest in East and South-East Europe, possibly reflecting the extent of tolerance and gay-positive social and cultural environments. Lower IH was also associated with being out as gay, exposure to targeted HIV prevention programmes, knowledge about HIV testing and testing for HIV and STIs. Among HIV-positive respondents, lower scores were associated with seeing a physician to monitor HIV infection and taking ART. Collectively, these results show that men who exhibited less self-stigma were more likely to be connected to relevant HIV and STI testing and treatment programmes. Thus, the results suggest that promoting self-acceptance of gay identity and being comfortable about being gay – particularly in those regions with high scores such as South-East and East Europe and those who are not open about their attraction to men – may foster improved mental wellbeing and positive health-seeking behaviour of relevance for HIV and STI transmission.

Abuse due to sexual orientation

Abuse due to sexual orientation occurs mainly against men who can be recognised as MSM, which means that those who hide their identity and sexual orientation are unlikely to experience it. This was confirmed by EMIS findings about the association between suffered abuse and self-identification as gay, outness, inclusion in networks of gay friends and places visited, especially gay community centres.

Low percentages of subtle forms of abuse at country and sub-regional level were often reported alongside higher percentages of reported overt abuse, verbal, physical or both, while low percentages of verbal abuse were often reported alongside more severe forms of abuse such as physical violence. Therefore, comparison of singular forms of abuse at country and sub-regional level should be complemented by an overall assessment of all forms of abuse. Low percentages of subtle forms of abuse do not necessarily indicate a higher level of acceptance of homosexuality. Differences in the levels of abuse and anti-gay violence between European sub-regions and countries may be even higher than suggested here, because in sub-regions with lower proportions of men who are out the reported levels of abuse and anti-gay violence were higher. Results also suggest that even in regions where most gay and bisexual men do not hide their sexual orientation, gay organisations are socially active and gay life is visible in the streets of the cities and in mass media, the accepting climate could not be taken for granted. Policies should be strengthened to protect gay and bisexual men from violence and homophobia.

The observed associations between abuse and age and abuse and education suggest targets for prevention strategies against violence and abuse, by indicating that younger people and those with lower education were particularly vulnerable.

Knowledge and being reached by targeted prevention

Knowledge about HIV, STIs and PEP was assessed and coverage of prevention programmes was estimated, revealing a range of prevention needs throughout Europe. HIV testing was the topic best known across Europe. Knowledge of HIV transmission was generally more widespread than knowledge about transmission of STIs, with knowledge of post-exposure prophylaxis (PEP) lowest in every country. Nonetheless, the amount of detail included in questions about each knowledge area varied, so levels of knowledge across topics (testing, transmission, etc) should be compared with caution. Certain outliers in each knowledge area indicated important points for future work. MSM in France, for example, were particularly well informed about PEP, as might have been expected because PEP has been available and widely promoted for MSM in France after sexual exposure for some time. The UK has mounted a similar response more recently and this is reflected in relatively high rates of knowledge. Turkey, with little or no prevention programmes for MSM, scored markedly low in each knowledge area. Ireland and Finland scored lower than their neighbouring countries, whereas Croatia and Bosnia and Herzegovina scored higher than Slovenia and Serbia. These differences may be due in part to the socio-demographic profiles of the MSM reached in each country, but they may also reflect national approaches to HIV prevention for MSM. The differences in knowledge scores by respondents based on their HIV status were also noteworthy, especially when compared with differences by education or age.

Distinct regional differences in coverage by prevention programmes were identified across the sub-regions. This division into regions shows that coverage in each country is best understood by comparison with neighbouring countries. Exceptions in regional groupings highlighted particular omissions in coverage. For example, UAI due solely to not having a condom was relatively common in Spain, compared with the situation in Slovenia, the Czech

Republic and Hungary, where rates of UAI due solely to not having a condom were relatively low. In Ireland, a relatively low percentage of MSM indicated having access to HIV testing, whereas in Belarus, Russia and Moldova access to HIV testing was reported to be relatively high. Importantly, coverage by targeted prevention programmes across Europe appeared to privilege European-born respondents, as well as respondents who were connected to an established gay social life. Programme coverage correlated strongly with knowledge about HIV, other STIs and PEP, as well as with the equality-adjusted Human Development Index.

Behavioural indicators

Reliable biological and behavioural surveillance is essential for monitoring the burden of HIV/STIs and public health responses to the HIV/AIDS epidemic. Regular and comparable behavioural surveillance improves understanding of the corresponding trends in disease and allows more precise planning and evaluation of prevention strategies. Several behavioural surveillance indicators have been used since the 1990s. In 2009, the European Centre for Disease Prevention and Control published the results of a European study on behavioural surveillance related to HIV and STI, including eight specific population groups such as MSM (ECDC, 2009). The study revealed that nine European countries had not introduced behavioural surveillance among MSM and another four provided no information (Elford et al. 2009).

Although the study revealed considerable diversity in behavioural indicators, there was a general consensus that the most important indicators among MSM could be grouped into four main headings: unprotected anal intercourse, condom use, number of partners and HIV testing (Elford et al. 2009). Based on experience of the harmonisation process and the mapping exercise for the European HIV/STI behavioural surveillance system, a framework was proposed for the implementation of a key set of HIV/STI behavioural indicators in Europe. This proposal included six core indicators that could be used in all populations surveyed and 11 behavioural indicators specifically designed for MSM populations in all countries.

EMIS is the first study to pilot the proposed ECDC indicators and has therefore enabled strongly comparable ECDC indicators to be constructed for MSM. Although the levels of the ECDC indicators across regions and sub-regions should be compared with caution due to differences in the sample composition, the trends in demographic associations with the indicators have shown somewhat consistent patterns across all regions. This suggests that a convenience sample can be a useful method for conducting a cross-European behavioural surveillance study among MSM.

Limitations

It is important to acknowledge the limitations of the socio-demographic data collected. The lack of good proxies for migration background, income and socioeconomic status are critical points to take into account. There were reasons why the data were difficult to collect: length of the survey, diversity of collaborators and, most importantly, challenges related to collecting and measuring data across a large number of countries. Questions on self-defining migration background and/or belonging to an ethnic or religious minority were seen as discriminatory. Moreover, all data are self-reported and limitations such as recall bias, social desirability bias and interpretation bias may affect the findings.

Finally, the sample was generated on the internet which meant that it excluded MSM without access to the Internet, who may also have exhibited other socio-demographic and behavioural characteristics.

1. Introduction

1. Introduction

HIV infection is a major public health concern across Europe and transmission among men who have sex with men (MSM) is the predominant mode of transmission in the EU/EEA. In most European countries, HIV infections are concentrated in specific sub-populations such as MSM, certain migrant populations, and injecting drug users (IDUs). Among the 48 European countries that reported consistently on HIV diagnoses and mode of transmission over the period 2004–2010, the number of newly diagnosed HIV infections among MSM increased by 42%, from 7 621 in 2004 to 10 854 in 2010 (ECDC 2010).

The European Centre for Disease Prevention and Control (ECDC) works with EU/EEA countries to help them strengthen their capacity to prevent and control infectious diseases, including HIV and sexually transmitted infections (STIs). European HIV and STI epidemics need to be monitored to inform public health responses.

Reliable surveillance data are essential for monitoring the HIV/STI disease burden and public health responses. ECDC has a mandate to implement and conduct surveillance of infectious diseases at EU level and is supporting countries conducting behavioural surveillance related to STI and HIV (ECDC, 2010). Comparable behavioural surveillance can help to improve understanding of trends in diseases, enabling more precise planning and evaluation of prevention responses (Brown 2003; Garnett et al. 2006; McGarrigle et al. 2006).

1.1 The problem

It is a challenging task to gather reliable information on the values, prevention needs, and behaviour of minority groups that may be subjected to stigma and discrimination. Difficulties in defining groups such as MSM make it harder to estimate the size of the true population. Moreover, the stigma connected to homosexual activity and the absence of a sampling frame mean that random sampling is challenging, if not impossible. Therefore, most studies of MSM have relied on convenience samples recruited in community venues (such as bars, saunas, or events) or clinical sexual health services (also known as STI or HIV clinics). In recent years the internet has become an important setting for recruiting large samples of MSM. These samples have been demonstrated to be more diverse in terms of age, education, bisexuality and geographic distribution than those recruited through gay community settings (Ross et al. 2000; Whittier et al. 2004; Elford et al. 2004). In countries with widespread internet access, MSM samples recruited through the internet have been shown to approximate to the regional distribution of MSM (Marcus et al. 2009a and 2009b).

A recent study mapped the current state of behavioural surveillance programmes related to HIV and STIs in Europe, with a focus on eight key populations including MSM (ECDC, 2009). Of the 31 countries surveyed, 28 responded, 16 of which claimed to have an established behavioural surveillance system and 14 expressly included MSM. Another four countries carried out periodic behavioural surveys among MSM. Nine countries had not introduced behavioural surveillance among MSM and another four did not provide any information about HIV among MSM which included biological surveillance, even though MSM are the group most affected by HIV in Europe. The study acknowledged that in some (smaller) countries behavioural surveillance systems may be difficult to justify, and in others MSM may be especially hard to recruit due to social, cultural, or religious barriers.

Where the infrastructure for MSM surveys does exist, almost all surveys have concentrated on regional or national populations of MSM. To date there has been little cooperation in data collection across EU countries regarding HIV and MSM communities. Where cooperation exists, comparability is hampered by partial lack of data, different questions and response sets, a variety of recruitment methods and diverse biological surveillance and healthcare systems. Moreover, different ways of accessing and defining MSM lead to dissimilar sample compositions and divergent questions targeting the same concept often result in incomparable results.

1.2 The solution

The European MSM Internet Survey, or EMIS (www.emis-project.eu), was conceived as a multi-language, pan-European, cross-sectional, HIV prevention needs assessment for MSM, encompassing behavioural measures and indicators of needs for HIV prevention. The survey questions were designed to allow comparisons with past and future national and regional surveys. They were also devised to enable the construction of indicators for national HIV responses suggested by The Joint United Nations Programme on HIV/AIDS (UNAIDS, 2009) and ECDC (2009). EMIS sought to advance the harmonisation of survey methods and questions and to generate comparable data between countries. It provides data for the planning of interventions and to facilitate the monitoring of changes over time in HIV-related behaviour, needs and interventions among MSM. If repeated, it can serve as the first wave of a pan-European, third-generation HIV surveillance system that encompasses data about prevention needs and behaviour.

The focus of the survey was on men living in Europe who had sex with men and/or felt attracted to men. The criteria for inclusion in the study were as follows: men living in Europe, at or over the age of homosexual consent in their resident country, who are sexually attracted to men and/or have sex with men, and who indicate that they understand the nature and purpose of the study and consent to take part.

The survey design was intended to provide data for the planning of interventions and (if repeated) to facilitate the monitoring of changes over time in the behaviour, needs and interventions affecting HIV incidence among MSM. Questions addressed HIV/STI diagnoses, sexual risk and precautionary behaviour, HIV prevention needs and the performance of prevention interventions (including clinical services). The prevention-planning objective was to identify prevention needs which are commonly not met across diverse groups of MSM (priority aims), and to identify subgroups of MSM who have multiple prevention needs which are poorly met (priority target groups).

Other objectives of the project included capacity building and knowledge transfer within the EMIS Network about online surveys among MSM; the generation of MSM datasets in countries with fewer research resources; facilitating dialogue between community, academic and public health sectors and maximising the educational impact of survey completion among respondents.

The survey was designed by six associate partners based in five countries (Germany, Italy, the Netherlands, Spain and the UK) and was funded by the Executive Agency for Health and Consumers (EAHC) of the European Commission and co-funded by the six associate partners. Furthermore, 77 collaborating partners were recruited from community, academic, and public health sectors across 35 countries. In addition, three large and three smaller commercial gay dating websites were contracted to advise on and support the recruitment. Collectively all partners are referred to as the EMIS Network.

EMIS 2010 was funded for 30 months from March 2009 to September 2011. Funding included the establishment of the network, development and agreement of the questionnaire, a three-month wave of data collection, preparation and distribution of national and international datasets and the writing and dissemination of a public report. Nominated representatives of the entire EMIS network met twice during the funding period and the associate partners met a further four times. All other business was conducted remotely. The project was overseen by a steering group of senior representatives from the six associate partners and an advisory board consisting of two representatives from the collaborating partners (elected at the first general meeting) and representatives of ECDC and the World Health Organization's Regional Office for Europe. The project activity was divided into nine work packages led by designated associate partners, with overall coordination from a scientific coordinator. Data was collected during the summer of 2010.

EMIS collected comparable data in 25 languages, advertised and promoted on at least 237 national and transnational websites for MSM and via NGOs. It was the first pan-European survey using a multilingual questionnaire and comparable recruitment procedures across a large number of countries.

EMIS results have been and continue to be jointly analysed and interpreted with a view to reaching a common understanding of HIV prevention challenges and fostering cooperation between sectors and agencies. These benefits are particularly valuable for countries in which MSM communities and HIV prevention responses are less well established.

1.3 Introduction to European sub-regions

One of the objectives of EMIS was to generate comparable population-level data needed to plan HIV prevention for MSM across countries. Given that EMIS covered 38 countries, geographical patterns were difficult to depict across individual countries and therefore countries were grouped into nine European sub-regions.

The World Health Organization (WHO) distinguishes three sub-regions within Europe – broadly based on the political history of the second half of the 19th century. Given that the political structures of countries have an impact on the geographical formation of epidemics, such as the HIV epidemic, this grouping is highly relevant for the analysis of EMIS data. WHO's grouping consists of three geographical entities:

- The WHO sub-region of Eastern Europe includes all succession states of the Soviet Union. Thus, some countries in the sub-region today are part of the European Union (such as the three Baltic states), or they are located outside Europe. EMIS-2010 was not funded to include residents of countries in central Asia or the Caucasus region.
- The WHO sub-region of Central Europe encompasses a wide range of countries, such as all the other (non-Soviet) European former COMECON members (or their succession states), as well the succession states of Yugoslavia, Turkey, and Cyprus.
- The WHO sub-region of Western Europe is broadly identical (except for Malta) to the 15 EU Member States as of 1995, plus the European Economic Area (EEA)/European Free Trade Association (EFTA) countries such as Norway and Switzerland.

A typical grouping for EU-funded analysis is the distinction between the EU Member States as of 1995, EU Member States that joined after 2004, and non-EU/EEA countries. A problem with this grouping, as with the WHO sub-regions, is the wide range of political histories of the countries within each sub-region. Political and societal systems have a substantial influence on how healthcare is organised, on the social acceptance of sexual behaviour and identities outside the heterosexual norm and on the permeability of borders and hence mobility. All these factors can broadly influence the onset and course of infectious disease epidemics, such as infections with HIV or other sexually transmissible pathogens.

EMIS data cover 18 countries within the WHO sub-region of Western Europe (at, be, ch, de, dk, es, fi, fr, gr, ie, it, lu, mt, nl, no, pt, se and uk) (See list of country codes on page xvii). The data also covers 13 countries within the WHO sub-region of Central Europe (ba, bg, cy, cz, hr, hu, mk, pl, ro, rs, si, sk and tr) and seven countries within the WHO sub-region of Eastern Europe (by, ee, lt, lv, md, ru and ua).

In EU terms, EMIS data covers the 17 EU/EEA countries (as of 1995) (similar to Western Europe above, without Malta);

12 EU Member States (that joined after 2004) (bg, cy, cz, ee, hu, mt, lt, lv, pl, ro, si and sk); and nine non-EU/EEA countries (ba, by, hr, md, mk, rs, ru, tr and ua).

Because these two groupings do not match, and because in many analyses of EMIS data they would mask important differences, in this report we use a third classification with nine sub-regions, each consisting of fewer and more comparable countries. Depending on how these nine sub-regions are combined, both the WHO and the EU groupings described above can be reconstructed. The placement of Greece and Malta in our grouping seems geographically counter-intuitive, but is necessary in order to match the WHO and the EU groupings.

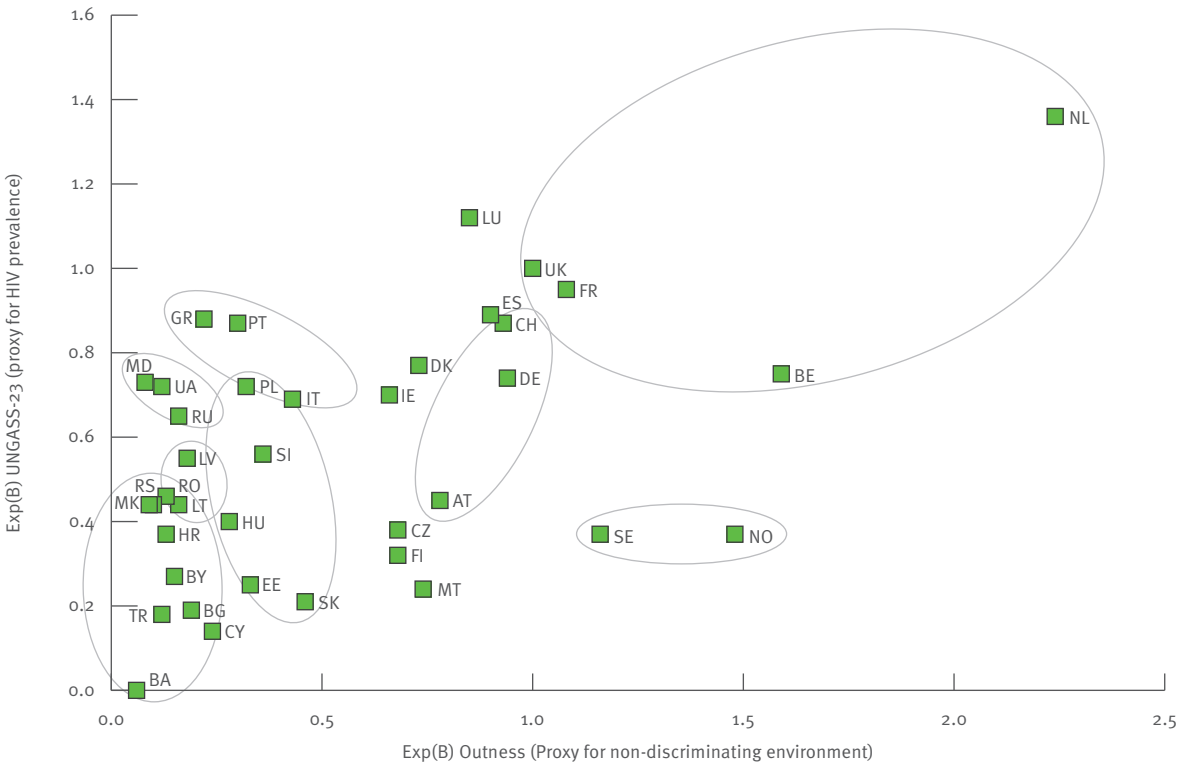
The nine sub-regions of Europe used within this report are:

- **West** – Belgium (be), France (fr), Republic of Ireland (ie), the Netherlands (nl) and the United Kingdom (uk).
- **North-West** – Denmark (dk), Finland (fi), Norway (no) and Sweden (se).
- **Central-West** – Austria (at), Switzerland (ch), Germany (de) and Luxembourg (lu).
- **South-West** – Greece (gr), Spain (es), Italy (it) and Portugal (pt).
- **North-East** – Estonia (ee), Lithuania (lt) and Latvia (lv).
- **Central-East** – The Czech Republic (cz), Hungary (hu), Poland (pl), Slovenia (si) and Slovakia (sk).
- **South-East (EU)** – Bulgaria (bg), Cyprus (cy), Malta (mt) and Romania (ro).
- **South-East (non-EU)** – Bosnia and Herzegovina (ba), Croatia (hr), the former Yugoslav Republic of Macedonia (mk), Serbia (rs) and Turkey (tr).
- **East** – Belarus (by), Moldova (md), Russia (ru) and Ukraine (ua).

The rationale for grouping EMIS countries is two-fold. Firstly, names needed to be intuitive to the reader and used or suggested by international organisations. Secondly, the grouping of sub-regions needed to be based on data that are crucial for the purpose of this research.

The United Nations Group of Experts on Geographical Names suggested six European sub-regions: North Europe, West Europe, Central Europe, East Europe, South Europe and South-East Europe. The definition of Central Europe is the most ambiguous. Out of a plethora of different definitions, WHO is the only organisation that groups Balkan countries – South-Eastern European countries such as Bulgaria, Romania, Turkey or Cyprus – as Central Europe. Therefore, in this report, when using WHO regions, we highlight this by referring to 'the WHO sub-region of Central Europe'. The EMIS definition of Central Europe is much narrower and includes both countries from the WHO sub-region of Western Europe (Austria, Germany, Luxembourg, and Switzerland - Central-West) as well as Poland, the Czech Republic, Slovakia, Hungary, and Slovenia (Central-East).

Figure 1.1: Country-level scatter plot for UNGASS-23 versus outness



(The UK is set as reference with Exp(B)=1. Odds ratios are adjusted for site of recruitment, age, education, settlement size and outness has been adjusted for HIV-diagnosis).

Greece was grouped with South-West Europe, while Malta was grouped with South-East Europe. This geographically counter-intuitive grouping was done to be able construct the WHO regions and the EU grouping. For the same reason, South-East Europe was divided into EU and non-EU countries; the Baltic countries were labelled North-East and the Scandinavian countries and Finland were labelled North-West.

In a survey on HIV prevention for MSM, two dimensions are important to consider. One dimension is the visibility of the population in focus (MSM), and the other dimension is past exposure of the population to HIV. The visibility of MSM in a given country is reflected by the proportion of men who do not conceal (are out about) having sex with men or being attracted to men (outness).

A population's past exposure to HIV is reflected by the HIV prevalence among MSM. As a proxy for HIV prevalence, the proportion of (self-reported) HIV-positive men among those tested for HIV was used (according to indicator UNGASS-23).

In Figure 1.1, when HIV-prevalence (vertical axis) is plotted against outness (horizontal axis), the emerging country clusters support the suggested EMIS sub-regions. For instance, South-East Europe has low levels of outness as well as low levels of HIV. North-East and in particular East Europe have higher levels of HIV and low levels of outness. Central-East Europe has similar levels of HIV to those in North-East Europe, but higher levels of outness. South-West Europe has the same levels of outness as Central-East Europe, but higher levels of HIV. Central-West Europe has moderate levels of outness and moderate levels of HIV. North-West Europe has high levels of outness but low levels of HIV and in West Europe high levels of outness are accompanied by high levels of HIV.

This means that the European sub-regions used in this report are useful groupings with respect to the two main dimensions of the survey: visibility of MSM and past exposure of MSM to HIV.

1.4 Structure of the report

Chapter 2 describes the methods used to undertake EMIS, the challenges faced in coordinating such a large network and the solutions that were applied.

Each chapter from 3 to 11 introduces a number of questions in a thematic area, explores their associations at the individual and country levels and investigates some key questions in more depth. At the end of each chapter the findings for the questions are presented for each country, together with medians for all 38 participating countries, including the 27 EU countries.

Chapter 12 describes how the key indicators for European second generation surveillance suggested by ECDC (ECDC, 2009) can be constructed from EMIS data. It introduces no new variables but provides a regional analysis for many of the areas presented earlier.

This report presents a descriptive analysis of the EMIS survey results. Results are not adjusted for national (MSM) population sizes, national (MSM) age composition, or access to the internet. MSM population sizes and demographics are largely unknown and also depend on how men who have sex with men (MSM) are defined.

Some sub-chapters include multivariable logistic regression analysis at the individual level. As a general approach, odds ratios were adjusted for recruitment (the largest recruiter, PlanetRomeo vs. all others); demographic characteristics (age, education, settlement size), and – where appropriate – for HIV diagnosis or country of residence. Some sub-chapters include country-level scatter plots to visualise country-level associations. Readers are advised to be aware of the ecological fallacy, and not to interpret country-level associations as causal.

1.5 Further data analysis plans

Further in-depth analysis of the EMIS European dataset is currently being undertaken in preparation for a wide range of academic articles in peer-reviewed journals. Priority will be given to open-access journals.

More information about EMIS, the entire question and response set and copies of national reports and other outputs arising from the data can be found at www.emis-project.eu. EMIS partners with access to national or European EMIS data can log in to the internal area of the website and download instructions and SPSS-based syntaxes in order to:

- correct coding errors identified during the analysis phase described in Chapter 2.6;
- exclude respondents where two or more data discrepancies were observed;
- construct all secondary variables used in this report.

Partners dealing with EMIS data – national or European datasets – are advised to download the syntaxes, read the respective manual and run the syntaxes on all data. Only by doing this can we guarantee comparability of results across European countries and comparability of national analyses with this report and other analyses published. Manuals and syntaxes are regularly updated and available in the internal area of www.emis-project.eu.

1.6 Summary

Some European countries have well-established systems for behavioural and biological HIV surveillance among MSM, but others have not begun to monitor behaviour and therefore study designs and measures used in their systems cannot be compared. EMIS aimed to develop a pan-European internet-based survey on HIV-related male homosexual behaviour and prevention needs, both to support an expansion of research capacity and to move towards harmonisation of existing approaches and systems.

2. Methods

2. Methods

2.1 Questionnaire design

2.1.1 The first draft

The EMIS Network was set up and the first proposal for the questionnaire developed between April and December 2009.

Representatives from Maastricht University, as the leading associated partner for questionnaire development, asked the other partners to share all available national or regional questionnaires targeting MSM in English. In total, 23 questionnaires from 20 countries were received. In addition, the associated partners produced a list of proposed core indicators that were grouped as:

- indicators of sexual exposure to HIV (and STIs) and transmission facilitators
- indicators of unmet prevention needs
- indicators of intervention performance (service needs and actions of others)
- HIV-related discrimination, homophobic violence and internalised homonegativity
- demographics.

These five categories were used to organise all questions asked in previous national questionnaires according to frequency, diversity, terms used, subjects and response formats. Literature reviews were done, focusing on the five proposed topic areas, to ensure that the scientific basis of the questionnaire was supported by psychological and behavioural theories and previous global qualitative and quantitative studies.

Previous questionnaires, core indicators, scientific literature, consultation with experts and feedback from the associated partners resulted in the first draft of a questionnaire that was presented to the first general meeting of the EMIS network in December 2009. The first draft contained 262 questions (pieces of information sought, although not all respondents would be asked all questions).

The network considered all topic areas and items in the first draft using a floating round table system of discussion and note-taking and achieved a good level of acceptability and prioritisation. In addition, the general meeting reached agreements on four major areas: recall periods, informed consent, the lower age limit and language register.

National questionnaires used many different recall periods – for example, last occurrence, last four weeks, last three, six, or 12 months – as well as asking whether respondents had ever engaged in specific behaviour. Shorter periods are considered more accurate (Bachman & O'Malley, 1981; Kauth, St. Lawrence & Kelly, 1991), but longer periods can be considered more representative, especially for behaviour that occurs infrequently. It is likely, however, that the more complex the recall task, the less reliable the data (Brener, Billy & Grady, 2003). Relatively short periods and familiar language may improve validity, but may also lead to erroneous reporting of infrequent behaviour. Valid estimates of infrequent behaviour require longer recall periods (for example 12 months). In addition, regardless of the length of the recall period, studies generally show that higher frequency behaviour is reported less consistently than lower frequency behaviour, because people who often engage in a specific behaviour are less likely to remember specific instances of doing so (McFarlane & Lawrence, 1999).

UNAIDS (2009) and ECDC (2009) advocate a 12-month recall period for the behavioural surveillance of MSM. The regional and national questionnaires that were collated used a variety of recall periods but most commonly 12 months. To satisfy the need for different binary recall periods and to ensure more valid data from those who engaged in behaviour more frequently, we used a quasi-logarithmic recency scale. Questions were of the form 'When did you last ...?' and the response set was: within the last 24 hours; within the last seven days; within the last four weeks; within the last six months; within the last 12 months; within the last five years; more than five years ago; never. Some follow-up questions asked about frequency of sexual behaviour in a more traditional way: 'In the last 12 months, how often have you.../how many ... did you/did it occur that...?'

Many of the EMIS partners were concerned about the sensitive nature of the data (including sexual behaviour and postal codes). This might be expected to negatively affect the overall volume of responses, item non-response rates and response accuracy (Tourangeau & Yan, 2007), because men might be afraid that their data would be misused (Singer, Thurn & Miller, 1995). In order to allay these fears it was agreed that the opening page of the survey would describe the study and its aims, inform potential participants that all possible measures had been taken to ensure the confidentiality and anonymity of their data, and that their privacy would be maintained in line with the European Data Protection Directive. It was agreed that no IP-addresses or other data that could be used to identify computers (and hence people) would be saved and that the survey software would install no cookies or leave any other trace files on computers. As a consequence respondents could not pause their completion of the questionnaire and sign in later to finish. However, this was a price worth paying to ensure that the survey was completely anonymous.

The age of consent is different across countries, which posed a challenge for a unified approach. It was agreed that participants would be required to declare that they understood the aims of the study and that they were old enough legally to have consensual sex with men in their

country of residence. This ensured that EMIS partners, who were legally responsible for the survey, could claim/maintain that individuals were aware of the aim of the study and took part on an entirely voluntary basis.

Finally, as slang and colloquialisms are often used in normal conversations, we chose to use informal language throughout the questionnaire, with NGOs confirming whether terms used fitted with their perceptions of common speech for the target group in their country. The use of familiar wording is believed to increase reporting of socially undesirable behaviour (Bradburn, Sudman & Wansink, 2004) and was commonly used in the submitted national questionnaires.

2.1.2 Development and paper piloting

It took until May 2010 to further develop and agree on the final questionnaire, pilot the survey tool, translate it into the 25 languages, plan the recruitment strategy and gain ethics committee approval.

The steering group and associate partners reviewed and amended the first draft, based on all the feedback from the first EMIS general meeting. The second draft was organised according to four key conceptual areas:

- Levels and distributions of sexual HIV/STI exposure and transmission facilitators ('behaviour');
- Levels and distributions of unmet (prevention) needs of MSM ('needs');
- Population coverage and acceptability of prevention interventions ('intervention performance');
- Information needed to compare samples and target interventions ('demographics').

The survey was designed to strike a balance between the numbers of questions asked in each of these four areas. This did not relate to the order in which the questions were asked (its structure) but the areas of enquiry it contained. Many interesting questions were discussed that could not be included in the questionnaire. Pertinence to the above areas was a key criterion for consideration in the survey.

The EMIS questionnaire required questions that were relevant for the entire European MSM population, regardless of their biological or social gender, their sexual identity, or the social and political environment in which they lived. Adapting existing questions and developing new questions was especially challenging in the area of demographics, since most questions and questionnaires had been devised for specific target groups. For example, information on migration history or comparable minority characteristics such as skin colour or religion was difficult to ask across Europe, because of differences in immigration history, immigration laws and concepts of minority. Another crucial challenge was to receive valid responses to sensitive questions. Online surveys have all the advantages of other self-administered methods: specifically, respondents are less likely to over-report desirable behaviour and less likely to underreport socially undesirable behaviour because of the sense of anonymity and confidentiality (Bradburn, Sudman & Wansink, 2004). It was agreed that the survey would start and finish with relatively neutral questions to increase respondent cooperation and reduce under-reporting.

Following broad agreement among associated partners, the second draft of the questionnaire was posted on the EMIS website in mid-January 2010 for consultation among the network on: the length of the questionnaire, the balance of topics, the acceptability of questions for specific countries and the clarity of the (English) wording. Collaborating partners were also asked to pilot the English version among five MSM who were to complete it using paper-and-pencil and record their feedback. Detailed comments were received from 21 EMIS partners. Completion times were obtained from 51 men and ranged from 10 to 45 minutes (median 30 minutes). In addition to highlighting numerous minor issues that were incorporated into a third draft of the questionnaire, this process identified survey length as a key area of concern and that the length would result in undesirable levels of attrition. Survey length remained the one issue on which consensus could not be reached among the associate partners. The paper version of the third draft was circulated to the associate partners in February 2010 for approval. A few minor changes were needed to obtain this approval.

2.1.3 Online transfer and piloting

The transfer of a paper survey to an online survey requires numerous modifications, and the first online version was sufficiently different from the third draft to become the fourth draft. The questionnaire was constructed using the chosen internet survey software (www.demographix.com) in English.

Eleven men in London were observed completing the survey online and they then responded to questions about how they completed the survey, to examine their understanding of the questions and the ease of its completion.

The fourth draft was also shared between EMIS partners in March 2010 to pilot it online with MSM who had not seen the survey. This pre-test focused on routing, regional question subsets which varied for each country (such as where men lived or educational qualifications), timing, the HIV test location response subset, and question acceptability. Completion times from 76 online pilots were received with a median time of 26 minutes (range 10–45 minutes).

The fourth draft was reviewed by one of the lead authors of ECDC's technical report on harmonised surveillance Mapping of HIS/STI behavioural surveillance in Europe to ensure that it would capture the required data to construct the indicators suggested for MSM. Comments were also received from 26 partners and numerous changes were made to create the fifth draft. This version was discussed at the third EMIS steering group meeting in April 2010. Length remained an area of concern and required a vote prior to agreement. Minor changes were made and all routing associated with the English-language questionnaire was checked by three researchers working independently. The final English language online version of EMIS was cleared by the associate partners in April 2010.

Following final agreement on the survey instrument, EMIS 2010 was approved by the Research Ethics Committee of the University of Portsmouth, United Kingdom (REC application number 08/09:21).

2.1.4 Final content

The final EMIS questionnaire sought 278 data items from respondents (although not all men were asked all questions) – 16 more items than the first draft of the survey. The final draft covered the six core ECDC indicators and nine of ten MSM-specific ECDC indicators (Dubois-Arber, Jeannin, Spencer et al., 2010). These are:

- number of sex partners in the last 12 months
- use of condom at last (anal) intercourse, separate for steady and non-steady partners
- having tested for HIV, ever and in the last 12 months; year and result of the last test
- having paid for sex in the last 12 months; use of condoms during last paid intercourse
- level of education (International Standard Classification of Education – ISCED), nationality/origin, sexual orientation (Kinsey modified classification)
- knowledge of sexual HIV transmission
- age when first had sex
- recent STIs
- condom use with different types of partners
- exposure to risk in the last 12 months
- recency of last hepatitis C test and result
- types of drugs taken
- proportion on treatment
- viral load (detectable or undetectable)
- CD4 count (at diagnosis).

To balance questions on surveillance with other information needed for prevention planning, including needs for policy and structural interventions, the final questionnaire contained fourteen areas:

- HIV knowledge (transmission, risks, non-risk, safe condom use, post exposure prophylaxis)
- problems related to alcohol and recreational drug use, types of drugs and recency of use;
- barriers to accessing early HIV treatment
- HIV-related discrimination
- experiences and perceptions of homophobic violence/homophobia
- access to MSM-specific information
- access to condoms
- access to HIV and STI testing interventions
- use of HIV and STI testing, service quality
- relationships
- friendships
- loneliness
- sexual happiness
- ideal sex life.

Survey questions were presented to all respondents on 25 internet pages and, depending on the answers to certain questions (those about country of birth, HIV testing history, sexual partners and substance use, for example), respondents were presented with further questions – up to 18 additional pages. To minimise completion time the survey used intra-questionnaire filters (routing) wherever possible. For example, questions about non-steady sexual partners were not asked (or shown) if the participant had already stated they had not had any non-steady partners in the last 12 months. This reduced the number of questions delivered and probably reduced attrition.

2.2 Translation and online preparation

The EMIS questionnaire was available in 25 languages simultaneously. A translation was available for 20 of the 23 official EU languages, excluding Maltese and Slovak (as EMIS had no national partner in Malta or Slovakia at the time of translation) and Irish Gaelic (which is spoken in a relatively small number of regions within the Republic of Ireland and usually as a second language). In addition to these 20 languages the survey was available in Norwegian and Ukrainian (as additional funding was available for these non-EU languages), Russian (a minority language in Poland, Lithuania, Latvia and Estonia and the commonest immigrant language in the EU), Turkish (a minority language in Bulgaria and the second commonest immigrant language in the EU), and Serbian (a minority language in Hungary and intelligible to many EU immigrants from the former Yugoslav states).

Most translations were outsourced to translators suggested by the national collaborating partners, thereby minimising costs. Translation was an interactive process involving native-speaking stakeholders from the field (such as experts in HIV prevention or in lesbian, gay, bisexual, and transgender (LGBT) health) and two native-speaking translators for each language. Several multi-language proof-readers were involved, to compare the translations not only with the English original but also with each other. The proof-readers ensured a harmonised multi-language questionnaire, while deliberately maintaining certain differences identified as culturally appropriate, such as explicitness of language, or the question of formal or informal address (e.g. 'Sie'/'Vous' or 'du'/'tu').

Translations were carried out directly online, using the survey hosting software to display the English version on the left half of the screen and a duplicate on the right half which was over-written with the translation. This process minimised routing errors (conditional questions being based on different questions or answers) and copy-and-paste errors. Once each translation was complete the associate partners checked the translated versions for visual integrity and layout online, and ensured that all language versions were structurally identical, had the same routing between questions, and saved their data in an identical format. Once this was achieved, EMIS partners in each country were asked to review the final survey and approve their main language version. Translation and sign-off of the

other 24 versions of the survey took a month. By the end of May 2010, all translations had been signed off by the EMIS country leads.

2.3 Survey promotion

Two major sources of error in the data are due to the lack of internet access among certain MSM subgroups and the self-selection bias inherent in the recruitment processes. There are known differences in the recruitment process (described below) and in internet access among MSM across countries.

Access to the internet varies considerably across Europe, and is generally much easier in the western and northern parts of Europe than in eastern and southern parts (International Telecom Union, 2011). Figure 2.1 shows the proportion of all households with internet access in 2009 by country (countries in brackets had no EMIS partner at the time of recruitment). Among the 38 countries where sufficient respondents were recruited to warrant analysis, less than 20% of households had internet access in four of them (Moldova, Ukraine, Bosnia and Herzegovina and Belarus) and less than 33% of households had access in another seven countries (Bulgaria, Turkey, Serbia, the former Yugoslav Republic of Macedonia, Russia, Romania and Greece). As a result, the sample sizes from these countries were smaller and likely to have been less representative of their overall MSM populations.

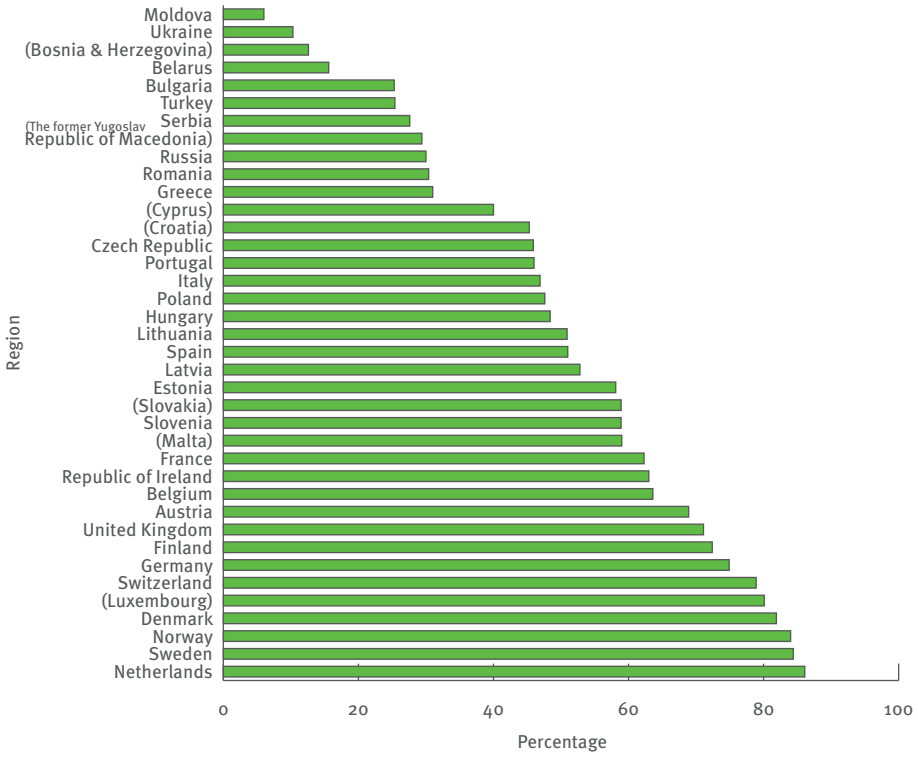
EMIS 2010 was available online for completion for 12 weeks, between Friday 4 June and Tuesday 31 August 2010.

The partners believed that collecting data in summer was advantageous in that a wide variety of summer events and gatherings took place at which the survey could be promoted. On the other hand, there were concerns that in countries with a net outflow of migrant labour, that many MSM might not be in their country of residence. Ultimately data had to be collected over the summer due to the overall project planning and funding arrangements, and it was uncertain what impact this had on the response and recruitment by country.

The survey was functionally identical in each of the 25 language versions, but each version had its own Uniform Resource Locator (URL). Each URL could be accessed directly, but all promotion of the EMIS survey directed users to a dedicated landing page, hosted alongside the survey software and accessible via http://www.emis-survey.eu. This landing page presented the 25 language names in a five-by-five rectangle. A click on a language name took respondents to that language's version of the EMIS questionnaire. The landing page also included a single counter for the total number of surveys submitted across the 25 languages.

The online survey provider stored all incoming data on multiple secure and encrypted data servers. These were backed up daily – and even hourly when data were arriving at the highest rates. Page view data were captured by our survey software, allowing us to estimate attrition across the survey. Respondent-derived data (answers) were transferred to the servers only when the respondent clicked 'Submit answers'; data from respondents who did

Figure 2.1: Household internet access in 2009 by country (International Telecom Union, 2011).



countries in brackets had no EMIS partner at the time of recruitment

not submit the survey were not captured. On submission, respondents were asked to nominate up to three friends to invite via email to complete the survey. Respondents living in Germany who filled in the German version of the questionnaire were offered the option of answering a few extra questions. Whether or not they chose to do this, all respondents were sent to an HIV prevention website appropriate to the language of survey completion and country of residence. Exit websites were selected by EMIS partners.

The survey software providers produced a consolidated version of the questionnaire database so that all incoming data could be monitored online, both within the 25 language versions and as a single consolidated database. EMIS partners could access responses to their language version as the data were collected, allowing them to see how many respondents accrued in real time and conduct descriptive analyses as the survey ran. The volume of completed national responses was monitored daily from the start, and specific promotions were used to stimulate recruitment in countries where lower responses were predicted or observed.

The EMIS partners and website partners started planning for the promotion of EMIS to potential respondents six months before it was launched. It was agreed that promotion would target national and transnational commercial and NGO websites, social networking websites, blogs, printed posters for display in gay venues and business cards for hand-to-hand distribution. There was a commitment to provide all promotional materials in all requested languages.

During the latter stages of questionnaire development and testing, all partners were asked to identify appropriate national and supranational websites for MSM where EMIS could be promoted. LSHTM supported national collaborating partners to establish contact with webmasters and reach agreements about the type of advertisement and promotion that was feasible, and fees payable, aiming to guarantee maximum visibility for minimum investment. If a fee was requested, the LSHTM liaised directly with the webmasters to ensure that payment was made and a precise contract was written and signed.

When a website agreed to promote EMIS, paid or unpaid, they were allocated a specific URL to use on all online advertisements, which included a unique source code. This URL took people to the EMIS landing page, but when they made their language selection and proceeded to the survey, the embedded source code was captured as the first item of data from that participant. As a result, the websites through which respondents were recruited could be identified.

The visual identity of EMIS was intensively discussed among the EMIS partners and, once agreed, it was used to develop the printed (offline) promotional materials and the online buttons and banners for websites.

All EMIS partners were consulted on a core slogan to promote the survey in all materials. The English language version was 'Be part of something huge!' It was intended to promote the benefits to the community of taking part in the study and to be intriguing and mildly suggestive of the sexual content of the survey (bearing in mind the sexual content of many of the promoting websites). National EMIS partners were allowed to modify the slogan if they did not believe it was appropriate and some did so.

All partners were asked whether they needed printed promotion materials for EMIS, including business cards and posters. The lead partner (LSHTM) for this work package helped those who requested such items to formulate the precise wording on the cards and posters and commissioned Sparkloop to produce the materials. Many partners also chose to advertise national services on their promotional materials. Ultimately, 27 different versions of the business card were produced and 139 350 were printed and delivered to 37 EMIS partners. In addition, 23 versions of the poster were produced and 6 635 were printed and delivered to 24 EMIS partners.

All partners and prospective advertisers were asked to confirm the number, size and specification of the online promotional buttons and banners they required and these banners were delivered by Sparkloop[1]. Ultimately they produced 191 different website buttons and banners in 24 languages, all of which remain available on www.sparkloop.com/visuals/emis.

2.3.1 Transnational promotion of EMIS

Five international commercial websites were paid to advertise the survey using instant messages (IMs) to their membership. These consisted of a short text and/or picture sent to the users' personal message box. Clickable banner advertisements were also used on these websites. The five sites were PlanetRomeo[2], Manhunt/Manhunt Cares[3], and Gaydar[4], each of which has members across Europe, Qguys[5] for countries within the Commonwealth of Independent States and the Baltic countries and Qruiser[6] for Scandinavia.

Three other international websites recruited over 1 000 men using only banner advertisements. Recon banner advertising was purchased as a result of requests from a number of EMIS partners, but more than half of all recruits lived in the UK. Similarly, advertising on Barebackcity[7] was purchased at the request of some partners, but the majority of recruits were resident in Germany. Finally, the main website of the International Lesbian, Gay, Bisexual and Intersex Association (ILGA[8]) provided free advertising and recruited more than 100 men residing in a range of European countries.

1 www.sparkloop.com
2 www.PlanetRomeo.com
3 www.manhunt.net
4 www.gaydar.eu
5 www.Qguys.com
6 www.Qruiser.com
7 www.barebackcity.info
8 www.ilga.org

The most successful of all the recruiting websites was the German-origin, Amsterdam-based site PlanetRomeo. This was the first website to promote the survey with IMs to all 1 060 772 of its members across all target countries. PlanetRomeo was a superb advocate for EMIS, organising the delivery of an instant message (IM) prepared jointly with the scientific coordinator and sending these messages during the first week of data collection in all 25 EMIS languages (based on the language members had chosen for their profile, or based on their country of residence). An article and a banner on the website's homepage also appeared later in the recruitment phase. With an average (median) response of 10% per country, and a range of 5–15%, the response to the detailed, language-appropriate PlanetRomeo IMs exceeded all expectations. The 103 000 PlanetRomeo recruits lived in all EMIS countries, but 45% lived in Germany and a further 7% in other German-speaking countries (at, ch, lu). PlanetRomeo recruitment accounted for between one half and three quarters of the entire sample in eight countries (in ascending order of proportion for all recruits via PlanetRomeo: nl, be, hu, pl, ro, tr, it, at) and more than three quarters of all recruits in another ten countries (de, lu, gr, ch, cy, mt, mk, rs, hr, ba. See Figure 2.2).

The second tranche of international advertising was undertaken by Manhunt/Manhunt Cares (based in the USA), which sent IMs in six languages (English, French, German, Italian, Spanish and Portuguese) to 181 000 members in targeted countries during weeks four and five of data collection. They sent a second tranche of instant messages in the last week of recruitment to men who had become members since the first messages were sent out. Manhunt/Manhunt Cares recruited over 12 000 respondents, with the vast majority residing in Portugal, Spain, Republic of Ireland and the UK (Figure 2.2).

The final large-scale, international, paid advertising effort was undertaken by Gaydar, which sent IMs and posted banner advertisements for EMIS in the last five weeks of the recruitment period. To save on costs, Gaydar was asked to target those countries which had not yet reached the threshold of three respondents per 10 000 residents of the country's general population. On request, their IMs and banners targeted potential respondents from Bulgaria, Czech Republic, France, Hungary, Ireland, Latvia, Lithuania, Moldova, the Netherlands, Poland, Portugal, Romania, Russia, Serbia, Sweden, Turkey, the UK and Ukraine. This flexible strategy had variable success: Gaydar recruited over 11 000 men, more than half of whom lived in the UK and most of the remainder resided in Ireland, Portugal, France, the Netherlands and Turkey (Figure 2.2).

In the latter half of the recruitment period, Qguys was paid to send IMs to all its members in Russia, Belarus, Estonia, Latvia, Lithuania, Moldova and Ukraine. IMs were sent in either Russian and English or Latvian and English, depending on the language in which members were registered. Almost two thirds (63%) of the 2 800 men recruited by Qguys lived in the Russian Federation, a quarter (27%) in Ukraine, and a small proportion (5%) in Belarus. The Qguys recruitment efforts had a limited impact on the volume of responses in other countries.

Similarly, Qruiser was paid to place banner advertising on its website, and later to deliver pop-up messages to its members in Sweden, Finland, Norway and Demark, matching the language in the message with the preferred language of the member. Ninety per cent of the 2 377 men recruited through Qruiser lived in Sweden. Qruiser recruitment had a very limited impact on the volume of responses in Norway and Denmark.

In addition, promotional campaigns were organised in most participating countries via Facebook, the world's largest online social network site. Facebook promotion included the establishment of EMIS 'event pages' in all countries, targeted approaches to popular opinion leaders, HIV and lesbian, gay and bisexual organisations and gay commercial organisations. All these people and organisations were asked to promote EMIS though their Facebook networks. This free, but very labour intensive approach yielded only around 1 500 recruits, however it did contribute a reasonable proportion of recruits in some countries, especially Sweden and Italy, but also Denmark, the UK, Slovakia, and Belgium.

During the last four weeks, a final method of targeted recruitment made use of Google Adwords, which presented targeted (paid) advertisements to people who used specific search phrases in the Google search engine. The aim was to boost responses in countries where recruitment had yielded less than one respondent per 10 000 population. Advertising targeted men who lived in Poland, Romania, Russia, Slovakia, and Turkey, with a varying degree of success.

2.3.2 National recruitment to EMIS

The content and purpose of websites for MSM vary considerably between countries. This fact, and the limited funding available for the EMIS partners, affected the variety and volume of recruitment activities that occurred in each country. In some countries, EMIS partners compensated for the lack of national MSM websites by using business cards and posters to promote the survey in a wide range of gay community settings. Elsewhere, the cards and posters were used alongside advertisements on various national websites.

In addition to the ten transnational websites already mentioned, at least another 227 national websites successfully promoted the survey. This is the minimum number of recruiting websites, as some agencies did not use a unique URL but copied one from another website. In addition, websites that placed a banner but did not recruit any qualifying cases will not be included here. Therefore, 237 is the minimum number of unique websites recruiting for EMIS. Less than 10% of recruiting websites (22) required any payment, and some of the payments agreed upon by local partners were small. The goodwill and generosity displayed, which guaranteed the success of EMIS, might be emulated in other research areas.

Five EMIS countries (Bosnia and Herzegovina, Croatia, Cyprus, Luxembourg and Malta) had no active partner at the time of data collection and did not undertake any

country-specific recruitment. Partners in another four countries (Greece, Hungary, Serbia and Slovakia) did not identify any country-specific websites that could promote EMIS. The Macedonian partner withdrew from the project when no funding could be found for a Macedonian language version. In Turkey only local and regional, but no national, LGBT organisations exist. Non-EU countries were ineligible to draw on the EMIS budget for promotion costs. Thus, for many of these 11 countries, the volume of responses (based on general population size) were lower than elsewhere.

In all other countries various websites were used for promotion and most national HIV and LGBT NGOs supported the project, usually at no cost. Fifteen national websites were paid for the promotion of EMIS, including sites in Austria, Bulgaria, Denmark, Greece, Ireland, Italy, Latvia, Lithuania, the Netherlands, Romania, Slovenia, Spain and Switzerland. In some countries (for example, Germany, Sweden and the UK) additional national advertising was financed by national EMIS partners. Resources for all national advertising were provided by EMIS.

In certain countries over 50% of respondents were reached by national websites, indicating a high degree of partner involvement in the recruitment efforts and/or commitment of the commercial partners of EMIS. These countries included Bulgaria, Belarus, Denmark, Czech Republic, Estonia, Finland, Lithuania, Latvia, Moldova, Norway, Russia, Slovakia and Slovenia.

For most countries, however, the largest recruiters were not national websites but the pan-European websites that sent IMs to their members. The largest recruiters were PlanetRomeo (around 100 000 respondents overall and important for all countries except Belarus, the Czech Republic, Ireland, Lithuania, Latvia, Norway, Portugal, Russia, Ukraine, and the UK), Manhunt/Manhunt Cares (around 12 000 respondents, especially important in UK, Spain, Portugal, and Ireland), Gaydar (around 11 000 respondents, especially important in Ireland and the UK), Oguys (around 2 800 respondents, especially important in Russia, Ukraine, Belarus) and Qruiser (around 2 300 respondents, especially important in Sweden and Finland).

2.3.2 National recruitment to EMIS

The content and purpose of websites for MSM vary considerably between countries. This fact, and the limited funding

Figure 2.2: Number of national websites used for recruitment, percentage of respondents from the three largest websites, number of promotional cards and posters

Country	# national websites	% of all recruits PlanetRomeo	% of all recruits Manhunt	% of all recruits Gaydar	# cards	# posters
Austria	3	76.5	0.8	0.0	5000	200
Bosnia & Herzegovina	0	98.2	0.0	0.0	No partner	No partner
Belgium	20	58.9	2.4	0.2	15 000	500
Bulgaria	8	30.2	1.4	1.8	5000	500
Belarus	1	4.5	0.0	0.0	Joined late	Joined late
Switzerland	5	83.9	1.7	0.1	5000	500
Cyprus	0	86.3	0.0	2.6	Joined late	Joined late
Czech Republic	4	15.2	0.8	2.2	5450	100
Germany	14	82.7	0.7	0.0	pdf only	pdf only
Denmark	2	17.8	1.6	0.1	0	0
Estonia	12	23.8	0.6	0.0	2500	0
Spain	13	45.2	23.5	0.1	10 000	500
Finland	6	29.0	0.9	0.1	7000	750
France	5	49.3	7.7	3.6	12 000	1200
Greece	0	83.8	1.2	0.1	5000	200
Croatia	0	93.9	0.4	0.2	Joined late	Joined late
Hungary	0	64.5	0.7	0.1	0	0
Republic of Ireland	12	15.3	19.5	36.2	20 000	50
Italy	8	75.0	1.2	0.1	5000	200
Lithuania	3	13.3	0.2	1.0	150	10
Luxembourg	0	83.1	1.0	0.3	No partner	No partner
Latvia	4	14.8	0.4	1.2	1000	50
Moldova	1	13.8	0.0	3.3	2000	500
The former Yugoslav Republic of Macedonia	0	90.5	1.6	0.0	No partner	No partner
Malta	0	90.2	0.0	2.4	No partner	No partner
Netherlands	5	53.0	4.6	8.0	5000	0
Norway	2	11.7	0.8	0.2	100	50
Poland	2	69.9	0.7	3.3	2600	200
Portugal	19	9.5	57.7	10.2	5000	500
Romania	10	69.8	0.6	1.9	2050	25
Serbia	0	91.8	0.6	1.6	2000	50
Russia	14	10.1	0.7	1.6	20 000	0
Sweden	3	15.5	1.4	0.7	0	0
Slovenia	12	46.3	0.5	0.1	2500	500
Slovakia	0	27.4	1.0	0.3	Joined late	Joined late
Turkey	3	73.9	1.5	6.3	3000	0
Ukraine	7	9.1	0.6	0.1	3000	250
United Kingdom	27	14.8	16.2	46.6	20 000	500

available for the EMIS partners, affected the variety and volume of recruitment activities that occurred in each country. In some countries, EMIS partners compensated for the lack of national MSM websites by using business cards and posters to promote the survey in a wide range of gay community settings. Elsewhere, the cards and posters were used alongside advertisements on various national websites.

In addition to the ten transnational websites already mentioned, at least another 227 national websites successfully promoted the survey. This is the minimum number of recruiting websites, as some agencies did not use a unique URL but copied one from another website. In addition, websites that placed a banner but did not recruit any qualifying cases will not be included here. Therefore, 237 is the minimum number of unique websites recruiting for EMIS. Less than 10% of recruiting websites (22) required any payment, and some of the payments agreed upon by local partners were small. The goodwill and generosity displayed, which guaranteed the success of EMIS, might be emulated in other research areas.

Five EMIS countries (Bosnia and Herzegovina, Croatia, Cyprus, Luxembourg and Malta) had no active partner at the time of data collection and did not undertake any country-specific recruitment. Partners in another four countries (Greece, Hungary, Serbia and Slovakia) did not identify any country-specific websites that could promote EMIS. The Macedonian partner withdrew from the project when no funding could be found for a Macedonian language version. In Turkey only local and regional, but no national, LGBT organisations exist. Non-EU countries were ineligible to draw on the EMIS budget for promotion costs. Thus, for many of these 11 countries, the volume of responses (based on general population size) were lower than elsewhere.

In all other countries various websites were used for promotion and most national HIV and LGBT NGOs supported the project, usually at no cost. Fifteen national websites were paid for the promotion of EMIS, including sites in Austria, Bulgaria, Denmark, Greece, Ireland, Italy, Latvia, Lithuania, the Netherlands, Romania, Slovenia, Spain and Switzerland. In some countries (for example, Germany, Sweden and the UK) additional national advertising was financed by national EMIS partners. Resources for all national advertising were provided by EMIS.

In certain countries over 50% of respondents were reached by national websites, indicating a high degree of partner involvement in the recruitment efforts and/or commitment of the commercial partners of EMIS. These countries included Bulgaria, Belarus, Denmark, Czech Republic, Estonia, Finland, Lithuania, Latvia, Moldova, Norway, Russia, Slovakia and Slovenia.

For most countries, however, the largest recruiters were not national websites but the pan-European websites that sent IMs to their members. The largest recruiters were PlanetRomeo (around 100 000 respondents overall and important for all countries except Belarus, the Czech Republic, Ireland, Lithuania, Latvia, Norway, Portugal, Russia, Ukraine, and the UK), Manhunt/Manhunt Cares (around 12 000 respondents, especially important in UK, Spain, Portugal, and Ireland), Gaydar (around 11 000 respondents, especially important in Ireland and the UK), Oguys (around 2 800 respondents, especially important in Russia, Ukraine, Belarus) and Qruiser (around 2 300 respondents, especially important in Sweden and Finland).

2.4 Attrition across the language versions

The EMIS survey consisted of 25 pages of core questions shown to all respondents, plus a further 18 pages that were shown, depending on responses to preceding questions. Figure 2.3 shows the proportion of men who continued with the survey at each core page.

The first page of the questionnaire, constituting the introduction to EMIS, is represented as 100% in Figure 2.3, which shows the proportion of respondents presented with each of the subsequent 24 core pages. The proportion of respondents who proceeded from the first page to the second page (by confirming that they had read the introductory text, consented to participate and were old enough to have sex legally with men in their country of residence) varied from 36% (Slovenian) to 76% (English). This marked difference accounts for most of the total attrition across the survey. Slovenian stood out from all other languages in terms of the size of the drop, probably because one of the most productive Slovenian promotional sites was not gay-specific, but a generic dating website with MSM sections.

Almost all respondents in all languages who had reached page 2 moved on to page 3. Of those presented with page 2, the proportion of men who reached the 25th page ('Submit') ranged from 62% (in Turkish) to 76% (in Norwegian), with a mean of 68.5% across the 25 languages.

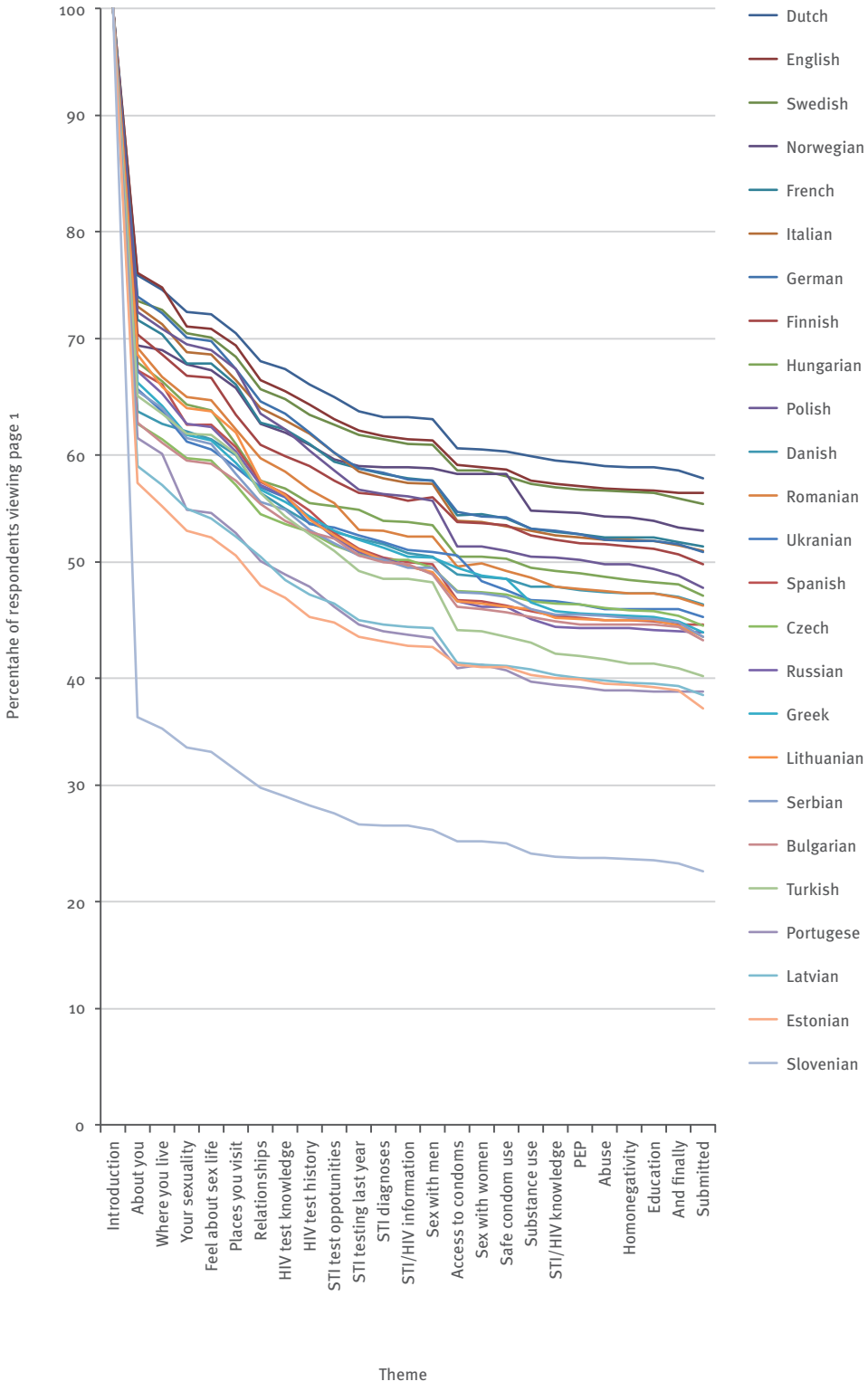
2.5 Total returns and non-qualifiers

At the close of data collection there were 184 469 cases in the consolidated EMIS data file. When downloaded, three cases were found to have been created by incorrect kerning in the survey software (the creation of another case by misreading a comma in an open-ended response), leaving 184 466 cases.

2.5.1 Non-qualifiers

Non-qualifiers were respondents who did not meet the criterion for inclusion in the study, which were: men living in Europe, at or over the age of homosexual consent in their country of residence, who were sexually attracted to men and/or had sex with men, and who indicated that they understood the nature and purpose of the study and consented to take part. Non-qualifying cases, 464 with no stated country of residence and another 1 963 with a country of residence outside of Europe, were removed from the datasets.

Figure 2.3: Attrition from survey pages by language (n=25)



This resulted in 182 039 remaining cases living in Europe before the following exclusions were applied:

- Two respondents had not checked that they had read and understood the introduction;
- 279 cases indicated that they were women (but not transgender women);
- 122 cases responded that they were male but were sexually attracted to women only and thought of themselves as straight or heterosexual and never had sex with men;
- 74 cases provided no evidence for homosexual desire, identity, or sex with men (these men answered no questions on sexual desire, identity or sexual behaviour);
- 303 cases gave no numeric value for age
- 24 cases gave an age between 1 and 12
- 33 cases gave an age over 89.

Certain cases were disqualified on more than one count (for example, being a woman and not stating age), therefore the total number of non-qualifying cases is less than the sum of the exclusions. A total of 181 495 cases met the qualifying criteria (Figure 2.4).

2.6 Datasets

The data were divided into national datasets based on current country of residence, regardless of the language used to complete the survey or country of birth, and also combined into a pan-European dataset. National datasets are available for all countries with 100 or more qualifying cases (Figure 2.4). Thirty-eight country datasets were produced including: Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom.

Cases living in England, Scotland, Wales, and Northern Ireland formed a UK dataset. Those living in British Overseas Territories and Crown Dependencies are available within the UK dataset. Cases that indicated themselves to be living in Northern Ireland are available in both the UK and the Republic of Ireland datasets. Cases living in Overseas Departments, Territories and Collectivities of France are available in the dataset for France. Cases that indicated themselves to be living in the Turkish Republic of Northern Cyprus are available in both the Cyprus dataset and the dataset for Turkey. Cases living in Greenland are available in the dataset for Denmark.

The following 13 European countries and states did not yield 100 qualifying cases: Albania (10), Andorra (19), Armenia (7), Azerbaijan (7), Georgia (10), Iceland (76), Kazakhstan (37), Kosovo[9] (25), Liechtenstein (16), Monaco (11), Montenegro (66), San Marino (5) and Vatican City (2). Data from these 291 MSM are not included in any dataset.

The pan-European dataset includes respondents from all of the 38 countries in Europe with 100 or more qualifying cases (countries in bold in Figure 2.4). Cases living in Overseas Departments, Territories and Collectivities of France; in British Overseas Territories and Crown Dependencies; or in Greenland are not included in the European consolidated dataset.

In several places the questionnaire allowed logically inconsistent data to be supplied, where answers to two questions could not both be valid. Inconsistent data could be submitted by moving backwards and forwards in the survey to change answers given previously. Data could also be submitted simply by supplying inconsistent answers to one or more questions. Given the very large sample recruited, the decision was taken not to try to infer which answer was 'correct' in the case of discrepancies in responses from the same respondent. It was felt that 'editing' the data submitted in this way would resolve some errors but also introduce new ones. Consequently, to increase the quality of the data, cases with inconsistent data on key variables were excluded from the dataset.

Six discrepancy flags were created to indicate whether a respondent had supplied inconsistent data in the following six areas: age (six possible inconsistencies), HIV testing history (four possible inconsistencies), STI testing (three possible inconsistencies), sexual practices (seven possible inconsistencies), steady partners (seven possible inconsistencies), and non-steady partners (13 possible inconsistencies). Overall, 13.2% of qualifying cases in EMIS countries had a discrepancy in one or more of these six areas. National databases contain all cases with discrepant data so that national leads can make exclusions according to their own needs. To strike a balance with case retention, this report excludes cases with discrepancies in two or more areas, which account for 3.7% of qualifying cases in EMIS countries.

In the process of data analyses, four mistakes were spotted in language versions:

- The translation for 'fist-fucking' in the Turkish version of the questionnaire was misleading and therefore incomparable with the other language versions. Answers to two questions in the Turkish language version were therefore defined as missing.
- Respondents to the French version of the questionnaire were asked 'Have you ever taken other drugs than steroids or medicine', instead of 'injected'. Positive answers to this question in the French language version were therefore defined as missing, but the answer 'No, never' was kept.
- The Polish language version had an incorrect coding list for the country of origin, which was corrected with no loss of data.
- In the Spanish language version, one of the questions needed to calculate the score for internalised homonegativity was omitted, leading to erroneous coding of the subsequent questions. While the subsequent coding could be corrected without any loss of data, the omission of the question needed for the score led to a

9 Designation of Kosovo in accordance with UN Security Council Resolution 1244

Figure 2.4: Cases submitted and non-qualifiers by country of residence

	Returns	No consent	Women	Heterosexual	No evidence of homosexuality	Age missing	Aged <13	Aged 90+	Total non-qualifiers	Qualifiers
Albania	11		1			1			1	10
Andorra	20				1				1	19
Armenia	7								0	7
Austria	4217		8	1	1	8	1	1	12	4205
Azerbaijan	8							1	1	7
Belarus	379								0	379
Belgium	4150		3	3	2	3		3	10	4140
Bosnia & Herzegovina	165		1		1	1			2	163
Bulgaria	1096		7	4	1	7			12	1084
Croatia	538			1				1	2	536
Cyprus	271		1			1			1	270
Czech Rep.	2502		6	2	1	7			10	2492
Denmark	1794		2	1		2		2	5	1789
Estonia	629		8	5	1	9	1	1	17	612
Finland	2084		7	4		8			12	2072
France	11 692		34	11	4	37		1	51	11 641
France overseas	122		1			1			1	121
Georgia	11		1			1			1	10
Germany	56 143	1	92	24	15	97	9	9	151	55 992
Greece	3249		3	8	1	6	2	2	18	3231
Greenland	11								0	11
Hungary	2151		7	9	2	7			18	2133
Iceland	76								0	76
Ireland	2307		3	1	1	3			4	2303
Italy	16 724		18	3	11	21	1	1	35	16 689
Kazakhstan	37								0	37
Kosovo*	25								0	25
Latvia	737		2		1	2			3	734
Liechtenstein	16								0	16
Lithuania	624		3	3		3			6	618
Luxembourg	290								0	290
The former Yugoslav Republic of Macedonia	126								0	126
Malta	123								0	123
Moldova	123								0	123
Monaco	11								0	11
Montenegro	67							1	1	66
Netherlands	3922		2		1	3		1	5	3917
Norway	2164		4			4		1	5	2159
Poland	2883		5	1	3	6		1	10	2873
Portugal	5406		11	2	3	11			15	5391
Romania	2477		6	4		6	1		11	2466
Russia	5269		2	1	3	2			6	5263
San Marino	5								0	5
Serbia	1157		1			1	1		2	1155
Slovakia	606				1				1	605
Slovenia	1052		4	6	5	4	1		16	1036
Spain	13 753		11	6	3	12	1	1	23	13 730
Sweden	3279		2	6		3		1	10	3269
Switzerland	5182		6	2	2	6			10	5172
Turkey	2025		7	6	1	7	1		15	2010
Turkish Republic of Northern Cyprus	17								0	17
Ukraine	1794		1	2	3	1		1	7	1787
UK England	16 101	1	5	6	2	8	4	3	24	16 077
UK Northern Ireland	436							1	1	435
UK Scotland	1311		2		2	2			3	1308
UK Wales	577		1		2	1	1		4	573
UK Overseas	84								0	84
Vatican City State	3		1			1			1	2
Total	**182 039**	**2**	**279**	**122**	**74**	**303**	**24**	**33**	**544**	**181495**

* Designation of Kosovo in accordance with UN Security Council Resolution 1244.

reduction of Cronbach's alpha. Although this was not relevant for country comparison, we recommend that the internalised homonegativity score should not be used in analyses of the Spanish national dataset.

All the analyses in the remainder of this report use the consolidated European dataset, which only includes residents of the 38 countries with more than 100 eligible participants and excludes all respondents for whom two or more data discrepancies were observed. This gives us a final sample of 174 209 men for this report.

2.7 Summary

Six associated partners recruited another 77 collaborating partners from academia, public health and civil society in 35 countries. Partners' existing surveys were collected and collated, producing a meta-survey which was discussed by all partners at a two-day summit. Survey development continued through user piloting and partner feedback until the English language content was agreed. Transfer to an online survey application was followed by further testing prior to on-screen translation into 24 other languages, final testing and sign-off. The project's visual identity and promotional materials were developed in close collaboration with all national stakeholders, tailoring products to match country-specific needs while maintaining an overall project identity. Five international gay dating websites were contracted to send instant messages to their members and the survey was promoted via banners on 232 other websites. Daily real-time monitoring of responses allowed targeted spending of the advertising budget to maximise coverage and daily real-time monitoring of responses allowed targeted spending of the advertising budget to maximise the number and geographic distribution of responses.

Data was collected during June–August 2010. Over 184 469 responses were submitted, 94.4% of which were eligible. Partners in 38 countries were handed back a national database of 100 or more respondents for national analysis and reporting, while the associated partners worked on comparisons among 174 000 respondents in 38 countries. EMIS demonstrated the feasibility of a multi-country, multilingual survey with limited public funding. Active participation by a large number of collaborators in the survey design, its visual identity and promotional strategies ensured that an unprecedented number and geographic diversity of men were recruited. Flexible planning was essential and a patchwork of recruitment was required across a range of commercial and community partners. Careful design, piloting, and presentation ensured that the survey was acceptable and authoritative and was perceived to offer community benefit.

3. Demographic profiles and use of settings

3. Demographic profiles and use of settings

3.1 Introduction

This chapter describes the EMIS sample of 174209 participants in terms of gender, settlement size, age, education, employment, sexual orientation of respondents and their male friends, outness, current partnership status and living situation. It also reports on the respondents' visiting of social and sexual settings where prevention interventions may occur.

Please note that the languages used for survey completion, country of birth and expatriate status are reported in Chapter 8 on migration and its associations.

To simplify the presentation of the data, the nine sub-regions (see Chapter 1) are used. A detailed description of the main demographic characteristics by country is presented in the country tables at the end of the chapter.

3.2 Gender

In order to include transgender MSM – and transgender women who have sex with men (who might identify themselves as female but frequent the same subculture or use the same internet sites as MSM for finding sexual partners) – the survey offered the options 'Transgender/transsexual (woman to man)' and 'Transgender/transsexual (man to woman)' in addition to the binary distinction between 'Man' and 'Woman'. Almost all eligible respondents identified themselves as men (over 99%); transgender MSM accounted for 0.16% of the total sample and transgender women for 0.22%. The proportions of transgender men were highest in Finland (1.7%), Sweden (0.9%), Poland (0.3%) and Norway (0.3%). The proportions of transgender women were highest in Latvia (1.4%), Estonia (1%), Serbia (0.6%), Bulgaria (0.6%), Turkey (0.5%) and Romania (0.5%). By sub-region the highest proportion of transgender participants was in North-West (1.2%) and the smallest in East Europe (0.2%).

3.3 Age

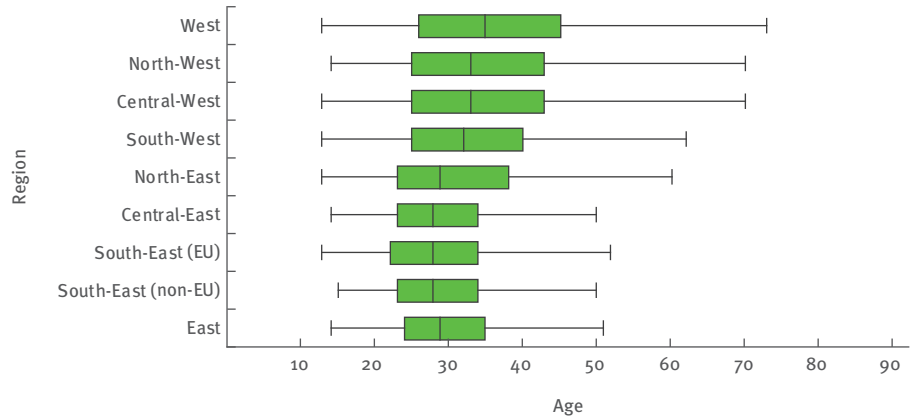
Respondents were between 13 and 89 years old (mean: 34.1 years; standard deviation: 11.3). As the age of homosexual consent varies across Europe (13–18 years), the minimum age of respondents also varied by country. The median age was 32 years, but lower in the eastern European sub-regions (25 years in Moldova, 26 years in Bosnia and Herzegovina and 27 years in Belarus, the Czech Republic, Lithuania, Romania and Turkey) and higher in the western European sub-regions (36 years in the UK and Luxembourg, 37 years in Switzerland and 40 years in the Netherlands) (Figure 3.2).

The commonest age group overall was 25–29 years (18% of respondents). In North-East, Central-East, East and South-East Europe, over 50% of respondents were younger than 30. For analyses with other variables, age was re-coded into five-year age groups (see Figure 3.3), or as three groups based on the quartiles of the national samples: less than 25 years old, 25–39 years old and 40 years and above.

Figure 3.1: Gender of the participants by European sub-region

Gender	West N=38 845	North-West N=8 996	Central-West N=63 780	South-West N=37 226	North-East N=1 897	Central-East N=8 789	South-East (EU) N=3 749	South-East (non-EU) N=3 697	East N=7 230
Man	99.7%	98.8%	99.6%	99.8%	99.0%	99.7%	99.4%	99.5%	99.8%
Trans (man to woman)	0.2%	0.4%	0.3%	0.1%	0.9%	0.1%	0.5%	0.5%	0.1%
Trans (woman to man)	0.1%	0.8%	0.2%	‹0.1%	0.1%	0.2%	0.1%	‹0.1%	0.1%

Figure 3.2: Age profile by European sub-region



Comparing the age distribution of EMIS participants with that of the general population by country, the proportion of the age group 15–49 years is much higher among respondents for all countries. Almost all participants were 15–49 years (between 79% in Netherlands to 100% in the former Yugoslav Republic of Macedonia), while the proportion of this age range in the general population was around 50%.

As expected, age among EMIS respondents – as in all surveys on MSM – does not follow a normal distribution pattern. This is due partly to differences in the age of homosexual consent, differences in sexual debuts and coming out and age-specific differences relating to access to the internet.

3.4 Settlement size

Respondents were asked 'How would you describe the place you live in?' They were offered the response options: 'A very big city (a million or more people)'; 'A big city (500 000–999 999 people)'; 'A medium-sized city (100 000–499 999 people)'; 'A small city or town (10 000–99 999 people)'; or 'A village/the countryside (less than 10 000 people)'. Overall, 46% of respondents indicated that they lived in a city of over 500 000 inhabitants, while 54% lived in medium/small cities or a village/the countryside. Across the 38 countries the median proportion living in a city with over 500 000 inhabitants was 48%, with a range from 2% (Malta, whose population is less than 500 000 inhabitants) to 87% (Turkey). Most men from South-East (non-EU) and East Europe (68% and 75%, respectively) lived in big or very big cities (Figure 3.4).

3.5 Education

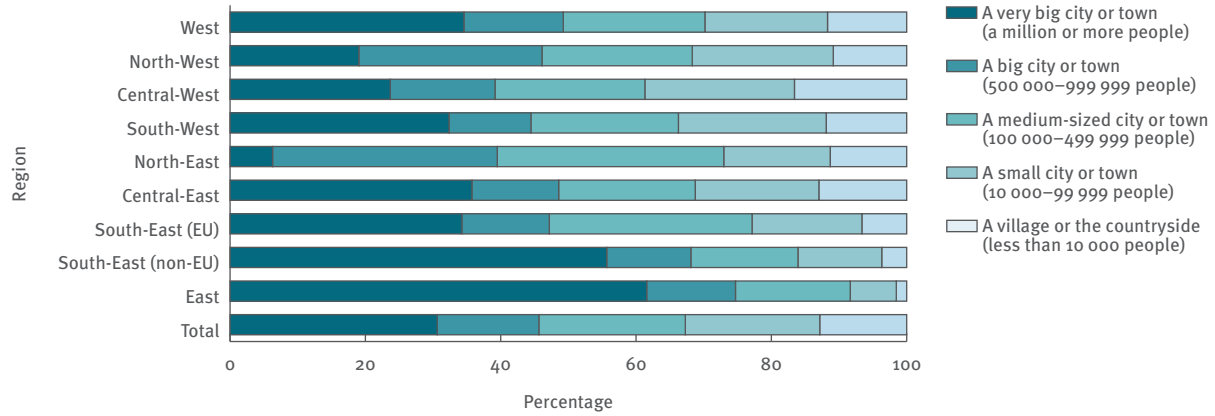
Men were asked 'What is your highest educational qualification?' Exceptionally, the response set for this question varied by survey language, and the range of responses reflected the names of educational qualifications in the countries where the language was (officially) spoken. Nevertheless, all answer categories were grouped according to the International Standard Classification of Educational Degrees (ISCED). Generically these were:

- ISCED 1: no secondary qualification;
- ISCED 2: lower secondary or second stage of basic education: designed to complete basic education, usually following a more subject-oriented pattern;
- ISCED 3: (upper) secondary education: more specialised education typically beginning at age 15 or 16 years and/or the end of compulsory education;
- ISCED 4: post-secondary, non-tertiary education: captures programmes that straddle the boundary between upper- and post-secondary education from an international point of view – e.g. pre-university courses or short vocational programmes;

Figure 3.3: Age distribution by European sub-region

Age	West N=38 845	North-West N=8 996	Central-West N=63 780	South-West N=37 226	North-East N=1 897	Central-East N=8 789	South-East (EU) N=3 749	South-East (non-EU) N=3 697	East N=7 230
<20	5.0%	7.7%	6.3%	5.3%	10.1%	10.2%	9.5%	7.9%	5.5%
20-24	14.1%	15.3%	16.3%	18.0%	21.4%	24.4%	26.6%	24.9%	20.6%
25-29	15.2%	15.1%	16.1%	18.7%	21.7%	23.8%	21.1%	26.9%	25.1%
30-34	14.0%	15.6%	15.0%	16.4%	14.6%	18.4%	18.4%	18.0%	20.6%
35-39	13.3%	12.2%	12.2%	14.5%	10.9%	10.4%	11.7%	10.4%	13.4%
40-44	12.8%	11.5%	13.4%	11.9%	8.9%	6.1%	6.5%	6.1%	8.0%
45-49	10.8%	9.1%	10.0%	8.0%	5.4%	3.0%	2.9%	3.4%	3.6%
50-54	6.6%	5.7%	5.1%	3.8%	3.2%	1.8%	2.1%	1.4%	1.6%
55-59	4.0%	3.7%	2.7%	1.8%	2.3%	1.0%	0.7%	0.6%	0.9%
60-64	2.6%	2.2%	1.5%	0.9%	1.3%	0.7%	0.3%	0.4%	0.5%
65+	1.6%	1.8%	1.5%	0.5%	0.4%	0.3%	0.2%	0.2%	0.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.%0**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Figure 3.4: Settlement size by European sub-region



- ISCED 5: first stage of tertiary education: tertiary programmes having an advanced educational content, cross-classified by field (advanced training);
- ISCED 6: second stage of tertiary education: tertiary programmes leading to the award of an advanced research qualification (e.g. bachelors, masters, PhD).

The borders between ISCED 3 and 4, or between 5 and 6 are difficult to compare between countries. Implementation of the Bologna process, which aims to unify standards and create educational compatibility between European countries, is still in progress. We grouped the six ISCED levels into low (ISCED 1 and 2), medium (ISCED 3 and 4) and high (ISCED 5 and 6) education. Most respondents (50%) reported a high level of education, 42% medium and 8% low. Across the 38 countries the median proportion of men with a higher education was 60%, ranging from 30% (Austria) to 83% (Turkey). Other countries where high levels of education were commonly reported were the former Yugoslav Republic of Macedonia (82%), Ukraine (76%), Poland (74%), Russia (72%) and France (72%). As shown in Figure 3.5, East, South-East (non-EU) and West Europe had the highest percentages of men with higher education (73%, 71% and 66% respectively) and Central-West Europe had the highest percentage of men with a lower level of education (10%).

3.6 Employment

Men were asked 'Which of the following best describes your current occupation?' and were invited to tick one of the following eight categories: 'Employed full-time'; 'Employed part-time'; 'Self-employed'; 'Unemployed';

Figure 3.5: Educational qualifications by European sub-region

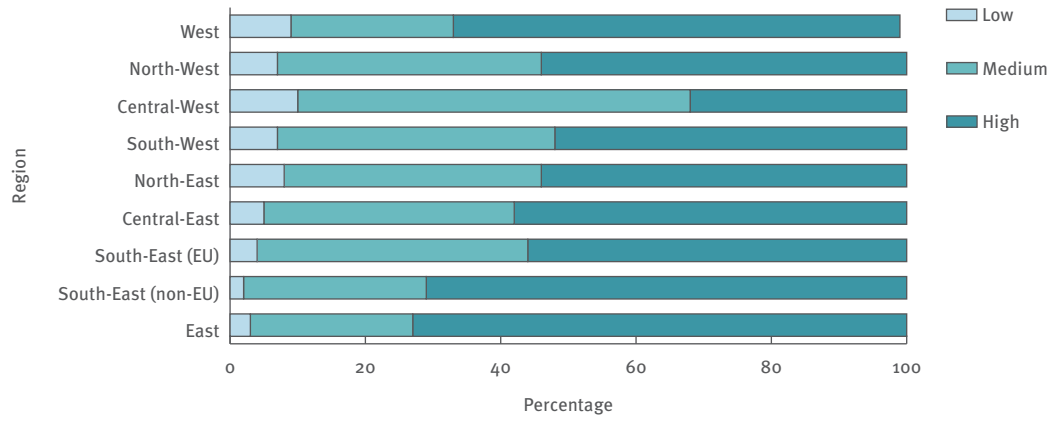


Figure 3.6: Employment status by European sub-region

Employment status	West N=38 845	North-West N=8 996	Central-West N=63 780	South-West N=37 226	North-East N=1 897	Central-East N=8 789	South-East (EU) N=3 749	South-East (non-EU) N=3 697	East N=7 230
Employed full-time	55.8%	55.1%	56.7%	46.9%	57.5%	49.7%	53.0%	47.1%	65.6%
Employed part-time	5.4%	6.4%	5.5%	5.7%	7.2%	3.3%	2.3%	4.4%	10.2%
Self-employed	11.2%	7.5%	11.2%	15.4%	7.3%	12.2%	12.1%	9.0%	6.3%
Unemployed	6.2%	5.5%	5.3%	8.0%	6.0%	4.3%	4.8%	8.1%	4.3%
Student	13.2%	18.0%	12.9%	19.1%	15.5%	25.9%	20.2%	27.1%	9.9%
Retired	3.4%	2.7%	3.2%	1.3%	0.7%	0.9%	0.8%	1.0%	0.6%
Long-term sick leave or medically retired	2.6%	2.7%	1.0%	0.5%	1.1%	0.6%	0.2%	0.1%	0.5%
Other	2.1%	2.1%	4.2%	3.1%	4.7%	3.2%	6.6%	3.2%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Figure 3.7: Employment status by HIV testing history

Employment status	HIV testing history		
	Untested (%)	Last test negative (%)	Tested positive
Employed full-time	46.7	57.6	53.6
Employed part-time	5.4	5.5	6.6
Self-employed	8.2	13.0	14.0
Unemployed	6.6	5.6	7.9
Student	25.9	12.3	3.3
Retired	2.1	2.2	6.5
Long-term sick leave or medically retired	0.8	1.0	5.3
Other	4.4	2.8	2.9

'Student'; 'Retired'; 'Long-term sick leave/medically retired' and 'Other'.

Across all countries the median proportion of unemployed men was 6% with the highest percentages in Serbia (13%), the former Yugoslav Republic of Macedonia (11%), Spain (11%), Greece (9%), and Ireland (9%); and the lowest percentages in Malta (0.8%), Belarus, Cyprus, Czech Republic, Romania, and Hungary (3% each). The employment status of participants by sub-region is shown in Figure 3.6. Respondents living in the East had the highest full-time employment rate (66%) and respondents from South-West and South-East (non-EU) had the highest rates of unemployment (8% in each). Participants from South-East (non-EU) and Central-East Europe had the largest proportion of students (27% and 26%, respectively), which can be broadly explained by differences in the age distribution.

Figure 3.7 shows employment status by HIV testing history (see also Chapter 5). HIV positive men are more likely than untested and HIV negative men to be unemployed, retired or on long-term sick leave/medically retired.

3.7 Sexual orientation

Sexual orientation is described using three components: sexual attraction, sexual identity and sexual behaviour (gender of sexual partners).

Figure 3.8: Sexual attraction by European sub-region

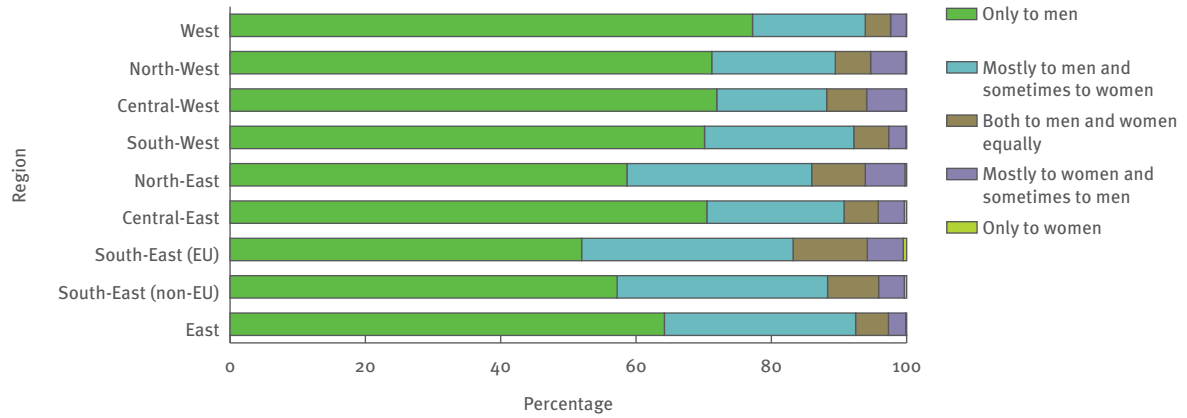
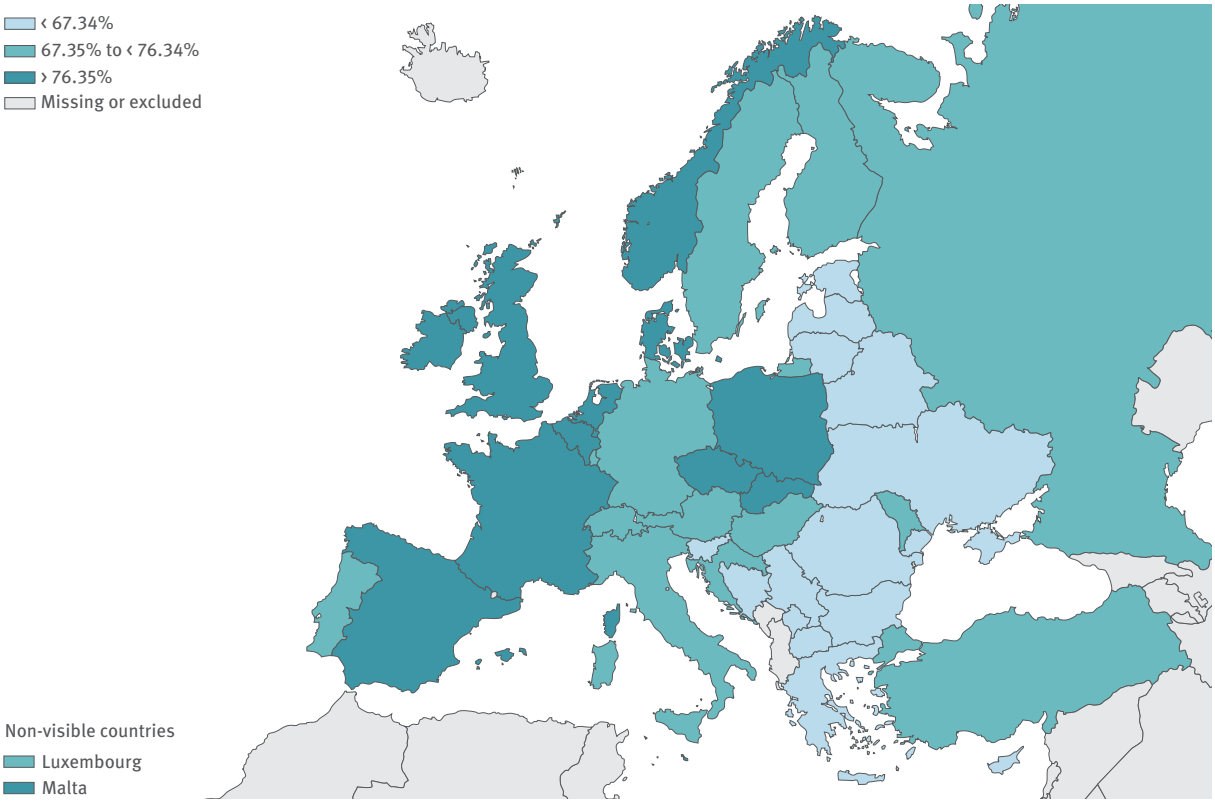


Figure 3.9: Percentage of men who identified themselves as gay or homosexual



Men were asked 'Who are you sexually attracted to?' and asked to tick one of the following: 'Only to men'; 'Mostly to men and sometimes to women'; 'Both to men and women equally'; 'Mostly to women and sometimes to men' and 'Only to women'. Men who responded that they were only attracted to women were only eligible if they reported having sex with men.

For analyses, three groups were used: attracted only to men; attracted to both men and women and attracted only to women: 71% of respondents reported being sexually attracted to men only, 29% were attracted to men and women and 0.1% were attracted only to women. Across the 38 countries the median proportion attracted only to men was 67% with a range from 47% (in the former Yugoslav Republic of Macedonia) to 83% (in Malta). The highest proportions of men who were attracted to both genders were from South-East and North-East Europe (Figure 3.8).

Men were also asked 'Which of the following options best describes how you think of yourself?' and were offered five options: 'Gay or homosexual'; 'Bisexual'; 'Straight or heterosexual'; 'Any other term' and 'I don't usually use a term'. For this analysis, the last three categories were grouped into one labelled 'Other'. Across the 38 countries the median proportion of men who identified themselves as gay or homosexual was 72%, with the highest proportions in the Netherlands (87%), Belgium (85%), France (84%), the UK (83%), Poland (83%), Norway (82%), Malta (82%), Spain (80%) and the Czech Republic (80%). The lowest proportions were found in Bosnia and Herzegovina (52%), Bulgaria (53%), Romania (54%) and Serbia (55%) (Figure 3.9).

In the sample overall, 76% of respondents identified themselves as gay or homosexual, 15% as bisexual and 9% fell into the 'other' category. The sub-regions with the highest proportions of men who identified themselves as gay or homosexual were West (83%), North-West (77%) and Central-West (76%). The sub-regions with the highest percentages of men who identified themselves as bisexual were South-East (EU), North-East and South-East (non-EU) (28%, 23%, and 22%, respectively) (Figure 3.10).

Sexual orientation based on the gender of partners was derived from responses to two questions: 'When did you last have any kind of sex with a man?' and 'When did you last have any kind of sex with a woman?' In the last 12 months, most respondents had only had sex with men (82%), while 11% had had sex with both men and women, and 2% only with women. Another 5% reported no sexual activity with men or women in the last 12 months.

Figure 3.10: Sexual identity by European sub-region

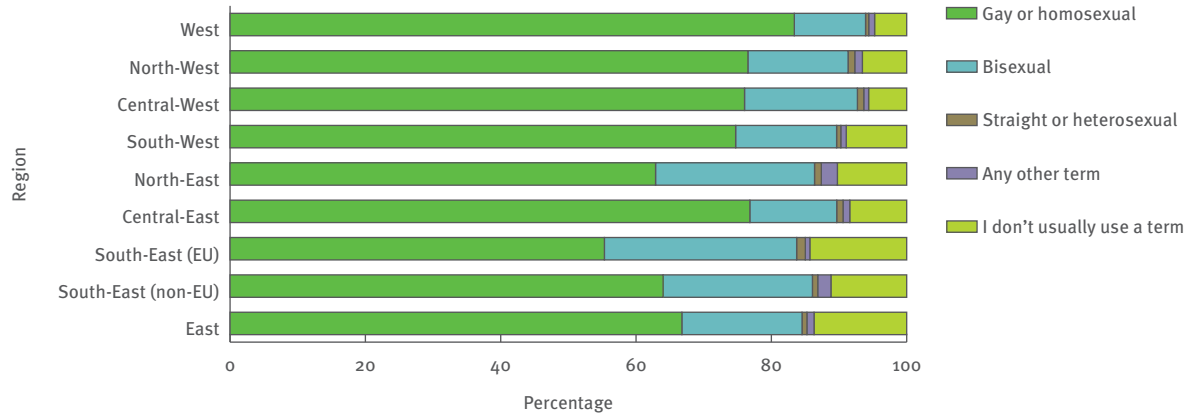
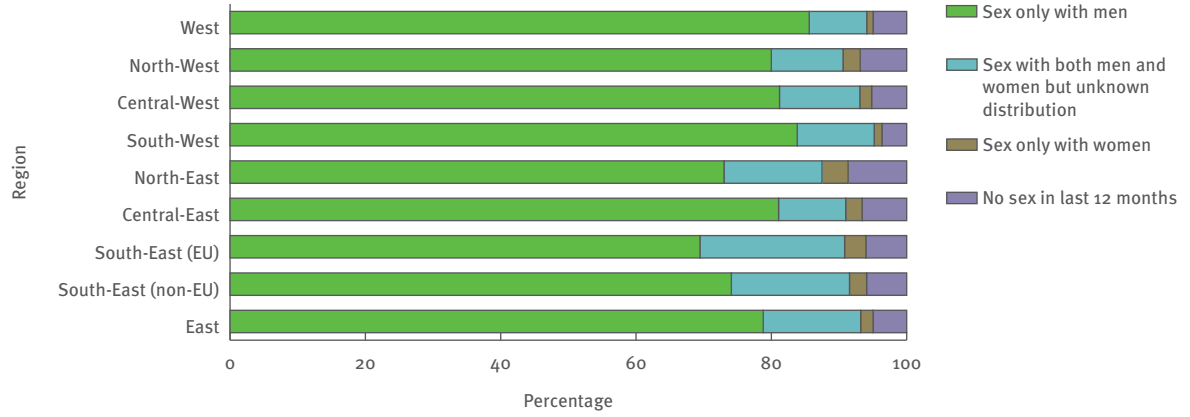


Figure 3.11: Gender of partners in the last 12 months by European sub-region



Across all countries, the median proportion of respondents who had only had sex with men was 80%, ranging from 64% (in Bosnia and Herzegovina) to 88% (in the Netherlands). The highest percentages of men who had sex with both men and women were in South-East Europe (EU) and South-East Europe (non-EU) (21% and 17%, respectively) (Figure 3.11).

3.8 Outness

Outness was defined as the degree to which people are open about their sexual attraction with others. Respondents were asked: 'Thinking about all the people who know you (including family, friends and work or study colleagues), what proportion know that you are attracted to men?' Five answers were offered: 'All or almost all'; 'More than half'; 'Less than half'; 'Few' and 'None'.

Overall, 39% of men in the EMIS survey were out to all or almost all who know them and 10% were out to no-one. There are huge differences in the extent of outness across Europe. The proportion of men who were out to all or almost all the people they knew ranged from 3% in Bosnia and Herzegovina to 70% in the Netherlands (country median: 19%). More than two thirds of men were out in the UK, France, Sweden, Norway and Belgium. Less than a quarter were out in the former Yugoslav Republic of Macedonia, Moldova, Serbia, Romania, Croatia, Turkey, Lithuania, Ukraine and Belarus. Not being out to anyone was reported by a median of 12%, with the lowest proportions in Malta (2%), the Netherlands (4%), Belgium (5%), France (6%) and Norway; and the highest proportions in Bosnia and Herzegovina (40%), Serbia (31%), Romania (28%) and Slovenia (26%).

When analysed by sub-region, over 50% of men from North-East, East, South-East (non EU), and South-East (EU) were out to no-one or to only a few people. The sub-regions of Central-West, North-West, and West Europe had the highest proportions of men who were out to all/almost everyone they knew (Figure 3.12).

3.9 Social connections with other gay or bisexual men

To measure the extent to which men were socially connected with other gay and bisexual men, they were asked 'What proportion of your male friends are attracted to men?' and given a set of six possible responses: 'Almost all of them', 'More than half of them', 'Approximately half of them', 'Less than half of them', 'Almost none of them' and 'I don't have any male friends'. These responses were re-coded into

Figure 3.12: Proportion of people who are aware of respondent's attraction to men (by European sub-region)

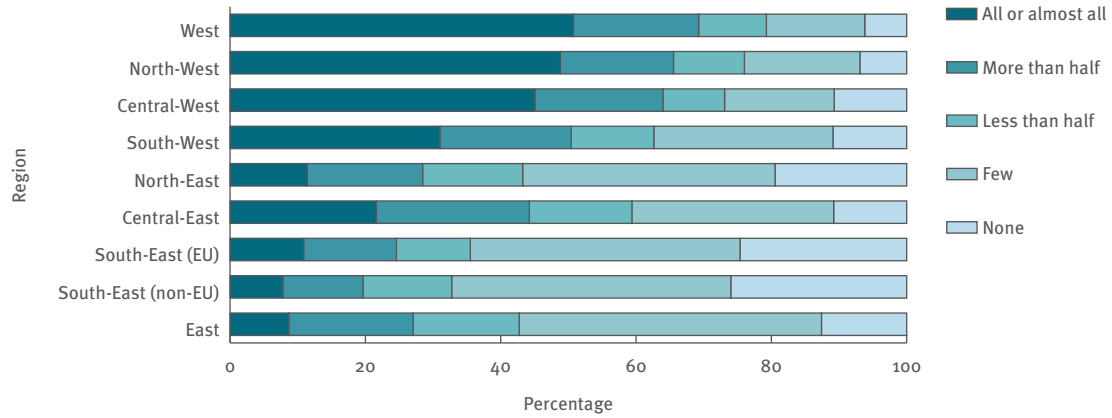
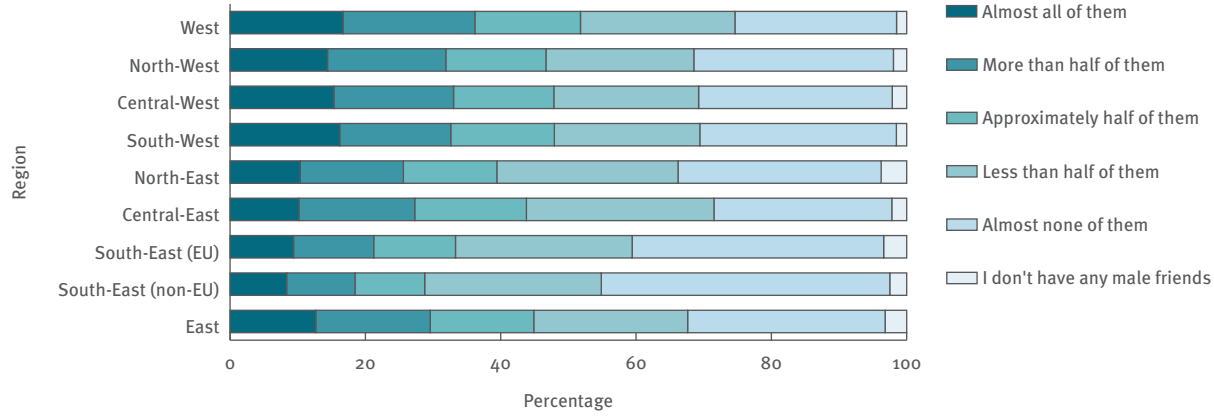


Figure 3.13: Proportion of respondents' male friends who are also attracted to men (by European sub-region)



three categories: 'Most or all', 'Some' and 'None or few' (the latter including having no male friends).

Across all countries the median proportion of respondents who indicated that almost all their male friends were attracted to men ranged from 4% in Moldova to 20% in the Netherlands (country median: 11%). As shown in Figure 3.13, the sub-regions of South-East (non-EU) and South-East (EU) Europe reported the highest percentages of men who had no or only few male friends who were attracted to men (45% and 40%, respectively). The highest percentages of respondents with most or all friends attracted to men were in West (17%), South-West (16%) and Central-West Europe (15%).

3.10 Current partnership status

Men were asked 'Are you currently in a steady relationship?' They were asked to tick all applicable responses from: 'Yes, with a man'; 'Yes, with more than one man'; 'Yes, with a woman'; 'Yes, with more than one woman', and 'No, I'm single'. These responses were re-coded into four categories. In the overall sample, 54% were single (currently no steady partner), 39% were in a steady relationship with a man and 6% were in a steady relationship with a woman. Less than 1% had both male and female steady partners at the time of interview. Across the 38 countries the median proportion who indicated that they were single was 54%, ranging from 42% in Belarus to 70% in Bosnia and Herzegovina.

Respondents who said that they were currently in a steady relationship with a man (including the small proportion with both male and female steady partners) made up 40% of the whole sample. Across the 38 countries the median proportion of men in a steady relationship with a man was 39%. Countries with lower percentages of men in a steady relationship with a man were Bosnia and Herzegovina (22%), the former Yugoslav Republic of Macedonia (26%), and Cyprus (29%). Countries with the highest proportions of men in a steady relationship with a man were Belarus (53%), Russia (52%) and Ukraine (49%).

In the entire sample, the majority of men who were in a steady relationship with another man (60%) had been in that relationship for over three years, while 19% had been in a relationship for less than one year. As shown in Figure 3.14, the sub-regions with the highest percentages of men in steady relationships were East, North-East and Central-East Europe (51%, 43% and 43%, respectively).

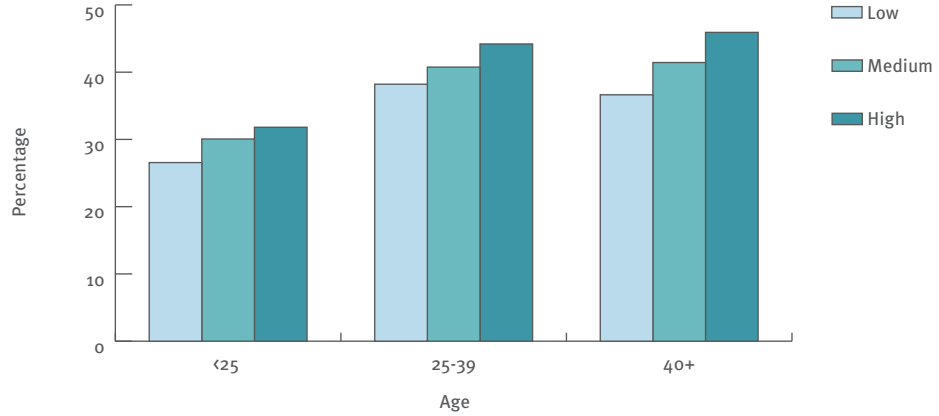
As expected from the age distribution, men from West, North-West and Central-West Europe had steady relationships with the longest duration (over five years), whereas men from South-East (non-EU), South-East (EU), and Central-East Europe had steady relationships with the shortest duration (less than one year).

Levels of educational attainment as well as age were strongly associated with having a steady male partner.

Figure 3.14: Respondents reporting a current steady relationship with a man (by European sub-region)

	West N=38 845	North-West N=8 996	Central-West N=63 780	South-West N=37 226	North-East N=1 897	Central-East N=8 789	South-East (EU) N=3 749	South-East (non-EU) N=3 697	East N=7 230
Current relationship with a man (%)									
No	58.9	62.4	58.7	65.2	56.8	57.5	64.3	67.0	49.0
Yes	41.1	37.6	41.3	34.8	43.2	42.5	35.7	33.0	51.0
Duration of the current homosexual relationship (%) (N=25,138)									
Less than one year	16.8	17.2	16.4	23.2	22.0	24.4	31.6	36.5	21.9
1-2 years	17.5	18.2	20.0	22.7	23.5	26.0	26.3	23.4	25.0
3-5 years	22.1	23.7	24.9	24.2	29.5	24.8	23.5	23.7	31.2
5-10 years	21.7	22.2	21.6	17.8	16.9	17.7	13.7	12.0	16.3
More than 10 years	21.9	18.7	17.2	12.1	8.1	7.2	5.0	4.5	5.5

Figure 3.15: Respondents reporting a current steady relationship with a man, by education level (low/medium/high) and age group



Higher proportions of older and more educated men reported having a steady partner (Figure 3.15).

Seven per cent of the total sample reported being in a current steady relationship with a woman. Across the 38 countries the median proportion of men with a steady female partner was 7%, ranging from 0.8% in Malta and 3% in France, Poland and Slovakia to 12% in Latvia, Luxembourg and Romania, and 14% in Slovenia.

Eighty-two per cent of men with a steady female partner reported that their relationships had lasted over three years and 47% reported relationships of over 10 years. The sub-regions with the highest percentages of men in heterosexual relationships were South-East (EU) and North-East Europe (both 10%) (Figure 3.16). Over 75% of men in steady relationships with women in all sub-regions, except in South-East (EU) and South-East (non-EU) Europe, reported that their heterosexual relationship had lasted over three years.

As with homosexual partnerships, age was strongly associated with reporting of a heterosexual partnership. Among men 40 years or over the percentage living in a steady relationship with a woman was four times higher than for men under 25 years. There were small differences in the proportion with a steady female partner across the education groups, with less well-educated men being slightly more likely to have a steady female partner in the older age groups (Figure 3.17).

3.11 Living situation

Men were asked 'Who do you live with?' and asked to tick all that applied from the following list: 'Male partner', 'Female partner', 'Child(ren)', 'Friends', 'One or both of my parents', 'Other family members', 'Others' and 'I live by myself'. Over a third of all respondents reported that they lived alone (38%), 23% reported living with a male partner and 19% lived with their parents.

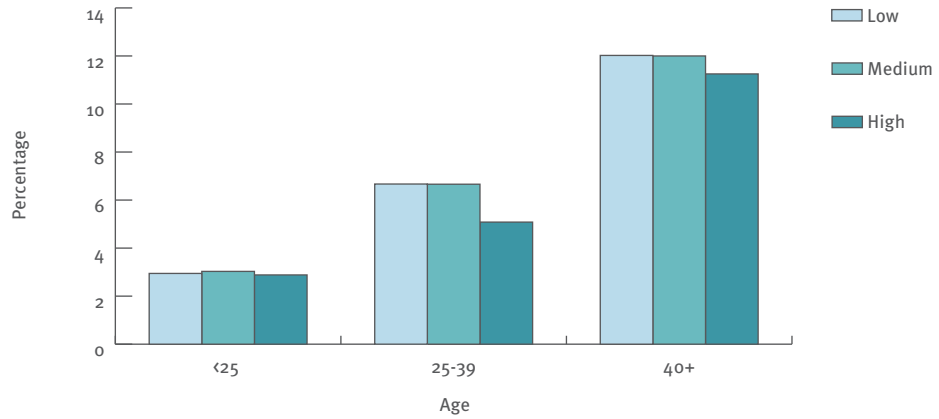
Across all countries the median proportion of men living alone was 30%, ranging from 13% in Moldova to 50% in Sweden. The median proportion of men living with one or both parents was 26% (range: 7% in the Netherlands to 54% in the former Yugoslav Republic of Macedonia). Household structures by sub-region are summarised in Figure 3.18. The highest proportions of men living with one or both parents were in South-East (non-EU), South-East (EU) and South-West Europe (42%, 30%, and 30%, respectively) and the highest proportions of men living alone were in North-West, Central-West and West Europe (49%, 45% and 38%, respectively).

As participants who lived with their parents or by themselves were the largest groups, these two categories were analysed by age group (‹25, 25-35, ›35 years). In all age groups, the proportion of participants who lived with their parents was highest in South-East Europe, whereas North-West and Central-West showed the largest proportions of men who lived by themselves.

Figure 3.16: Respondents reporting a steady relationship with a woman (by European sub-region)

	West N=38 845	North-West N=8 996	Central-West N=63 780	South-West N=37 226	North-East N=1 897	Central-East N=8 789	South-East (EU) N=3 749	South-East (non-EU) N=3 697	East N=7 230
Current relationship with a woman (%)									
No	95.1	93.2	91.6	94.7	90.2	94.3	89.7	92.4	92.6
Yes	4.9	6.8	8.4	5.3	9.8	5.7	10.3	7.6	7.4
Duration of the current heterosexual relationship (%) (N=11 579)									
Less than one year	6.6	9.0	7.0	8.7	11.5	7.6	15.1	18.2	7.0
1-2 years	8.0	12.1	10.8	9.0	12.0	11.9	16.6	16.8	11.7
3-5 years	12.1	15.6	15.4	15.6	14.8	18.3	20.0	19.3	21.7
5-10 years	14.7	16.4	18.6	19.2	21.9	22.5	21.8	20.0	26.5
More than 10 years	58.6	46.9	48.1	47.4	39.9	39.6	26.5	25.7	33.1

Figure 3.17: Respondents reporting a steady relationship with a woman, by education level (low/medium/high) and age



3.12 Social and sexual venues

The social and sex lives of MSM are often organised around specific social venues and places ('scenes'). Participation in these scenes can differ between MSM, however, both at individual and country level. At the individual level, attendance at particular venues is related to the expression and self-definition of identity. At a country level, stigma and homophobia at social and institutional levels can influence the public expression of personal identities and the ability to self-organise as a unified community.

3.12.1 Classification of social and sexual venues

Respondents were asked when they had last visited the following places in their country of residence: a gay community centre, organisation or social group; a gay café, bar or pub; a gay disco or nightclub; the backroom of a bar, a gay sex club or a public gay sex party; a gay sex party in a private home; a gay sauna; a porn cinema; a cruising location where men meet for sex (street, roadside service area, park, beach, baths, lavatory) or a website for gays or bisexuals.

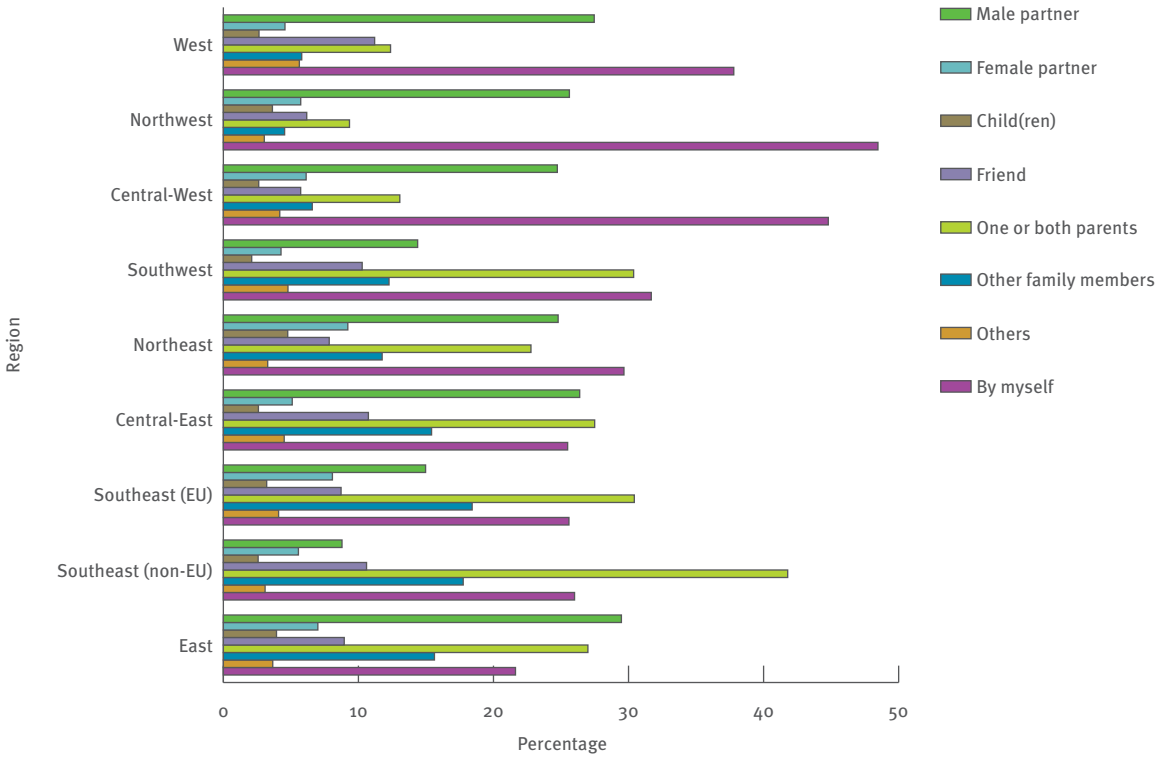
Factor analysis was performed in order to generate a preliminary idea of possible clusters. The result was interpreted following theoretical criteria in order to construct clusters (categories) as follows: community centres, organisations and social groups; commercial social venues; sex venues and websites. Although factor analysis grouped this variable with the second category (social venues), internal consistency was improved by keeping 'community centre, organisation and social groups' out of the social venue cluster, which also improved interpretability. In fact, attendance of gay community centres is often linked with activism and specific commitment to gay communities, while bars and discos are less frequently linked with activism or community. Furthermore, the availability of these two types of places could differ from one country to another, depending on the social and institutional climate with regard to homosexuality. Therefore, cafés, bars, and pubs with gay discos and night clubs, were clustered as commercial social venues. All other venues, except gay websites, were clustered together as sex venues. The category 'gay websites' was used alone as the original variable.

Recent attendance was defined as attendance in the last four weeks, with the exception of the gay websites, where recent attendance was defined as in the last seven days.

3.12.2 Gay community centres, organisations and social groups in the last four weeks

Overall 12% of the sample had visited a gay community centre, organisation or social group in the preceding four weeks. The highest percentages were found in Sweden (22%), Denmark (21%) and Moldova (20%), and the lowest in Bosnia and Herzegovina (1%), Latvia (3%) and Russia (4%). At the sub-regional level the picture was even clearer: in all eastern European sub-regions, percentages did not exceed 10% of respondents (ranging from 6% in East to 10% in Central-East Europe), while in the western European sub-regions these percentages always exceeded 10% and reached 18% in the North-West (Figure 3.19).

Figure 3.18: People that the respondents live with, by European sub-region



Age appeared to be only weakly associated with attending these venues: 13% of respondents were aged 40 years or above, compared with 11% of those between 25 and 39 years and 12% of those under 25 years. Other venues showed much greater variation by age. After adjusting for other factors, however, age was significantly associated with gay community venue attendance: men under 25 years were more likely to visit gay venues than men over 40 (Figure 3.20).

Education was not clearly associated with attendance of these venues. Slightly more men with higher levels of education had visited them recently (12%) than those with medium (11%) or lower levels of education (11%).

Consideration of socio-sexual identity variables, such as self-definition, visibility and friends who are attracted to men clarified tendencies towards venue attendance. Those who identified themselves as gay or homosexual visited gay community centres (13%) more often than those who self-identified as bisexual (6%) or who had some other identity label (8%). A higher percentage of those who reported that they were out to most of the people they knew visited these venues (15%) than those who were not (7%). Those who reported that they had a network of friends most of whom were attracted to men visited gay community centres more often (18%) than those who reported that only some or a few friends were attracted to men (14% and 4%, respectively).

3.12.3 Gay social-commercial venues in the last 4 weeks

Commercial social venues were visited more frequently than community centres, organisations and groups. Almost half of the overall sample reported having visited such venues in the preceding four weeks (46%), ranging from 5% (Bosnia and Herzegovina), 20% (Slovenia) and 23% (Croatia) to 54% (United Kingdom), 56% (Belgium) and 61% (Spain). As with community centres, the highest percentages were found in the western European sub-regions, ranging from 45% in North-West to 52% in the West Europe. Meanwhile in the eastern European sub-regions percentages were always below 30%, with the exception of Central-East Europe (40%).

As with the community centre category of venue, an association was found with age. Those who reported recent attendance at social-commercial venues were more likely to be aged 25 to 39 years (50%), while younger and older MSM reported lower levels of attendance (42% and 43%, respectively).

Again, a higher educational level was associated with attendance. More highly educated men had recently visited commercial social venues (49%) than those with medium (44%) or lower (39%) educational levels.

An association with socio-sexual identity was also found with these venues: those who self-identified as gay or homosexual visited social-commercial venues (53%) more often than those who self-identified as bisexual (21%) or who had some other identity (28%). Those who reported being out to most of the people they knew visited such

Figure 3.19: Demographic associations with use of particular social settings

	% Visited gay centre, organisation or social group in last four weeks	% Visited gay commercial venue in last four weeks	% Visited a sex-venue in last four weeks	% Visited a gay website in last seven days
European sub-region				
West	14.3	52.0	35.3	94.1
North-West	17.8	45.3	23.1	94.1
Central-West	10.8	45.8	30.5	92.6
South-West	11.4	50.4	33.4	94.0
North-East	6.7	28.6	23.6	94.2
Central-East	10.0	39.7	20.9	93.7
South-East (EU)	7.0	25.4	22.1	92.1
South-East (non-EU)	9.3	28.9	17.3	94.0
East	6.5	28.5	22.9	95.5
Age				
<25	11.7	42.2	16.1	94.1
25-39	11.0	49.6	29.8	93.6
25-39	11.0	49.6	29.8	93.6
Education				
Low	11.3	38.6	33.2	90.4
Medium	11.2	43.8	28.5	93.4
High	12.2	49.4	31.7	94.2
Sexual identity				
Gay or homosexual	13.3	53.1	31.7	94.2
Bisexual	5.9	21.4	28.4	92.2
Other	7.6	28.1	23.0	90.0
Outness				
Out to most people	15.3	58.5	33.1	93.8
All other answers	6.8	29.4	26.9	93.3
Proportion of male friends also attracted to men				
Most or all	18.4	69.3	42.2	94.6
Some	13.9	54.5	32.0	93.8
None or few	4.4	19.3	21.8	92.6

venues (59%) more than those who were not (29%); those who reported having a network of friends most of whom were attracted to men visited social commercial venues (69%) more than those who had only some (55%) or few (19%) friends that were attracted to men.

3.12.4 Sex-venues in the preceding four weeks

Overall, 30.5% of the sample had visited a sex venue in the previous four weeks. The highest percentages were found in the Netherlands (41%), France (39%), Belgium (38%) and Spain (38%), and the lowest percentages in Slovakia (12%), Serbia (14%) and Norway (15%). In western European sub-regions, percentages of those visiting a sex venue in the previous four weeks were higher, ranging from 30% of respondents in Central-West to 35% in South-West Europe. North-West (23%) constituted the only exception, where the percentage was similar to those in eastern European sub-regions, ranging from 17% in South-East (non-EU) to 24% in North-East Europe.

In addition, there was an association with age and the difference between older and younger MSM was larger than that for all other kinds of venues. More men over 39 years had visited a sex venue recently (44%) than men aged 25-39 years (30%) and those under 25 years (16%).

A further association was found with socio-sexual identity: more men who self-identified as gay or homosexual had visited sex venues recently (32%) than those who self-identified as bisexual (28%) or had some other identity (23%). Those who reported that they were out to most of the people they knew visited such venues (33%) more than those who were not out (27%). Those who reported that most of their friends were attracted to men visited sex venues (42%) more than those who reported that only some (32%) or few (22%) of their friends were attracted to men.

3.12.5 Gay websites in the previous seven days

Since EMIS respondents were recruited online and since 96.6% of the overall sample had visited gay websites in the preceding four weeks, the percentages of those who visited gay websites were analysed using a shorter time span of one week.

Overall, 94% of the sample had visited a gay website in the last seven days. In general, percentages in all countries

Figure 3.20: Demographic associations with use of particular social settings (multivariable logistic regression)

	Community centre (last four weeks)			Gay commercial venue (last four weeks)			Gay sex venue (last four weeks)			Internet (last seven days)		
	AOR	95%-CI		AOR	95%-CI		AOR	95%-CI		AOR	95%-CI	
		Lower	Upper		Lower	Upper		Lower	Upper		Lower	Upper
Recruitment												
PlanetRomeo	0.79	0.77	0.82	1.11	1.08	1.13	1.13	1.10	1.16	1.37	1.31	1.43
Other	1			1			1			1		
Age												
<25	1.19	1.14	1.24	1.62	1.56	1.67	0.30	0.29	0.31	1.32	1.25	1.40
25-39	0.90	0.86	0.93	1.47	1.43	1.51	0.59	0.57	0.60	1.08	1.03	1.13
40+	1			1			1			1		
Education												
Low/Medium	0.96	0.93	0.99	0.86	0.84	0.88	1.03	1.01	1.06	0.84	0.80	0.88
High	1			1			1			1		
Settlement size												
<500 000	0.93	0.90	0.96	0.46	0.45	0.48	0.88	0.86	0.90	1.06	1.02	1.11
Larger cities	1			1			1			1		
HIV status												
Untested or last test negative	0.78	0.74	0.82	0.81	0.78	0.85	0.47	0.45	0.49	1.17	1.09	1.26
Last test positive	1			1			1			1		
Outness												
Out to no-one or only a few	0.63	0.60	0.65	0.57	0.56	0.59	1.01	0.98	1.03	1.05	1.00	1.10
Out to more than a few	1			1			1			1		
European sub-region												
West	1.94	1.75	2.15	2.77	2.60	2.95	1.47	1.37	1.56	0.66	0.58	0.75
North-West	2.71	2.42	3.04	2.44	2.27	2.64	0.88	0.81	0.95	0.73	0.63	0.85
Central-West	1.74	1.56	1.93	2.53	2.37	2.70	1.19	1.12	1.27	0.48	0.42	0.55
South-West	1.83	1.65	2.03	3.24	3.04	3.45	1.49	1.40	1.59	0.64	0.56	0.73
North-East	1.13	0.91	1.39	1.49	1.31	1.69	1.09	0.96	1.23	0.76	0.60	0.96
Central-East	1.55	1.37	1.75	1.78	1.65	1.92	0.93	0.86	1.01	0.61	0.53	0.71
South-East (EU)	1.35	1.14	1.59	1.22	1.10	1.35	1.06	0.96	1.17	0.48	0.41	0.58
South-East (non-EU)	2.09	1.79	2.44	1.26	1.14	1.40	0.76	0.68	0.84	0.58	0.48	0.70
East	1			1			1			1		
Sexual identity												
Gay or homosexual	1.21	1.13	1.30	1.78	1.70	1.85	1.20	1.15	1.25	1.77	1.66	1.89
Bisexual	0.97	0.89	1.05	0.97	0.92	1.02	1.41	1.34	1.48	1.35	1.25	1.45
Other	1			1			1			1		
Proportion of male friends attracted to men												
Most or all	3.76	3.55	3.98	5.63	5.42	5.85	2.07	1.99	2.15	1.31	1.22	1.40
Some	2.94	2.80	3.09	3.55	3.45	3.65	1.51	1.47	1.55	1.10	1.05	1.16
None or few	1			1			1			1		
Constant	**0.05**			**0.14**			**0.64**			**9.97**		

exceeded 90%, with the only exceptions being Finland, Slovenia, and Bulgaria (89%, 89% and 90%, respectively). More men under 25 years had visited a gay website in the last seven days than men aged 25 to 39 years, or those aged 40 and above (94%, 94% and 93%, respectively).

Education was associated with visiting gay websites in a pattern similar to that shown for gay social venues (both commercial and community): more highly educated men had visited a gay website in the last seven days (94%) than those with medium or lower levels of education (93.4% and 90%, respectively).

Finally, MSM who self-identified as gay, who were more out and who had more friends who were attracted to men were more likely to visit gay websites than other men.

3.12.6 Social needs and settings used

Loneliness and opportunities to make new friends were found to be associated with the attendance of venues for gay men. Loneliness was assessed through disagreement or agreement with the statement 'I sometimes feel lonely' on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Opportunities to make new friends were assessed with a similar scale in relation to the statement 'I know where to go if I want to make some new friends'.

With regards to loneliness, mean scores were lower among those who reported visiting gay community centres (mean=3.22), gay commercial social venues (3.24), or sex-venues (3.21) in the preceding four weeks than among those who had visited them previously or never (3.32, 3.37, 3.35, respectively). Conversely, the mean score for feelings of loneliness was higher among those who had visited a gay website in the previous seven days (3.32) than among those who had visited in the past or never (3.19). A similar difference was also apparent between those who had and had not visited a gay website in the last 24 hours.

Those who attended non-virtual places more frequently were found to have more opportunities for new friendships. Those who reported that they had visited gay community centres, gay social commercial venues, or sex venues in the last four weeks had higher mean scores for new friendship opportunities (3.58, 3.49, 3.46, respectively) than those who had visited them in the past or never (3.29, 3.17, 3.26, respectively). Those visiting gay websites in the last seven days had slightly higher mean scores (albeit significant from a statistical point of view) for knowing where to make new friends (3.32) than those who had never visited or done so further in the past (3.29). This result was also confirmed by analysing data for a 24-hour period.

Figure 3.21: Setting use associations with social needs

	I sometimes feel lonely (mean)	I know where to go if I want to make some new friends (mean)
Visited gay community centres, organisations or social groups in the last four weeks		
Never or before	3.32	3.29
Last four weeks	3.22	3.58
Visited a gay social commercial venue in the last four weeks		
Never or before	3.37	3.17
Last four weeks	3.24	3.49
Visited a gay sex-venue in the last four weeks		
Never or before	3.35	3.26
Last four weeks	3.21	3.46
Visited a gay website in the last seven days		
Never or before	3.19	3.29
Last four weeks	3.32	3.32

3.13 Limitations

Some relevant socio-demographic data were not collected in the survey. The lack of good proxies for migration background, income and socioeconomic status are critical points to consider. These data were difficult to collect due to the length of the survey, the diversity of EMIS partners and, most importantly, difficulties related to collecting and measuring data across countries and societies. Questions on self-defining migration background were seen as discriminatory by a number of EMIS partners.

EMIS respondents were recruited through the internet. Previous studies have shown that respondents surveyed online differ in several aspects from men surveyed at gay venues (Rhodes et al. 2002, Elford et al. 2004, Knapp et al. 2004, Chiasson et al. 2007, Fernández-Dávila & Zaragoza, 2009).

Like most (if not all) studies on MSM, the large EMIS sample is a convenience sample and cannot be assumed to be representative of all MSM in Europe.

3.14 Summary and conclusions

There are obvious socio-demographic differences between residents of countries and sub-regions, mainly when comparing North-East, South-East and East Europe with other sub-regions.

Differences in the age compositions of the national samples do not reflect differences in the countries' male populations. It is unclear, however, whether they reflect variations in national MSM populations, age-specific disparities in terms of access to the internet, being reached by EMIS promotion, willingness to take part in a survey for MSM, or attrition while taking part in the survey.

A high percentage of respondents lived in large cities and this percentage increased with age and level of education. This was most striking in the countries of South-East and East Europe, where homosexuality is less socially accepted. In this case, migration to a big urban area may be an escape from oppression to find safety, friendship and social support (Egan et al. 2011). Nevertheless, while more men in the eastern European sub-regions reported living in large cities, fewer of them were out, or considered themselves to be gay or bisexual. Large cities often provide more opportunities to meet other men, or to be open about one's sexuality. It might be that there is a less gay-friendly environment in the eastern parts of Europe (even in large cities) than in western parts. The high proportion of respondents living in large cities in these sub-regions might also indicate better access to the internet.

EMIS respondents had higher levels of education than the general population. Better educated men might have better internet access and be more willing to take part in surveys. Respondents from East and South-East Europe reported the highest levels of education, suggesting that EMIS disproportionately reached men with higher levels of education. On the other hand, in Central-West Europe where participation rates were among the highest, levels of education were lower. This partly reflects continuing differences in national educational systems, but it also suggests that with increasing levels of participation the bias that favours participation of men with higher educational levels - inherent in this kind of survey - diminishes.

Experience of sexual orientation differs between sub-regions of Europe (North, West, Central-West, South-West and Central-East compared with South-East (EU), South-East (non-EU), and East Europe). In eastern parts of Europe, gay communities are more recently established than their western counterparts (Tripathi et al., 2009) and MSM from those countries still have to deal with prejudice, stigma and discrimination.

The current economic crisis in some European countries (e.g. Spain and Greece) is reflected in the rate of unemployment in South-West Europe.

Many respondents had known independence (living alone) and been able to lead an openly gay life by living with a male partner. In some countries in the South-West, living with one or both parents may reflect cultural patterns rather than the possibility of being independent.

Almost all respondents had visited a gay website in the previous seven days, regardless of the country or European sub-region. On the other hand, large differences were found with regard to physical locations, in terms of venues, and socio-sexual identity characteristics. Gay community centres were visited less frequently than social-commercial venues and sex venues. In general, these physical locations seemed to be less visited in almost all eastern sub-regions, although there was one exception (North-West) when sex venues were taken into consideration. Our data on feelings of loneliness and socio-sexual characteristics suggest that many MSM still conceal their sexual identity, perhaps because of the social climate towards homosexuality.

Variations in the demographic profiles of MSM between countries might be due in part to differences in acceptance of homosexuality, access to the internet, types of website used to promote recruitment to the survey and willingness to fill in a survey on homosexuality and HIV. These possible demographic differences should be considered when designing public health policy initiatives to address the needs of MSM in Europe.

3.15 Country table

Country		Region		Population	Demographics					
Code	Name	EU region	EMIS region		Median age	Living in a large city[a] (%)	Born outside of the country (%)	Expatriates (%)	High level of education[b] (%)	Without employment (%)
at	Austria	EU	Central-West	8,383,784	31	46.6	16.9	10.0	30.3	4.3
be	Belgium	EU	West	10,741,048	34	43.6	22.6	8.5	65.4	5.4
bg	Bulgaria	EU	South-East (EU)	7,602,116	28	65.3	4.3	18.0	57.9	8.7
cy	Cyprus	EU	South-East (EU)	870,000	30	4.3	33.8	33.5	61.7	3.0
cz	Czech Republic	EU	Central-East	10,474,607	27	44.3	10.9	6.1	40.5	3.3
de	Germany	EU	Central-West	82,062,249	33	41.1	8.3	4.0	31.3	5.5
dk	Denmark	EU	North-West	5,519,259	34	51.2	14.0	8.4	49.0	5.9
ee	Estonia	EU	North-East	1,340,341	30	9.8	4.7	9.9	45.6	6.1
es	Spain	EU	South-West	45,853,045	32	51.4	22.4	5.3	58.6	10.8
fi	Finland	EU	North-West	5,325,115	33	38.2	6.7	7.2	49.2	6.6
fr	France	EU	West	64,105,125	34	50.9	13.3	10.9	72.4	7.3
gr	Greece	EU	South-West	11,262,539	30	71.3	11.9	9.4	64.8	9.3
hu	Hungary	EU	Central-East	10,029,873	28	63.7	8.9	8.5	67.2	3.5
ie	Republic of Ireland	EU	West	4,517,758	31	50.0	22.8	15.6	69.6	9.2
it	Italy	EU	South-West	60,090,430	33	34.9	7.0	7.1	42.7	5.9
lt	Lithuania	EU	North-East	3,350,385	27	42.7	2.9	15.0	68.6	6.3
lu	Luxembourg	EU	Central-West	493,300	36	3.7	50.4	31.5	51.6	5.8
lv	Latvia	EU	North-East	2,261,132	30	61.1	6.0	14.1	48.3	5.7
mt	Malta	EU	South-East (EU)	410,290	32	1.8	16.9	16.8	61.9	0.8
nl	Netherlands	EU	West	16,481,139	40	42.4	23.1	12.2	61.7	3.9
pl	Poland	EU	Central-East	38,130,302	28	62.4	3.5	27.6	73.9	4.7
pt	Portugal	EU	South-West	10,631,800	30	41.8	17.7	8.1	56.7	6.7
ro	Romania	EU	South-East (EU)	21,496,664	27	46.1	2.7	19.1	54.9	3.4
se	Sweden	EU	North-West	9,259,044	35	52.1	17.7	5.6	54.0	5.7
si	Slovenia	EU	Central-East	2,053,393	30	2.3	6.2	5.7	45.8	6.3
sk	Slovakia	EU	Central-East	5,379,455	26	24.6	5.2	30.5	49.5	6.2
uk	United Kingdom	EU	West	61,612,255	36	50.9	27.7	7.0	63.6	5.8
ch	Switzerland	EEA/EFTA/acceding	Central-West	7,667,715	37	13.5	26.5	9.6	45.9	3.5
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	4,489,409	29	51.3	9.7	27.5	64.2	7.4
no	Norway	EEA/EFTA/acceding	North-West	4,825,500	31	40.6	11.9	5.4	63.1	3.9
ba	Bosnia & Herzegovina	other	South-East (non-EU)	4,613,414	26	17.2	14.3	55.6	56.8	8.8
by	Belarus	other	East	9,489,000	27	62.2	12.2	20.5	67.7	2.7
md	Moldova	other	East	4,122,847	25	57.4	8.6	32.7	60.3	6.9
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	2,114,550	28	61.2	8.8	28.7	81.7	11.3
rs	Serbia	other	South-East (non-EU)	7,498,001	28	52.6	12.1	13.1	56.2	13.4
ru	Russia	other	East	141,000,000	30	78.1	11.2	11.0	72.4	4.4
tr	Turkey	other	South-East (non-EU)	70,586,256	27	86.8	8.3	10.7	83.0	4.8
ua	Ukraine	other	East	45,994,287	29	68.6	12.0	14.7	75.5	4.1
	Low				25.0	1.8	2.7	4.0	30.3	0.8
	Median			**802,137,427**	**30.0**	**48.3**	**11.9**	**11.0**	**59.5**	**5.8**
	High				40.0	86.8	50.4	55.6	83.0	13.4
	EU27 median			**499,736,448**	**31.0**	**44.3**	**11.9**	**9.9**	**56.7**	**5.8**

[a] Over 500 000 inhabitants
[b] ISCED5 and ISCED6

Demographics												
	Steady relationship with a man (%)	Steady relationship with a woman (%)	Identify as gay or homosexual (%)	Attracted only to men (%)	Had sex only with men (previous 12 months) (%)	Out to all or almost all (%)	Out to none (%)	Most/all of male friends are attracted to men (%)	Visited gay community centre, organisation or social group in the preceding 4 weeks (%)	Visited gay commercial social venue in the preceding 4 weeks (%)	Visited gay sex-venue in the preceding 4 weeks (%)	Visited gay websites in the previous 7 days (%)
	39.2	8.3	74.7	70.8	81.5	39.8	10.8	12.9	9.3	46.0	29.3	93.0
	45.7	4.5	84.8	78.6	87.1	58.9	5.3	15.7	16.9	56.0	38.1	93.0
	34.7	9.1	52.5	50.1	68.2	12.5	21.2	8.2	5.3	24.8	28.0	89.8
	28.5	8.2	67.3	63.2	77.2	12.8	19.2	12.4	8.5	29.2	28.8	91.4
	47.7	4.1	80.4	71.6	83.1	31.1	6.5	10.1	12.4	42.4	16.7	92.3
	41.3	8.3	76.1	72.2	81.2	45.7	10.7	15.9	10.8	45.8	30.1	92.6
	34.8	6.8	76.7	72.8	82.3	46.3	6.8	15.7	20.5	49.5	30.3	97.1
	40.4	9.5	65.1	57.8	71.9	15.0	15.7	10.4	6.8	32.9	23.6	91.9
	32.2	4.0	79.9	74.8	86.7	45.1	7.2	19.8	10.0	61.0	37.9	95.8
	41.8	8.7	72.9	68.9	76.2	34.4	8.7	15.4	13.1	44.2	24.1	88.9
	47.2	3.4	83.5	78.1	85.7	46.4	5.8	13.4	15.6	46.4	39.2	93.2
	35.1	6.2	66.5	62.7	78.4	14.3	16.9	11.3	9.7	44.2	26.4	90.2
	41.1	7.8	72.1	69.5	78.7	19.2	11.6	13.9	8.9	37.7	19.6	93.6
	29.2	7.0	77.9	72.9	81.6	39.8	11.5	13.6	17.5	53.1	25.3	93.8
	36.3	5.6	73.6	69.9	83.8	26.4	12.5	15.8	14.3	45.8	31.9	93.4
	44.4	7.4	65.7	60.3	71.9	7.5	23.9	11.5	11.1	26.9	21.3	94.6
	39.8	11.5	71.1	65.8	81.2	39.7	10.1	7.2	4.6	41.5	27.0	92.9
	44.6	12.2	58.6	57.9	74.9	11.6	18.9	9.4	2.9	26.5	25.7	95.9
	37.3	0.8	81.5	83.2	86.2	31.1	1.7	17.6	10.9	50.4	31.9	94.9
	46.5	4.5	87.0	79.8	88.0	70.2	4.1	20.3	9.2	52.6	40.5	96.7
	42.0	3.2	82.9	75.9	85.6	17.5	8.8	8.0	9.8	47.8	27.7	96.0
	37.0	7.4	69.7	63.0	79.7	19.2	12.0	11.0	7.2	41.0	30.6	93.8
	36.8	11.6	53.9	49.9	68.3	8.9	28.0	9.2	7.3	24.1	18.2	93.1
	39.0	7.3	75.2	69.9	79.4	54.1	6.6	15.4	22.1	45.7	23.7	93.7
	35.4	14.0	60.1	54.6	68.6	16.1	25.8	8.7	8.4	20.6	19.8	89.4
	40.3	2.6	78.3	70.8	80.4	19.5	9.9	9.6	7.1	29.0	11.9	95.1
	36.6	5.8	82.9	76.3	85.2	48.8	6.4	18.6	13.6	54.3	32.4	94.4
	42.2	9.4	76.3	70.7	80.8	42.1	10.8	12.3	12.9	45.9	36.9	92.6
	35.6	5.0	68.0	61.5	79.3	8.6	25.2	10.1	6.9	22.5	20.9	95.0
	33.5	4.4	82.0	74.0	82.6	56.9	5.8	10.8	13.6	42.2	15.3	97.2
	21.6	10.1	52.0	47.0	63.5	3.4	40.3	5.4	1.3	5.3	16.6	93.3
	53.3	7.9	66.2	64.3	77.7	6.9	11.5	11.2	12.4	24.6	19.0	95.2
	43.6	6.8	67.5	64.1	75.0	4.3	22.2	4.3	20.4	27.2	23.9	95.6
	25.9	9.5	60.7	47.0	70.2	5.2	30.2	6.0	14.7	24.1	19.8	94.0
	32.1	8.3	54.7	51.1	73.4	6.8	31.4	7.4	8.2	23.3	13.8	94.4
	51.7	6.8	68.0	65.3	80.0	9.1	11.9	13.7	4.2	30.3	23.7	95.9
	34.2	7.6	69.8	61.2	74.1	8.8	21.4	8.8	10.9	36.4	18.4	93.5
	49.2	9.1	63.3	60.9	75.8	8.0	14.1	10.5	10.9	24.2	21.4	94.7
	21.6	0.8	52.0	47.0	63.5	3.4	1.7	4.3		5.3	11.9	88.9
	39.1	**7.4**	**71.6**	**67.4**	**79.6**	**19.2**	**11.6**	**11.3**	**10.4**	**41.3**	**24.7**	**93.8**
	53.3	14.0	87.0	83.2	88.0	70.2	40.3	20.3	22.1	61.0	40.5	97.2
	39.2	**7.3**	**74.7**	**69.9**	**81.2**	**31.1**	**10.7**	**12.9**	**9.8**	**44.2**	**27.7**	**93.4**

4. Sexual unhappiness

4. Sexual unhappiness

4.1 Introduction

The World Health Organization states that 'Sexual health is a state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.' Being happy with one's sex life is therefore a health promotion goal of similar importance to avoiding the transmission of infections.

HIV health promotion recognises the rights of MSM to pursue a satisfying and happy sex life and to have control over their involvement in HIV transmission. Consequently, promoting, enforcing or engaging in choice architecture to encourage MSM to practice unsatisfying or unhappy sex is not an acceptable way to reduce HIV incidence. It should not be the goal of prevention programmes to minimise HIV incidence at any cost. Reducing sexual misery is, for some agencies and organisations, a population goal alongside (or ahead of) reducing HIV transmission. This chapter addresses the work of such agencies and organisations in particular.

This chapter reports on the extent of sexual unhappiness among different groups of MSM across Europe and the reasons men gave for being sexually unhappy. To our knowledge this is the first time that such a question has been asked in a survey of MSM. The results will be useful for planners whose interventions are intended to reduce sexual unhappiness, in that they help identify those groups who would most benefit from such interventions and the common reasons for sexual unhappiness. The chapter discusses the potential intervention target groups in which sexual unhappiness is most common and the most common reasons for sexual unhappiness among MSM.

4.2 Questions

Sexual unhappiness was assessed using a single binary item. In English, men were asked 'Are you happy with your sex life?' and were offered the answers 'No' or 'Yes'. The proportion of respondents that ticked 'No' was taken to indicate the extent of sexual unhappiness in a group (5.7% declined to answer the question while 94.3% supplied an answer). The question was translated as shown below.

- English: Are you happy with your sex life?
- Bulgarian: Доволни ли сте от Вашия сексуален живот?
- Czech: Jste spokojený se svým sexuálním životem?
- Danish: Er du tilfreds med dit sexliv?
- Dutch: Ben je tevreden met je seksleven?
- Estonian: Kas Sa oled oma seksuaaleluga rahul?
- Finnish: Oletko tyytyväinen seksielämääsi?
- French: Êtes-vous heureux dans votre vie sexuelle ?
- German: Sind Sie mit Ihrem Sexleben zufrieden?
- Greek: Είσαι ευχαριστημένος με τη σεξουαλική σου ζωή;
- Hungarian: Elégedett a szexuális életével?
- Italian: Sei contento della tua vita sessuale?
- Latvian: Vai esat apmierināts ar savu seksuālo dzīvi?
- Lithuanian: Ar Jūs patenkintas savo lytiniu gyvenimu?
- Norwegian: Er du fornøyd med seksuallivet ditt?
- Polish: Czy jesteś zadowolony ze swojego życia seksualnego?
- Portuguese: Estás feliz com a tua vida sexual?
- Romanian: Eşti mulţumit de viaţa ta sexuală?
- Russian: Вы довольны своей сексуальной жизнью?
- Serbian: Da li si zadovoljan svojim seksualnim zivotom?
- Slovenian: Ali si zadovoljen s svojim spolnim življenjem?
- Spanish: ¿Estás satisfecho con tu vida sexual?
- Swedish: Är du nöjd med ditt sexliv?
- Turkish: Seks hayatınızdan memnun musunuz?
- Ukrainian : Чи задоволені Ви своїм статевим життям?

Men who answered 'No' to the initial question on sexual happiness were asked 'Why are you not happy with your sex life?' and given a list of 13 possible reasons to answer from (more than one reason could be indicated).

'Why are you not happy with your sex life?' (Tick as many as apply)

- I am not having any sex.
- I would like more sexual partners.
- I worry about having too many sexual partners.
- I would like more sex with the man/men I have sex with.
- I want a steady relationship with someone.
- I have problems in my steady relationship.
- I am not as sexually confident as I want to be.
- I worry about passing on HIV or other STIs.
- I worry about picking up HIV or other STIs.
- I have problems getting or keeping a hard-on (erection).
- My sex drive is too low.
- My health problems interfere with sex.
- My partner's health problems interfere with sex.
- Other reason.

The list of possible responses were generated from qualitative answers to the same question in a previously unpublished English language survey in the United Kingdom. The order in which the reasons were offered was rotated to prevent presentation bias.

4.3 Sexual unhappiness across target groups

Programmes and interventions intended to reduce sexual unhappiness will be more efficient if they target groups among whom sexual unhappiness is more common. Targeted programmes may also reduce disproportionate levels of unhappiness within certain groups.

Among all EMIS respondents, 38.6% indicated that they were not happy with their sex life, suggesting that sexual unhappiness is very common among MSM. Figure 4.3 gives the proportion of MSM unhappy with their sex life across six potential groups for targeted intervention. It also shows the odds ratios for unhappiness across each subgroup (taking one value of the subgroup as a reference group), adjusted for the other five groups of characteristics, country of residence and recruitment source. The data suggest that being unhappy with one's sex life is independently associated with being younger or older (rather than in the middle age group); having a medium level of education; living in smaller settlements; being sexually attracted to men but not identifying oneself as gay or bisexual and not having revealed one's sexual attraction to men to acquaintances.

Age: At the univariable level, the youngest group of men appeared most likely to be unhappy with their sex life. However, after adjusting for the other factors, relative to the middle age group the younger age group were significantly less likely to be unhappy, while the older age group did not differ significantly.

Education: At the univariable level, men with a lower level of education appeared most likely to be unhappy with their sex life. However, after adjusting for other factors, those with a lower level of education and those with a higher education were significantly less likely to be unhappy than those with medium education.

Settlement size: Men who lived in larger settlements were less likely to be unhappy with their sex lives. Adjusting for other factors, men who lived in very large, large or medium-sized cities and towns did not differ significantly in the level of unhappiness with their sex lives but those living in small towns, villages or the countryside were significantly more likely to be unhappy.

HIV testing history: At the univariable level, men who had never tested for HIV were most likely to be unhappy with their sex life and there appeared to be little difference between those who had tested positive and those whose last test was negative. However, when adjusting for other factors, compared with men who had tested positive, those who had never tested were significantly more likely to be unhappy and those who had tested negative were significantly less likely to be unhappy.

Sexual identity: At the univariable level it appeared that men who used a term other than gay/homosexual or bisexual (or who used no term for their sexuality) were most likely to be unhappy with their sex life, while those who identified themselves as gay/homosexual were least likely to be unhappy. However, in multivariable analysis, men who identified themselves as bisexual were less likely to be unhappy than those who identified themselves as gay/homosexual, who were less likely to be unhappy than those using no term or some other term.

Outness: Among MSM sexual unhappiness was positively associated with not being out to family, friends and acquaintances. At the univariable level the proportion of men unhappy with their sex life was highest (53.0%) among those who were out about their sexuality to no-one and was

Figure 4.3: Extent of sexual unhappiness among MSM in demographic sub-groups

		% not happy with their sex life	Age-adjusted odds ratio (AOR) for sexual unhappiness (95%-CI) **
All respondents		38.6	-
Age*	Under 25 years (N=38,119)	39.3	0.92 (0.89-0.96)
	25 to 39 years (N=80,283)	38.6	1.00
	40 years and older (N=45,926)	37.9	1.02 (0.99-1.05)
Education*	Low (N=13,083)	37.4	0.93 (0.89-0.97)
	Medium (N=68,471)	39.1	1.00
	High (N=81,596)	38.4	0.95 (0.93-0.97)
Settlement size*	Very large town or city: over one million people (N=49,046)	37.0	1.00
	Large town or city: 500 000–999 999 people (N=24,059)	36.2	0.97 (0.94-1.00)
	Medium town or city: 100 000–499,999 people (N=34,678)	38.2	1.00 (0.97-1.03)
	Small town or city: 10 000–99 999 people (N=31,967)	41.2	1.07 (1.03-1.10)
	Village or countryside: less than 10 000 (N=20,624)	41.5	1.07 (1.03-.1.11)
HIV testing history*	Never tested (N=47,800)	47.1	1.33 (1.27-1.39)
	Tested positive (N=12,570)	35.1	1.00
	Last test negative (N=10,2793)	34.3	0.93 (0.90-0.97)
Sexual identity*	Gay or homosexual (N=12,4958)	36.6	1.00
	Bisexual (N=24,813)	43.7	0.89 (0.86-0.92)
	Other (N=14,200)	47.2	1.17 (1.13-1.22)
Outness (proportion of people who know I'm attracted to men)*	All or almost all (N=63,495)	31.0	1.00
	More than half (N=30,556)	36.7	1.28 (1.24-1.31)
	Less than half (N=17,682)	40.8	1.51 (1.46-1.57)
	Few (N=34,829)	45.9	1.85 (1.80-1.91)
	None (N=16,900)	53.0	2.46 (2.36-2.56)

* Univariable chi-squared p<0.01
** Adjusted for age, education, settlement size, HIV testing history, sexual identity, outness, country of residence and recruitment source.

lowest (31.0%) among those who were out to everybody or almost everybody. After adjusting for other factors, compared to men who were out to all or almost all the people they knew, sexual unhappiness was significantly more common (AOR 1.24-1.31) even among those who were out to over half the people they knew. Among those who were out to nobody sexual unhappiness was more than twice as likely (AOR 2.36-2.56).

In summary, sexual unhappiness is more common among MSM whose sexual attraction is unknown to the people in daily contact with them; MSM who do not identify as gay or bisexual; MSM who live in smaller settlements; MSM who have never tested for HIV, MSM with a medium level of education and among younger and older MSM. Therefore programmes intended to reduce sexual unhappiness among MSM should ensure that some of their activities engage with men who do not take part in the gay and bisexual scenes; those who live in smaller communities, and those who have not had contact with sexual health services. The internet may prove invaluable for contacting and interacting with these men.

4.4 Sexual unhappiness across European countries

Any agency or organisation concerned with sexual unhappiness among MSM across Europe can reduce inequalities and increase efficiency by focusing their attention on those countries where unhappiness is more common. National agencies may also benefit from comparisons with other countries.

Figure 4.4 shows the proportions of EMIS respondents in each country who were unhappy with their sex life, and the odds ratio for a man living in that country being unhappy with his sex life to the odds for a man living in the UK being unhappy with his sex life (which was 0.72), adjusted for age, education, settlement size, HIV testing history, sexual identity, outness and recruitment source. The UK was chosen as the reference country for the comparison as its respondents were closest to the mean for unhappiness with their sex lives and it had a very large subsample. The countries in the table are ordered by this odds ratio.

Figure 4.4: Extent of sexual unhappiness among MSM in different countries

Country name	Sub-sample size	Unhappy with their sex life (%)	Adjusted odds ratio for sexual unhappiness (95% confidence interval) *		
			AOR	Lower value	Upper value
Bosnia and Herzegovina	142	61.3	1.42	0.99	2.01
The former Yugoslav Republic of Macedonia	112	55.4	1.32	0.90	1.94
Cyprus	255	53.7	1.30	1.00	1.69
Sweden	2,932	47.8	1.30	1.20	1.41
Hungary	1,952	50.4	1.22	1.10	1.34
Russia	4,790	50.2	1.17	1.10	1.26
Croatia	476	52.7	1.16	0.97	1.40
Ukraine	1,627	51.5	1.16	1.04	1.29
Estonia	565	50.8	1.16	0.97	1.38
Belarus	353	51.8	1.15	0.92	1.42
Finland	1,910	47.8	1.15	1.04	1.27
Ireland	2,071	46.7	1.13	1.02	1.24
Norway	1,871	43.9	1.07	0.97	1.18
Serbia	1,072	50.6	1.02	0.90	1.16
Slovakia	558	47.7	1.00	0.84	1.20
United Kingdom	16,379	41.7	1.00	-	-
Moldova	112	48.2	0.99	0.68	1.45
Bulgaria	990	47.0	0.99	0.87	1.13
Lithuania	570	49.5	0.96	0.81	1.14
Greece	2,875	44.2	0.92	0.84	0.99
Czech Republic	2,284	42.5	0.92	0.84	1.01
Turkey	1,727	45.3	0.89	0.80	0.99
Latvia	673	46.7	0.88	0.75	1.03
Denmark	1,545	39.4	0.87	0.78	0.97
Germany	51,278	38.4	0.85	0.82	0.89
Slovenia	936	44.0	0.80	0.69	0.92
Luxembourg	264	40.2	0.80	0.62	1.05
Poland	2,599	39.7	0.79	0.72	0.86
Malta	111	37.8	0.78	0.52	1.16
Romania	2,215	42.9	0.76	0.70	0.84
Austria	3833	35.1	0.74	0.69	0.80
Italy	15,361	37.3	0.72	0.69	0.76
Belgium	3731	31.7	0.69	0.64	0.74
Netherlands	3575	30.7	0.66	0.61	0.72
Spain	12,411	31.9	0.65	0.62	0.68
Portugal	4,995	34.3	0.61	0.57	0.65
Switzerland	4,707	31.2	0.60	0.56	0.65
France	10,471	27.8	0.54	0.52	0.57

* Adjusted for age, education, settlement size, HIV testing history, sexual identity, outness and recruitment source.

The median value of the proportion unhappy with their sex lives across the 38 countries was 46.7% and the mean was 43.9%. The proportion of men who were unhappy with their sex life varied widely depending on the country they lived in, from a minimum of 27.8% in France to a maximum of 61.3% in Bosnia and Herzegovina. Allowing for other factors, MSM living in Bosnia and Herzegovina were 2.61 times more likely (AOR; 95%-CI: 1.83-3.71) to be unhappy with their sex lives than men living in France – a larger difference than by any other factor. This suggests that the country a man lives in has a greater influence on his sexual happiness than any of the other demographic factors considered, and that interventions to reduce sexual unhappiness in MSM may be more effective and efficient if they focus on country level characteristics than if they attempt to effect changes in men themselves. Therefore programmes to reduce sexual unhappiness among MSM should consider country level or structural factors contributing to sexual unhappiness as well as trying to change the individual situation for men through provision of direct services such as education, training and therapy.

Sexual unhappiness is widespread among MSM across Europe but appears particularly high in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Cyprus. Any agency or organisation concerned with sexual unhappiness among MSM across Europe should therefore prioritise change in these countries.

4.5 Reasons for sexual unhappiness

There may be a wide range of reasons why MSM are unhappy with their sex lives and any measures to reduce sexual unhappiness will be more effective if they address the most common of these reasons (Figure 4.5).

Wanting but not having a steady sexual relationship was the most commonly cited reason for sexual unhappiness in 35 of the 38 countries and was the second most common reason in the other three. Typically, 25% of men in each country were unhappy with their sex lives because they were single. This reason was expressed considerably more frequently than the two next most common reasons given: wanting more sex with the man or men they already had sex with and wanting to be more sexually confident, cited by 14–15%.

Two of the top three reasons for sexual unhappiness concern establishing and maintaining steady sexual relationships. These are complex needs that are poorly served by the commercial gay leisure-sex industry, which promotes and profits from the acquisition of new sexual partners. Sexual health programmes for MSM could therefore include helping MSM develop opportunities to meet potential longer-term partners (perhaps outside of or away from sexual settings), foster steady partnerships, and provide access to relationship support services. State acknowledgement and support of steady same-sex partnerships should be encouraged.

The main reasons men were unhappy with their sex lives related to steady partners, wanting but not having a steady relationship and the challenges of maintaining one. HIV prevention programmes could reduce sexual unhappiness and decrease harm by fostering regular partnerships in association with HIV testing and explicit rules about sex outside those relationships.

4.6 Components of the best sex life

If sexual happiness is related to matching desire with reality, what people desire from their sex life will be as important as what actually happens (or does not happen). For MSM the main representations of what constitutes a good sex life come from the commercial gay leisure-sex industry, which provides services and products for sexual purposes. HIV prevention for MSM often reinforces the image of the best sex life as involving multiple sexual partners, in order to engage with what MSM are thought to value.

To get a more balanced picture of what aspects of a sex life are valued by MSM, respondents were asked the open-ended question 'What is your idea of the best sex life?' This question produced a large amount of shallow, qualitative data in 25 different languages. Content analysis of these responses was carried out by two teams working independently on responses in different languages (English and Slovenian) to develop coding frames. These coding frames were then brought together and consolidated, and the coding frame tested on data from a third language

Figure 4.5: Common reasons for sexual unhappiness among MSM in 38 European countries

I'm unhappy with my sex life because...	Country mean (%)	Standard deviation (%)	Country median (%)	Country range (%)
I want a steady relationship with someone	25.4	6.9	25.1	13.8 - 40.6
I would like more sex with the man/men I have sex with	15.2	4.5	14.8	9.0 - 27.7
I am not as sexually confident as I want to be	14.7	3.8	14.2	5.5 - 22.9
I worry about picking up HIV or other STIs	12.6	3.3	12.1	7.6 - 21.0
I would like more sexual partners	12.0	2.9	11.7	6.9 - 19.8
I have problems in my steady relationship	7.7	4.7	5.9	3.4 - 22.4
I am not having any sex	7.9	3.0	7.5	4.0 - 15.2
I have problems getting or keeping a hard-on (erection)	5.7	1.3	5.6	3.2 – 9.7
My sex drive is too low	4.6	1.2	4.8	2.9 – 6.9
I worry about having too many sexual partners	3.1	1.6	2.8	0.9 – 7.2
My health problems interfere with sex	2.8	1.0	2.7	0.0 – 4.6
I worry about passing on HIV or other STIs	2.7	0.8	2.7	1.4 – 4.5
My partner's health problems interfere with sex	1.0	0.4	1.0	0.0 – 1.8

(Norwegian). The topic areas below emerged solely from the answers men gave in three different languages, although the way the topics are organised was negotiated among the researchers.

Nine response topics were identified and a number of specific sub-topics were elaborated within each. These areas are briefly described below with typical quotes shown in italics. The order in which they are presented indicates how often themes appeared as part of men's answers (i.e. the most common theme was relationship formation and the least common was 'Not sure/don't know').

Relationship formation: When asked what their idea of the best sex life was, the most common response was a desire for a relationship with another man. For most men this was a committed, monogamous relationship, but open relationships, polygamous relationships, and casual sexual relationships were also described. For example: 'The best sex life is the one with only one partner for a number of years in a monogamous relationship.'

Emotional/sexual connection with sexual partner: A significant proportion of men stated their desire for some form of loving, intimate or trusting connection with their partner, but sometimes they talked more broadly of a sexual connection with another person. These responses generally referred to mutuality – something shared between the two (or more) individuals. For example: 'Two people that totally connect with each other on all levels.'

Volume and variety: Some men stated a desire for regular sex, or sex more frequently than was already the case, and stated a desire for varied, exploratory or experimental sex. This might refer to the variety of sexual acts they would like to perform, or the variety of men they wished to have sex with. For example: 'Having sex whenever I want (for example, more than four times a week, mostly on a daily basis).'

Sexual action/behaviour: Some men described specific sexual acts they would like to engage in. This included behaviours such as oral sex, anal sex, group sex, dominant or submissive sex, or a desire for particular sexual positions. For example: 'Fucking while getting fucked'.

Free from physical harm: A relatively small number of men described their idea of the best sex life as one that is free from physical harm. Such harm might include HIV or other STIs or physical assault. Concerns for consensual sex were included here. For example: 'One where HIV is not an issue'.

Idealised physical attributes: A small number of men associated the best sex life with sexual partners who have particular physical attributes. Examples of these include a large penis, an attractive or muscled body, a particular complexion, or a particular style (for example a twink or a bear). For example: 'To regularly have sex with a men with a huge penis (>20cm)'.

Overcoming psychological and social barriers: A few men stated their desire to be confident or assertive with regard to sex and to be able to enjoy sex free from stress. Many responses in this category were related to overcoming stigma, such as negative feelings in themselves or others about sex with men or about having HIV. For example: 'Open and honest people who are not ashamed of their sexuality'.

Settings/physical spaces: A very small number of men described their idea of the best sex life in terms of the setting or physical space in which it occurred, including sex in a sauna, at a cruising ground, or on a beach. For example: 'On the beach at sunset with the man of my life'.

Don't know: Finally, a few men simply stated that they did not know or were not sure what their idea of the best sex life is. In other instances there was insufficient information with which to code the response.

In summary, homosexual desire is diverse and the sexual lifestyles most sought after by MSM also vary. There is no one sexual lifestyle or pattern of sexual behaviour that is desired by all MSM. Notably, however, relationships and intimacy appeared far more often in men's descriptions of the best sex life than large numbers of partners or specific sexual acts. The content of these answers may also reflect a widespread desire among single MSM for a steady partner, and the social and community needs that fuel this desire. Aspects of a sex life that are important to MSM include various features, representing different values for different men. Emotionally meaningful relationships are the most commonly valued feature. Therefore programmes concerned with increasing the quality of MSM's sex lives should focus on emotional and interpersonal aspects and capacities alongside the more commonly addressed topics of safety and technique.

4.7 Summary and conclusions

Reducing sexual unhappiness in itself is a worthwhile goal for sexual health programmes. In addition, HIV prevention among MSM will be strengthened if it is not in direct competition with what men seek from their sex lives. Programmes should attempt to improve men's sex lives as well as making them safer. It is not acceptable to seek to reduce HIV infections using methods which lead to sexual unhappiness in the population, such as preventing men who wish to make sexual contact from doing so, attempting to make men unhappy about their sexual orientation, or reinforcing unhappiness about homosexual desire by suggesting that desire can be changed by therapy. HIV prevention programmes need to ensure that they do not cause harm in the process of reducing HIV infections. Therefore the true goal of such programmes should be to move the population towards better sex with less harm.

According to EMIS, sexual unhappiness is widespread among MSM, with a country level average of 47% not being happy with their sex life. Sexual unhappiness is more common among MSM whose sexual attraction to men is unknown to those with whom they have daily contact. It is also more common among MSM who do not identify themselves as gay or bisexual; who live in smaller settlements; who have never been tested for HIV; who have a medium level of education and who are in the younger and older age groups. However, sexual unhappiness varies more with the country of residence than with the characteristics

of men themselves. It is particularly high in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Cyprus.

The most common reason for sexual unhappiness among MSM across Europe is wanting but not having a regular sexual partner. Aspects of a sex life that are important to MSM include a variety of features but steady, emotionally meaningful relationships are the most commonly valued feature.

As with all the EMIS findings (and with the vast majority of MSM research) these results are limited by the extent to which the respondents' representativeness is unknown. In particular, since sexual unhappiness is more common in men who are less out about their sexual attraction to men, sexual unhappiness might be expected to be higher among MSM than measured here. A second key limitation of these findings is the simple binary measure of sexual unhappiness. This can be addressed in future research by developing a validated scale of sexual happiness that is independent of sexual behaviour or function.

4.8 Policy and programme implications

Sexual health programmes (rather than solely HIV prevention programmes) should make reducing sexual unhappiness a key programme goal. Programmes intended to reduce sexual unhappiness among MSM should include activities that engage with men who are not active on the gay and bisexual scenes, those not living in large urban centres and those who have not had contact with sexual health services. The internet provides a unique setting for contacting and interacting with these men.

Programmes concerned with reducing sexual unhappiness among MSM should focus on promoting, maintaining and supporting regular partnerships. Services for MSM should be concerned with emotional and interpersonal aspects and capacities alongside safety and technique. They should consider national or structural factors that contribute to sexual unhappiness as well as trying to change men themselves through direct health and social services. Any agency with concerned with sexual unhappiness among MSM across Europe should prioritise change in Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia and Cyprus.

4.9 Country table

Country		Region			Reason for unhappiness				
Code	Name	EU region	EMIS region	% happy with their sex life	Not having any sex	Want more partners	Too many partners	Want more sex with partner/s	Want a steady partner
at	Austria	EU	Central-West	64.9	4.4	12.1	1.2	10.6	17.1
be	Belgium	EU	West	68.3	4.0	8.6	3.2	15.0	16.4
bg	Bulgaria	EU	South-East (EU)	53.0	10.6	14.3	2.0	15.3	29.2
cy	Cyprus	EU	South-East (EU)	46.3	11.7	15.0	6.2	19.0	37.2
cz	Czech Republic	EU	Central-East	57.5	10.4	8.1	2.8	12.6	25.1
de	Germany	EU	Central-West	61.6	5.1	13.3	1.5	12.3	18.5
dk	Denmark	EU	North-West	60.6	5.6	13.4	2.8	14.9	20.9
ee	Estonia	EU	North-East	49.2	8.4	19.8	1.4	17.9	28.3
es	Spain	EU	South-West	68.1	4.2	8.0	2.8	19.9	17.6
fi	Finland	EU	North-West	52.2	8.1	13.6	2.3	27.6	24.4
fr	France	EU	West	72.2	4.5	7.1	3.4	9.1	16.2
gr	Greece	EU	South-West	55.8	6.5	11.4	3.1	8.9	24.3
hu	Hungary	EU	Central-East	49.6	8.0	13.2	1.9	13.8	27.3
ie	Republic of Ireland	EU	West	53.3	10.4	13.8	6.1	15.7	25.1
it	Italy	EU	South-West	62.7	12.5	6.9	3.1	9.0	19.6
lt	Lithuania	EU	North-East	50.5	14.7	11.3	1.4	18.8	28.7
lu	Luxembourg	EU	Central-West	59.8	4.8	11.4	1.8	14.3	19.4
lv	Latvia	EU	North-East	53.3	5.0	13.5	2.6	15.3	25.8
mt	Malta	EU	South-East (EU)	62.2	7.0	11.3	7.0	9.6	18.3
nl	Netherlands	EU	West	69.3	4.1	8.7	2.1	19.3	13.7
pl	Poland	EU	Central-East	60.3	8.2	8.3	2.8	20.6	22.4
pt	Portugal	EU	South-West	65.7	7.6	7.4	5.1	9.7	20.5
ro	Romania	EU	South-East (EU)	57.1	4.8	10.6	2.5	12.7	25.6
se	Sweden	EU	North-West	52.2	7.4	15.1	2.9	16.7	22.9
si	Slovenia	EU	Central-East	56.0	10.2	11.5	2.5	12.2	21.1
sk	Slovakia	EU	Central-East	52.3	12.7	8.5	4.0	11.6	27.2
uk	United Kingdom	EU	West	58.3	10.9	13.8	5.2	14.8	21.2
ch	Switzerland	EEA/EFTA/acceding	Central-West	68.8	4.5	11.0	1.8	11.1	14.7
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	47.3	11.8	13.6	6.9	17.9	35.6
no	Norway	EEA/EFTA/acceding	North-West	56.1	8.2	10.9	4.9	13.9	24.8
ba	Bosnia & Herzegovina	other	South-East (non-EU)	38.7	8.5	14.4	2.6	14.4	39.2
by	Belarus	other	East	48.2	5.5	10.5	1.9	21.8	34.4
md	Moldova	other	East	51.8	5.9	14.4	0.8	13.6	33.9
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	44.6	11.6	16.5	4.1	18.2	34.7
rs	Serbia	other	South-East (non-EU)	49.4	6.4	11.7	2.7	13.5	30.0
ru	Russia	other	East	49.8	7.2	16.3	2.3	23.3	32.8
tr	Turkey	other	South-East (non-EU)	54.9	9.6	11.4	5.8	9.0	29.0
ua	Ukraine	other	East	48.8	6.8	14.7	1.8	22.2	35.3
	Low			38.7	4.0	6.9	0.8	8.9	13.7
	Median			**55.2**	**7.5**	**11.6**	**2.7**	**14.6**	**25.0**
	High			72.2	14.7	19.8	7.0	27.6	39.2
	EU27 median			**57.5**	**7.6**	**11.4**	**2.8**	**14.8**	**22.4**

Reason for unhappiness								
	Problem with steady partner	Not as confident as want to be	Worry about passing on HIV/STI	Worry about picking up HIV/STI	Problems with erection	Sex drive is too low	My ill health interferes with sex	Partner's ill health interferes with sex
	4.9	14.1	1.9	8.2	4.8	3.3	2.2	0.9
	5.1	12.3	3.3	10.2	5.5	3.4	2.2	0.7
	6.8	17.6	2.1	13.0	4.3	3.0	3.3	1.1
	7.7	21.9	2.6	19.7	5.8	5.8	0.7	0.7
	8.2	12.5	1.6	11.2	4.4	4.3	2.3	1.3
	6.2	14.9	2.4	10.3	5.3	3.5	3.0	1.1
	4.9	11.1	2.6	8.2	6.8	5.0	3.7	1.3
	11.2	15.2	1.9	12.4	6.4	6.9	3.6	1.6
	3.4	5.4	2.6	11.4	3.9	3.4	2.5	0.7
	9.5	19.0	1.8	8.0	6.7	5.1	3.4	1.8
	4.6	10.9	2.3	9.1	4.1	2.9	2.3	0.7
	4.2	19.9	2.7	14.3	3.4	4.2	2.5	0.8
	8.8	19.7	1.6	14.3	5.5	4.9	4.1	1.1
	5.9	21.6	3.6	14.4	7.6	6.7	3.5	1.2
	4.8	11.4	2.1	13.0	4.9	3.5	2.1	0.5
	7.8	12.8	4.4	11.0	6.1	4.2	2.9	1.2
	6.2	13.9	4.4	11.4	5.5	4.8	2.2	1.5
	12.9	17.6	2.2	10.9	6.9	6.6	3.6	1.3
	5.2	16.5	1.7	13.0	4.3	5.2	2.6	1.7
	4.1	10.6	3.2	7.7	5.8	4.6	2.8	1.2
	5.7	14.7	2.2	12.6	6.4	4.9	2.8	1.1
	5.4	13.1	3.5	12.7	4.1	3.0	2.3	0.8
	6.0	17.0	2.8	12.0	5.4	3.9	2.6	0.8
	6.1	17.2	2.6	9.8	7.0	5.5	4.5	1.9
	7.2	14.5	1.3	14.1	5.1	4.5	2.5	0.5
	8.5	10.9	1.7	13.9	4.0	4.0	2.8	1.0
	5.5	18.9	3.9	11.7	8.4	6.8	4.6	1.5
	4.4	10.8	1.5	8.0	4.8	3.0	2.0	0.9
	5.3	18.3	3.3	20.9	5.7	6.1	3.7	1.4
	5.6	9.1	3.1	11.6	5.9	5.5	4.2	1.0
	3.3	13.7	3.3	20.3	4.6	3.9	3.3	0.7
	21.2	12.9	3.0	10.5	6.6	5.2	2.5	0.6
	13.6	15.3	3.4	16.1	4.2	3.4	0.0	0.0
	3.3	19.8	3.3	14.0	9.1	5.0	1.7	0.8
	5.6	14.8	3.7	18.3	6.8	5.2	3.7	0.6
	21.4	12.8	3.5	11.8	6.8	5.4	2.4	1.0
	9.6	10.0	2.8	12.6	5.7	3.2	2.5	0.7
	22.6	13.1	3.7	12.5	6.3	4.8	1.9	0.8
	3.3	5.4	1.3	7.7	3.4	2.9	0.0	0.0
	5.9	**14.3**	**2.6**	**12.2**	**5.6**	**4.7**	**2.6**	**1.0**
	22.6	21.9	4.4	20.9	9.1	6.9	4.6	1.9
	6.0	**14.7**	**2.4**	**11.7**	**5.5**	**4.5**	**2.8**	**1.1**

5. HIV infection

5. HIV infection

5.1 Testing for HIV

5.1.1 Introduction

All countries in Europe claim to provide antiretroviral therapy (ART) to anyone in need (with some exceptions such as migrants without legal documents or individuals without insurance coverage). In order to take advantage of the treatment available an individual must be tested for HIV. Therefore it is desirable that anyone at risk of acquiring HIV is tested and anyone who continues to be at risk has access to free or affordable HIV testing, combined with HIV risk assessment and risk reduction counselling.

EMIS respondents were asked what they thought their HIV status was (regardless of whether they had been tested or not, or how long ago the last test was), how they perceived the accessibility of HIV testing in their countries, and whether they had ever received an HIV test result. Those who had been tested were asked about their test result, and how long ago and at what type of testing site they had had their last HIV test. They were also asked how satisfied they were with confidentiality and the counselling received (if any), and whether they were treated with respect. Moreover, respondents were asked about opportunities for open discussion about HIV transmission risks related to their sexual practices and to their male sexual partners with their counsellor/healthcare provider.

5.1.2 Assumed HIV status and HIV testing history

As expected, the assumed HIV status of the vast majority of respondents who had been tested for HIV coincided with their last HIV test result (Figure 5.1). Among the 29% who had never been tested for HIV, more than 90% said they were definitely or probably HIV-negative. The proportion of men who were not sure about their status or who assumed that they were HIV-positive was higher among those who had never been tested than among those whose last test was negative. Of the 8% of respondents who reported a positive HIV test result, 1% indicated that they assumed themselves not to be infected with HIV. This could be due to misunderstanding the question, errors in completing the questionnaire, not believing the test result, or not believing in HIV. The behavioural consequences of discrepancies between assumed and tested HIV status require further analysis.

The proportion of respondents ever tested for HIV varied between 43% in Lithuania and 84% in France (median 63%; see country tables in Section 5.5). A feature common to all countries was that testing rates were higher among respondents living in larger cities than those living in smaller cities or in the countryside. This probably reflects easier access to testing in larger cities, and perhaps larger numbers of partners. Another common feature was lower testing rates among men under 25 years of age (Figure 5.2).

5.1.3 HIV testing in the past 12 months

The proportion of men who had received a test result in the past 12 months (recent testing) varied between 20% and 47% (median 35%; see country tables and Figure 5.3). There was no clear geographical pattern: countries where

Figure 5.1: Assumed HIV status and HIV testing history

Assumption about HIV status	HIV testing history		
	Country mean (%)	Standard deviation (%)	Country median (%)
Definitely negative	58.8	0.7	68.7
Probably negative	33.6	0.3	28.1
Not sure or doesn't know	7.2	0.2	2.9
Probably positive	0.4	1.0	0.2
Definitely positive	0.1	97.8	0.1
Total	**100.0**	**100.0**	**100.0**

Figure 5.2: Proportion of respondents who had ever tested for HIV by age group and settlement size

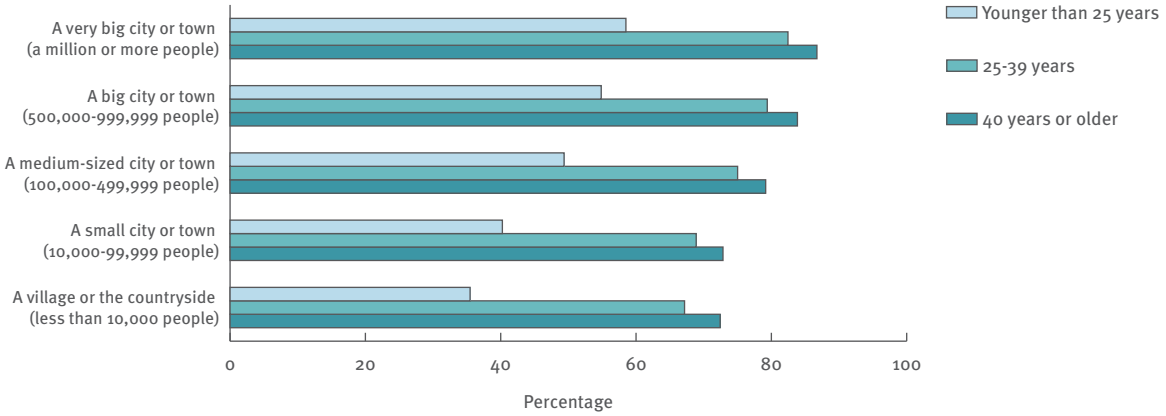


Figure 5.3: Proportion of respondents who had been tested for HIV in the past 12 months

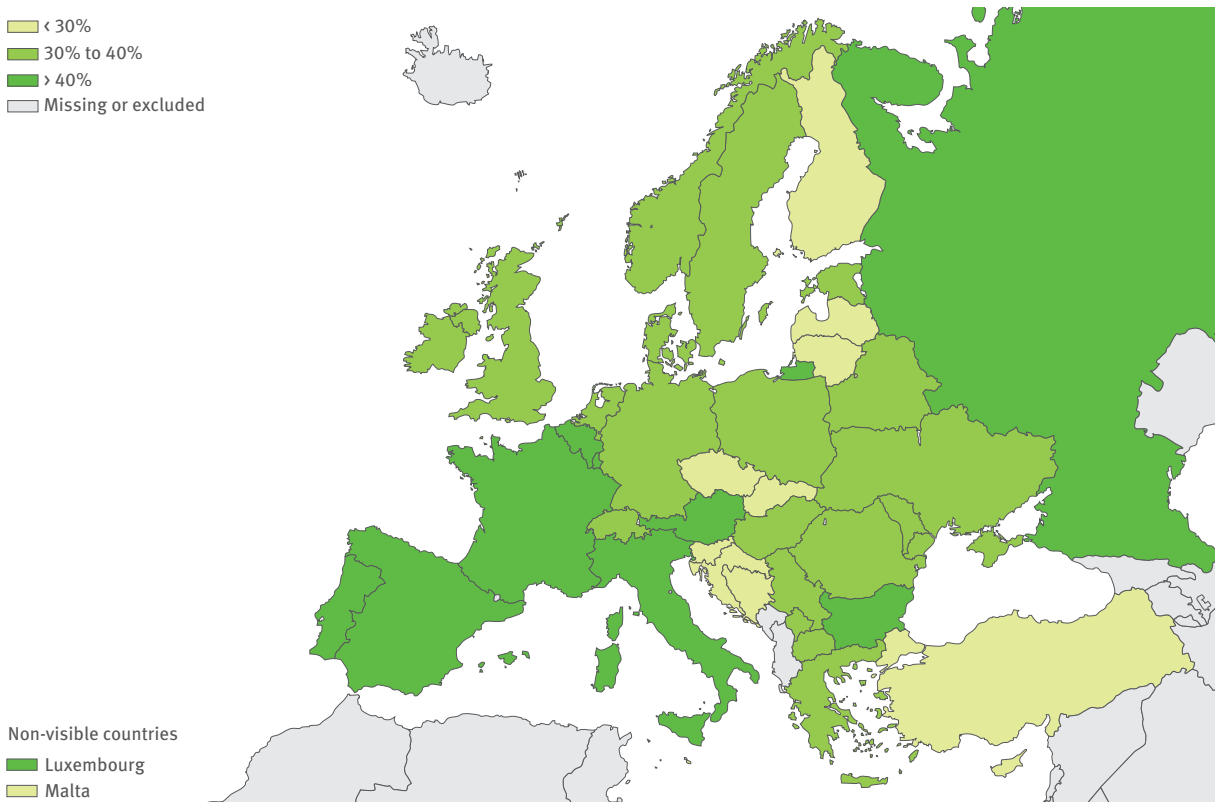
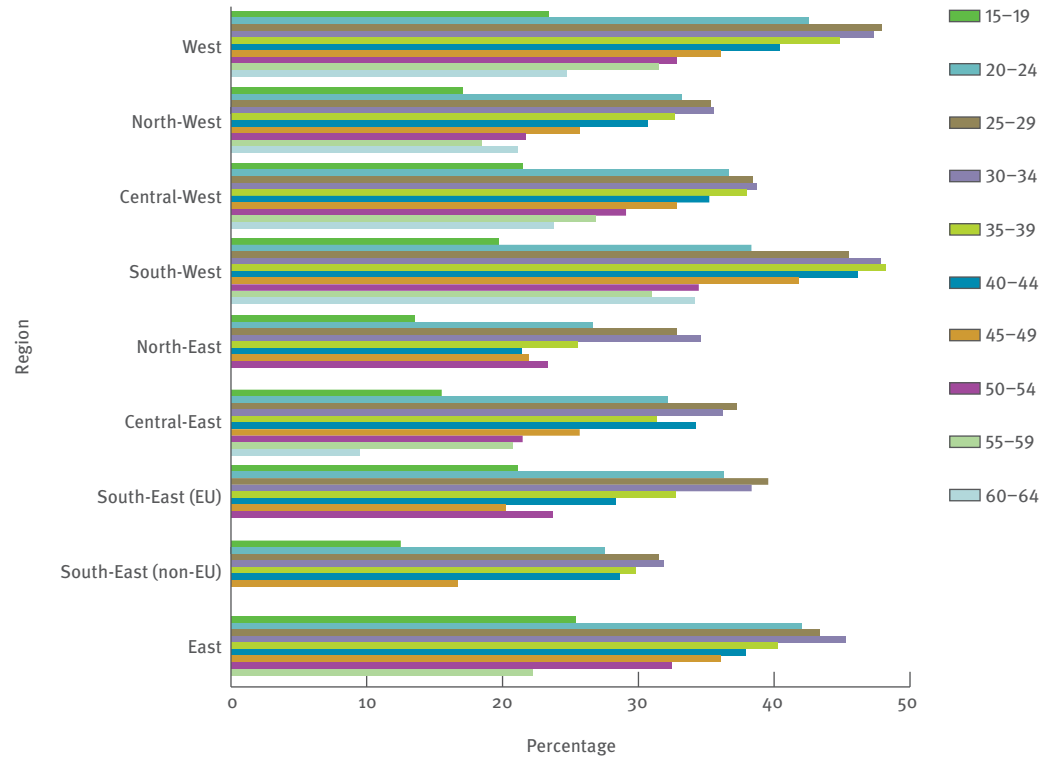


Figure 5.4: Proportion of respondents tested for HIV in the past 12 months by age group and EMIS region (age groups with n‹50 not shown)



more than 40% of MSM had recently been tested were Belgium and France in West, Luxembourg and Austria in Central-West, and Portugal, Spain and Italy in South-West Europe, but also Bulgaria in South-East, and Russia in East Europe. The lowest proportions of recent HIV testing were found in countries in Central-East, South-East, and North-East Europe, comprising Bosnia and Herzegovina, Croatia, the Czech Republic, Finland, Latvia, Lithuania, Slovakia and Slovenia.

Figure 5.4 shows the proportions of EMIS respondents tested for HIV in the past 12 months by age group and geographic region. In the majority of EMIS regions recent testing was most commonly reported by the 25–29 and 30–34 years age groups. A slight shift towards older age groups was noticeable in South-West Europe.

5.1.4 Perceived access to HIV testing

Perceived inaccessibility of free or affordable HIV testing was highest in Lithuania (56%), corresponding with the lowest proportion of recent testers (20%). In Latvia and Cyprus, perceived inaccessibility was 31%; followed by Moldova, Romania, Turkey and Greece (25%). A median of 10% for all 38 countries reported perceived inaccessibility. In Luxembourg, France and Denmark, less than 5% felt that HIV testing was inaccessible.

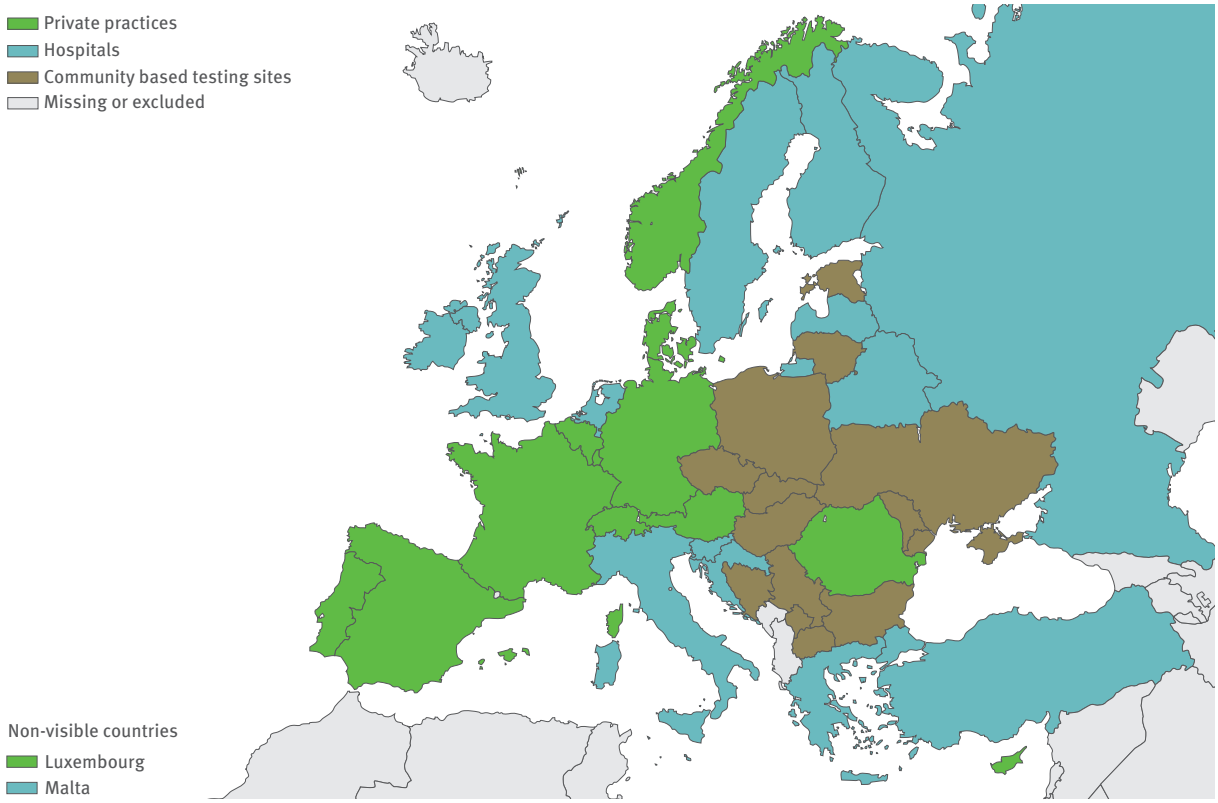
Within countries, perceived inaccessibility of HIV testing correlated with individuals making assumptions that they were HIV-infected, despite not having been tested for HIV (R^2=0.62). Perceived inaccessibility also correlated with problems associated with use of testing facilities. In countries where access to free or affordable HIV testing was perceived to be low the proportion of men whose last HIV test had occurred in the context of blood donation tended to be higher (R^2=0.35). Both associations indicate unmet HIV testing needs. The strength of these associations becomes weaker, however, if the outlier country Lithuania is excluded from this analysis.

5.1.5 Predominant testing sites and testing experiences

In all European countries HIV tests are accessible in at least some types of health facilities. Healthcare systems differ across Europe, and the predominant HIV testing sites showed clear regional patterns in accordance with the structures of healthcare systems (Figure 5.5). Private practices were the main testing sites in Central-West Europe, as well as in Norway, Denmark, Belgium, France, Spain and Portugal, but also in Romania. Community-based testing was most common in the Netherlands, in Central-East Europe and in parts of South-East and East Europe (Bulgaria was the only country where most respondents had had their last HIV test in a mobile medical unit).

Questions on satisfaction with confidentiality, respectful treatment and the counselling received were used to assess the performance of all types of testing sites (see country tables).

Figure 5.5: Predominant types of HIV testing site



The highest levels of dissatisfaction with confidentiality were reported by respondents from Turkey (18%), Belarus, Russia, the former Yugoslav Republic of Macedonia, Malta, Ukraine, Poland and Serbia. Hospitals are the main or second most important testing sites in these countries. Analysing performance characteristics for HIV testing by type of facility rather than country (Figure 5.6) revealed weaknesses regarding confidentiality, respectful treatment and quality of counselling in hospitals, yet few problems regarding confidentiality and respect at private practices. Competent counselling seemed to be a challenge, both in hospitals and private practices. The most meaningful information about sex and sexual risk were provided at community-based testing sites, and in the genitourinary medicine (GUM) clinic system (Ireland, Malta and the UK, see Chapter 6), where an experienced workforce manages sexual health issues irrespective of the sexual preferences and practices of their clients.

5.1.6 Feeling forced or tricked into HIV testing

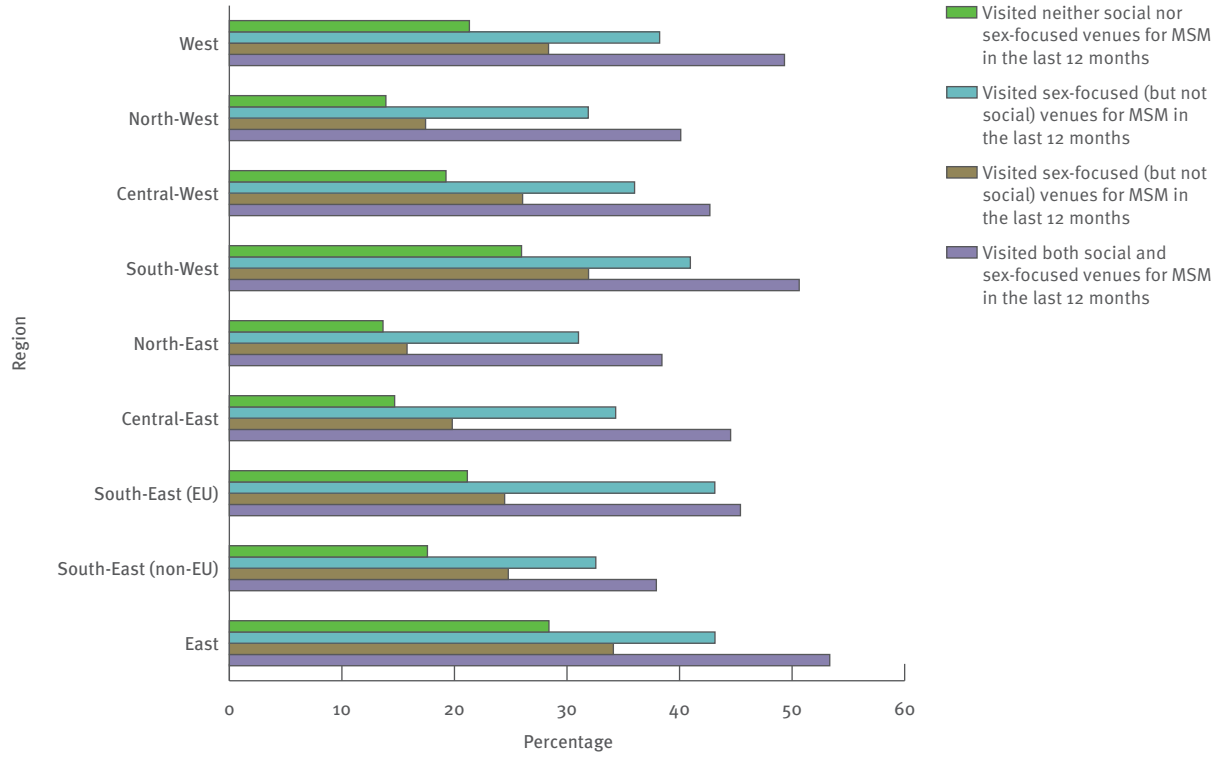
A median of 6% of respondents who had at some time been tested for HIV reported feeling forced or tricked into HIV testing at least once (see country tables). The proportion ranged from 2% in Lithuania to 14% in the Czech Republic and Slovakia. Two country clusters were found to have higher proportions of respondents who felt forced or tricked into testing: France and Belgium (and Luxembourg) in West Europe and the Czech Republic, Slovakia and Poland in Central-East Europe. In the West this was associated with high overall testing rates, but this was not the case in Central-East Europe. Comparably high overall testing rates associated with lower proportions of men feeling forced or tricked into testing – as in the Netherlands and Switzerland – suggests that high testing rates can be achieved without compromising freedom of choice and individual autonomy.

It should be noted that indiscriminate routine testing in hospitals in Russia and Belarus seems not to be perceived as forced testing. An analysis and comparison of effectiveness and the effects of different testing policies is beyond the scope of this report.

Figure 5.6: Performance characteristics of HIV testing sites by type of facility

	Dissatisfied with confidentiality (%)	Dissatisfied with respect (%)	No counselling or dissatisfied with counselling (%)	Opportunity to talk about sex and disclosure of having sex with men (%)
Practice-based physician	5.2	5.3	51.7	30.4
Hospital or clinic (outpatient)	9.3	8.4	51.9	28.1
Hospital or clinic (inpatient)	13.5	12.6	58.2	22.6
GUM clinic (ie, mt, uk)	3.3	5.4	43.4	63.8
Community service	4.0	5.0	26.0	52.1

Figure 5.7: Tested for HIV in the past 12 months by venue types for gay and other MSM and by EMIS region



5.1.7 Attending venues for gay and other MSM and recent HIV testing

For targeted promotion of HIV testing it is important to know where men can be reached. HIV testing rates were analysed in relation to the MSM venue types that respondents had visited in the past 12 months (see Chapter 3 and Figure 5.7). In all European sub-regions, the highest testing rates were reported by men who visited social venues for gay men and sex-focused venues for MSM. Men who did not visit any type of venue for MSM were least likely to have been tested recently. Although targeted testing promotion in gay communities may be successful, more needs to be done to reach the many MSM who do not or only rarely visit such venues (see Chapter 3). Our findings suggest that substantial proportions of these MSM could be reached by online promotion of HIV testing.

5.1.8 Recent testing and sexual risk-taking

Country level analysis

Sexual risk-taking as measured by EMIS was only weakly associated with HIV testing. Across Europe, unprotected anal intercourse (UAI) with a steady partner of unknown or discordant HIV status – non-concordant UAI (ncUAI) – was less common where proportions of recently tested men were higher. This probably reflects HIV status disclosure within steady partnerships, which often leads either to protected anal intercourse or to UAI with a partner who has the same HIV status as the respondent.

About 50% of men who reported UAI in the past 12 months with a non-steady partner assumed to have concordant HIV-negative status also reported testing in the past 12 months. Other studies have shown, however, that up to 50% of men who had an as yet undiagnosed HIV infection reported a negative test within the previous 12 months (MMWR 2011). Thus, even a 50% rate of recent testing may not provide adequate safety for men who believe that mutual disclosure of their last HIV negative test results with a non-steady partner reduces their risk of HIV infection through UAI. In contrast, for men with diagnosed HIV infection no correlation was observed between HIV prevalence levels and levels of reported UAI with non-steady partners whose status was assumed to be the same. This suggests that HIV sero-sorting occurred both between HIV-positive sex partners and partners assumed to be HIV-negative.

No association was observed between UAI with non-steady partners and recent HIV testing. Among men who reported UAI with a non-steady partner of unknown or discordant HIV status in the past 12 months, the proportion of men who had been tested for HIV during this period ranged from 20% in North-East, Central-East and South-East Europe to 39% in South-West and West Europe. This means that most men who reported a potential risk for acquiring HIV in the past 12 months had not been tested for HIV during this period.

The low levels of recent testing among men who reported recent risk-taking raises questions about the quality and validity of their communication of HIV status to non-steady partners. It suggests that using negative HIV test results as a means of reducing the risk of HIV transmission by serosorting between non-steady sex partners may be unreliable. To facilitate adequate use of HIV status information for risk reduction between non-steady partners, clear counselling about the potential problems of serosorting between non-steady male partners needs to be provided. Unfortunately, the low proportion of men who had talked about the sex they had with other men to healthcare providers or counsellors during their last HIV test indicates that few received such information. Unsurprisingly, the required communication skills seem more common in settings which deal specifically with HIV testing or sexual healthcare, and less available in hospitals (except GUM clinics) and many private practices.

Although recency of HIV testing was not correlated with the proportion of respondents reporting a recent risk of HIV acquisition (that is, ncUAI), there were geographic patterns between recent risk-taking and having ever or recently been tested. The proportions of men reporting recent HIV risk-taking and also indicating that they had at some time or recently been tested for HIV were particularly low in South-East, Central-East and North-East Europe. This suggests greater individual barriers to HIV testing among men at increased risk of HIV in these areas.

5.1.9 Other associations with HIV-testing

Individual level analysis

In logistic multivariable regression analysis, controlling for country of residence, the following factors were identified as being independently associated with testing. Having ever been tested for HIV was positively associated with age (reference group 25-39; age ‹25 AOR=0.96; 95%-CI: 0.93–0.99; age 40+ AOR=0.68; 95%-CI: 0.66–0.70), numbers of sexual partners in the past 12 months (reference no partner; 2–5 partners AOR=1.45; 95%-CI: 1.35–1.56; ›10 partners AOR=2.59; 95%-CI: 2.41–2.78), perceived access to free or affordable HIV testing (AOR=2.68; 95%-CI: 2.55–2.82), settlement size (≥500,000 AOR=1.18; 95%-CI: 1.15–1.21), outness (AOR=1.36; 95%-CI: 1.33–1.41) and internalised homonegativity (per score point from 0–6 AOR=0.94; 95%-CI: 0.93–0.95). Men who reported living with a steady partner were less likely to have ever been tested, but more likely to have had a recent test.

Country level analysis

Factors associated with testing at the country level were essentially the same as those for individuals.

Countries with younger samples indicated higher proportions of untested men. This strong correlation became much weaker when looking at recent testing. The proportion of men tested for HIV in the past 12 months was lowest in the age group 15–19 years (21%) and peaked in the age groups 30–34 years (42%) and 35–40 years (40%).

The number of sexual partners in the past 12 months (measured as the proportion of men with more than 10 partners) was strongly and positively correlated with ever or recently having been tested (Figure 5.8). Accordingly, the more different types of venue for MSM had been visited

in the past 12 months, the higher the proportion of men who had been tested (and who had been newly-diagnosed with HIV infection).

Outness was strongly and positively associated with ever being tested: high proportions of men who were not out correlated with high proportions of men who had never been tested (R^2=0.57). After controlling for age and partner numbers, however, this correlation did not remain significant.

5.1.10 Summary and policy recommendations

Perceived accessibility of free or affordable HIV testing for MSM is high, but some countries lag behind. Apart from not meeting the testing needs of MSM, perceived inaccessibility of HIV testing may result in HIV testing taking place in the context of blood donation.

Differences regarding access to testing in rural and urban settings are common and require innovative approaches. Lower testing rates among young MSM, and MSM who do not visit gay social or sex venues, are also associated with these rural/urban differences.

Repeated HIV testing for people with an ongoing risk of infection should be promoted, and testing should be accompanied by discussion of sexual practices, partner selection strategies and risk reduction. EMIS results suggest that only a minority of respondents take an HIV test close to episodes of UAI with partners whose HIV status is unknown. Nevertheless, EMIS data suggest that men who have never been tested for HIV do not practise more UAI with non-steady partners than men who have tested negative. In contrast, within steady partnerships the proportion of men not consistently using condoms is much higher, irrespective of their knowledge of HIV status. Men should therefore be encouraged to check and mutually disclose their HIV status with their steady partner before abandoning the use of condoms.

The potential for risk reduction counselling in the context of HIV testing is underutilised. If testing occurs in hospitals or private practices not particularly specialised in sexual health, the likelihood – particularly as regards the recording of sexual histories and provision of adequate counselling for MSM – is quite low. Thus, skills in these settings should be improved or alternative sites for testing and counselling by skilled staff should be promoted.

Young MSM and men who are not out about their sexual preference may have difficulties in deciding whether to take an HIV test.

5.2 Frequency of HIV infection

5.2.1 Introduction

The frequency with which HIV infection occurs and is identified in MSM populations in Europe is an essential parameter for guiding the provision of adequate medical and psychosocial support services, budgeting for antiretroviral drugs to treat HIV infection and planning and evaluating programmes of HIV prevention.

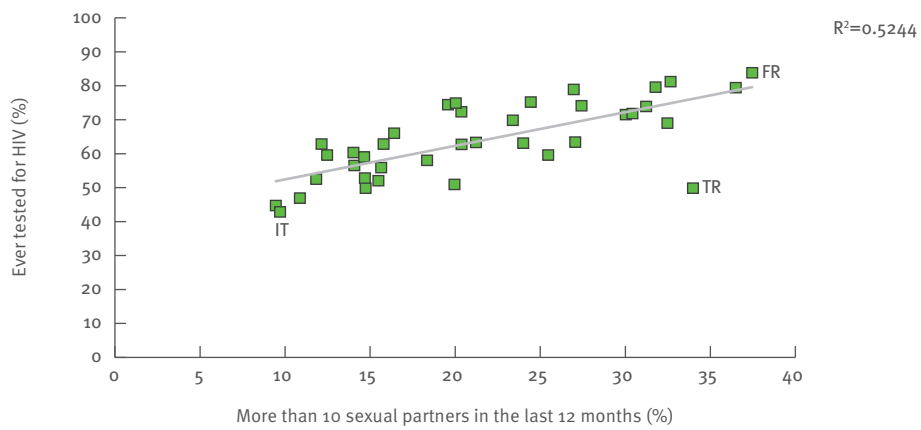
Since the HIV epidemic among MSM began at different times in the various regions of Europe, we should expect the prevalence of HIV infection in MSM to differ between countries. The prevalence should be higher in Western Europe, where the HIV epidemic started in the late 1970s or early 1980s, and lower in Eastern Europe, where the epidemic started nearly two decades later due to restrictions on mobility and on the organisation of social (and sexual) minorities. The comparison of data on HIV infection among MSM in different parts of Europe may reveal the extent to which this historically-determined epidemiological advantage may be maintained, despite the political, social, economic and cultural change being experienced by the countries and people in these European regions.

We know that for another population highly vulnerable to HIV – injecting drug users – the historic advantage has been lost in eastern Europe, because the lessons learned in western Europe were not acted upon.

5.2.2 Self-reported frequency of HIV infection

Larger numbers of partners usually contribute to a faster spread of sexually transmitted infections (STIs), especially in younger age groups. This is particularly true for the

Figure 5.8: Country level association: number of sexual partners and ever having had a test for HIV



Box 5.1: Epidemiological indicators to describe the status of the HIV epidemic and their limitations

Important epidemiologic indicators to describe the status of an epidemic of a human-to-human transmitted chronic infection, are 'prevalence' (proportion of individuals in a given population currently infected), 'incidence' (proportion of individuals in a given population that have recently acquired the infection – for example, during the course of one year), and the basic reproduction number (sometimes called basic reproductive rate or basic reproductive ratio). The basic reproduction number is the mean number of secondary cases a typical single infected case will cause in a population that has no immunity to the disease. It is often denoted Ro. Large values of Ro may indicate the possibility of a major epidemic.

Generally, the larger the value of Ro, the harder it is to control the epidemic. The basic reproductive rate is affected by several factors including an individual's duration of infectivity, the infectiousness of the organism, the availability and use of means to prevent transmission and the number of susceptible people in the population with whom the affected individuals are in contact.

The problem with HIV epidemics is that all three indicators are very difficult or impossible to measure directly.

The prevalence of HIV infection in MSM in European or national surveillance reports is usually described as either self-reported HIV prevalence in a given population – e.g. self-reported prevalence of diagnosed HIV infection among EMIS respondents (EMIS prevalence estimate # 1) – or as directly measured prevalence in a specific sample of the population, or as estimated prevalence based on the number of men diagnosed with or suspected to be infected with HIV as a proportion of the estimated total size of the MSM population.

The advantage of the self-reported prevalence in a given population is the clear definition of the population; the disadvantage is the unknown size of the undiagnosed fraction of infected individuals. To partly adjust for this undiagnosed fraction, the proportion of those diagnosed can be related to the population of those who have ever been tested (EMIS prevalence estimate # 2 = UNGASS 23 indicator). Compared with the real prevalence in the population this may overestimate prevalence, because it implies that those who have never been tested have the same probability of being infected as those who have been tested. On the other hand, some of those who have been tested for HIV and whose results have been negative so far may have acquired HIV infection since their last negative test and be infected without knowing it.

Measured prevalence has the advantage that the number of infected individuals can be directly determined, but the disadvantage in the case of HIV in MSM is the unknown size and composition of the MSM population. It remains uncertain whether this group is representative of the whole MSM population. In most cases it must be assumed that men who agree to be tested for HIV in a prevalence study are a pre-selected, non-representative part of the MSM population. HIV-infected men can be over- or underrepresented in such studies, because men at higher risk of HIV infection may be more likely to take part in such studies, or less likely, because they already know that they are infected. On the other hand, studies that do not require the informed consent of participants for testing (for example, unlinked anonymous testing of unrelated blood samples) usually cannot reliably determine the sexual preferences of the tested individuals.

Finally, estimates based on the number of men diagnosed or suspected to have HIV infection as a proportion of the estimated total size of the MSM population are difficult to compare between countries. This is because very few countries in Europe have been involved in studies on the proportion of MSM in the general adult male population. Apart from the lack of data for most European countries, the studies that exist have been conducted at different points in time and with various methodologies, making it hard to compare results.

These limitations should be kept in mind when looking at the HIV prevalence indicators derived from self-reported HIV prevalence in EMIS. In particular, further analysis is required on possible self-selection biases in different countries, and on defining the relative size of the MSM population under study. For example, the population of MSM affected by HIV in the WHO sub-region of Western Europe comprises all age groups between 15 and 64 years, because the HIV epidemic in these countries started in the early 1980s. In contrast, men over 50 in the WHO sub-regions of Central and Eastern Europe have been much less affected by HIV.

Apart from the reported prevalence of HIV infection in older age groups, the median time since HIV diagnosis among those diagnosed with HIV and participating in the study is another proxy for the age of the epidemic in different countries.

transmission of an infectious agent (HIV) which is enhanced in the presence of other STIs. Since HIV persists, however, and since people with HIV can have an almost normal life span if HIV replication is efficiently suppressed by antiretroviral therapy (ART), prevalence increases in older age groups the longer the epidemic continues. If infectiousness in larger proportions of people with HIV is not reduced by ART, increasing HIV prevalence in older age groups may also result in an increasing incidence of HIV, since most sexual partners are selected from the same age group. Thus, it is not surprising that a particularly high prevalence of HIV is reported for MSM within the age groups 45–54 years in the older EU/EFTA countries. Meanwhile, in the newer EU Member States and other countries in the sub-regions of South-East and East Europe where the HIV epidemic among MSM took hold about 10–15 years later, men of this age group remain less affected.

Peaks in self-reported prevalence of HIV infection (among those who reported ever having been tested) were found in the 35–39 year age group in East (prevalence 13%) and in the 40–44 year age group in the South-East (7%) and North-East Europe (13%). Self-reported prevalence peaked at 45–49 years in West and Central-West Europe (19–22%), at 50–54 years in South-West (19%) and at 60–64 years in North-West Europe (14%) (Figure 5.9). If, instead of

Figure 5.9: Self-reported HIV prevalence by age group and EMIS region (age groups with n<50 are not shown)

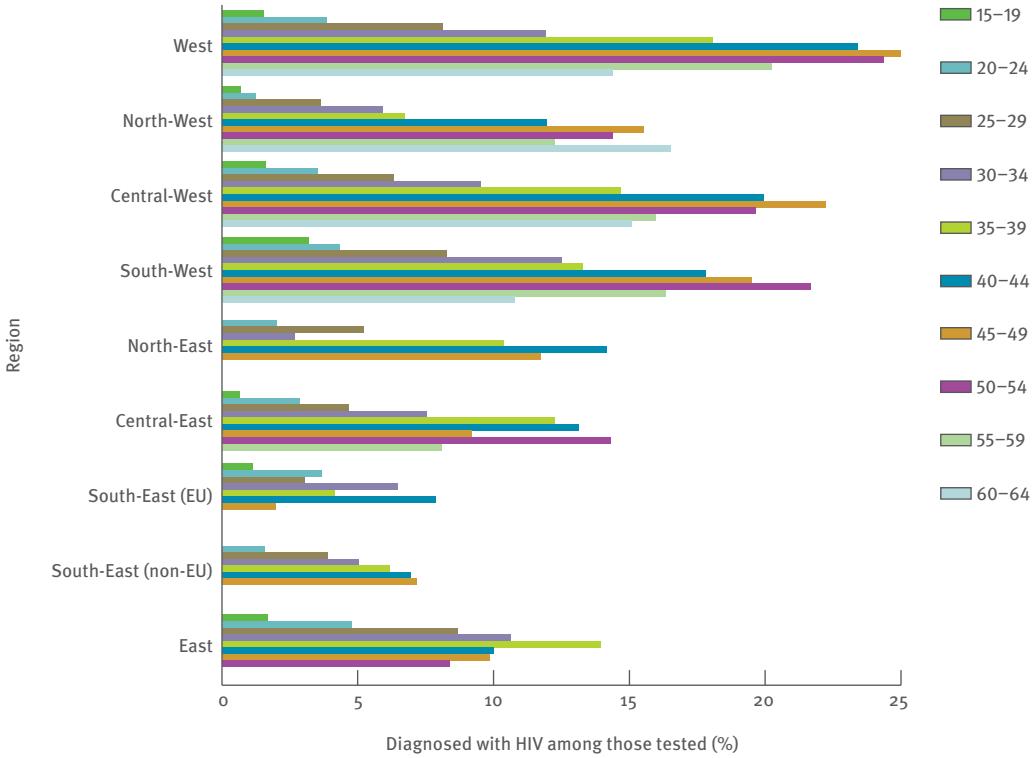
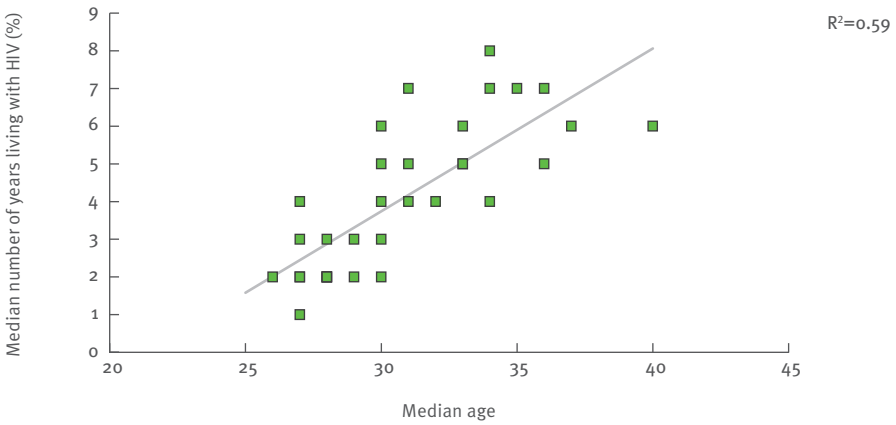


Figure 5.10: Correlation between median number of years living with HIV and median age of the country samples



prevalence estimate #2 (prevalence among those ever tested), the prevalence estimate #1 (prevalence in the sample) is used, age peaks in some regions move one age group up or down.

At country level, the median number of years men had lived with an HIV diagnosis ranged from one to eight. The older epidemics were in West, Central-West and North-West Europe, the younger epidemics in Central-East, South-East and East Europe. The HIV epidemic among MSM in South-West Europe was in-between the two.

The median number of years men have lived with an HIV diagnosis correlates strongly with the median age of respondents from the same country (R^2=0.59) (Figure 5.10). This suggests that the differences in the median ages of the samples reflect the different starting points of the epidemic among MSM and the differing extents to which older and younger age groups have been affected by HIV in specific countries.

5.2.3 Self-reported frequency of HIV infection in EMIS compared with directly-measured prevalence

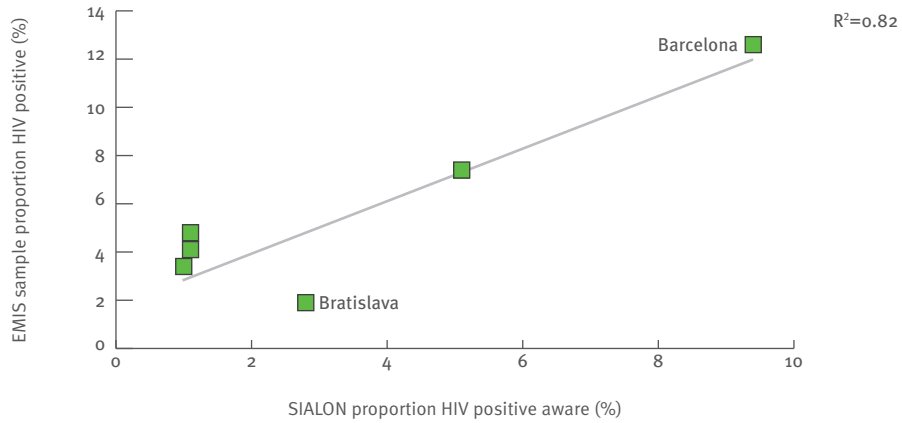
A recent study that used the method of time-location-sampling at gay venues in six European cities (Barcelona, Bratislava, Bucharest, Ljubljana, Prague and Verona) measured HIV prevalence among men visiting the respective venues by means of antibody tests in oral fluid samples (SIALON-I study, 2008–2009; SIALON 2010). In addition, study participants were asked whether they were aware of their HIV status. The proportions of SIALON participants who were aware of being HIV-infected correlated very strongly with self-reported HIV diagnoses among EMIS respondents from the same cities (R^2=0.82) (Figure 5.11). Although this comparison covers only six cities, the result suggests that the national samples may be comparable. Nevertheless, more research is needed on the comparability of self-reported infection and surveillance data on HIV prevalence and newly diagnosed HIV, as the representativeness of MSM samples is always uncertain.

5.2.4 Newly diagnosed HIV infection in the past 12 months

HIV infection diagnosed in the past 12 months (measured as a proportion of EMIS respondents who tested positive for HIV among all those tested for HIV in the past 12 months) is an indicator which avoids some but not all the comparability problems set out in Box 5.1. The question may still arise as to whether comparable segments of the MSM population in different countries were reached by EMIS and whether testing behaviour was comparable (see Chapters 5.1 and 7).

The proportion of EMIS respondents with newly-diagnosed HIV infection peaked at 4–5% in North, West, South-West, Central-East, South-East (EU) and East Europe. The age groups at which this peak occurred differed across the sub-regions: from 55–64 years in North-West; 35–39 years in West; 30–34 years in South-West and South-East (EU);

Figure 5.11: Correlation between directly-measured prevalence of HIV among men aware of their diagnosis (SIALON) and self-reported frequency of HIV infection (EMIS)



Text Box 5.2: Comparability of indicators describing newly-diagnosed HIV infections among MSM

Comparing EMIS-derived measures for newly-diagnosed HIV with newly-diagnosed HIV among MSM in national surveillance reports is not straightforward as surveillance reports tend to use the general male population as the denominator.

Taking these values for comparison between countries would imply that the size of the MSM populations is equal or very similar, which is unlikely to be the case. Moreover, as indicated, the reliability of national surveillance systems in identifying MSM among newly-diagnosed individuals may differ significantly, for example, in terms of the proportion of newly-diagnosed individuals whose mode of transmission is reported as unknown.

Figure 5.12: Proportion of respondents with newly-diagnosed HIV among those tested for HIV in the past 12 months by age group and EMIS region (age groups with n<50 not shown)

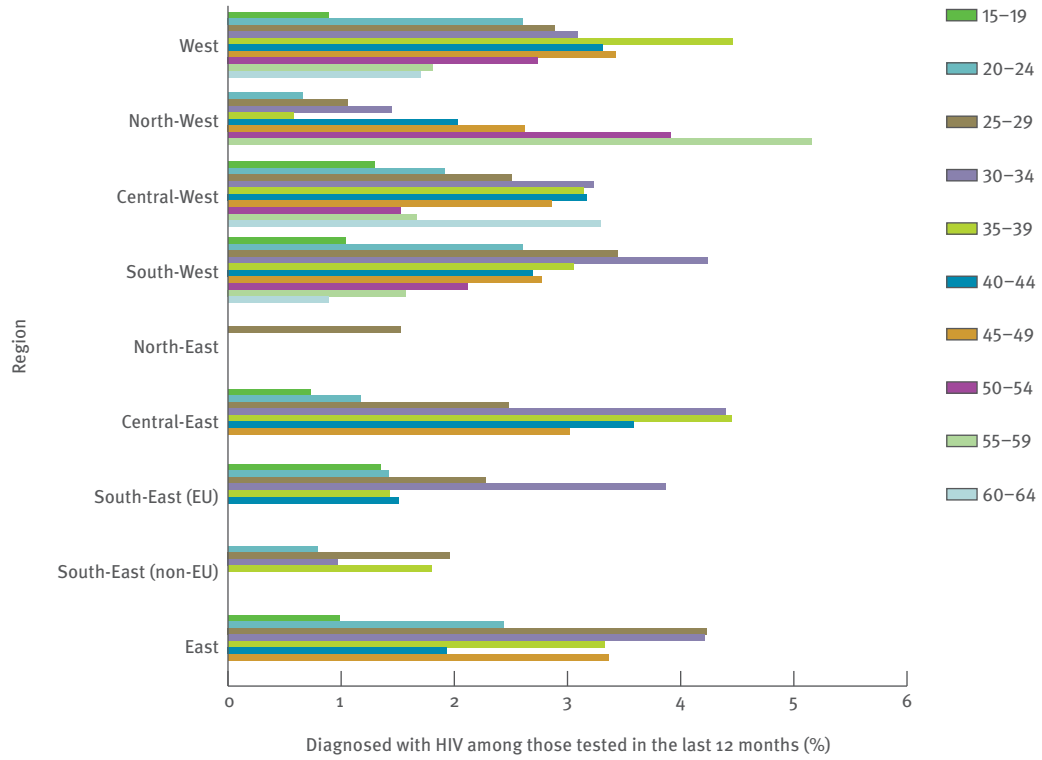
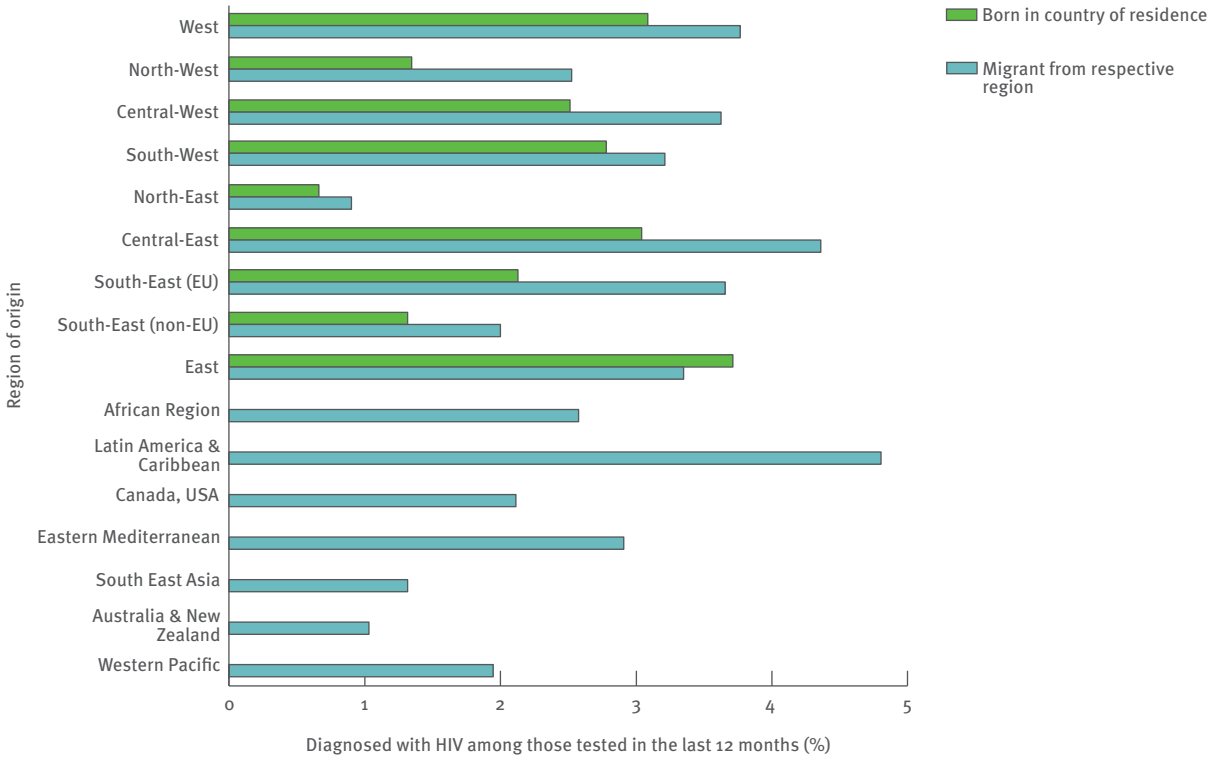


Figure 5.13: Diagnosed HIV among those tested in the past 12 months by region of origin



30–39 years in Central-East and 25–34 years in East Europe. The proportion of respondents with newly-diagnosed HIV infection peaked at 3% in Central-West and at 2% in South-East (non-EU), and was slightly lower in North-East Europe. Men aged 25–29 years were the most affected age group in North-East. South-East (non-EU) had peaks at both 25–29 years and 35–39 years. In Central-West, the age groups most affected were 30–44 years and 60–64 years (Figure 5.12).

Higher proportions of men with newly-diagnosed HIV infection were observed in larger cities (3.3% in settlements with over 500 000 inhabitants) than in smaller cities or in the countryside (2.0%).

Men who reported having had exclusively male sex partners during the past 12 months were more likely to be newly-diagnosed with HIV (3.0%) than men who reported partners of both sexes (1.5%) and men who reported exclusively female sex partners during the past 12 months (0.2%).

Men who were not born in their current country of residence were more likely to be newly-diagnosed with HIV than men with no history of migration, suggesting increased vulnerability associated with migration. The highest proportion with newly-diagnosed HIV was among men born in Latin America, followed by men originating from Central-East Europe (Figure 5.13).

5.2.5 Country-level associations with newly-diagnosed HIV

Correlations for newly-diagnosed HIV infection at the individual level are difficult to interpret. Behavioural factors defy analysis, because behaviour reported by respondents with diagnosed HIV may change after diagnosis, and thus represent the consequences rather than the causes of HIV infection. Other factors determining the probability of HIV infection, such as HIV prevalence, the presence of STIs in HIV-infected partners and HIV-exposed individuals, or the effectiveness of antiretroviral therapy in the HIV-infected partner are difficult to measure at an individual level.

At country level, the proportion of men with newly-diagnosed HIV infection correlated with HIV prevalence (EMIS estimate #2; R^2=0.42; Figure 5.14) and newly-diagnosed STIs (R^2=0.50; Figure 5.15). Linear regression analysis showed that, in addition to these two factors, the internalised homonegativity score (see Chapter 10) was also significantly correlated with newly-diagnosed HIV.

Figure 5.14: Country-level association between the proportions of men diagnosed with HIV among those ever tested (prevalence estimate #2, UNGASS 23) and among those tested in the past 12 months

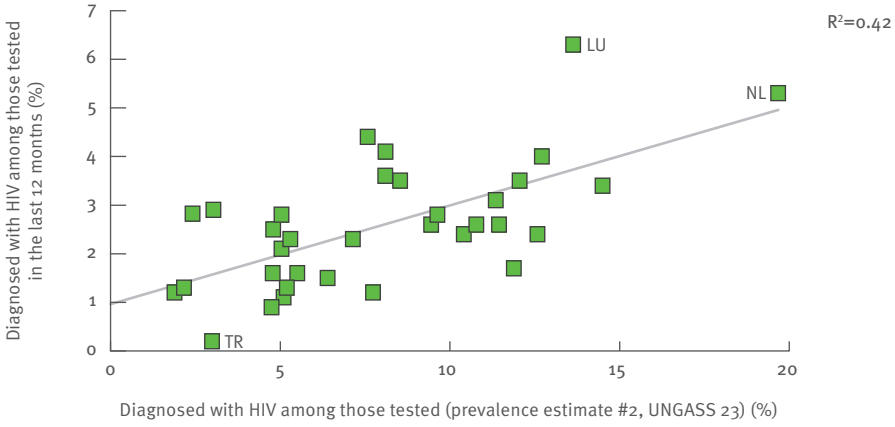
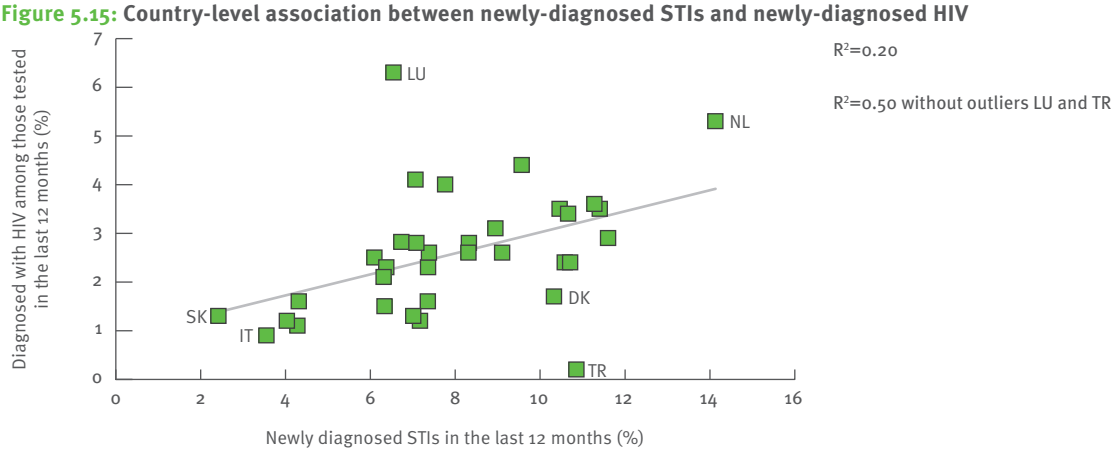


Figure 5.15: Country-level association between newly-diagnosed STIs and newly-diagnosed HIV



Text Box 5.3: Growth rate of the HIV epidemic as an EMIS proxy for the basic reproduction number

The basic reproduction number is the most difficult parameter to measure, but the most informative for assessing the success of prevention programmes. It naturally changes during the course of an HIV epidemic, being very high at the start and usually declining over time, because the number of susceptible individuals in a population gradually declines and awareness of the need for precautionary behaviour increases. It is almost impossible to measure directly, but has to be estimated by repeated measurements, for example, of HIV prevalence.

Theoretically, growth rate as measured in EMIS would still indicate a growing epidemic in a country where no new infections were occurring, but prevalent, as yet undetected infections were subsequently detected. Thus, growth rate has to be measured longitudinally and must be interpreted in the context of other parameters, such as CD4 cell count at the time of diagnosis (which would decline in the theoretical scenario described). Unfortunately, there is no indication that any country in Europe has been so successful in HIV prevention that no new infections occur. However, it should be noted that, in addition to the age of the epidemic, successful HIV test promotion could also seriously confound the comparison of growth rates among countries in a cross sectional analysis.

Figure 5.16: Epidemic growth rates by EMIS region

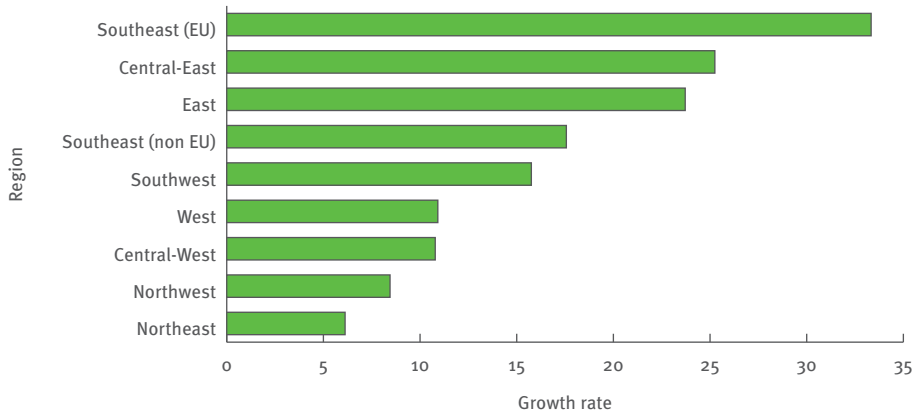
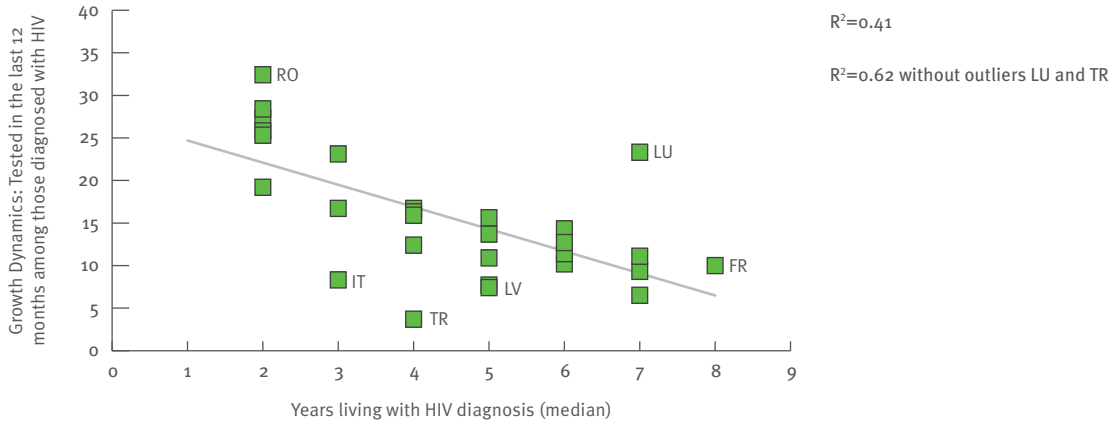


Figure 5.17: Correlation between growth rate (HIV diagnoses in the past 12 months as a proportion of all respondents diagnosed with HIV) and years living with HIV diagnosis (median)



5.2.6 Measuring epidemiological dynamics

As an imperfect proxy for the basic reproduction number we used the growth rate of the HIV epidemic, measured as the number of individuals diagnosed with HIV in the past 12 months as a proportion of the total number of individuals diagnosed with HIV in the national EMIS samples (see country tables).

Our proxy is imperfect, not only because a considerable proportion, or perhaps even the majority of new infections, were transmitted by people who were unaware that they were infected but also because it can be confounded by changes in testing behaviour. Countries with high growth rates are not necessarily countries with the highest HIV prevalence.

5.2.7 Country-level associations with growth rates of the epidemic

Growth dynamics were only moderately correlated with HIV incidence (R^2=0.24). A stronger, negative correlation existed with the age of the epidemic, measured as the median number of years those infected had lived with their HIV diagnosis (R^2=0.41): the older the epidemic, the lower the growth rate (Figure 5.17).

In the older EU/EFTA Member States, a strong negative correlation was seen between the proportion of HIV-positive respondents who received ART and the growth of the epidemic. In the newer EU Member States and neighbouring countries in eastern Europe such a correlation was not seen, probably because the proportion of infected men receiving effective treatment is too low to have preventive effects on the spread of HIV (see Section 5.3 and country tables).

5.2.8 Summary on frequency of HIV infection

The self-reported prevalence of HIV infection and the median number of years living with an HIV diagnosis varied considerably across Europe, reflecting the different starting points of the HIV epidemic among MSM. When interpreting prevalence levels it should also be considered that the proportion of sexually-active MSM among the adult male population may differ across Europe, with higher proportions in northern and western parts of Europe and lower proportions in eastern and southern parts of Europe.

In the most affected age groups (25–39 years), the proportion of men diagnosed with HIV among those tested in the past 12 months varied between 2% and 4%. In countries with younger epidemics, these peaks shifted towards younger ages, and in countries with older epidemics, they shifted towards older ages. Migrants reported higher HIV prevalence and higher proportions of newly-diagnosed HIV. Pathways for this increased vulnerability need further exploration to inform the planning and implementation of prevention programmes.

Participation rates and sample composition differed widely among countries, so further analysis is needed of self-reported prevalence and newly-diagnosed HIV infection and data generated by national infectious disease surveillance systems. A first more in depth analysis of comparability of self-reported HIV prevalence in EMIS and other prevalence studies and estimates has been published (Marcus et al. 2012). Other analyses (e.g. age biases in EMIS samples, comparability of countries within EMIS and with surveillance data) were under review at the time this report went to print.

Growth rates of the HIV epidemic among MSM were higher in Central-East, South-East and East Europe than in all western sub-regions of Europe. However, Latvia and Estonia, which are among the EU countries with the highest HIV prevalence in the general population, had rather low growth rates in the MSM sub-epidemic, although this finding may be partly due to low testing rates.

5.3 HIV care and antiretroviral therapy

5.3.1 Introduction

Across Europe, 13 533 of the 174 209 respondents eligible for analysis reported having been diagnosed with HIV infection. In national samples the proportion (prevalence estimate-1, see Section 5.2) ranged from 0% in Bosnia to 16% in the Netherlands (median 4%; see country tables). Ten or fewer men reported having been diagnosed with HIV in eight of the 38 countries covered (Belarus, Bosnia and Herzegovina, Cyprus, Estonia, Moldova, the former Yugoslav Republic of Macedonia, Malta and Slovakia), and these results are not presented. With the exception of Estonia and Moldova, these are all countries where no EMIS partner was available during survey recruitment, which resulted in a smaller sample overall. Fewer than 50 respondents with diagnosed HIV infection were recruited to EMIS from Bulgaria (n=15), Croatia (13), Luxembourg (9), Lithuania (12), Latvia (27), Serbia (31), Slovenia (26) and Turkey (25). Therefore any findings based on men diagnosed with HIV in these eight countries must be interpreted with caution. Consequently, results in this chapter will be limited to 22 countries (with n>50), or to 30 countries (with n>10). We acknowledge that the exclusion of many countries because of small sub-samples introduced selection bias, as most of the excluded countries were economically weaker than the majority of those included and were represented by samples where higher proportions of men (with HIV) were younger and the HIV epidemic started later.

For individual level analyses of the whole sample, all respondents with self-reported HIV infection were included and, where appropriate, pooled with respondents from the same European sub-region. This section describes how access to HIV monitoring and care for MSM differs across countries and other parameters; how access to antiretroviral therapy (ART) for MSM varies across countries and other parameters; what reasons men with HIV give for not receiving ART and how effective the treatment is – all based on self-reported data. The last part of this section will look at the effectiveness of ART from a public health perspective, focusing on a population-level parameter (community viral load) that has a large impact on the incidence of HIV infection (Das et al. 2010; Wood et al. 2009).

5.3.2 Access to HIV monitoring and care

Universal access to HIV monitoring, care and treatment is one of the key aims of the Joint United Nations Programme on HIV/AIDS (UNAIDS). The EMIS questionnaire asked how recently respondents had seen a health professional to monitor their HIV infection (using the standard response set for EMIS recency questions). The current *Guidelines for clinical management and treatment of HIV-infected adults in Europe* (2011) recommend the monitoring of T-helper cells (CD4) and viral load (plasma HIV RNA copies) at least every six months. Respondents who reported that they had had their HIV infection monitored within the last six months were therefore defined as having access to HIV monitoring and care.

The proportion of men reporting such access ranged from 71% in Ukraine to 97% in Luxembourg (median 93%; see country tables). In East Europe, where 401 respondents had been diagnosed with HIV, 7% reported never having been in contact with HIV monitoring and care services, and another 10% said that this had been more than six months ago. In the non-EU countries of South-East Europe, these proportions were 3% and 7%, respectively. As for Member States of the European Union, the highest deficits were found in North-East Europe, where 2% reported never having been in contact with HIV healthcare services and 10% said contact had been over six months ago.

Individual level analysis

In each of the nine EMIS sub-regions of Europe, individual-level access to HIV monitoring and care was not associated with recruitment, age, the level of educational attainment, employment status, sexual identity, not being born in the country of residence, or – most remarkably – settlement size. Men living in the countryside were as likely to report access to HIV monitoring and care as men living in larger cities.

In northern Europe – Scandinavia (North-West) and in the Baltic countries (North-East) – access to HIV-specific healthcare was strongly associated with outness (North-West: 95% vs. 86%; OR=3.47; 95%-CI: 1.47–8.18; N=408; North-East: 96% vs. 73%, OR=9.75, 95%-CI: 1.07–88.59, N=49).

It is plausible that not being out about one's sexuality might hamper access to HIV-specific healthcare, because men might not want to reveal their sexual preference or lifestyle to the personnel of the healthcare facility or to fellow patients. Given that the numbers of respondents with diagnosed HIV in the two northern European sub-regions was small, however, the confidence intervals are broad and the findings should be explored in national or regional analyses.

5.3.3 Antiretroviral therapy and reasons for not taking it

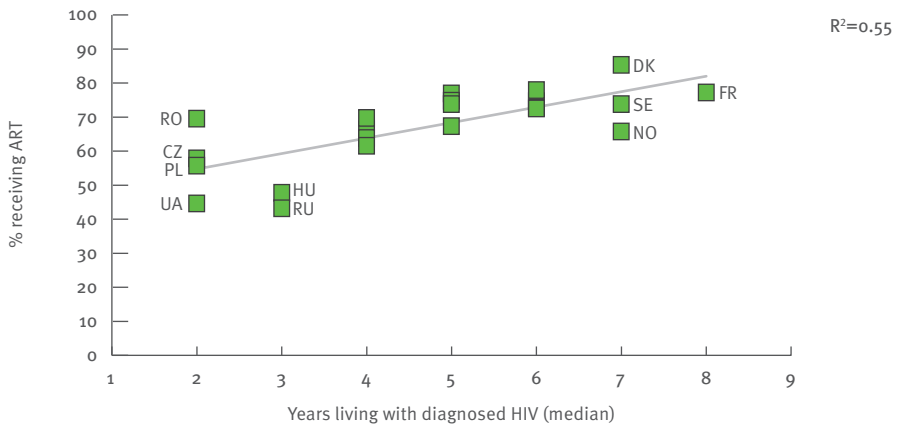
The guidelines for clinical management and treatment of HIV-infected adults in Europe suggest that antiretroviral therapy (ART) is indicated if a patient presents with AIDS-defining events or if the CD4 count is below 350 per microlitre (EACS 2011). These guidelines are not binding for countries – not even within the European Union – and national guidelines, particularly in non-EU/EFTA countries, may differ from the European guidelines. The proportion of MSM receiving ART varied from 37% in Latvia to 85% in Denmark (median 67%; see country tables).

Individual level analysis

As CD4 cells decline over time in the presence of (replicating) HIV infection, receipt of ART is dependent on the duration of HIV infection. EMIS did not collect data on current CD4 counts, but asked respondents for the year when their HIV infection was diagnosed and can provide information on time lived with diagnosed HIV infection.

At an individual level, each extra year lived with HIV increased the odds of receiving ART by 21% (OR=1.21; 95%-CI: 1.19–1.21; Nagelkerke's Pseudo R2=22%). No relevant associations could be found between receiving ART and recruitment, level of educational attainment, employment status, sexual identity, not being born in the country of residence, or settlement size. Receiving ART was also not associated with sexual happiness, HIV-related stigma, or – among those who engaged in anal intercourse – condom use with steady or non-steady partners.

Figure 5.18: Country-level association between median years of living with HIV and proportion on ART



Country level analysis

National comparisons of MSM who were receiving ART at the time of the survey must take into consideration the various onsets of HIV epidemics (among MSM) in the countries concerned and thus the different average lengths of time that respondents had been infected. Figure 5.18, based on the 22 countries with more than 50 HIV-diagnosed respondents, shows a strong positive correlation between the median time respondents had been living with diagnosed HIV and the percentage of diagnosed, positive respondents who were receiving ART. Every dot in the graph represents a country (Beta=0.74; p<0.001; R2=55%).

Reasons for never having received ART

Men who reported that they were not currently taking ART (either because they had never received it or because they had stopped taking it) were asked 'Why have you never taken antiretroviral treatment for your HIV infection?' or 'Why have you stopped taking antiretroviral treatment for your HIV infection?' For both questions, respondents were given a list of seven reasons to choose from, with the possibility of indicating more than one reason. The options were generated from qualitative answers to the same question in an earlier survey. The order in which the reasons were offered rotated to prevent the first and last answers being chosen disproportionately. An eighth option – 'Other reason' – was always given as the last option. Figure 5.19 shows the proportions of men identifying the respective answers, grouped by European sub-regions. Given that the number of HIV-positive men without ART was very small in some European sub-regions, a broader grouping was used, comparing the 17 older EU Member States as of 1995 with the newer Member States that joined in 2004 and 2007 and non-EU/EFTA countries.

The vast majority of the 3 391 men diagnosed with HIV who had never received ART said it was because their doctor did not yet recommend it. This reason was followed by 'I feel it is not necessary' and 'To avoid side effects'. The order of answers in terms of the proportion of men who checked them was the same in all sub-regions. For all reasons given, a clear East-West gradient could be seen. Men living in non-EU/EFTA countries were more likely to be afraid of side effects, or not to want to be reminded about HIV every day, or wish to avoid other people noticing that they were HIV-infected, suggesting a higher level of HIV-related stigma (see Chapter 10). They also stated more often that they could not afford treatment, or that the treatment was not available in the country where they lived.

Respondents who checked 'Other reason' were asked the open-ended question 'For what other reason have you never taken antiretroviral treatment?' The following description uses responses from 201 MSM who answered the question in one of the 25 available languages. The responses were translated into English, their content was analysed and they were coded into new response types. Typical quotes have been translated into English.

Diagnosis too recent: By far the most common 'other reason' for never having taken ART was having been diagnosed very recently, not having had time to visit a specialist, being scheduled for treatment but not yet having taken it, or still waiting for laboratory results to decide whether treatment was indicated. 'I recently discovered the HIV and I have yet to conclude any analysis to see if the therapies are required or not' (Italian[1]) or 'Because the results are still so new that you want to watch the development to see how parameters change' (German[2]).

Does not know what antiretroviral treatment is: Some respondents were unaware that there were treatments for HIV infection: 'I was not aware...' (Portuguese[3]). It was striking that most answers of this type were given in Dutch, possibly indicating that in the Netherlands or Flanders a term other than 'anti-retrovirale behandeling' is used in public health communication: 'Never heard of it' (Dutch[4]).

Distrust in medical science: Some respondents indicated a lack of trust in research or treatment: 'ART – this is more a business than a real need. There are other ways to control the viral load but one only speaks about ART' (Russian[5]); or lack of trust in reliable knowledge about HIV infection itself: 'Firmly embrace the dissident theory of HIV... and there is evidence that HIV does not cause AIDS!' (Spanish[6]).

These additional three options could be added to the set of answers in future questionnaires.

1 Ho scoperto la sieropositività da poco e devo ancora concludere tutte le analisi per verificare se le terapie siano già necessarie oppure no.

2 Weil das Ergebnis noch so frisch ist, dass man erst die Entwicklung abwarten will wie sich die Werte verändern.

3 Não tinha conhecimento...

4 Nog nooit van gehoord.

5 АРТ – это скорее бизнес чем реальная необходимость. Есть другие способы контролировать нагрузку но говорят лишь об АРТ.

6 Abrazo firmemente la teoría disidente del vih... Y pruebas de que vih no es la causa del sida no faltan!

Figure 5.19: Reasons for never having taken ART

(Multiple response)	17 older EU/EFTA Member States (n=2 943) (%)	12 newer EU Member States (n=163) (%)	9 non-EU/EFTA countries (n=249) (%)	Total (n=3 355) (%)
My doctor says I don't need anti-retroviral treatment at the moment	88.1	87.1	72.3	86.9
I feel it is not necessary	7.0	11.0	24.1	8.5
To avoid the side-effects	5.8	7.4	14.5	6.5
I don't want to be reminded about HIV every day	4.4	4.9	13.3	5.1
I'm afraid people will notice	2.1	4.3	6.0	2.5
I cannot afford the treatment	2.1	4.3	5.6	2.5
The treatment is not being available in the country I live in	0.2	1.2	2.4	0.4
Other reason	5.9	4.3	6.4	5.8

Reasons for having stopped ART

Among men who reported ever having received antiretroviral therapy, 3% (n=278) had stopped taking it. The most common reason for stopping – as for not having started yet – was a clinician's recommendation (58%). However, 28% of those who had stopped treatment had done so because of experiencing side effects, and some indicated a certain fatigue about taking regular medication ('I don't want to be reminded about HIV every day' – 15%).

Again, respondents who checked 'Other reason' were asked the open-ended question: 'For what other reason have you stopped taking antiretroviral treatment?' The responses from 35 MSM were translated into English and analysed. Three types of answers seemed to be missing in the original response set, and the first two may be considered for inclusion in future questionnaires.

Research: Some men indicated that they had received treatment as part of a clinical trial: 'I was on a clinical trial where treatment was given for 48 weeks to those who could prove that they had only recently become HIV-positive. That period of treatment has now ended' (English).

PEP: A few men said that the ART they had in the past was post exposure prophylaxis: 'A year before HIV infection I received PEP prophylaxis treatment' (German[7]).

No hope: A few men indicated that they had lost the will to live (with HIV), or prolong their lives: 'I do not want to live with the shame' (German[8]) or 'Have lived long enough' (Hungarian[9]).

7 Ein Jahr vor der HIV-Infektion war eine Pep-Behandlung.

8 Ich möchte nicht mit der Schande leben.

9 Eleget éltem.

Figure 5.20: Reasons for having stopped ART

(Multiple response)	Total (n=272) (%)
My doctor says I don't need antiretroviral treatment at the moment	58.1
To avoid the side effects	28.3
I don't want to be reminded about HIV every day	14.7
I feel it is not necessary	11.8
I'm afraid people will notice	5.5
I cannot afford the treatment	3.3
The treatment stopped being available in the country I live in	1.1
Other reason	12.9

5.3.4 Impact and effectiveness of antiretroviral therapy

Respondents who reported having had their HIV infection monitored were asked: 'What was the result of your viral load test the last time you had your HIV infection monitored?' Figure 5.21 shows the answers, stratified by three broad European sub-regions. Again, this truncated regional analysis was necessary because the numbers of respondents in the five eastern European sub-regions were too small for further stratification. The differences in the four western sub-regions were negligible and therefore they are not presented.

The results shown in the above table are based on all HIV-positive respondents who had been monitored, whether they were receiving ART or not. From a clinical point of view, it would be more interesting to restrict answers to respondents who reported receiving ART at the time of the survey, to assess the effectiveness of ART on plasma HIV RNA copies (viral load). Effectiveness is defined as the ability of an intervention to produce the desired effect under real-life circumstances. The efficacy – ability to produce the desired beneficial effect under ideal circumstances – of ART is incontrovertible, but effectiveness depends on various factors, perhaps the most important of which are viral resistance and individual problems associated with regularly taking the pills.

Among national samples which included more than 50 men with diagnosed HIV infection the proportion of respondents receiving ART and reporting that their viral load had been undetectable when last monitored ranged from 51% in Ukraine to 89% in the Netherlands (median 78%). However, for some countries these values were based on very small numbers and for most countries estimates of the effectiveness of treatment can be derived from clinical studies much more reliably.

EMIS respondents from the five largest Member States of the European Union (Germany, Spain, France, Italy and the UK) each comprised over 1 000 men who reported having been diagnosed with HIV infection. Therefore for these countries the EMIS-derived estimates of ART effectiveness were not limited by small numbers and were 74% in Italy, 80% in Germany, 81% in Spain, 83% in the UK and 86% in France.

Individual level analysis – possible influences on effectiveness of ART

For these five countries, age had the strongest influence on effectiveness of treatment. Undetectable viral loads were

Figure 5.21: Result of the viral load test the last time the HIV infection was monitored

	17 older EU/EFTA Member States (n=11 927) (%)	12 newer EU Member States (n=408) (%)	9 non-EU/EFTA countries (n=439) (%)	Total (n=12 774) (%)
Undetectable	65.1	43.6	36.4	63.4
Detectable	27.1	33.8	38.5	27.7
I was told but I don't remember the result	3.8	9.3	10.5	4.2
It was measured but I was not told the result	1.4	5.6	3.6	1.6
It was not measured	0.8	4.2	4.8	1.0
I don't remember	1.9	3.4	6.2	2.1

reported by 70% in the age group 20–29 years (n=543), by 79% in the age group 30–39 years (n=1 958), by 83% in the age group 40–49 years (n=3 198) and by 84% in the age group 50 years and above (n=1 301).

When controlling for age, effective treatment was negatively associated with a bisexual identity (AOR=0.60; 95%-CI: 0.46–0.79), and positively associated with outness (AOR=1.52; 95%-CI: 1.31–1.77), living in larger cities (AOR=1.36; 95%-CI: 1.20–1.54) and higher educational attainment (ISCED III vs. I+II: AOR=1.33; 95%-CI: 1.18–1.51), but unrelated to being born in the country of residence, to filling in the questionnaire in a language other than the official language of the country, or the level of stigma and discrimination respondents had experienced since being diagnosed.

No association was found between effective treatment and consumption of recreational drugs (such as cannabis, or drugs typically used in a sexual context, see Chapter 9) in the 12 months preceding the survey or with alcohol consumption in the past 24 hours. Looking at more recent timeframes for the consumption of recreational drugs did not change this observation. Consumption of recreational drugs is sometimes regarded as a predictor for non-compliance with rules in general, or for non-adherence to medical prescriptions in particular, but no such association was observed in EMIS.

Individual level analysis – possible consequences of effective ART

In the five countries with the largest samples, reporting an undetectable viral load was not associated with reporting higher levels of sexual risk behaviour, such as UAI – either with steady or non-steady partners – or, in particular, ncUAI. Clinicians, public health experts, and HIV prevention activists have often stated a fear that the preventive effects of effective ART might be offset by an increase in sexual risk behaviour. This assumption was not supported by EMIS data.

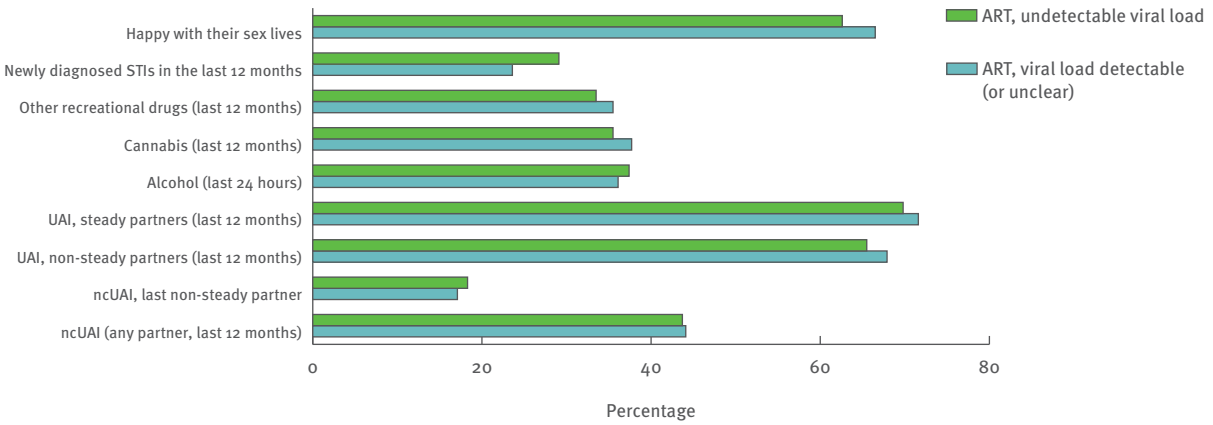
Conversely, effective treatment was positively associated with a happy sex life (AOR=1.20, 95%-CI: 1.06–1.37), a benefit rarely assumed or assessed. Furthermore, effective treatment was negatively associated with reports of newly-diagnosed STIs (syphilis, gonorrhoea, or chlamydial infection, or first diagnosis of anal or genital herpes or anal or genital warts, all in the past 12 months: AOR=0.80; 95%-CI: 0.70–0.91). This confirms results from previous internet studies on MSM (Schmidt et al. 2007), now based on a much larger sample with respondents from more than one country

Country level analysis

Wide availability of medical equipment to measure plasma HIV viral load, availability of the full spectrum of antiretroviral drugs, and medical personnel with time to build up close professional relationships with their patients and to communicate the information needed to adhere to medical therapies are all likely to be related to the resources available within a society. We therefore looked at country-level associations between the effectiveness of treatment and the United Nations Human Development Index (HDI).

The HDI is a composite measurement of access to long and healthy lives, knowledge and economic wealth. It is used to rank countries by an overall level of human development on a scale between zero and one. In terms of development, European countries have a variety of rankings. Of the 169 countries listed in the UN Human Development Report 2010, the countries covered by EMIS ranged from Norway (rank 1=0.938) to Moldova (rank 99=0.623). Figure 5.23 is based on the 22 countries with over 50 HIV-positive respondents and shows the positive association between HDI and effectiveness of treatment.

Figure 5.22: Individual-level associations with ART effectiveness. Respondents from de, es, fr, it, uk (n=7 000) with detectable vs. undetectable viral load with respect to reporting unprotected anal intercourse, consumption of alcohol or recreational drugs, newly-diagnosed STIs, or being happy with their sex lives



ncUAI: non-concordant unprotected anal intercourse (i.e. with any partner of unknown or different HIV status)
UAI: unprotected anal intercourse
Other recreational drugs: drugs typically associated with sex and parties (XTC, amphetamines, crystal, mephedrone, GHB, ketamine, cocaine)
Newly diagnosed STIs: diagnosis of syphilis, gonorrhoea, or chlamydial infection, or first diagnosis of anal or genital herpes or anal or genital warts, all in the last 12 months.

The relationship between HDI and effectiveness of treatment was strong (Beta=0.70; p<0.001; R2=48%). Effectiveness of treatment was also strongly correlated with the median time living with HIV (Beta=0.66; p=0.001; R2=44%). Two variables, described in more detail in Chapter 10, had an even greater explanatory power for effectiveness of treatment: measurements of discrimination and homophobia. Effectiveness of treatment correlated very strongly with national mean scores for HIV-related stigma (Beta=-0.79; p<0.001; R2=62%) and with national mean scores for internalised homonegativity (Beta=-0.80; p<0.001; R2=64%). Combined, these two factors explained 72% of the variance in effectiveness of treatment. HDI was most strongly associated with homophobia and, to a lesser extent, with HIV-related stigma (see Chapter 10). The higher the level of homophobia within EMIS countries, and the lower the Human Development Index, the younger the respondents that EMIS could motivate to complete the online questionnaire – and age had the strongest impact on effectiveness at an individual data level. All the structural factors examined were thus interrelated. Further studies will have to determine how exactly the causal chain works and what other intermediate factors might exist that EMIS did not measure.

5.3.5 Community viral load

The last decade has yielded increasing evidence that effective HIV treatment not only provides clinical benefits for people with HIV but also reduces the chances of onward transmission of the virus. This is good news for people with HIV – because it lessens the fear of infecting others – and for the planning of public health interventions. The concept of community viral load is based on three cornerstones (Figure 5.24) that need to be addressed when aiming to reduce the number of sexually active people with replicating HIV:

- decreasing undiagnosed infections among those infected with HIV – particularly in the early and late stages of HIV infection, where individual viral load and the risk of onward transmission is highest – by scaling up HIV testing;
- decreasing untreated infections among those who are diagnosed with HIV, by scaling up treatment;
- decreasing ineffective treatment among those who are treated for HIV infection by scaling up the effectiveness of ART.

There is no consensus on the extent to which each of the three cornerstones contributes to community viral load. There seems to be consensus, however, that scaling up HIV testing – even if everybody had a test after every potential exposure or before every new sexual partner – can only partially affect HIV transmission during early infection, when infectivity is highest and antibodies cannot yet be detected because seroconversion is incomplete. EMIS data do not enable us to estimate the proportions of MSM with undiagnosed HIV infections, but they do allow us to examine the other two cornerstones that affect community viral load (see Figure 5.25). As this chapter deals with access to HIV-specific medical care and ART for MSM and how this varies across Europe, the two treatment-related cornerstones are combined for country level analysis.

Figure 5.24: Cornerstones of community viral load

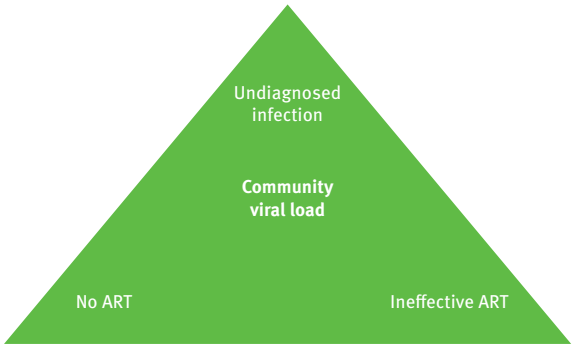
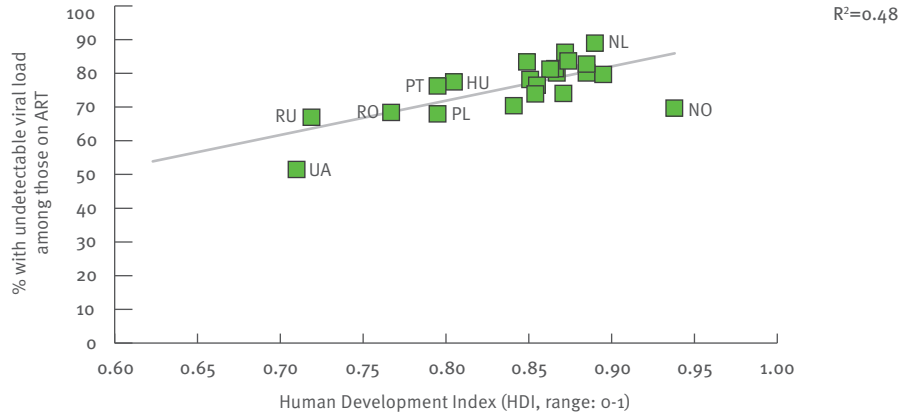


Figure 5.23: Country-level association between the Human Development Index and the proportion of respondents on ART who report undetectable viral load



Country level analysis

In the 30 countries with more than 50 respondents diagnosed with HIV, the proportion diagnosed with HIV but not receiving ART, or who reported being on ineffective treatment, varied from 31% in Denmark to 77% in Ukraine (median 51%; see country tables). A higher score represents a greater potential for onward transmission of HIV (from MSM with diagnosed HIV who engage in ncUAI) and risk of exposure to HIV (from the perspective of MSM without HIV infection who engage in UAI with an infected partner).

Together, HDI (Beta=0.44; p<0.001) and the median number of years since HIV diagnosis (Beta=0.38; p<0.001) explained 58% of the variance in national proportions of MSM with detectable HIV. The strong correlation with the external HDI data suggests a structural explanation – for example, socioeconomic development – for the variation in community viral load. Again, further analysis is required to better understand what other factors might be relevant.

Higher levels of individual mobility between continents and larger cities meant that the HIV epidemic started much earlier in countries that now score highly on the HDI. Given that mobility patterns – including and perhaps particularly those among MSM (see Chapter 8) – have changed dramatically over the last 20 years, it is important to be aware that a low prevalence of HIV infection among MSM in many European countries might be offset by higher viral loads among those with HIV infection.

As demonstrated for the five largest EU countries at an individual level, age had a strong influence on effectiveness of treatment. Being younger, having a lower level of educational attainment and living in smaller cities are factors that had a negative impact on treatment success. All of these factors point towards issues at the individual level that need to be addressed both in patient follow-up and when planning new health centres and clinics.

5.3.6 Summary and policy recommendations

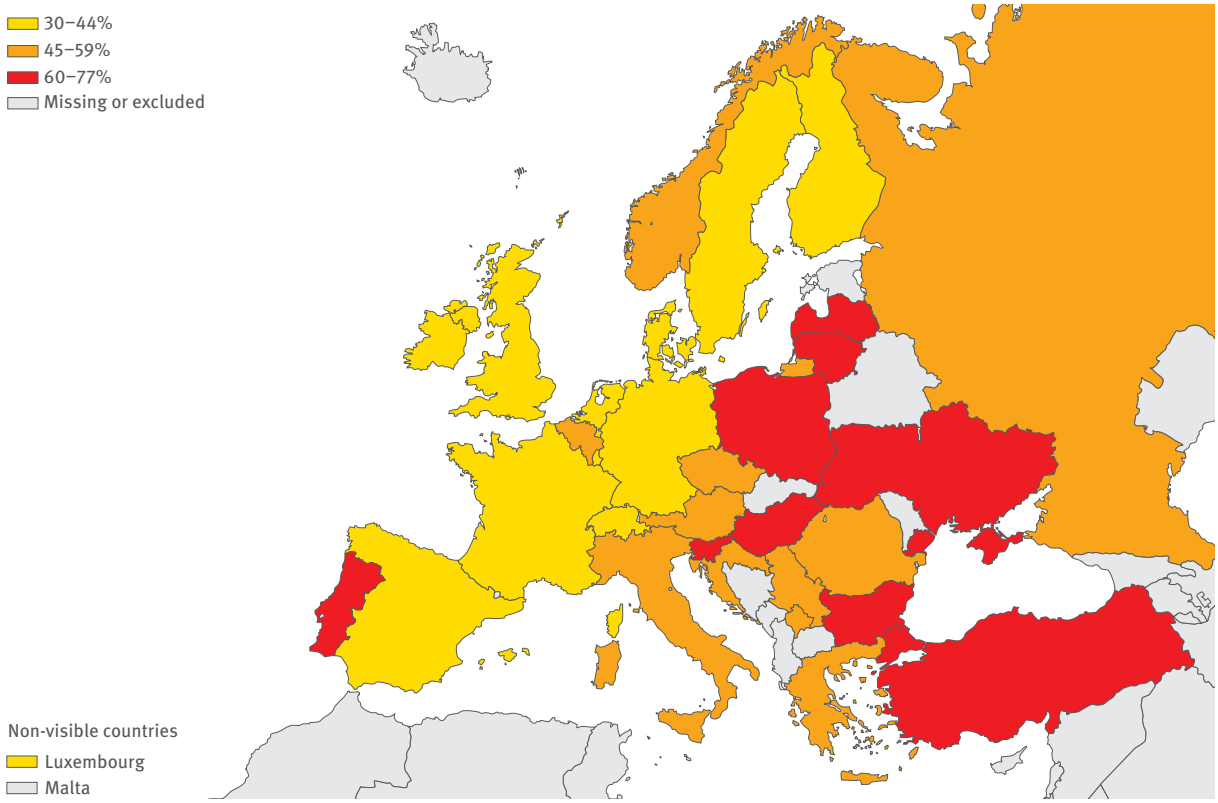
Substantial proportions of MSM diagnosed with HIV, particularly in new EU Member States and non-EU/EFTA countries, reported deficits in HIV-specific care (monitoring of infection, viral load testing and access to ART). Only a very small proportion reported having stopped treatment once they had started. Nevertheless, effectiveness of treatment needs to be improved, as detectable viral loads while on treatment have negative consequences both for the individual and for public health.

5.4 Post Exposure Prophylaxis (PEP)

5.4.1 Introduction

The use of post exposure prophylaxis (PEP) as an intervention for preventing HIV infection after sexual exposure has been controversial since the American Centers for Disease Control and Prevention issued a statement on its use after sexual exposure in 1997 (CDC, 2005).

Figure 5.25: Proportion of HIV-infected respondents with detectable viral load



National health authorities in Europe were among the first to recommend using PEP after sexual exposure. In a survey carried out during 1998 and 1999, Austria, France, Germany, Luxembourg and Switzerland recommended PEP after vaginal or receptive (but not insertive) anal intercourse with an infected partner (Rey et al. 2000). In France, PEP was recommended even if the HIV status of the source person was unknown. In Belgium, Denmark, Ireland, Poland, Portugal, Romania, Slovenia, Spain, Sweden and the UK, PEP was available on a case-by-case basis at the discretion of the physician. Rey and colleagues showed that easy access to PEP after sexual exposures was not guaranteed in most European countries and concluded there was 'a real challenge in improving access to PEP in the non-occupational context' across Europe.

In 2001, the European Commission funded a project on PEP after sexual exposure to HIV with the objective of developing European recommendations. The project was coordinated by CEEISCAT (Centre d'Estudis Epidemiològics sobre les Infeccions de Transmissió Sexual i Sida de Catalunya), and 14 European countries took part. A consensus was found to recommend PEP after unprotected receptive (but not insertive) anal intercourse if 'the source person is known as HIV positive or to be from a population group with high HIV prevalence. (...) All patients should receive medical evaluation including HIV antibody tests, drug toxicity monitoring and counselling periodically for at least six months after the exposure' (Almeda et al. 2004).

As such recommendations are subject to change, particularly in the context of a growing European Union, the EMIS coordinator conducted a brief survey among national partners in September 2009. According to the responses of EMIS national partners, PEP was available free of charge after sexual exposure in the following 19 countries: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Ukraine and the UK. It was not available free of charge after sexual exposure in the following 12 countries: Bulgaria, the Czech Republic, Estonia, Finland, Hungary, Lithuania, Latvia, the former Yugoslav Republic of Macedonia, Moldova, Poland, Romania and Russia. Availability of PEP could not be determined for Belarus, Bosnia and Herzegovina, Croatia, Cyprus, Malta, Slovakia and Turkey.

The efficacy of PEP strongly depends on the time between HIV exposure and starting treatment: it should start as soon as possible but certainly within 72 hours of exposure. The efficacy of PEP after sexual exposure is unknown, however, and seroconversion despite PEP has been observed (Roland et al. 2005). Prophylactic treatment for HIV typically lasts four weeks and mainly uses the same antiretroviral regimen as for long-term treatment of HIV.

In the EMIS questionnaire, the section on PEP started with three true statements on PEP and respondents were asked whether or not they knew this information (see Section 11.1 on knowledge). The first statement was: 'Post-exposure prophylaxis (PEP) attempts to stop HIV infection taking

Figure 5.26: Proportion of respondents treated with PEP

place after a person is exposed to the virus.' Respondents were then asked if they had ever been treated with PEP (respondents with diagnosed HIV were asked if they had been treated with PEP before being diagnosed). The last question on PEP was 'How confident are you that you could get PEP if you thought you needed it?' Men could respond on a four-point Likert scale from 'Very confident', 'Quite confident', 'A little confident' or 'Not at all confident', or they could choose 'I don't know'.

Perceived access to PEP was defined as knowing that PEP attempts to stop HIV infection taking place after a person is exposed to the virus – indicating some basic knowledge of what PEP is – and as being 'quite' or 'very' confident of being able to obtain PEP if needed.

5.4.2 Country-level and individual-level analyses of post exposure prophylaxis (PEP)

Country level analysis

In most countries, respondents reported very little experience of taking PEP (median 1.3%). In 15 of the 38 EMIS countries, the proportion was 1% or less. In another 11 countries, 2% or less had experience with PEP. In Poland, Ireland, Austria, Cyprus and the Netherlands the respective proportion was between 2% and 3%. In Denmark, Luxembourg, Belgium, Switzerland, and the UK between 3% and 5% had taken PEP. France ranked first on the list with 9% of respondents, reflecting a PEP policy distinct from that in all other European countries (Figure 5.26).

It should be emphasised that EMIS did not ask where PEP was received or prescribed, so respondents living in any country might have been treated with PEP while abroad. Nevertheless, while excluding men born abroad from analysis lowered the proportions of men with experience of PEP in countries where PEP is not officially available, the magnitude – even if small – remained unchanged.

Perceived access to PEP (median 17%) correlated strongly with the proportion having received PEP in the past (Figure 5.27). Perceived access was lowest in the former Yugoslavia (Serbia, the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina), and less than 20% in all countries where the EMIS national partner said that PEP was not available after sexual exposure. Perceived access to PEP was highest in France (54%), followed by Switzerland (46%), Denmark (43%), the UK (40%), Austria (32%), the Netherlands and Belgium (30%). Among countries where EMIS national leads stated that PEP was available, it is

Figure 5.27: Country-level association between ever having been treated with PEP and perceived access to it

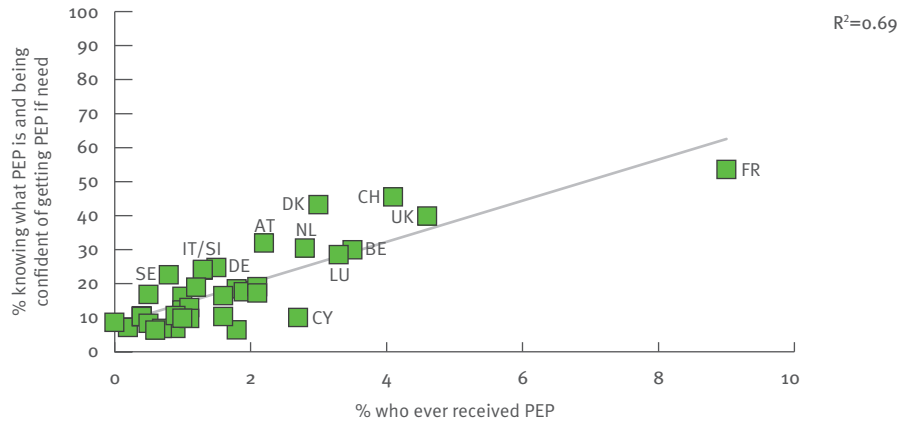
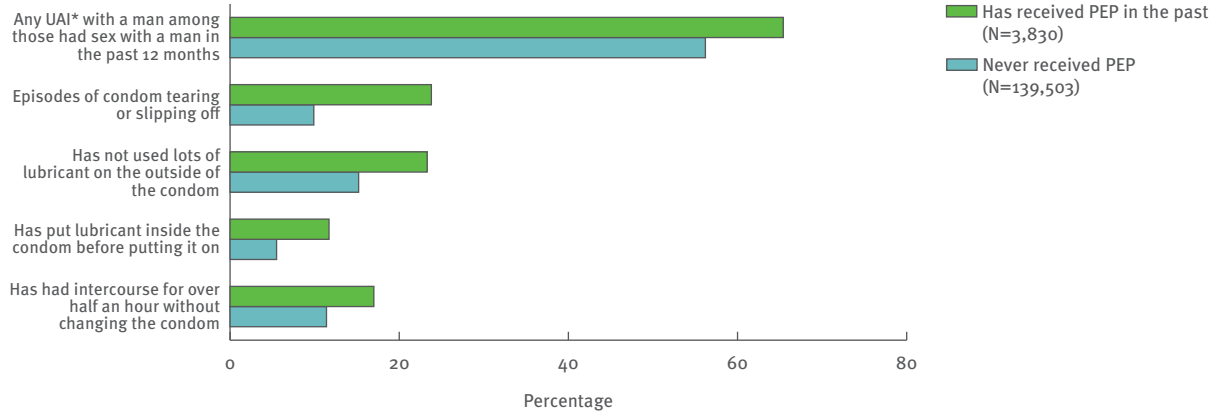


Figure 5.28: Individual-level associations with having received PEP (respondents from 17 European countries where PEP is available free of charge after sexual exposure to HIV (n=136 969))



important to note that perceived access was just above the median in Greece, Spain, Ireland, Norway and Portugal and was particularly low in Serbia and Ukraine.

Individual level analysis

In logistic regression analysis, adjusting for country of birth and age – since the likelihood of ever having received PEP increased with age and was higher for migrants (OR=1.51; 95%-CI: 1-40–1.64) – respondents from France were still twice as likely to have received PEP (AOR 2.27; 95%-CI: 2.06–2.51) as respondents from the UK, Switzerland or Luxembourg, and the ranking of countries remained largely the same. The geographical pattern of the map in Figure 5.26 is therefore not confounded by recent migration or the age composition of the samples.

To find out about factors associated with PEP use, another logistic regression analysis was conducted for those countries where PEP was available in 2009, according to EMIS national partners (Serbia and Ukraine were excluded from this analysis since perceived access to PEP was similar to countries where PEP was not available).

Having received PEP was neither associated with current HIV status nor with having engaged in ncUAI in the past 12 months. Having received PEP was associated with reporting UAI with male partners in the past 12 months (AOR=1.35; 95%-C: 1.26–1.45) and with having experienced the tearing or slipping off of condoms in the past 12 months (AOR=2.51; 95%-CI: 2.30–2.74).

Putting lubricant inside the condom before putting it on (AOR=1.94; 95%-CI=1.74–2.17), not having used lots of lubricant on the outside of the condom (AOR=1.19; 95%-CI=1.09–1.31), and having had intercourse for over half an hour without changing the condom (AOR=1.18; 95%-CI=1.07–1.30) were associated with having received PEP; all these are behavioural factors that contribute to the tearing or slipping off of condoms (Figure 5.28).

Although ever having received PEP refers to a different timeframe to the behavioural parameters indicated, it is plausible to assume that most experience with PEP occurred before the behavioural events reported for the 12 months preceding the survey. The results highlight unmet prevention needs among MSM. Using condoms for ncUAI is important for reducing the risk of HIV infection, but knowing how to use condoms correctly and putting this knowledge into practice remains a challenge for HIV prevention.

5.4.3 Summary and policy recommendations

While efficacy and cost-effectiveness of PEP after sexual exposure remain unclear, there is a large variation across Europe with respect to how often PEP is considered and prescribed for HIV prevention. The high costs of PEP may be a major obstacle for its prescription. Awareness of PEP and perceived access to PEP is low among MSM in most European countries – indicating that PEP is not a first-line prevention intervention. MSM who are exposed to HIV – regardless of the reason for exposure – have a right to be informed about all potential interventions, including knowledge about what PEP is and where it can be obtained. EMIS findings suggest that condom accidents and a consistent lack of knowledge on how to use condoms correctly, rather than carelessness, are associated with exposure to HIV and related experience of PEP.

5.5 Country table

Country		Region		Age median	HIV testing						
Code	Name	EU region	EMIS region		Untested %	UNGASS 8 - Testing for HIV in previous 12 months (%)	Perceived inaccessibility of free or affordable HIV-testing (%)	Dissatisfied with confidentiality at last HIV test (%)	Dissatisfied with respect at last HIV test (%)	Dissatisfied or no counselling at last HIV test (%)	No opportunity to talk about sex at last HIV test (%)
at	Austria	EU	Central-West	31.0	24.8	41.2	9.0	4.7	4.4	43.0	21.7
be	Belgium	EU	West	34.0	18.8	46.6	8.1	3.0	2.7	56.5	27.2
bg	Bulgaria	EU	South-East (EU)	28.0	36.7	41.6	8.3	8.3	5.9	39.3	37.5
cy	Cyprus	EU	South-East (EU)	30.0	40.4	32.1	30.8	7.5	5.1	68.8	
cz	Czech Republic	EU	Central-East	27.0	43.5	29.5	7.6	5.8	6.9	36.8	16.7
de	Germany	EU	Central-West	33.0	30.2	33.8	13.4	4.1	4.4	37.0	21.8
dk	Denmark	EU	North-West	34.0	25.9	35.4	3.9	5.3	4.0	34.9	30.5
ee	Estonia	EU	North-East	30.0	39.7	33.0	11.8	5.3	6.9	50.3	50.0
es	Spain	EU	South-West	32.0	26.1	44.4	14.0	3.9	4.7	41.3	33.5
fi	Finland	EU	North-West	33.0	37.2	23.7	6.8	5.1	5.1	30.3	29.2
fr	France	EU	West	34.0	16.2	47.0	3.4	3.7	4.4	64.1	27.1
gr	Greece	EU	South-West	30.0	36.6	33.7	24.5	6.2	8.9	68.8	28.5
hu	Hungary	EU	Central-East	28.0	42.0	33.9	13.5	5.5	6.5	47.7	28.8
ie	Republic of Ireland	EU	West	31.0	36.9	32.9	16.3	4.5	5.7	46.8	27.5
it	Italy	EU	South-West	33.0	28.5	41.2	10.9	7.8	6.0	58.3	43.1
lt	Lithuania	EU	North-East	27.0	57.2	19.8	55.7	8.5	8.5	59.8	33.3
lu	Luxembourg	EU	Central-West	36.0	21.1	42.5	2.8	4.0	3.9	64.6	23.3
lv	Latvia	EU	North-East	30.0	50.2	25.7	31.3	6.5	6.1	42.0	44.4
mt	Malta	EU	South-East (EU)	32.0	31.0	35.1	9.6	13.2	10.3	35.9	50.0
nl	Netherlands	EU	West	40.0	20.6	38.4	7.5	2.7	2.2	39.4	24.2
pl	Poland	EU	Central-East	28.0	37.3	35.8	8.9	11.8	8.0	42.6	33.3
pt	Portugal	EU	South-West	30.0	27.7	45.9	13.2	3.1	3.0	41.2	29.6
ro	Romania	EU	South-East (EU)	27.0	49.1	30.5	24.7	7.0	6.2	57.8	30.0
se	Sweden	EU	North-West	35.0	25.1	30.4	6.4	5.3	6.4	31.5	16.6
si	Slovenia	EU	Central-East	30.0	47.5	24.6	8.9	7.4	5.9	30.7	19.2
sk	Slovakia	EU	Central-East	26.0	53.1	26.0	16.3	5.2	4.5	46.8	16.7
uk	United Kingdom	EU	West	36.0	28.2	36.4	7.5	2.4	3.6	48.4	23.3
ch	Switzerland	EEA/EFTA/acceding	Central-West	37.0	20.4	39.3	8.0	2.8	3.0	38.4	18.4
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	29.0	48.0	25.0	7.9	5.8	5.0	32.7	15.4
no	Norway	EEA/EFTA/acceding	North-West	31.0	34.0	30.9	8.8	2.7	5.9	40.4	40.3
ba	Bosnia & Herzegovina	other	South-East (non-EU)	26.0	55.3	28.4	19.9	0.0	0.0	21.1	
by	Belarus	other	East	27.0	37.2	37.7	8.6	16.7	11.5	38.1	28.6
md	Moldova	other	East	25.0	41.0	36.0	25.4	5.3	5.3	17.6	
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	28.0	44.1	39.8	9.9	14.3	7.0	41.9	20.0
rs	Serbia	other	South-East (non-EU)	28.0	47.2	32.0	12.6	10.3	9.2	29.2	25.8
ru	Russia	other	East	30.0	25.6	43.1	19.8	14.7	9.9	55.9	37.7
tr	Turkey	other	South-East (non-EU)	27.0	50.2	25.5	24.5	17.6	12.7	64.8	29.6
ua	Ukraine	other	East	29.0	40.4	35.3	17.4	12.3	9.0	32.4	49.4
	Low			25.0	16.2	19.8	2.8	0.0	0.0	17.6	15.4
	Median			**30.0**	**37.1**	**34.5**	**10.4**	**5.4**	**5.9**	**41.6**	**28.6**
	High			40.0	57.2	47.0	55.7	17.6	12.7	68.8	50.0
	EU27 median			**31.0**	**36.6**	**33.9**	**9.6**	**5.3**	**5.7**	**43.0**	**28.6**

			HIV frequency					HIV care/treatment						
	Forced/tricked into HIV testing at least once (%)	No opportunity to talk about having sex with men %	Diagnosed with HIV (%) = prevalence estimate #1	UNGASS 23 - Diagnosed with HIV among those tested (%) = prevalence estimate #2	Diagnosed with HIV among those tested in previous 12 months (%)	Growth dynamics: Tested in previous 12 months among those diagnosed with HIV (%)	Median number of years HIV positive men live with HIV diagnosis (only countries with >=5 HIV positives)	Number of HIV-positive respondents	In medical care (monitored last 6 months) among those diagnosed with HIV (%)	Years living with diagnosed HIV (median)	Receiving ART (%)	Undetectable viral load, among those on ART (%)	Detectable viral load, among those diagnosed with HIV* (%)	Ever received PEP
	5.3	10.9	5.4	7.1	2.3	16.7	4.0	220	93.6	4.0	66.4	78.1	48.2	2.2
	9.2	11.2	8.5	10.4	2.4	12.4	4.0	334	93.4	4.0	63.8	80.0	48.9	3.5
	11.8	6.3	1.5	2.4	2.8		2.0	15	93.3	2.0	66.7		66.7	2.0
	7.3		1.1	1.9	1.2			≤ 10						2.7
	14.2	16.7	2.7	4.8	2.5	27.3	2.0	64	93.8	2.0	57.8	70.3	59.4	0.4
	4.5	11.1	8.0	11.5	2.6	10.2	6.0	4351	93.7	6.0	74.6	80.0	40.3	1.5
	4.6	5.2	8.8	11.9	1.7	6.5	7.0	152	93.4	7.0	85.3	81.3	30.7	3.0
	5.3	0.0	1.7	2.8				≤ 10						1.0
	3.8	6.2	8.9	12.1	3.5	16.3	4.0	1161	92.9	4.0	69.7	81.2	43.4	1.8
	2.7	6.2	3.2	5.1	1.1	7.7	5.0	65	93.8	5.0	76.9	74.0	43.1	0.5
	13.2	6.6	10.5	12.6	2.4	10.0	8.0	1174	92.8	8.0	77.2	86.2	33.4	9.0
	7.7	8.8	8.1	12.7	4.0	15.9	4.0	237	94.1	4.0	61.5	76.4	53.0	1.9
	3.4	9.1	3.2	5.5	1.6	16.7	3.0	65	95.4	3.0	47.7	77.4	63.1	0.9
	4.1	9.9	6.0	9.5	2.6	13.7	5.0	131	93.1	5.0	74.8	79.6	40.5	2.1
	2.8	8.5	6.9	9.6	2.8	15.6	5.0	1091	94.7	5.0	67.3	73.8	50.4	1.3
	1.9	0.0	2.0	4.7	0.9	8.3	3.0	12	83.3	3.0	72.7		63.6	0.2
	9.0	6.7	10.8	13.6	6.3	23.3	7.0	29	96.6	7.0	62.1		41.4	3.3
	7.7	11.1	3.9	7.7	1.2	7.4	5.0	27	92.6	5.0	37.0		74.1	0.4
	9.3	0.0	1.7	2.5				≤ 10						0.0
	5.9	7.9	15.6	19.7	5.3	11.4	6.0	589	94.9	6.0	72.7	88.9	35.3	2.8
	10.3	7.1	5.1	8.1	4.1	28.4	2.0	140	94.3	2.0	55.7	67.9	62.1	2.1
	6.1	6.4	7.8	10.8	2.6	14.3	6.0	316	84.2	3.0	43.2	66.9	71.1	1.6
	5.0	11.7	2.6	5.0	2.8	33.3	2.0	405	94.8	6.0	72.5	76.2	44.7	0.4
	6.0	6.6	4.8	6.4	1.5	9.3	7.0	149	95.3	7.0	73.8	82.7	38.9	0.8
	6.3	3.8	2.6	5.0	2.1	19.2	2.0	26	80.8	2.0	68.0		64.0	1.3
	13.7	0.0	1.0	2.2	1.3			≤ 10						0.5
	5.2	9.9	10.4	14.5	3.4	10.9	5.0	1829	93.8	5.0	73.8	83.3	38.5	4.6
	7.1	10.1	9.0	11.4	3.1	12.7	6.0	453	93.4	6.0	77.9	83.6	34.9	4.1
	7.0	7.7	2.5	4.8	1.6		3.0	13	92.3	3.0	53.8		46.2	1.0
	4.8	9.7	3.4	5.2	1.3	11.1	7.0	72	91.7	7.0	65.7	69.6	54.3	1.2
	6.8		0.0	0.0				≤ 10						0.7
	5.7	0.0	1.9	3.0	2.9			≤ 10						1.1
	6.8		2.6	4.3				≤ 10						0.9
	5.2	20.0	4.2	7.6	4.4			≤ 10						1.8
	5.6	22.6	2.8	5.3	2.3	25.8	2.0	59	89.8	2.0	69.5	68.3	52.5	0.6
	6.0	4.0	6.4	8.5	3.5	23.1	3.0	31	77.4	2.0	63.3		46.7	1.6
	8.1	3.7	1.5	3.0	0.2	3.7	4.0	25	80.0	4.0	60.0		60.0	1.1
	6.0	3.6	4.8	8.1	3.6	25.3	2.0	83	71.1	2.0	44.6	51.4	77.1	1.0
	1.9	0.0	0.0	0.0	0.2	3.7	2.0	12	71.1	2.0	37.0	51.4	30.7	0.0
	6.0	**7.1**	**4.1**	**6.8**	**2.6**	**14.0**	**4.0**	**136**	**93.4**	**4.0**	**67.0**	**77.8**	**48.6**	**1.3**
	14.2	22.6	15.6	19.7	6.3	33.3	8.0	4351	96.6	8.0	85.3	88.9	67.1	3.4
	6.0	**6.9**	**5.1**	**7.7**	**2.5**	**14.0**	**4.5**	**152**	**93.7**	**5.0**	**68.0**	**78.9**	**48.2**	**9.0**

6. STIs other than HIV

6. STIs other than HIV

The sexual health of MSM is often compromised by the presence of sexually transmitted infections (STIs) such as anal or genital warts, syphilis, gonorrhoea (pharyngeal, genital or rectal), and chlamydial infections. Syphilis and rectal bacterial STIs in particular are known to increase the per-contact risk of HIV infection (Fleming & Wasserheit, 1999). Early detection of asymptomatic STIs requires regular sexual health check-ups (based on each person's number of new sexual partners) and physical examinations that, if appropriate and with the client's consent, include rectal and penile inspection and the collection of clinical specimens. Effective detection of STIs at infection sites common to MSM and specific to their sexual practices is possible only under these conditions.

Differences in STI-diagnostic approaches may also affect the comparability of national surveillance data for MSM in Europe. For these reasons we compared the STI test-seeking behaviour of MSM, performance of STI testing sites and recent diagnoses of STIs across Europe. The description of our findings will be followed by brief sub-chapters on hepatitis B vaccination needs and hepatitis C.

6.1 Access to STI testing

6.1.1 Introduction

Across Europe – inside and outside the European Union – preventive services as well as healthcare for STIs are provided by various medical specialists including general practitioners, urologists and dermato-venereologists. These services are offered by physicians in private practice, at genitourinary medicine (GUM) clinics and through specialised STI services within hospitals, dermatology clinics, municipal health offices and others. Over the last decade, a small but increasing number of STI clinics have been set up specifically to meet the needs of gay and bisexual men in larger cities such as Amsterdam, Barcelona, Dublin, Hamburg, London, Stockholm and Zurich.

All these sites may differ with respect to fees, anonymity, confidentiality, services provided and the quality and extent of counselling (see Chapter 5.1). The respect with which MSM are treated at STI testing sites is likely to have an impact on the likelihood of their undergoing regular sexual health check-ups, especially when they have no symptoms. Therefore the frequency and regularity of STI testing not only depends on individual knowledge and attitudes but also on the accessibility and quality of services.

While the UK, Ireland, Malta (three countries with a common history of STI clinics) and Sweden – through their respective national health systems – provide a network of open access GUM or sexual health clinics, in many European countries the private sector (physicians in private practice, including those specialising in infectious diseases and HIV care) plays an important role in the provision of care for STIs. Magazines for gay men provide lists of gay or gay-friendly physicians or private clinics in many cities. In most of the countries where the private sector plays a significant role, open access STI care is offered through municipal health offices. However, this is often limited to the diagnoses and treatment of certain infections such as syphilis or gonorrhoea. The Netherlands – one of the European countries with the highest levels of healthcare privatisation – also offers open access dedicated STI services, at least in major cities (for EU/EFTA countries as of 2002, see the detailed overview by Lowndes et al. 2004).

Eastern European countries, particularly countries which were part of the former Soviet Union, have largely kept an approach based on mass screening, contact tracing, and compulsory therapy. This region has a large number of STI clinics, whose main approach is to 'trace and treat'.

6.1.2 Perceived access to STI testing

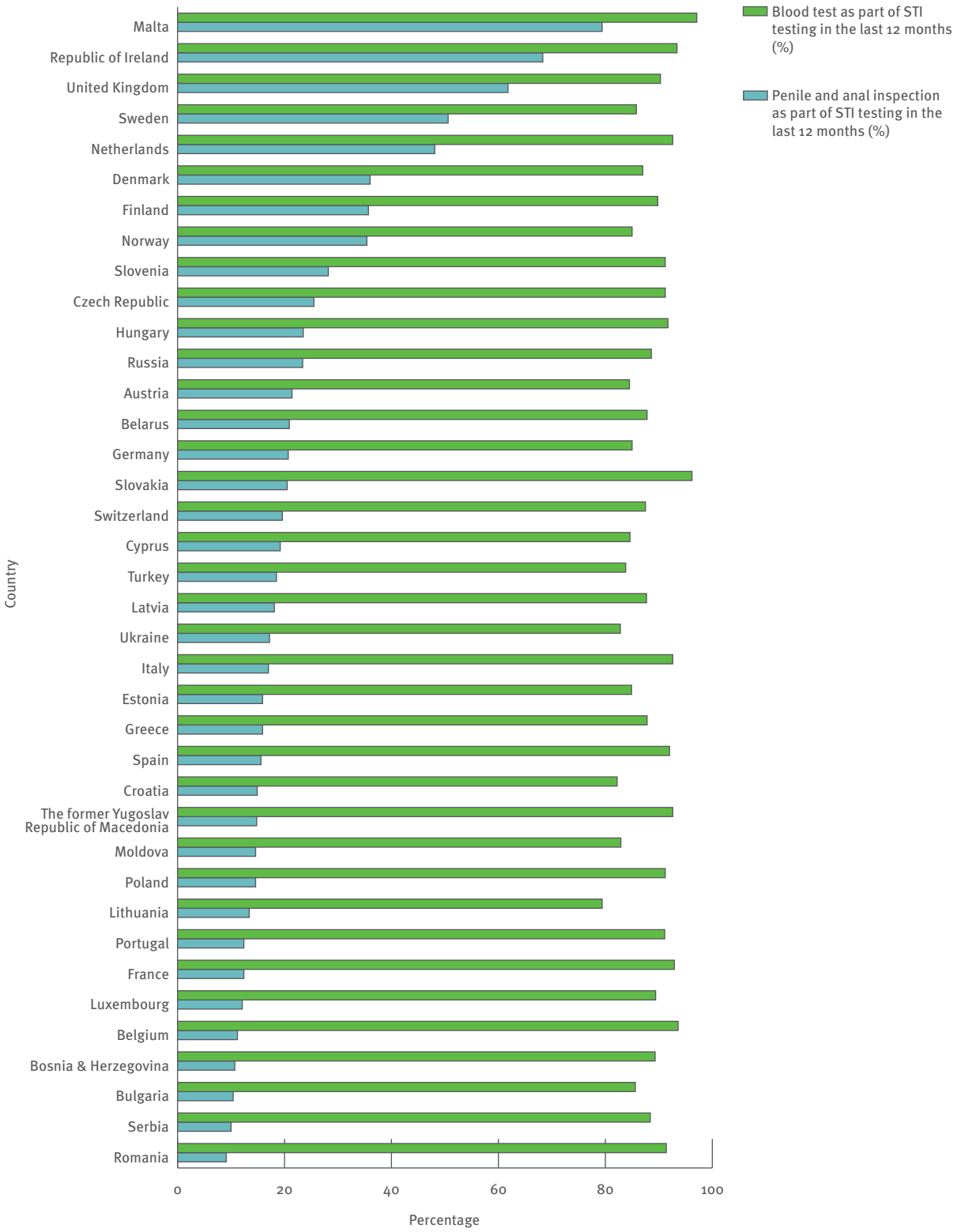
The section on STIs in the EMIS questionnaire began with a question about how confident respondents were that they could get a test for STIs other than HIV. Less than two thirds were 'quite' or 'very' confident in Turkey, Slovakia, Bulgaria, the Czech Republic, Bosnia, the former Yugoslav Republic of Macedonia, Malta and Cyprus, but in most countries confidence was much higher (median: 88%, see country tables). The greatest levels of confidence could be demonstrated not only for the 17 older EU/EFTA countries, but also for most of the former Soviet Union countries, in particular Russia, which makes the geographical pattern look quite distinct from many other issues described in this report.

Although respondents were confident about being able to get an STI test, a large proportion said they did not know if they could get free STI testing in the country where they lived (Figure 6.1). A median of 38% had no idea if STI testing in their country was free or not – the highest proportion was among MSM in Turkey (63%). Only in two countries did the answers to this question seem self-evident: in Denmark and the United Kingdom more than 90% said STI testing was free, leaving less than 10% who did not know if they

Figure 6.1: Responses (%) by sub-region to 'Can you personally get free STI testing in the country you live in?'

	No	Yes	I don't know
West	3.3	76.4	20.3
North-West	2.3	79.1	18.7
Central-West	9.2	58.1	32.6
South-West	8.5	52.1	39.4
North-West	20.1	29.3	50.5
Central-East	7.6	42.3	50.1
South-East (EU)	18.4	30.0	51.6
South-East (non-EU)	14.5	36.0	48.6
East	25.5	38.1	36.3

Figure 6.2: National comparisons for diagnostic approaches: blood tests and penile and anal inspection



would be charged. It is pointless to offer free services if those considered to be high-risk do not know about them.

To construct a country level indicator about transparent low-threshold STI testing services, those who said that STI testing was not free were asked if they could afford to pay for it. Twenty-nine per cent of men said they did not know if they could afford to pay. Only in Belgium, Switzerland and Luxembourg was this proportion 10% or less, and about 85% of respondents in these countries said it was affordable. As expected, being able to afford the charges for STI testing was age-dependent. Among those who were aware of the costs, a quarter of those under 20 years said they could not afford to pay for STI testing. In the 20–24 years age group it was one fifth; in the 25–29 years age group it was one sixth and after the age of 30 this dropped to one eighth.

Overall, the countries that scored highest (when controlling for age and HIV status) on the indicator for transparently offering free or affordable STI testing were: Denmark, the UK, Sweden, Norway, Finland, Luxembourg and the Netherlands (in order of their score). When controlling for age and HIV status, it became clear that France, Belgium, Austria, and Switzerland (in that order) were only about half as likely to offer free or affordable STI testing. The lowest scores were for Lithuania, Moldova, Cyprus, Latvia, Greece, Turkey, Romania, Hungary, and Slovakia (see country tables).

The lack of clarity surrounding charges for sexual health check-ups indicates – apart from limited testing experience – that in most countries, STI testing and care are dispersed among many services, each with different policies and prices.

6.1.3 STI testing history

EMIS asked respondents when they had last been tested for any STIs other than HIV. Across the 38 countries, the proportion of respondents who reported having been tested for STIs in the past 12 months varied widely: 20% or less in Slovakia, Turkey, Slovenia, Bosnia, the Czech Republic, and Hungary, around 40% in Moldova, Sweden, Ireland, Belgium, France, Belarus, Russia, and the UK, and 52% in the Netherlands (see country tables). Interestingly, the countries with the highest rates of STI testing were in the sub-regions of West and East Europe. Chapter 6.2 indicates that in East Europe, but to a certain extent also in Belgium and France, STI testing rates may broadly reflect mass screening approaches rather than preventive approaches specifically tailored to sexual minorities and their needs.

6.1.4 Screening

Respondents were asked if they had any noticeable symptoms when they were last tested for STIs other than HIV. If in any medical setting a patient presents with symptoms and a medical diagnostic test is carried out to determine the cause of those symptoms, this is called diagnostic testing. Across Europe, among respondents who reported testing for STIs in the past 12 months, between 12% and 34% (median: 21%) reported symptoms at their last test. Performing a medical diagnostic test in the absence of symptoms is called screening. In Europe, between 66% and 88% (median: 79%) reported being screened for STIs at their last test (see country tables).

At an individual level, among those who tested for STIs in the past 12 months, no relevant associations with screening could be found for age, educational attainment, settlement size, sexual identity, outness or HIV status. Section 6.2 compares the diagnostic approaches that were reported to have been part of STI testing in different countries.

6.2 Performance of STI testing

6.2.1 Introduction

All respondents who reported having been tested for STIs other than HIV in the 12 months preceding the survey were asked what happened during those tests. The questions were asked in such a way that they could be answered without knowledge of medical terminology:

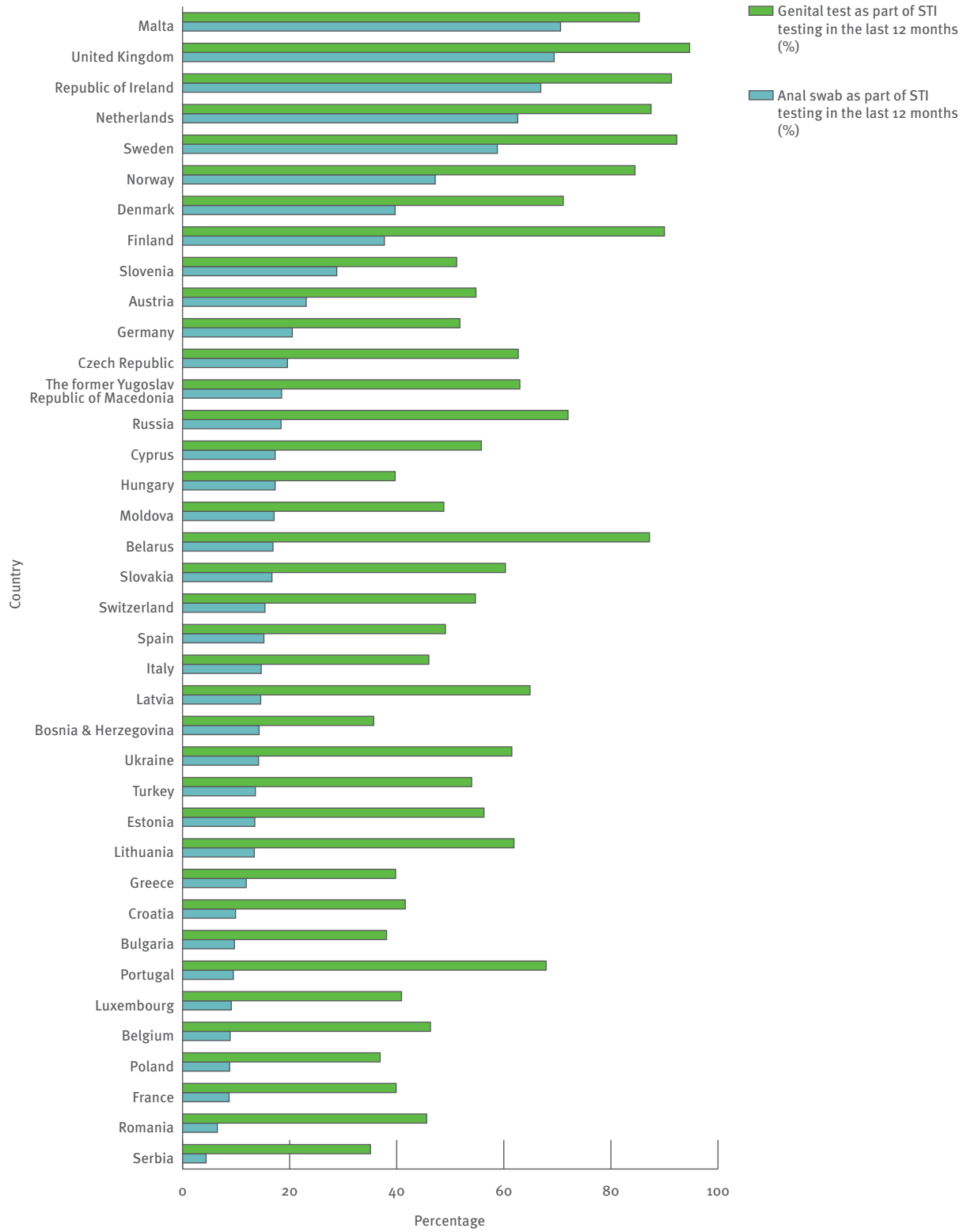
- Have you provided a blood sample?
- Have you provided a urine sample?
- Has your penis been examined?[1]
- Was something inserted into your penis (urethral swab)?[1]
- Has your anus been examined?
- Was something inserted into your anus (anal swab)?

In addition to 'No' and 'Yes' respondents could also answer 'I don't remember'. The question to which the largest number of respondents reported that they did not remember (2.2%) was: 'Have you provided a urine sample?'. For penile and anal examinations 0.7% responded 'I don't remember'.

The six different diagnostic procedures were grouped according to the STIs they are able to diagnose. Syphilis and viral hepatitis can best be diagnosed with antibody tests performed on blood samples. Viral infections, such as anal or genital warts or anal or genital herpes, can be diagnosed only if both penis and anus are inspected. Examinations of penis and anus (regardless of whether a swab was inserted or not) are reported here under penile and anal inspection. Urethral chlamydial infections can best be diagnosed by detecting genetic material in specimens of urine or urethral secretions. Gonococcal infections of the male urethra are typically symptomatic (Kent et al. 2004), presenting with discharge and painful urination, and therefore do not require further diagnostic tests after inspection and the taking of a medical history, unless bacterial resistance or co-infections with other sexually transmitted bacteria – particularly chlamydia – are suspected. If a urine specimen was provided, or the urethra was swabbed, this was reported under the label genital test. Anal/rectal infections with gonococci or chlamydia largely present without symptoms and can be diagnosed only if the anus is swabbed for microbiological culturing or, preferably because of higher sensitivity (see Ota et al. 2009), to detect genetic material using nucleic acid amplification tests (NAATs). Both are reported here as anal swabbing.

1 This question was not asked to respondents who identified either as transgender men who have sex with men, or as transgender women with a history of gender re-assignment surgery.

Figure 6.4: Country comparison for diagnostic approaches to detect chlamydial and gonococcal infections



Unlike chlamydial infections of the oropharynx, pharyngeal gonorrhoea is very common following oral sex between men, providing another reservoir for onward transmission. However, EMIS did not query diagnostic approaches to the detection of pharyngeal gonorrhoea, because little evidence exists of its routine usage in STI testing in Europe.

6.2.2 Blood tests

Testing blood for antibodies in order to be able to diagnose syphilis and viral hepatitis was very common across Europe. Between 79% and 97% (median: 89%) said they had provided a blood sample as part of STI tests in the last 12 months. In all countries, a blood test was the most common diagnostic approach in STI testing, with the least variation across Europe (Figure 6.2 and country tables).

6.2.3 Penile and anal inspection

Basic physical examinations of the penis or anus as part of STI testing varied from under 10% in Romania to nearly 70% in Ireland (and close to 80% in Malta, but this proportion was based on fewer than 50 respondents). The median was 18%. In Norway, Finland and Denmark, more than 30% of respondents reported having had their penis and anus examined as part of an STI check-up. In the Netherlands and Sweden this proportion was around 50% and in the UK, Ireland and Malta it was more than 60%.

There was an almost perfect correlation (R2=94%) between penile/anal inspection and anal swabbing (Figure 6.3). As already mentioned, the UK, Ireland, Sweden and Malta offer a network of open-access sexual health clinics, and the Netherlands offers open-access dedicated STI services. It is in these five countries that the diagnostic procedures best met the STI testing needs of MSM.

In most European countries, given the lack of basic physical examinations, certain STIs such as anal or genital warts or herpes are likely to be profoundly underdiagnosed among MSM.

6.2.4 Genital test

Diagnostic tests to detect urethral STIs were common (median 55%), but varied substantially across Europe (Figure 6.4), ranging from 35% in Serbia to 95% in the UK. In the large majority of countries a urine test was used more commonly than a urethral swab. Only in Denmark, Latvia, Estonia, Ukraine, Moldova, Russia, Lithuania and Belarus (in order of proportion) was urethral swabbing reported more frequently than the provision of a urine sample. Other than Denmark, where the difference was small, these are countries coming within the WHO sub-region of Eastern Europe, or newly independent states of the former Soviet Union, indicating historic differences in healthcare.

6.2.5 Anal swabbing

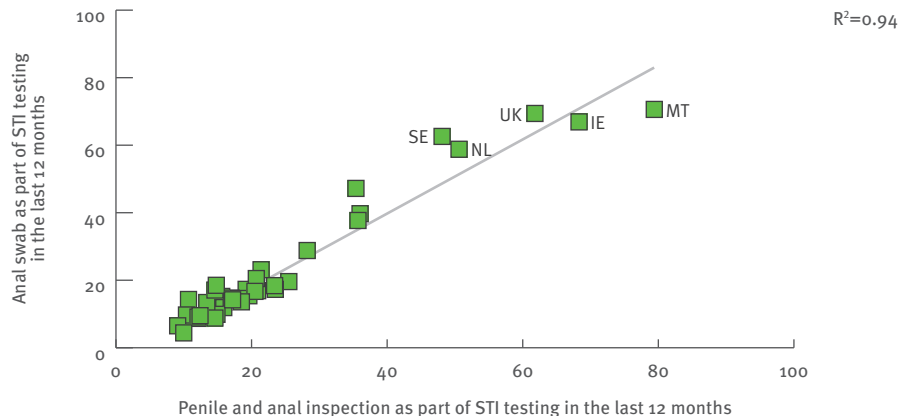
Anal swabbing was the least commonly reported of all diagnostic approaches (median 16%). It was reported by less than 10% of respondents in Serbia, Romania, France, Poland, Belgium, Luxembourg, Portugal, Bulgaria, and Hungary (in order of proportion). In only eight countries did more than 20% of STI check-ups include diagnostic procedures allowing for the detection of rectal gonorrhoea or rectal chlamydial infection. In Sweden, the Netherlands, Ireland, the UK and Malta at least 60% reported anal swabbing. Several studies applying systematic screening among MSM in the United States and Germany have shown that rectal infections with Neisseria gonorrhoeae or Chlamydia trachomatis are more common than urethral infections with these bacteria (Kent et al. 2005, Dudareva et al. 2011). Consequently, rectal gonococcal and chlamydial infections are likely to be substantially underdiagnosed among MSM in most European countries.

6.3 Frequency of STI diagnoses

6.3.1 Introduction

EMIS asked about recently diagnosed STIs common among MSM: anal/genital warts, anal/genital herpes, gonorrhoea, chlamydial infection, syphilis and hepatitis C. Hepatitis C is primarily bloodborne rather than sexually transmitted, and so far in Europe its sexual transmission has been among MSM who are infected with HIV. For this reason it is reported in Section 6.4 on hepatitis rather than with STIs. Nevertheless, for comparison, newly-diagnosed hepatitis C is included in Figure 6.12 on newly-diagnosed STIs among men with diagnosed HIV.

Figure 6.3: Country level association between physical examination of anus and penis and anal swabbing



One of the aims of EMIS was to suggest an indicator for 'any STIs other than HIV' among MSM which could be used in European surveillance. However, STIs have different characteristics, with respect to self-limitation, curability and the possibility of getting infected more than once. Bacterial STIs such as syphilis, gonorrhoea, or chlamydial infections can be acquired repeatedly, but infections with the sub-types of the human papilloma virus (HPV) associated with anal/genital warts and genital infections with herpes simplex viruses (HSV 1 and 2) tend to become chronic, with recurring symptomatic manifestations. Therefore, EMIS asked for any new diagnosis of syphilis, gonorrhoea, or chlamydial infection during the past 12 months, and for any first diagnosis of anal/genital warts or anal/genital herpes in the past 12 months. All these five variables were incorporated into the indicator for newly-diagnosed STIs (other than HIV) in the past 12 months.

Country level analysis

Across Europe, 7.4% of respondents reported newly-diagnosed STIs (other than HIV) in the preceding 12 months (range 2.4–14.1%). The most common newly-diagnosed STIs were anal/genital warts (median: 2.5%; country range: 0.8–3.5%); followed by gonorrhoea (median: 2.0%; country range: 0.3–5.2%), syphilis (1.9%; 0–5.2%), chlamydial infection (1.6%; 0.5–7.0%), and anal/genital herpes (0.7%; 0–1.7%).

The situation was similar when looking at the proportions of MSM who reported ever having been diagnosed with those five STIs: 14.5% gave a history of gonorrhoea, 13.4% of anal or genital warts, 8.6% of syphilis, 8.1% of chlamydial infection and 3.6% of anal/genital herpes.

6.3.2 Constructing a comprehensive indicator for newly-diagnosed STIs

Individual level analysis

Factor analysis of individual level data showed that variation among the five STI variables could be explained by two (latent) components. On one component, newly-diagnosed gonorrhoea and chlamydial infections had factor loadings of 0.74 and 0.72, respectively, and syphilis had a factor loading of 0.52. On a second component, warts and herpes had similarly high factor loadings of 0.74 and 0.73, respectively. The latent components can be interpreted as an interplay of the various routes of sexual transmission and different diagnostic procedures needed for detection. Any comprehensive indicator for newly-diagnosed STIs among MSM should therefore include at least one STI from each component – gonorrhoea and anal/genital warts at a minimum, and preferably also syphilis.

Country level analysis

Due to its infrequent occurrence, herpes was of negligible value for the indicator of newly-diagnosed STIs. At a country level, using multivariable linear regression analysis, the other four STIs together explained 95% of the variance of the aggregated indicator for newly-diagnosed STIs. Adding herpes to the model did not increase the coefficient of determination for newly-diagnosed STIs.

Newly-diagnosed gonorrhoea alone had the most explanatory power: diagnoses of gonorrhoea explained 78% of the variance of newly-diagnosed STIs. The reason for this is twofold: firstly, gonorrhoea is rather common; and secondly urethral manifestations of gonorrhoea almost always cause symptoms. Symptomatic STIs are much less likely to remain undetected or undiagnosed. Therefore, of all the STIs reported here (including hepatitis and HIV), urethral gonorrhoea is the one that is least likely to be affected by differences in testing performance.

Newly-diagnosed syphilis – diagnosed on the basis of a blood test – explained only 55% of the variance for newly-diagnosed STIs. Syphilis often presents with symptoms that are not suggestive of an STI, particularly if the primary stage is not noticed. Nevertheless, as blood tests were the diagnostic procedure that varied least between countries, self-reported diagnoses of syphilis were much less affected by differences in diagnostic performance than by differences in access to and the frequency of STI screenings. Choosing only syphilis as an indicator for newly-diagnosed STIs has another shortcoming: syphilis is unevenly spread among MSM in Europe. Firstly, syphilis particularly affects men with diagnosed HIV infection (see below) and secondly, syphilis epidemics show distinct time-space patterns. They sweep through local MSM scenes, connect 'gay metropolitan cities', or affect European sub-regions (Renton et al. 1998). For example, after the collapse of the Soviet Union (and its healthcare system), a major heterosexually-driven syphilis epidemic occurred in the newly independent states throughout the 1990s, and this then also affected MSM.

In contrast, the diagnosis of chlamydial infections among MSM is highly dependent on national variations in the testing of urine samples during STI screenings, as well as on national variations in anal or urethral swabbing.

Genital warts are likely to be noticed by affected men, but tend to be trivialised. Anal warts are often not noticed, particularly if they occur above the ano-rectal junction (rectal warts). Furthermore, there is a strong sense of shame connected to anal warts – maybe more so than with all other STIs except hepatitis C (Owen 2008). Therefore the chance of anal (and genital) warts being diagnosed is highly dependent on national variations which determine the likelihood of receiving a physical examination of the anus and penis.

For all these reasons, newly-diagnosed warts, herpes and chlamydial infections had a much smaller explanatory power ($R2$=47%, 47%, and 46%, respectively) than gonorrhoea and syphilis. Country level (and individual level) analyses of EMIS data suggest that constructing a comprehensive indicator for newly-diagnosed STIs among MSM would best be achieved by combining newly-diagnosed syphilis, gonorrhoea, chlamydial infections and anal/genital warts.

6.3.3 Influence of testing rates and testing performance on newly-diagnosed STIs

Different rates of STI testing and variations in testing performance determine the extent to which STIs are diagnosed

and reported within national and European surveillance systems. EMIS looked at country differences for newly-diagnosed STIs, adjusting for the age composition of the samples and for HIV status, as both age and HIV infection affect the likelihood of becoming infected with – and being tested for – STIs.

Several multivariable logistic regression analyses were performed to compare the odds of newly-diagnosed syphilis, gonorrhoea, chlamydial infections and anal/genital warts among study participants (controlling for age and HIV status).

The UK was chosen as a reference because it was among the countries with the best performance in STI testing as demonstrated above, and because it had provided one of the largest samples for EMIS. To reduce the likelihood of random effects for countries with small sample sizes, the following analyses are restricted to the 23 EMIS countries with samples larger than 1 700 respondents (even in countries with a sample of around 1 000 MSM – such as Bulgaria or Serbia – the number of respondents who underwent anal swabbing, or anal and genital inspection, would only be around 10–30 men, which would be too small for calculating reliable estimates).

By way of example, the likelihood of respondents living in Germany reporting newly-diagnosed (in the past 12 months) syphilis was about the same as for respondents living in the UK. As can be seen in the country tables, the proportions were 2.0% in the UK and 1.9% in Germany. When controlling for age and HIV status, the adjusted odds ratio was 1.03 (95%-CI: 0.91–1.17). In Figure 6.5, the grey bar for the UK (reference value) is 1.00 by definition, and the grey bar for Germany (de) is 1.03, suggesting similar levels of newly-diagnosed syphilis among respondents from both countries.

However, while 44% of respondents had been tested for STIs in the UK during the past 12 months, the proportion was only 27% in Germany. Among those tested, 90% provided a blood sample in the UK and 85% in Germany. This means that 40% of the UK respondents had had a blood test, compared to 23% of those in Germany. This suggests that more cases of syphilis would have been diagnosed in Germany if the level of blood testing had been the same. The red bar for Germany shows that respondents from Germany would have been 1.5 times more likely to have been diagnosed with syphilis if the level of blood testing had been the same as in the UK (AOR=1.52; 95%-CI: 1.34–1.72; p<0.001).

The greater the ratio between the lengths of the red and grey bars, the higher the risk of syphilis remaining undetected (Figure 6.5). The chances of not detecting syphilis were highest in Turkey, followed by the Czech Republic, Portugal, Finland, Poland, and Germany. In contrast, in countries with rates of blood testing similar to that in the UK, such as Belgium, France, Ireland, the Netherlands, Norway, Russia, and Sweden, the relative estimates remained unchanged.

Syphilis epidemics among MSM seem to be particularly pronounced in Ukraine, Russia and on the Iberian Peninsula. Nevertheless, EMIS data suggest that despite moderate differences in the likelihood of underreporting, the surveillance systems of most countries do enable the magnitude of syphilis epidemics among MSM to be estimated, depending on the systems' abilities to determine whether reported cases can reliably be classified as MSM.

Figure 6.6 shows the relative chances of rectal gonorrhoea going undetected by adjusting for anal swabbing in the past 12 months. Although usually self-limiting after an unknown timeframe, if rectal gonorrhoea is not diagnosed and treated it can be spread to sexual partners.

Compared with the UK, the relative potential for under-diagnosis and thus underreporting of rectal gonorrhoea due to low rates of anal swabbing was highest in Portugal, Romania, Poland, Greece, France, Switzerland, Belgium, the Czech Republic, Italy, Turkey, Spain, Ukraine, and Germany. It was lowest in the Netherlands, Ireland and Sweden.

Gonorrhoea was particularly common among respondents from Turkey, followed by respondents from Belgium, Switzerland, Spain, France, Portugal and Russia.

Many sexually transmitted chlamydial infections remain undetected if anal swabbing is not performed. Furthermore, without performing a genital test as previously defined, many urethral infections remain undiagnosed because discharge or itching are mild or absent and hence do not prompt the infected person to seek treatment.

Compared with the UK, the relative potential for under-diagnosis and thus underreporting of rectal and urethral chlamydial infections (due to low rates of anal swabbing and genital testing) was highest in Poland, Greece, Hungary, Romania, France, and Italy. No such potential could be seen in the Netherlands, Ireland or Sweden.

Sexually-transmitted chlamydial infections were particularly common among respondents from Ukraine, Belgium and France.

The relative potential for under-diagnosis of genital or anal warts – when compared with the UK – could be seen in every country apart from Ireland, the Netherlands and Sweden.

Anal and genital warts were particularly common among respondents from Turkey and Greece, but also among respondents from Belgium, Spain, France and Italy.

6.3.4 Summary and policy recommendations (Part 1)

STI testing rates differ widely across Europe and we have identified deficits in the performance of diagnostic procedures needed for the detection of anal or genital warts, herpes and rectal STIs such as gonococcal or chlamydial infections (including lymphogranuloma venereum - LGV). Figures 6.9 and 6.10 illustrate that most European countries need to improve their STI services for MSM. Under-diagnosis of most STIs has implications for the sexual health of MSM, for HIV prevention and for comparing European surveillance data. There is an urgent need to provide or improve sexual healthcare tailored to men at risk of STIs (Schmidt & Marcus, 2011), and to meet the health needs of gay, bisexual and other MSM.

Figure 6.5: Odds of obtaining a new diagnosis of syphilis before and after adjustment for having had a blood test

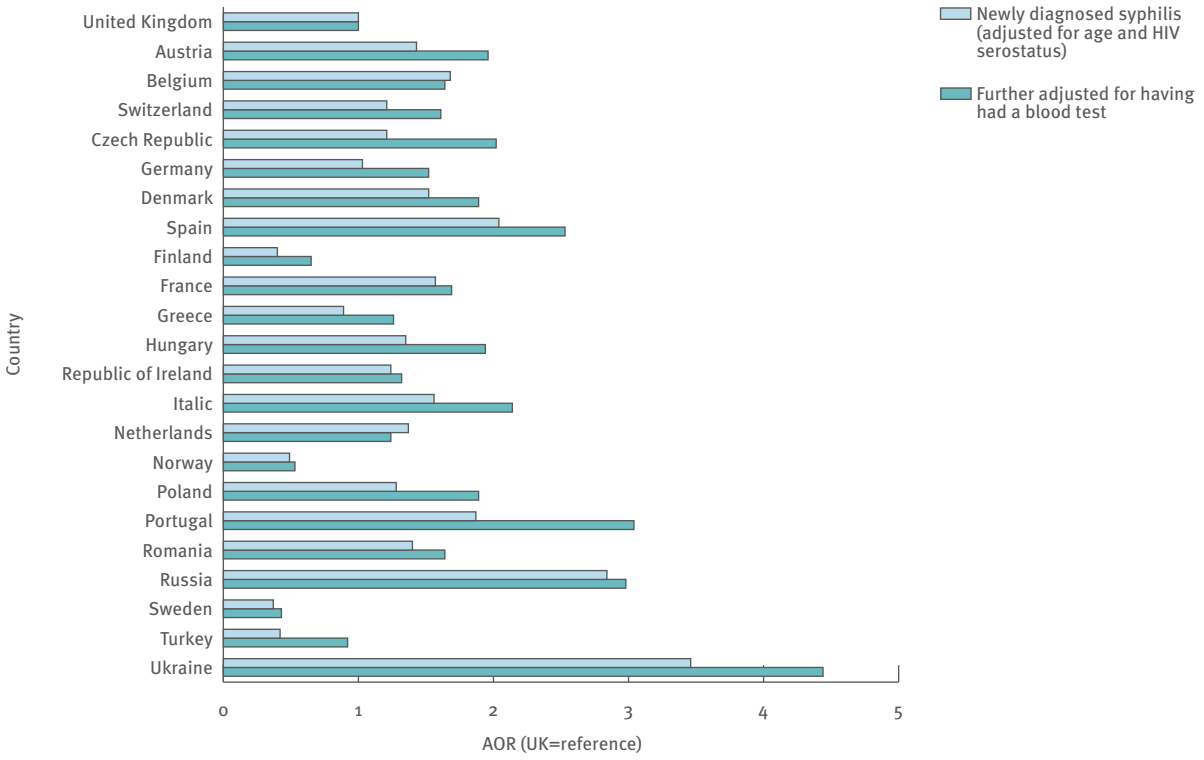


Figure 6.6: Odds of newly-diagnosed gonorrhoea before and after adjustment for undergoing anal swabbing

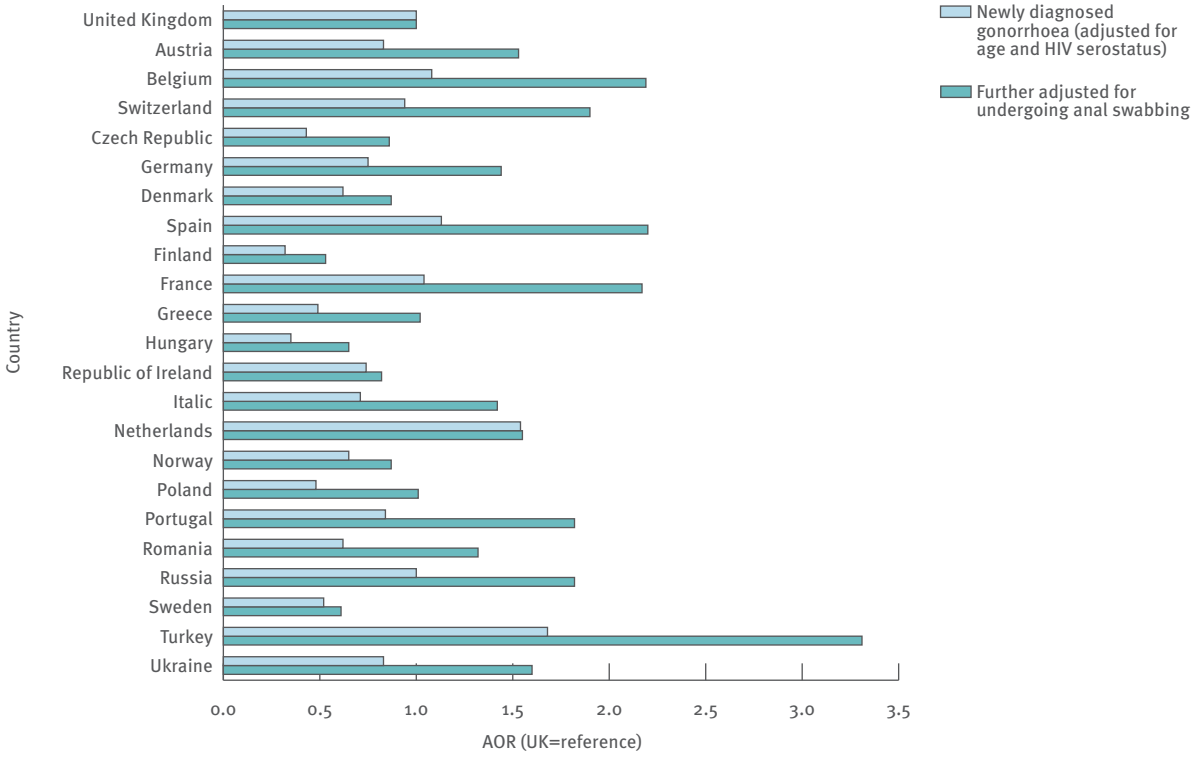


Figure 6.7: Odds of newly-diagnosed chlamydial infections before and after adjustment for undergoing anal swabbing and genital testing

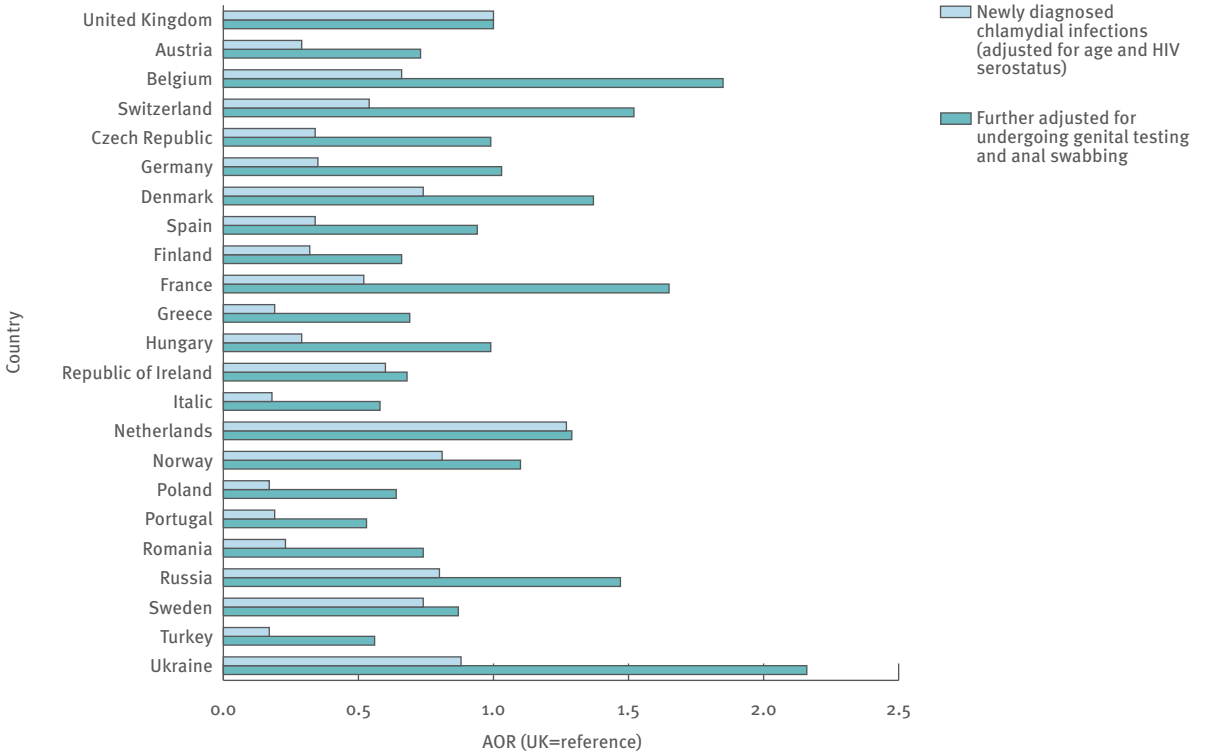


Figure 6.8: Odds of newly-diagnosed anal/genital warts before and after adjustment for receiving anal and penile inspection

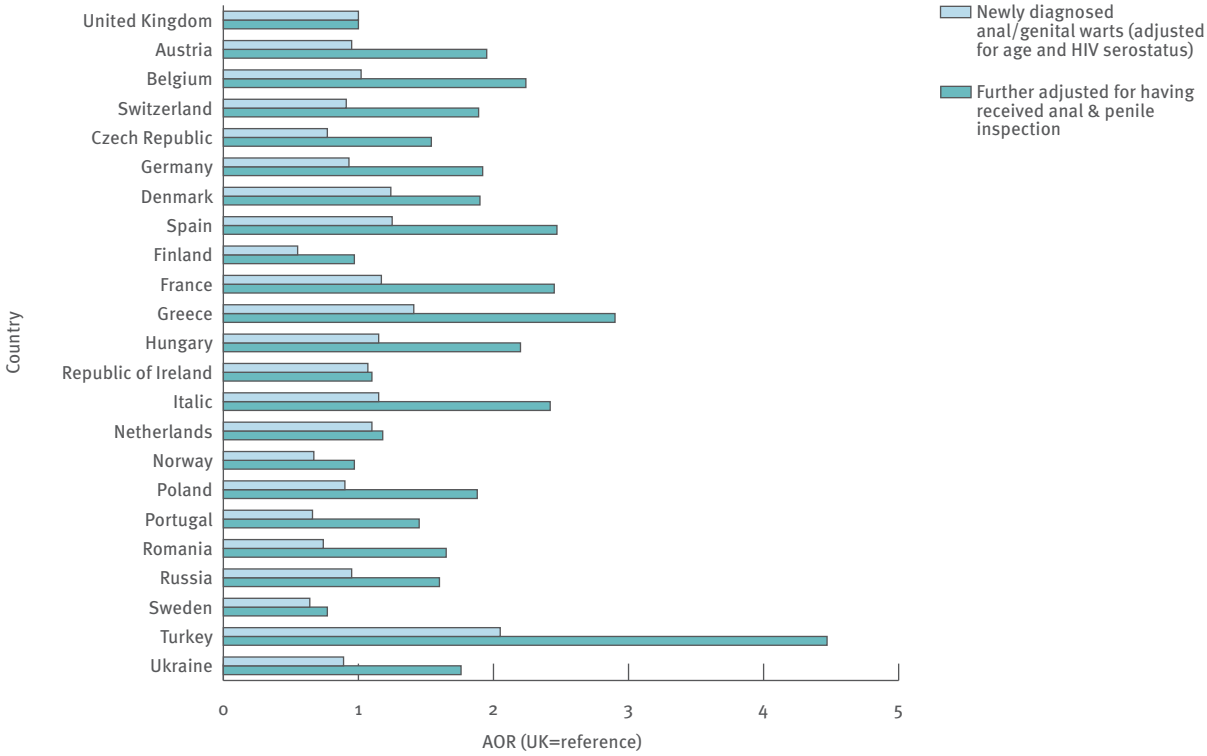


Figure 6.9: Proportions of respondents who underwent anal swabbing for detection of anorectal STIs in the last 12 months

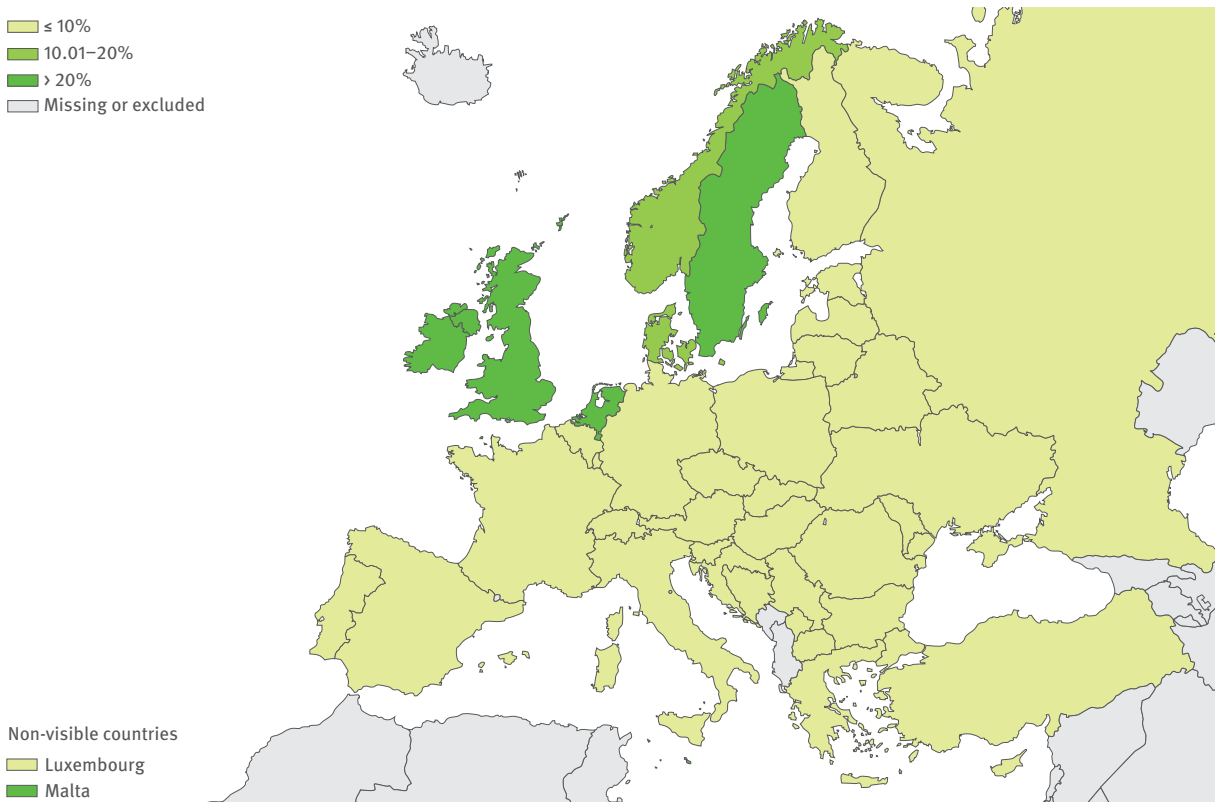
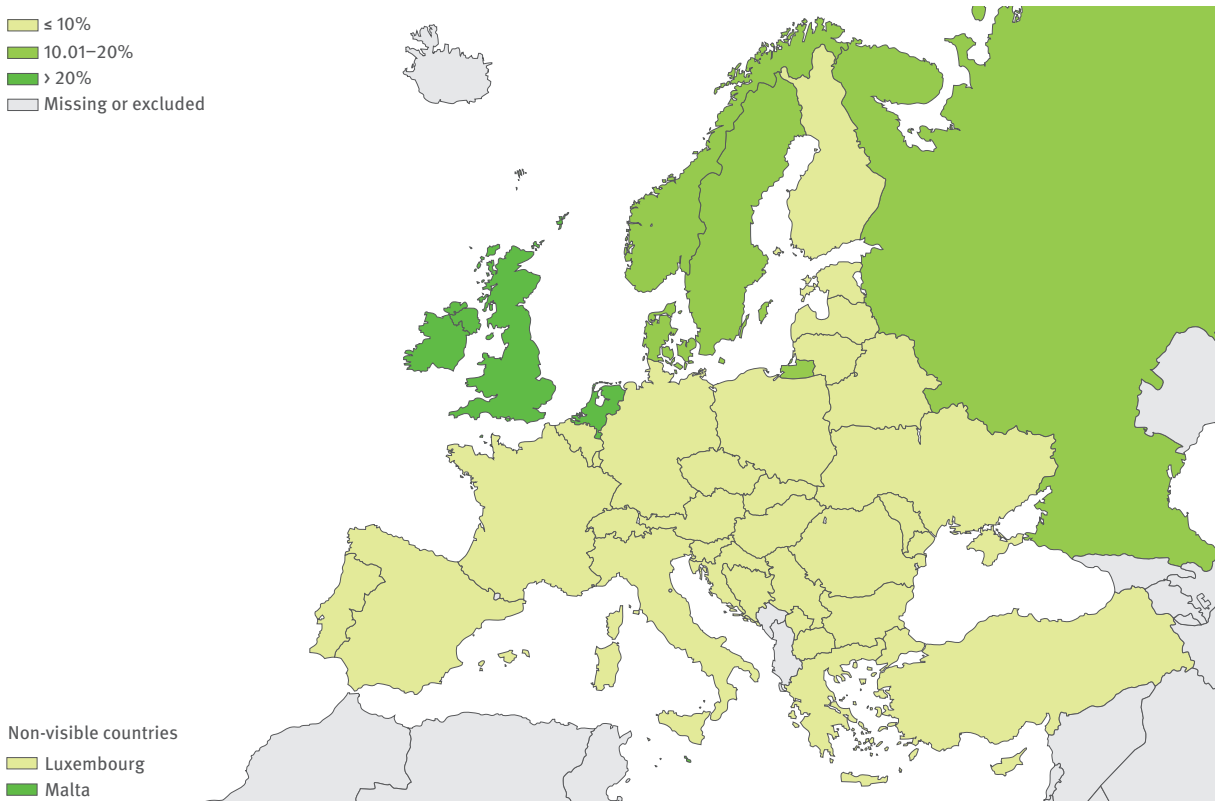


Figure 6.10: Proportion of respondents who had their penis and anus examined in the last 12 months



6.3.5 Individual level determinants of newly-diagnosed STIs

Univariable associations

The incidence of STIs is known to depend on the number of sexual partners, and to be higher among men diagnosed with HIV. The impact of HIV infection can be explained not only by differences in sexual behaviour and the frequency and extent of testing, but also biologically via altered immune function. Its impact can also be explained epidemiologically via differences in the composition and range of sexual networks (Aral, 2002).

The range and composition of sexual networks or the characteristics of sexual partners also influence the age distribution of STIs. Among respondents not diagnosed with HIV and under 25 years of age, anal and genital warts were the most frequently reported newly-diagnosed STI (Figure 6.11). Over 3% of respondents 20–25 years old reported newly-diagnosed anal/genital warts.

Newly-diagnosed gonorrhoea peaked in the age group 25–29 years old (around 3% of respondents), while the proportions of newly-diagnosed syphilis and HIV infection were highest among respondents in their 30s (around 2% and 1.5%, respectively). The true incidence of many STIs is likely to be higher than that of HIV, because the testing rates for other STIs are lower, and testing performance for other STIs is less sensitive in most countries (see above).

Overall, infections with anal/genital warts and gonorrhoea were the most common newly-diagnosed STIs among MSM without diagnosed HIV infection, and anal or genital herpes was the least common. Newly-diagnosed hepatitis C was reported by 0.15% of respondents without diagnosed HIV infection (not shown).

Eleven per cent of respondents without diagnosed HIV infection reported having at some time been infected with anal or genital warts and 3% had a history of anal or genital herpes. Both infections have the potential to manifest recurrently and cause persistent infectivity.

Among respondents with diagnosed HIV, the proportions with newly-diagnosed STIs were much higher in all age groups (Figure 6.12). All but gonorrhoea had their age

Figure 6.11: Proportions of newly-diagnosed STIs (and HIV) among respondents not previously diagnosed with HIV, stratified for age

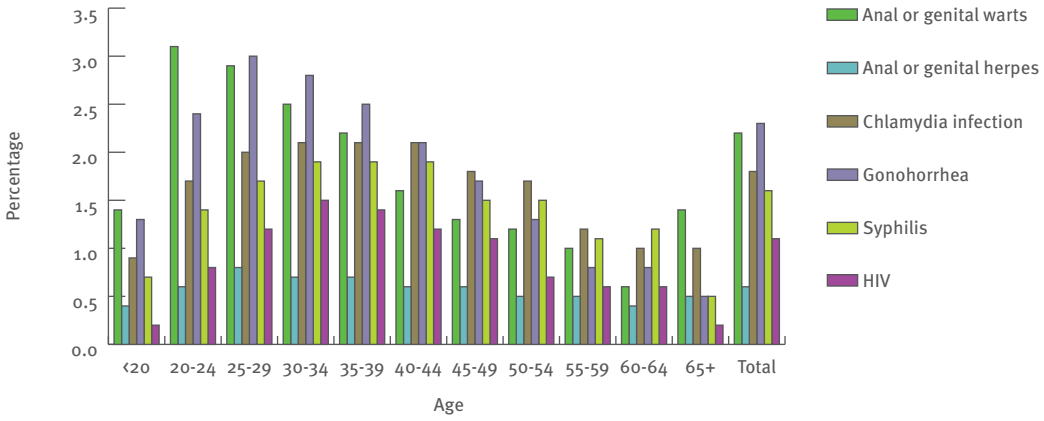


Figure 6.12: Proportions of newly-diagnosed STIs (and hepatitis C) among respondents diagnosed with HIV infection, stratified for age

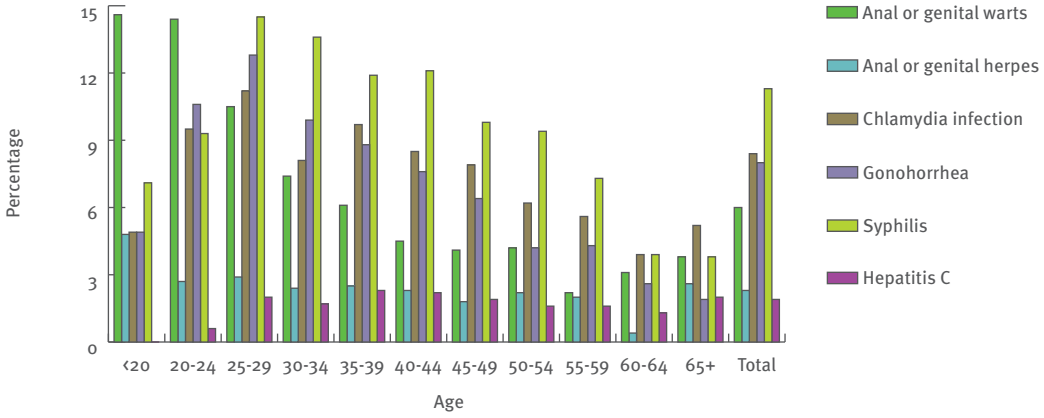


Figure 6.13: Proportion (%) of newly-diagnosed STIs (and HIV) among respondents not (previously) diagnosed with HIV, stratified for the number of sexual partners in the past 12 months

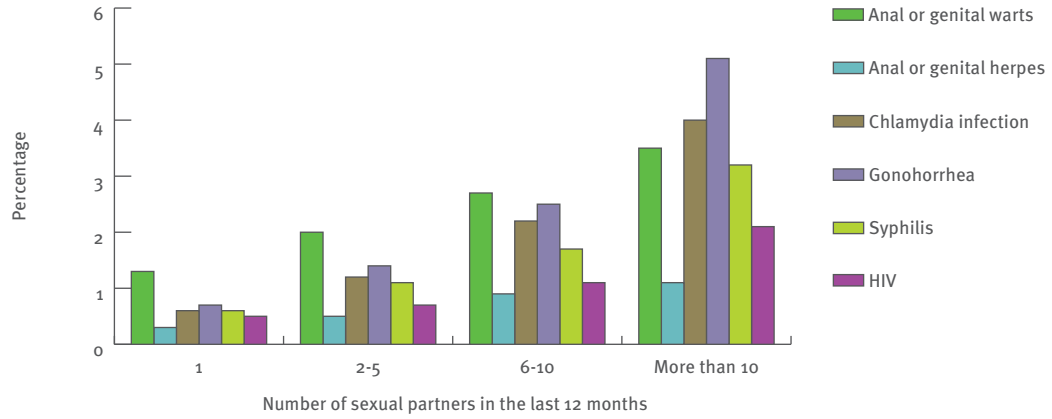


Figure 6.14: Proportion of newly-diagnosed STIs (and hepatitis C) among respondents diagnosed with HIV, stratified for the number of sexual partners in the past 12 months

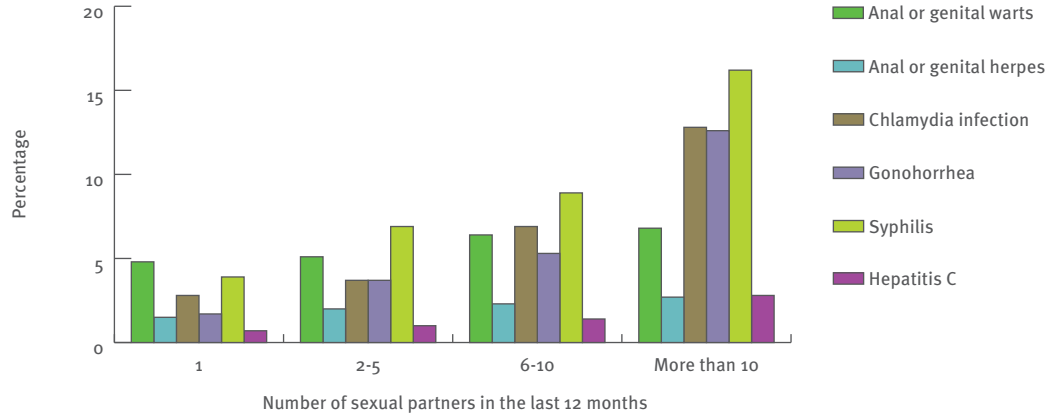


Figure 6.15: Comparing individual-level associations with newly-diagnosed STIs vs. newly-diagnosed HIV

Category	Newly-diagnosed STIs				Newly-diagnosed HIV			
	p	AOR	95%-CI		p	AOR	95%-CI	
Age								
25 to 39	REF.	1			REF.	1		
24 or younger	0.919	1.00	0.95	1.05	<0.001	0.59	0.51	0.68
40 or older	<0.001	0.64	0.62	0.67	<0.001	0.65	0.57	0.73
Number of sexual partners in the past 12 months								
None	REF.	1			REF.	1		
One	0.017	1.14	1.02	1.26	0.344	1.14	0.87	1.51
Two to five	<0.001	1.76	1.60	1.94	0.631	1.07	0.82	1.39
Six to ten	<0.001	2.41	2.18	2.67	0.296	1.16	0.87	1.55
More than 10	<0.001	3.53	3.20	3.91	<0.001	1.66	1.26	2.19
HIV status								
Diagnosed positive	<0.001	3.08	2.94	3.23	N.A.			
Visiting venues for MSM in the past 12 months								
Sex venue	<0.001	1.43	1.37	1.49	<0.001	2.01	1.77	2.28
Social venue	<0.001	1.86	1.76	1.96	<0.001	2.08	1.78	2.44
Anal intercourse and condom use with non-steady partners in the past 12 months								
No non-steady partners	REF.	1			REF.	1		
No anal intercourse	<0.001	0.57	0.51	0.63	<0.001	0.49	0.36	0.67
Consistent condom use	<0.001	0.81	0.74	0.88	0.085	0.80	0.61	1.03
Inconsistent condom use	<0.001	1.39	1.27	1.52	<0.001	2.37	1.84	3.04

peak shifted towards younger age groups. Twelve per cent of respondents with diagnosed HIV aged 25–29 years reported having been diagnosed with gonorrhoea in the past 12 months and 14% in this age group had been newly-diagnosed with syphilis. Overall, syphilis was the most common newly-diagnosed infection, followed by gonorrhoea and chlamydial infections. Newly-diagnosed hepatitis C was reported by 2% of respondents with HIV, but this measurement was not checked against injecting drug use and hepatitis C was not necessarily transmitted sexually.

Thirty-eight per cent of respondents with diagnosed HIV reported having at some time been infected with anal or genital warts and 13% had a history of anal or genital herpes.

As shown in figures 6.13 and 6.14, the number of sexual partners during the past 12 months was strongly associated with the proportion of men newly-diagnosed with STIs, particularly bacterial STIs such as gonorrhoea, chlamydia and syphilis.

Multivariable associations

In multivariable logistic regression analysis, the strongest association with the combined indicator for newly-diagnosed STIs was the number of sexual partners in the past 12 months, followed by HIV status (Figure 6.15). Young respondents (up to 24 years of age) had the same risk of STIs as the main age group (25–39 years). Men aged 40 years or above were 36% less likely to have been newly-diagnosed with STIs. Compared with men reporting no sexual partners in the past 12 months, having just one sexual partner increased the risk of STIs by 14%. Risk increased steadily with more partners: newly-diagnosed STIs occurred more than three times as often in men who reported more than ten sexual partners. Men diagnosed with HIV were three times more likely to report new STIs than men not diagnosed with HIV.

Having frequented social venues for MSM in the past 12 months (meeting men in bars, cafes and other places where sexual contacts are unlikely to happen 'on the spot') increased the risk of STIs by 86% – more than having visited a sex venue for MSM (having met men in gay saunas, darkrooms, at cruising sites or at private or commercial sex parties, which increased the risk of newly-diagnosed STIs by 43%). The dichotomised variables do not reflect the frequency of visiting such places.

Men who had sex with non-steady partners but without engaging in anal intercourse had a 43% lower risk of STIs than men who did not have non-steady partners (the reference group, most of them in steady relationships). Respondents who had anal intercourse with non-steady partners but reported always using condoms had a 19% lower risk than the reference group. Respondents who had UAI with non-steady partners ran a 39% higher risk of contracting STIs than the reference group.

It is noteworthy that using condoms for anal intercourse with non-steady partners had little effect on newly-diagnosed STIs, particularly when compared with the impact of the number of sexual partners. The impact of multiple partners might be explained partly by the fact that most STIs – unlike HIV – are easily transmitted via oral sex. Condom use is not routinely recommended for oral sex and condoms are not often used by MSM during oral sex. Moreover, the EMIS questionnaire restricted questions on condom use to anal intercourse only. The association with condom use might be higher for countries where rectal STIs are more commonly diagnosed because of better performance in STI testing. The impact of UAI on newly-diagnosed STIs is likely to be greater if the indicator includes more rectal STIs. More detailed analysis should be undertaken in this area.

In contrast, the patterns of the individual-level associations with newly-diagnosed HIV infection were quite distinct. Firstly, men aged up to 24 years were 41% less likely than the main age group (25–39 years) to have acquired HIV infection. Secondly, the impact of having more sexual partners was much weaker than for acquiring other STIs. Reporting more than 10 sexual partners within the past 12 months increased the risk of newly-diagnosed HIV by 66%.

Compared with men without non-steady partners (who might have engaged in UAI with their steady partners), men who had sex with non-steady partners but without engaging in anal intercourse had a 51% lower risk of newly-diagnosed HIV. The HIV risk for respondents who had engaged in UAI with non-steady partners was over twice as high as that for the reference group.

6.3.6 Summary and policy recommendations (Part 2)

EMIS data suggest that prevention messages for STIs should have a different focus to prevention messages for HIV. Testing rates for STIs need to be driven by the number of sexual partners, regardless of the extent to which condoms are used. To achieve higher STI testing rates among MSM, gay-friendly, non-judgmental, accessible and affordable services are needed.

6.4 Hepatitis B vaccination needs and hepatitis C

6.4.1 Hepatitis B vaccination needs

In 1992, the WHO World Health Assembly called for the inclusion of hepatitis B immunisation – available since the mid-1980s – in national vaccination programmes (WHO, 1992). As sexually transmitted infections with the hepatitis B virus were common among MSM before vaccination programmes were introduced, the EMIS questionnaire asked if respondents had been vaccinated against hepatitis B. The following answers were possible:

- No, I am naturally immune to hepatitis B (because I had it in the past)
- No, and I don't know if I'm immune
- Yes, and I completed the course of 3 shots of vaccine
- Yes, but I did not complete the course of 3 shots of vaccine
- Yes, but I did not respond to the vaccinations
- I don't know.

To construct an indicator for hepatitis B vaccination needs, natural immunity and completion of the course of three shots were taken to indicate that there was no need of vaccination. The response 'I don't know' was re-coded as a missing answer to increase the reliability of the indicator and the remaining three options were included in the indicator for hepatitis B vaccination needs.

Across Europe, 50% of respondents (country median) were in need of hepatitis B vaccination, ranging from less than 40% in West (except Ireland), Central-West, and South-West Europe (except Greece), to more than 60% in Estonia, Slovakia, Slovenia, Ukraine, Bulgaria, and Serbia, and more than 70% in Lithuania (Figure 6.16 and country tables).

The highest proportions of respondents who had completed a full course of vaccination were in the UK, the Netherlands, all the countries in the Central-West Europe sub-region, Portugal, and Malta – with up to 60% or more. The lowest proportions – less than 30% – were in Lithuania, Ukraine, Serbia and Bulgaria (see country tables).

Many countries, particularly the EMIS countries with the largest samples, set up vaccination programmes in the

Figure 6.16: Proportion of respondents in need of hepatitis B vaccination

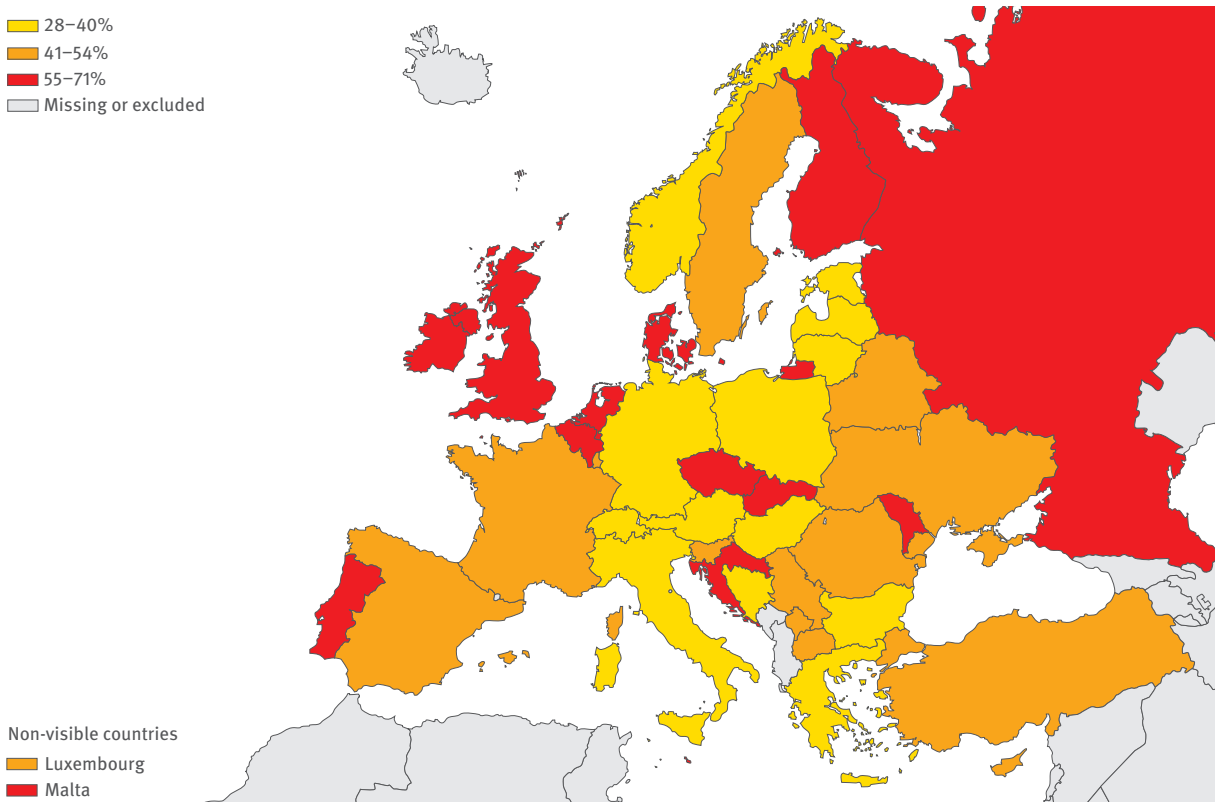
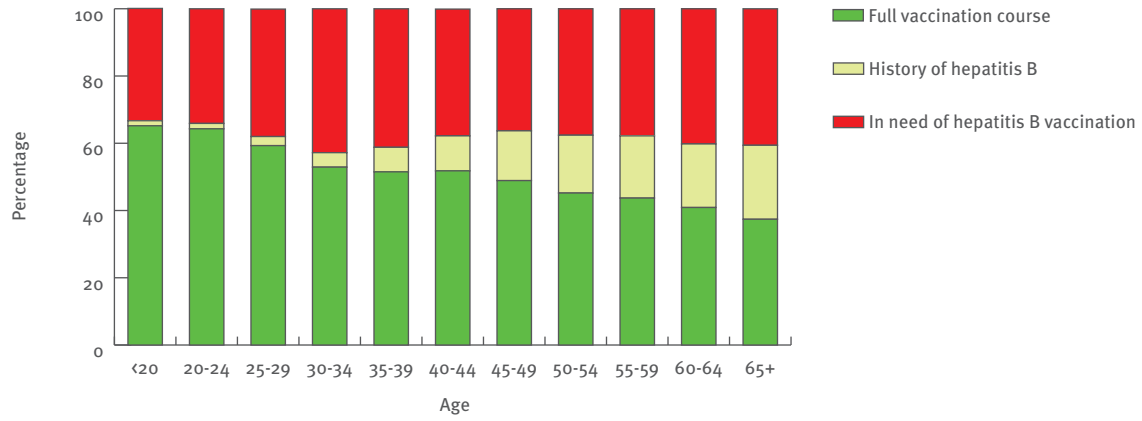


Figure 6.17: Individual-level associations of hepatitis B vaccination and age



1990s, so coverage with hepatitis B vaccination is likely to be negatively associated with age. Although hepatitis B vaccination has been recommended for MSM in most countries because of their increased risk of infection, the age-dependency can be seen among EMIS respondents. (Figure 6.17). The likelihood of ever having been diagnosed with hepatitis B increased with age. Over 20% of respondents in the upper age groups indicated that they had a history of hepatitis B.

The indicator for hepatitis B vaccination needs is much less affected by age, however, as lack of vaccination is counterbalanced by natural immunity. Because the total European sample is biased towards respondents from Germany, Spain, France, Italy and the UK, we can conclude that at least 40% of MSM are in need of hepatitis B vaccination across Europe, largely irrespective of age, and that in many other European countries the proportion is substantially higher.

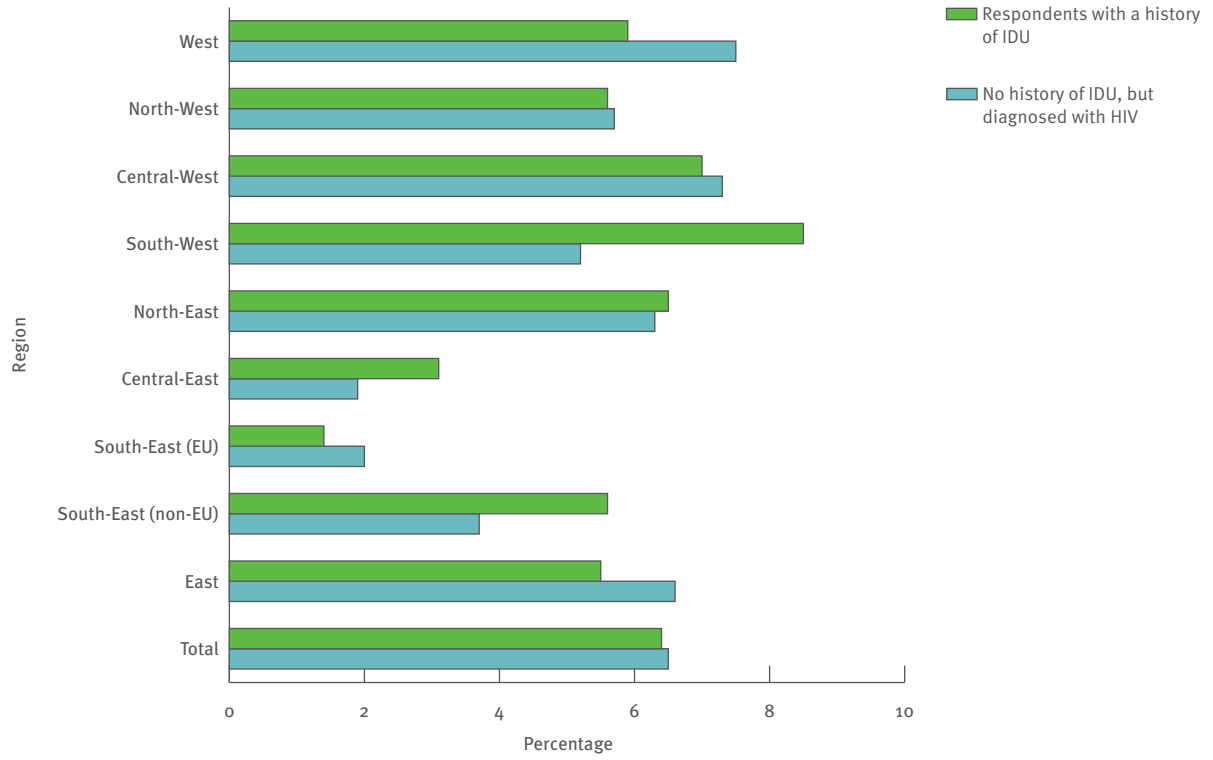
6.4.2 Hepatitis C

In the last decade, increasing diagnoses of infections with the hepatitis C virus (HCV) among HIV-infected MSM have been observed and evidence suggests that a substantial proportion of HCV infections were transmitted sexually. Few studies have been conducted to determine the sexual or non-sexual routes of transmission among MSM with HIV infection who do not inject drugs. A large cohort of European HIV-infected MSM who denied injecting drug use (IDU) showed an HCV prevalence of 6.6% (Rockstroh et al. 2005). The prevalence was similar among EMIS respondents with the same characteristics. Figure 6.18 shows the proportions stratified for the European sub-regions. The largest proportions were found in West (7.5%) and Central-West (7.3%) Europe.

Among respondents with a history of injecting drug use the proportion of men who had at some time been diagnosed with hepatitis C was highest in the South-West (8.5%), North-East (6.5%) and East (6.4%) Europe. In these three sub-regions, as well as in South-East, most cases were not diagnosed with HIV infection, suggesting an epidemic driven mainly by IDU. The proportions of EMIS respondents with a history of IDU who reported being diagnosed with hepatitis C are substantially lower than the prevalence estimates of hepatitis C among injecting drug users (Roy et al. 2002). The most likely reason for this finding is that EMIS respondents with a history of IDU differ as a population from the injecting drug users covered in specific surveys on IDU.

All respondents who had ever been diagnosed with hepatitis C were asked about their current hepatitis C status. Respondents could choose from the following answers: 'I cleared it with treatment', 'I cleared it (spontaneously) without treatment', 'I don't know', and 'I still have it'. Figure 6.19 shows the respective proportions stratified by sub-region. The absolute numbers of respondents with a history of hepatitis C were small for North-East (n=27), Central-East (42), South-East (EU) (32), and South-East (non-EU) (26) and the respective proportions should therefore be interpreted with caution.

Figure 6.18: Proportion (%) of respondents with a history of hepatitis C by European sub-region



Self-reported clearance of HCV infection without treatment might not always be reliable, but the reported proportion of spontaneous clearance – 27% in total – is in the range of what has been reported elsewhere. Among the sub-regions with large enough sample sizes, access to treatment for hepatitis C was highest in Central-West (46%) and lowest in East Europe (19%). If respondents who did not know their current hepatitis C status are considered to be probably still infected, then 29% of men with a history of hepatitis C are still infected in Central-West Europe, along with 31% in North-West, 36% in South-West, 38% in West and 67% in East Europe.

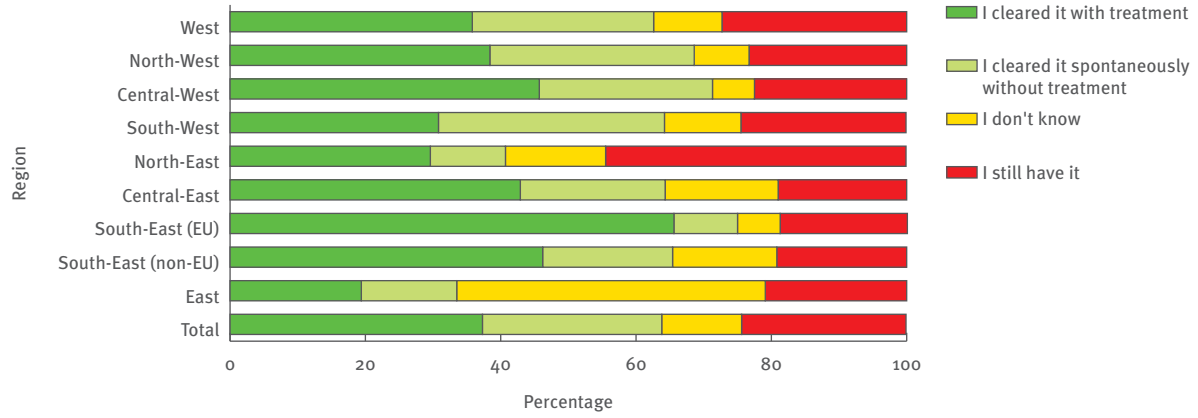
Recent evidence suggests that sexual practices associated with bleeding, particularly if more than two sexual partners are involved (group sex), are most likely to explain the current epidemic among non-injecting HIV-infected MSM in Europe (Schmidt et al. 2011). The sexual routes of hepatitis C transmission seem to be different from the transmission routes of other STIs (including HIV). There is an urgent need to increase access to treatment for hepatitis C, to increase testing for hepatitis C among men known to be HIV-infected and to implement new prevention programmes that address the routes of infection for hepatitis C.

6.4.3 Summary and policy recommendations

With regard to hepatitis B, there are extensive vaccination needs for MSM across Europe: at least 40% of MSM are in need of hepatitis B vaccination, and in many European countries the proportion is substantially higher.

Hepatitis C infection among MSM was reported on the one hand by MSM who also had a history of IDU and, on the other hand, in the absence of a history of IDU, predominantly by HIV-positive MSM. Hepatitis C seems to be transmitted mainly through injecting drug use in South-West, North-East, South-East and East Europe, while in West, North-West, and Central-West a considerable proportion of hepatitis C infections seem to be due to transmission among HIV-positive MSM. Access to specific care for hepatitis C was particularly low outside the European Union.

Figure 6.19: Current status of infection among respondents with a history of hepatitis C



6.5 Country table

Country		Region		Age median	STIs other than HIV					
Code	Name	EU region	EMIS region		Confident can receive STI test if needed (%)	Perceived access to free or affordable STI testing (%)	STI test in previous 12 months (%)	Screened at last STI-test during previous 12 months (%)	Blood test as part of STI testing in previous 12 months (%)	Penile and anal inspection as part of STI testing in previous 12 months (%)
at	Austria	EU	Central-West	31.0	94.3	88.5	29.6	77.3	84.5	21.4
be	Belgium	EU	West	34.0	92.1	88.3	41.9	80.4	93.6	11.2
bg	Bulgaria	EU	South-East (EU)	28.0	76.6	71.2	29.3	78.8	85.6	10.4
cy	Cyprus	EU	South-East (EU)	30.0	81.9	63.2	20.7	82.7	84.6	19.2
cz	Czech Republic	EU	Central-East	27.0	77.4	73.9	18.3	75.2	91.2	25.5
de	Germany	EU	Central-West	33.0	92.0	84.1	27.5	76.5	85.0	20.7
dk	Denmark	EU	North-West	34.0	97.9	95.8	34.5	67.1	87.0	36.0
ee	Estonia	EU	North-East	30.0	84.1	77.2	22.4	72.2	84.9	15.9
es	Spain	EU	South-West	32.0	91.9	81.8	36.6	73.3	92.0	15.6
fi	Finland	EU	North-West	33.0	95.4	91.8	22.3	78.4	89.8	35.7
fr	France	EU	West	34.0	93.3	91.4	40.3	83.8	92.9	12.4
gr	Greece	EU	South-West	30.0	84.8	66.7	30.6	77.5	87.8	15.9
hu	Hungary	EU	Central-East	28.0	83.0	68.3	24.2	83.4	91.7	23.5
ie	Republic of Ireland	EU	West	31.0	90.6	85.4	38.1	79.8	93.4	68.3
it	Italy	EU	South-West	33.0	90.5	80.0	29.6	78.0	92.6	17.0
lt	Lithuania	EU	North-East	27.0	87.6	40.3	17.1	67.0	79.4	13.4
lu	Luxembourg	EU	Central-West	36.0	91.3	92.8	26.6	78.8	89.4	12.1
lv	Latvia	EU	North-East	30.0	87.0	65.0	26.4	73.7	87.7	18.1
mt	Malta	EU	South-East (EU)	32.0	80.5	87.3	30.4	85.3	97.1	79.4
nl	Netherlands	EU	West	40.0	94.9	94.0	52.7	77.1	92.6	48.1
pl	Poland	EU	Central-East	28.0	83.6	77.4	24.6	78.5	91.2	14.6
pt	Portugal	EU	South-West	30.0	83.1	77.9	27.6	77.6	91.1	12.4
ro	Romania	EU	South-East (EU)	27.0	90.0	65.9	32.2	84.2	91.4	9.1
se	Sweden	EU	North-West	35.0	96.4	93.7	37.7	84.0	85.8	50.6
si	Slovenia	EU	Central-East	30.0	85.1	80.1	18.0	73.5	91.2	28.2
sk	Slovakia	EU	Central-East	26.0	72.5	67.7	14.6	84.6	96.2	20.5
uk	United Kingdom	EU	West	36.0	95.8	94.7	44.1	78.7	90.3	61.8
ch	Switzerland	EEA/EFTA/acceding	Central-West	37.0	95.2	89.3	32.4	74.7	87.5	19.6
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	29.0	86.0	85.4	20.0	83.2	82.2	14.9
no	Norway	EEA/EFTA/acceding	North-West	31.0	93.5	92.9	36.0	79.1	85.0	35.4
ba	Bosnia & Herzegovina	other	South-East (non-EU)	26.0	79.5	73.1	19.4	78.6	89.3	10.7
by	Belarus	other	East	27.0	90.4	86.0	42.5	80.4	87.8	20.9
md	Moldova	other	East	25.0	79.8	56.9	37.3	87.8	82.9	14.6
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	28.0	85.1	78.3	23.5	85.2	92.6	14.8
rs	Serbia	other	South-East (non-EU)	28.0	86.1	75.6	23.6	83.3	88.4	10.0
ru	Russia	other	East	30.0	92.7	82.7	43.6	73.5	88.6	23.4
tr	Turkey	other	South-East (non-EU)	27.0	65.5	64.3	15.6	66.0	83.8	18.5
ua	Ukraine	other	East	29.0	87.7	75.2	34.7	71.5	82.8	17.2
	Low			25.0	65.5	40.3	14.6	66.0	79.4	9.1
	Median			**30.0**	**87.7**	**80.1**	**29.5**	**78.5**	**89.0**	**18.3**
	High			40.0	97.9	95.8	52.7	87.8	97.1	79.4
	EU27 median			**31.0**	**90.0**	**80.1**	**29.3**	**78.4**	**91.1**	**19.2**

STIs other than HIV											
	Genital test as part of STI testing in previous 12 months (%)	Anal swab as part of STI testing in previous 12 months (%)	Diagnosed with any STI in previous 12 months (%)	Diagnosed with syphilis in previous 12 months (%)	Diagnosed with gonorrhea in previous 12 months (%)	Diagnosed with chlamydia in previous 12 months (%)	First diagnoses of anal or genital herpes in previous 12 months (%)	First diagnosis of anal or genital warts in previous 12 months (%)	Hepatitis C diagnosis among MSM with HIV without injecting drug use (%)	In need of vaccination against hepatitis B (%)	Full course of vaccination against hepatitis B (%)
	54.8	23.1	7.4	2.3	2.6	1.4	0.4	2.3	4.8	30.6	64.99
	46.3	8.9	10.6	3.1	3.5	3.3	1.1	2.5	11.4	64.4	57.26
	38.1	9.7	6.7	1.2	1.4	1.7	0.6	3.0	5.9	38.8	28.17
	55.8	17.3	7.2	0.8	3.0	2.3	0.8	2.7		54.1	55.98
	62.7	19.6	6.1	1.7	1.3	1.5	0.5	2.0	4.6	60.2	42.65
	51.8	20.5	7.4	1.9	2.4	1.8	0.6	2.3	7.6	38.5	61.61
	71.1	39.7	10.3	2.8	2.0	3.7	0.9	3.1	9.5	58.8	39.71
	56.3	13.5	3.6	0.7	1.0	1.4	0.0	1.2		39.5	34.83
	49.1	15.2	11.4	3.8	3.9	1.8	1.0	3.3	5.1	41.9	51.92
	90.0	37.7	4.3	0.6	0.9	1.4	0.3	1.3	1.5	57.4	38.71
	39.9	8.7	10.7	3.1	3.5	2.8	1.2	3.0	5.8	46.7	52.52
	39.8	11.9	7.8	1.7	1.8	1.0	0.9	3.7	0.9	37.3	50.37
	39.7	17.3	7.4	2.0	1.1	1.3	0.9	2.9	1.5	36.1	39.09
	91.3	66.9	9.1	2.1	2.4	3.0	0.5	2.7	2.3	55.0	48.24
	46.0	14.7	8.3	2.7	2.4	0.9	0.6	2.9	6.1	27.6	51.62
	61.9	13.4	3.6	0.2	1.2	0.5	0.3	1.7	11.8	29.1	20.71
	40.9	9.1	6.5	2.9	0.7	0.7	1.1	2.5		47.4	57.94
	64.9	14.6	4.0	1.0	0.7	1.1	0.7	1.0	6.1	29.1	34.04
	85.3	70.6	5.1	0.8	1.7	0.8	0.8	0.8		63.2	70.48
	87.5	62.6	14.1	3.3	5.2	7.0	0.7	2.7	11.1	61.5	58.51
	36.9	8.8	7.1	2.1	1.7	0.8	1.1	2.4	1.4	28.8	47.14
	67.9	9.5	8.3	3.3	2.8	1.0	1.1	1.8	5.3	56.3	64.02
	45.6	6.5	7.1	1.9	2.0	1.0	0.7	2.0	1.4	48.7	33.20
	92.3	58.8	6.3	0.6	1.6	3.4	0.6	1.5	6.2	53.1	44.01
	51.2	28.8	6.3	1.5	1.2	1.1	0.3	2.9		45.6	32.95
	60.3	16.7	2.4	0.3	0.3	0.9	0.2	1.0		68.7	33.03
	94.7	69.4	10.7	2.0	3.3	5.1	0.9	2.5	7.0	64.3	57.94
	54.7	15.4	8.9	2.3	3.1	2.8	0.7	2.2	6.7	32.5	64.35
	41.6	9.9	4.3	1.0	1.0	0.6	0.6	1.6		71.4	39.14
	84.5	47.2	7.0	0.7	1.9	3.6	0.4	1.6	1.3	36.0	46.37
	35.7	14.3	4.8	0.0	1.4	2.0	0.0	1.4		34.0	38.04
	87.2	16.9	11.6	4.7	3.9	6.4	1.7	3.3		52.5	35.94
	48.8	17.1	9.5	2.6	2.6	3.4	1.7	3.4		58.4	35.94
	63.0	18.5	9.6	0.0	1.7	3.5	0.0	4.4		51.4	45.57
	35.1	4.4	6.4	0.5	0.6	1.1	0.6	4.0		48.9	21.82
	72.0	18.4	10.5	4.7	3.5	4.0	1.5	2.6	4.8	55.7	37.42
	54.0	13.6	10.9	0.6	5.1	0.7	1.6	5.0	9.4	53.5	38.95
	61.5	14.2	11.3	5.2	2.8	4.1	1.1	2.4	12.2	51.4	21.28
	35.1	4.4	2.4	0.0	0.3	0.5	0.0	0.8	0.9	27.6	20.7
	55.3	**16.0**	**7.4**	**1.9**	**2.0**	**1.6**	**0.7**	**2.5**	**5.9**	**50.2**	**43.3**
	94.7	70.6	14.1	5.2	5.2	7.0	1.7	5.0	12.2	63.5	70.5
	55.8	**16.7**	**7.2**	**1.9**	**1.8**	**1.4**	**0.7**	**2.5**	**5.8**	**47.4**	**48.2**

7. Sexual experiences, partners, behaviour and contexts

7. Sexual experiences, partners, behaviour and contexts

7.1 Introduction

This chapter reports key findings on sexual experience and sexual behaviour, such as unprotected anal intercourse (UAI), condom access and use. Aggregated results are presented in the text, and detailed results for individual countries provided in country tables at the end of the chapter. For most variables multivariable logistic regressions were conducted to investigate potential associations with age group (<25 years, 25–39 years, ≥40 years); educational level (lower [ISCED 1–4] vs. higher [ISCED 5-6]); settlement size (<500 000 inhabitants vs. larger cities) and sub-regions (see Chapter 2 for a list of countries in each sub-region). For variables on sexual behaviour in the past 12 months HIV status was also added.

Country medians are not weighted by country sample sizes. The effects of sub-region are always controlled for age, educational level, settlement size and – when included – HIV status.

7.2 Sexual experiences with men

Almost all respondents (98%) reported some sexual experience with men (median 97%; range 90– 99%). The median age of the first homosexual experience was 18 years. The proportion of respondents who had their first experience before the age of 18 varied between countries from 42% to 57% (median 49%). Men with a lower educational level were more likely to have had their first homosexual experience before the age of 18 (AOR=1.58; 95%-CI: 1.55–1.61). The proportion that had their first experience under the age of 18 was higher than the median in North-West and West Europe and lower in North-East and Central-East Europe (sub-region range 44–53%; Figure 7.1).

Among respondents who had had a sexual experience with men, 95% reported having had anal intercourse with a man (median 95%; range 89–97%) and 85% reported having had anal intercourse during the past 12 months. The median age of first male anal intercourse was 20 years. The percentage of respondents who first experienced male anal intercourse before the age of 20 varied from 40–61% between countries (median 51%), with percentages higher than the median in South-East Europe (both EU and non-EU) and lower in North-East and Central-East Europe (sub-region range 47–53%; Figure 7.2). Men with a lower educational level were more likely to have first had male anal intercourse before the age of 20 (AOR=1.77; 95%-CI: 1.63–1.71).

7.3 Unprotected anal intercourse in the past 12 months: all partner types

Unprotected anal intercourse (UAI) is defined as 'not consistently using condoms for anal intercourse' and may therefore range from one instance of unprotected anal intercourse to never using condoms for anal intercourse. Respondents who reported having had sex with men in the past 12 months were asked whether they had engaged in UAI with one or more steady or non-steady partners. Overall, 58% reported at least one instance of UAI with at least one male partner in the last 12 months (median 59%; range 49–75%).

Men younger than 25 and men between 25 and 39 years old were more likely to report UAI than respondents of 40 years and above (60% [AOR=1.41; 95%-CI: 1.37–1.46]; 60% [AOR=1.43; 95%-CI: 1.40–1.46] and 51% respectively). Men with diagnosed as having HIV infection were more likely to report UAI than men not diagnosed with HIV (69% vs. 57%; AOR=1.86; 95%-CI: 1.78–1.93). Educational level and settlement size had marginal effects. Higher levels of UAI were reported in South-East (EU) and East Europe

Figure 7.1: First homosexual experience before the age of 18

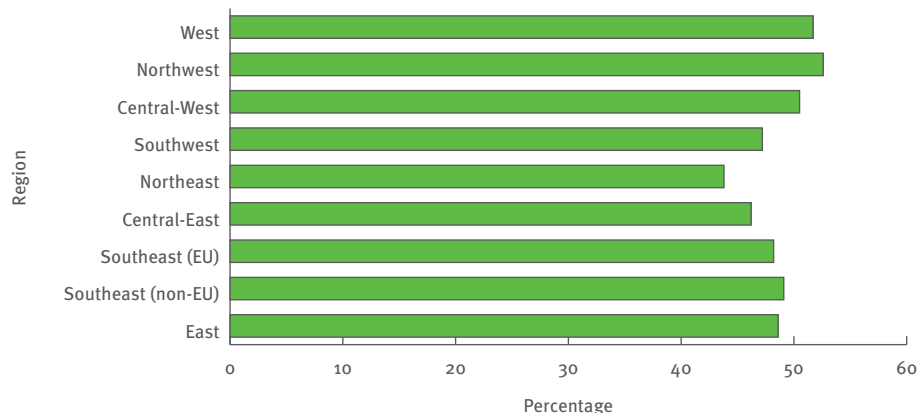


Figure 7.2: First anal intercourse with a man before the age of 20

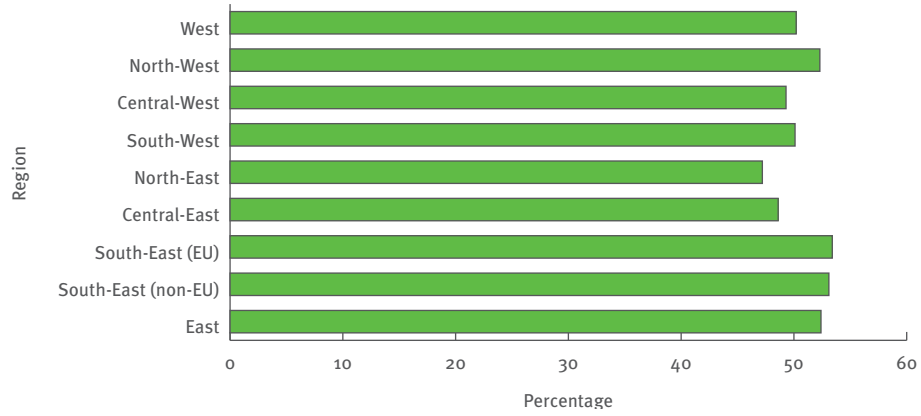


Figure 7.3: UAI with one or more steady or non-steady partners in the past 12 months

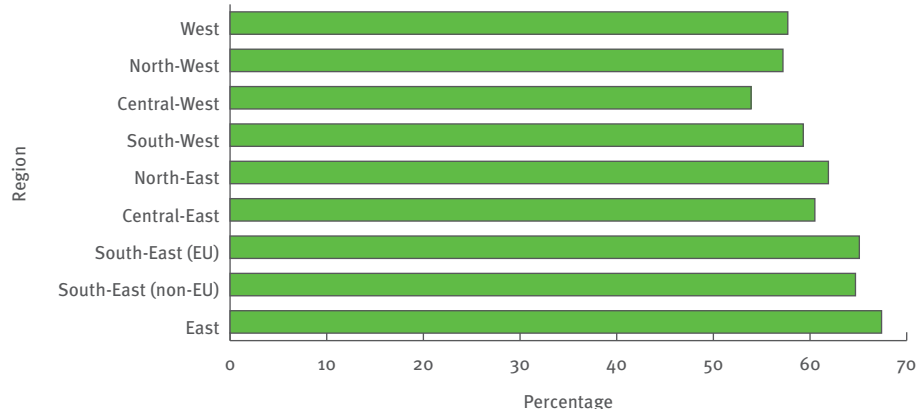


Figure 7.4: UAI with steady partners in the past 12 months among respondents who had sex with a steady partner

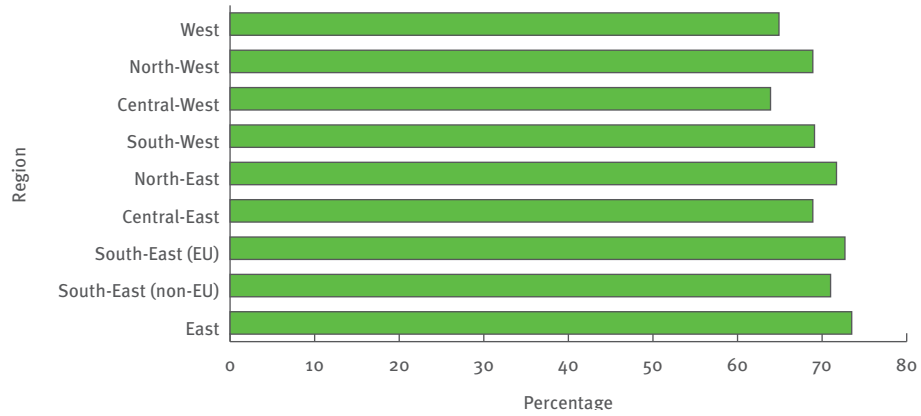


Figure 7.5: Non-concordant UAI (ncAI) with steady partners in the past 12 months, among respondents who had sex with a steady partner

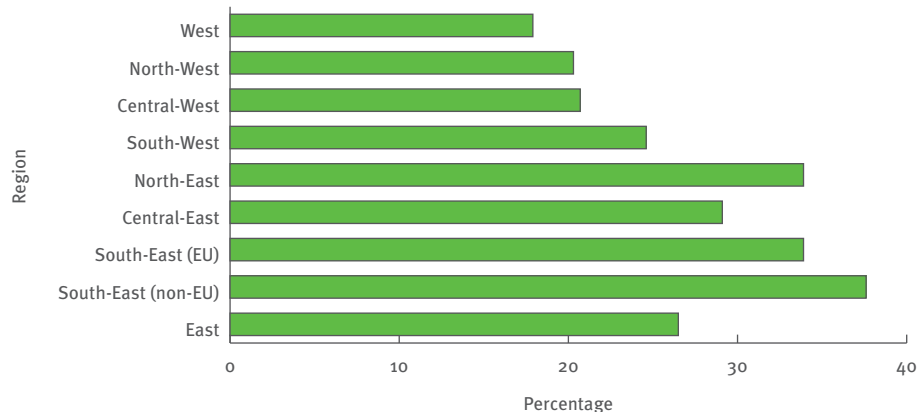


Figure 7.6: Number of non-steady sex partners in the past 12 months among men with a non-steady partner

Number of non-steady sex partners in the past 12 months	%
1	11.3
2	12.4
3	11.3
4	8.0
5	8.3
6	5.0
7	2.4
8	2.6
9	0.9
10	7.6
11-20	14.3
21-30	6.0
31-40	2.8
41-50	1.8
More than 50	5.2
Total	**100.0**

Figure 7.7: UAI with non-steady partners in the past 12 months among respondents who had had sex with non-steady partners

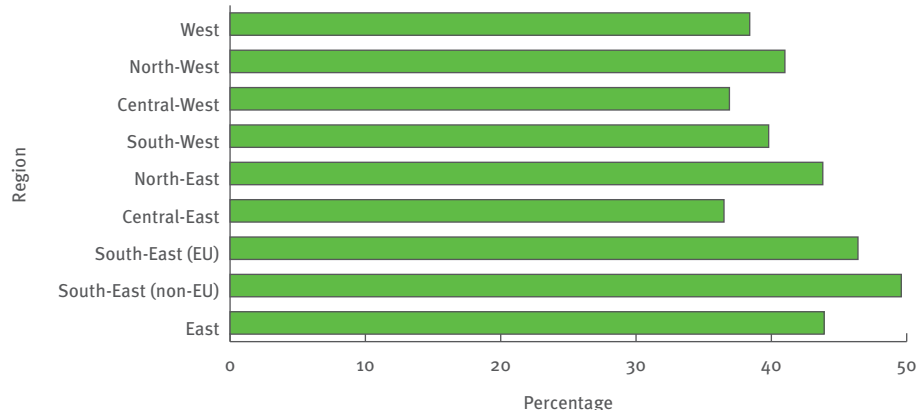


Figure 7.8: Non-concordant UAI with non-steady partners in the past 12 months among respondents who had had sex with non-steady partners

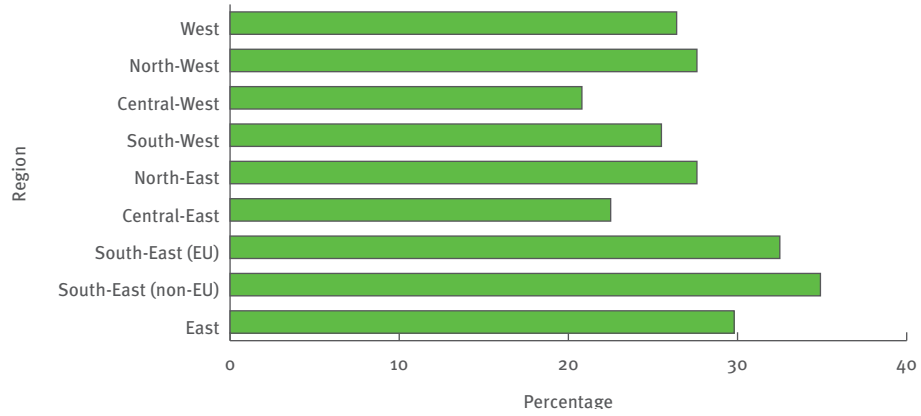
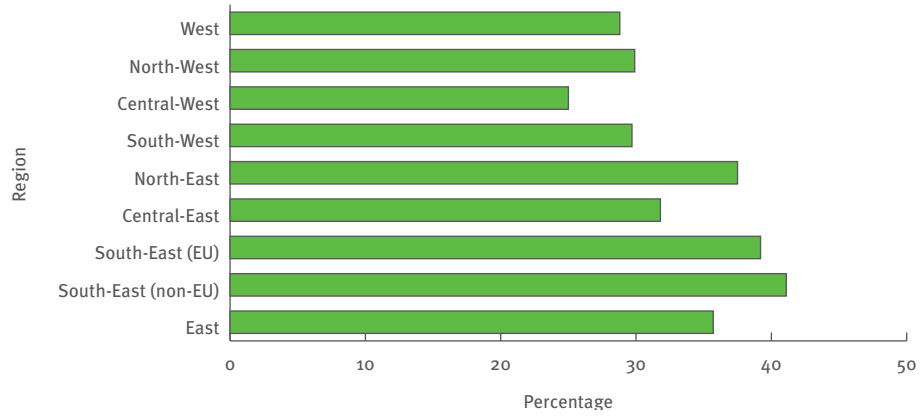


Figure 7.9: Sexual practices with non-steady partners in the past 12 months

Sexual practices with non-steady partners in the past 12 months among men who had a non-steady partner	%
Mutual masturbation	89.8
Suck a man's penis	96.2
Get your penis sucked	96.6
Lick a man's anus	64.6
Have a man lick your anus	76.0
'Active' anal intercourse (you fucked a man)	74.4
'Passive' anal intercourse (you were fucked by a man)	72.5
Put your hand into a man's rectum (fist-fucking a man)	17.1
Have a man's hand in your rectum (being fist-fucked)	10.5

Figure 7.10a: Non-concordant UAI with any male partner in the preceding 12 months



and lower levels in Central-West and North-West Europe (sub-region range 54–67%, Figure 7.3).

7.4 Sex with steady male partners in the past 12 months

Respondents were told 'In this survey we use the term 'steady partners' to refer to boyfriends or husbands that mean you are not 'single', but not to refer to partners who are simply sex buddies'. Overall, 58% of respondents indicated that they had had sex with a steady male partner in the past 12 months (median 63%; range 49–73%). Two thirds of these respondents (65%) reported one steady partner, 15% two steady partners and 20% three or more. Among men who had sex with one or more steady partners, 67% reported UAI with their steady partner (median 69%; range 60–82%), 23% consistently used condoms and 10% did not have anal intercourse with their partner. Sixty-nine per cent of men under 25 years and men between 25 and 39 years reported UAI with their steady partner, compared with 59% of respondents aged 40 years and above (69% [AOR=1.39; 95%-CI: 1.34–1.45], 69% [AOR=1.48; 95%-CI: 1.43–1.53], 59%). Again, educational status and settlement size had marginal effects. Men who had been diagnosed as having HIV were somewhat less likely to report UAI with their steady partner (62% vs. 67%; AOR=0.88; 95%-CI: 0.84–0.93). UAI rates were highest in South-East (EU) and East Europe, and lowest in West and Central-West Europe (sub-region range 64–74%; Figure 7.4).

The above figures for UAI do not take into account the HIV testing history of respondents and their steady partner(s). To investigate this, a variable was constructed that distinguished HIV-concordant UAI on the one hand (respondent and his steady partner have the same HIV test result) from unknown, HIV-discordant or non-concordant UAI (ncUAI) on the other. Overall, 22% of respondents who had sex with a steady partner reported ncUAI (median 25%; range 14–44%). Men under 25 years were more likely to report ncUAI (31%) than men aged 25–39 years (21%) or 40 years and above (18%: AOR=1.53; 95%-CI: 1.47–1.58 and AOR=1.12; 95%-CI: 1.75–1.92 respectively). Respondents with lower levels of educational achievement were more likely to report ncUAI than men with more education (26% vs. 19%; AOR=1.42; 95%-CI: 1.37–1.47). Men living in larger cities were less likely to have engaged in ncUAI (20% vs. 25%; AOR=0.76; 95%-CI: 0.74–0.79). HIV status was not associated with this UAI measure. Men in South-East (EU and non-EU) and North-East Europe reported the highest levels of ncUAI; men in West and North-West Europe the lowest (sub-region range 18–38%, Figure 7.5).

7.5 Sex with non-steady male partners in the past 12 months

Non-steady partners were defined as partners other than steady partners. Overall, 67% of respondents reported sex with non-steady sex partners in the past 12 months (median 74%; range 63–83%). Eleven per cent reported one non-steady partner, 40% 2–5 partners, 19% 6–10 partners and 30% 11 or more non-steady partners.

The proportion of men reporting 11 or more non-steady partners in the past 12 months varied widely by country, from 7% to 43% (median 23%). Seventeen per cent of the respondents who had had sex with non-steady partners did not have anal intercourse (AI), 44% had AI and used condoms consistently and 39% reported UAI with at least one partner (median 40%; range 29–62%). The associations between non-steady UAI, age group and settlement size were marginal. Men with lower levels of education were more likely to report UAI with non-steady partners than men with higher levels of education (42% vs. 36%; AOR=1.37; 95%-CI: 1.33–1.40). Men diagnosed with HIV infection were more likely to report UAI with non-steady partners than men who had not tested HIV positive (65% vs. 36%; AOR=3.53; 95%-CI: 3.38–3.69). Finally, non-steady UAI was more common in South-East Europe (both EU and non-EU) and less common in Central-East and Central-West Europe (sub-region range 37–50%; Figure 7.7).

Similar to the analyses with steady partners, a new variable was constructed that distinguished HIV-concordant UAI from non-concordant UAI (ncUAI). Twenty-five per cent of men who had a non-steady partner had had ncUAI with a non-steady partner in the previous year (median 25%; range 16–47%). Age group, educational level and settlement size were not associated with this measure, but HIV positive men were more likely to report non-steady ncUAI than men who had not tested HIV positive (45% vs. 23%; AOR=3.03; 95%-CI: 2.91–3.17). The highest levels of ncUAI were reported in South-East Europe (EU and non-EU) and the lowest in Central-East and Central-West Europe (sub-region range 21–35%; Figure 7.8).

Respondents were asked which sexual practices they had engaged in with non-steady partners in the past 12 months.

Mutual masturbation and oral sex were very common (≥90%) with non-steady partners. Sixty-five per cent of respondents reported licking a man's anus and 76% reported having had their anus licked by a man. Regarding anal intercourse, 74% reported insertive anal intercourse and 73% receptive anal intercourse. Fist-fucking was less common: 17% reported fist-fucking another man, while 11% reported being fist-fucked by another man.

7.6 Adjusted UAI rates for steady and non-steady partners combined

The following analysis combines behaviour with both steady partners and non-steady partners in the past 12 months. Five per cent of the sample reported no sex partners, 20% reported sex with steady partners only, 37% with non-steady partners only and 39% both steady and non-steady partners. Among men who reported sex in the past 12 months, the overall level of ncUAI was 30% (27% for men with steady partners only, 23% for men with non-steady partners only, and 36% for men with steady and non-steady partners).

Men aged 25 to 39 years and men 40 years and above were less likely to report ncUAI than men under 25 years

(30% and 27% respectively vs. 34% [AOR=0.85; 95%-CI: 0.82–0.87 and AOR=0.73; 95%-CI: 0.71–0.76]). Less well-educated men were more likely to report ncUAI than men with a higher level of education (AOR=1.22, 95%-CI: 1.19–1.25). Finally, more HIV positive men reported ncUAI than HIV negative and untested men (AOR=2.39; 95%-CI: 2.30–2.48). Central-West and West Europe had the lowest levels and South-East Europe (EU and non-EU) the highest (sub-region range 25–41%, Figure 7.10a).

7.7 Sex with women in the past 12 months

Overall, 13% of respondents reported having had sex with women in the past 12 months (median 15%; range 8–28%). Among men who had sex with women, 64% reported having had unprotected intercourse with women. Men aged 25 to 39 years and aged 40 and above were more likely than younger respondents to report unprotected intercourse with women (64% [AOR=1.78; 95%-CI: 1.65–1.92] and 74% [AOR=2.98; 95%-CI: 2.73–3.26] respectively vs. 53%). Men in larger cities (≥500 000 inhabitants) were less likely to report unprotected intercourse with women than men in smaller cities (59% vs. 68%; AOR=0.72; 95%-CI: 0.67–0.77). Men who had not tested HIV positive were more likely to report unprotected intercourse with women than HIV-positive respondents (65% vs. 34%; AOR=3.83; 95%-CI: 3.21–4.82). The highest levels of unprotected intercourse with women were reported in North-West and North-East Europe, and the lowest levels in South-West, West and South-East Europe (EU) (range 56–78%; Figure 7.11).

Forty-five per cent of the men who reported unprotected sex with women in the past 12 months also reported UAI with men.

7.8 The last non-steady male partner

Respondents were asked detailed questions about their last non-steady sex partner. Firstly, they were asked where they had met their last non-steady partner. Most (58%) had met their last non-steady sex partner on the internet, 21% at a sex-focused venue, 9% at a social venue and 12% elsewhere.

The percentage of respondents who had met their last non-steady sex partner online varied substantially among countries, from 46% to 77% (median 59%). Seventy per cent of the encounters were with a new non-steady sex partner, 11% with a man the respondent had had sex with once before and 19% with a man the respondent had had sex with at least twice before.

In the last encounter with a non-steady partner, 39% did not have anal intercourse, 42% had AI with a condom and 19% reported UAI. Rates of UAI with the last non-steady sex partner varied substantially between countries, from 10%

Figure 7.10b: Non-concordant UAI with any male partner in the preceding 12 months

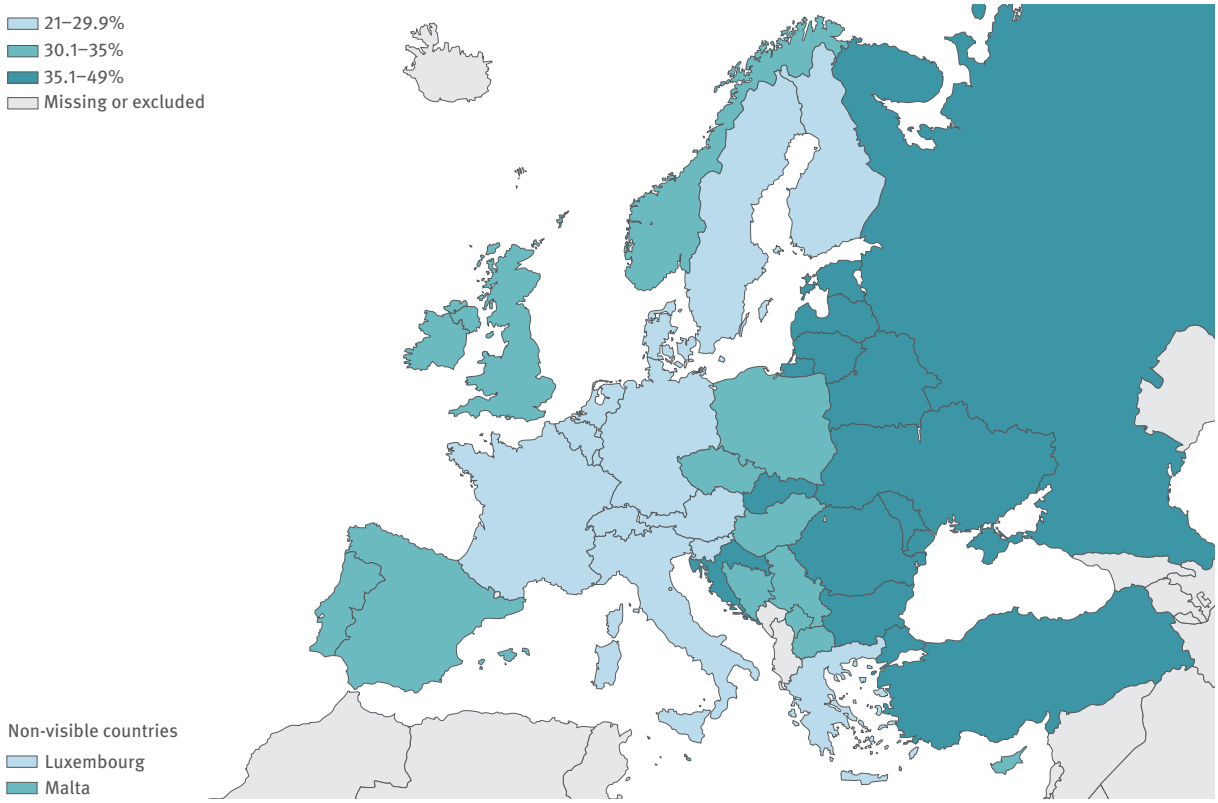


Figure 7.11: Unprotected intercourse with women in the past 12 months among respondents who had sex with women

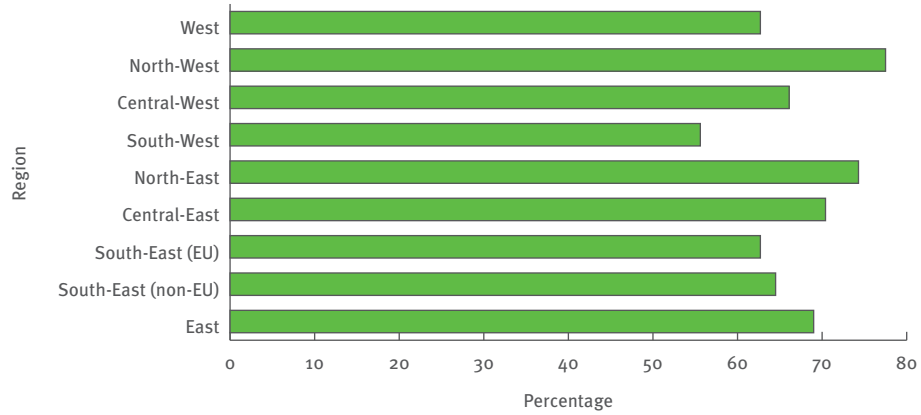


Figure 7.12: UAI with the most recent non-steady partner among respondents who had had sex with non-steady partners

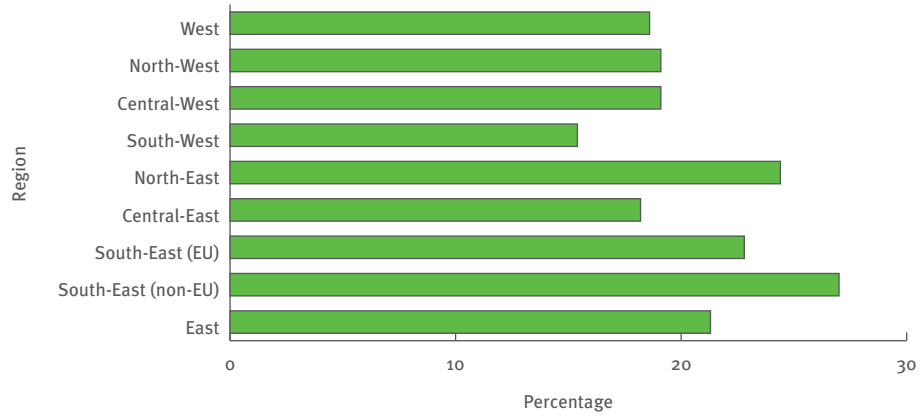


Figure 7.13: No condoms available in the preceding 12 months

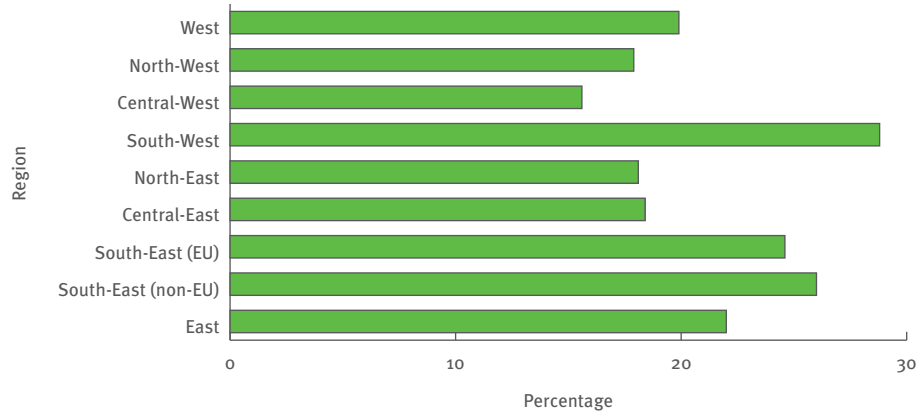


Figure 7.14: UAI because no condoms were available in the past 12 months

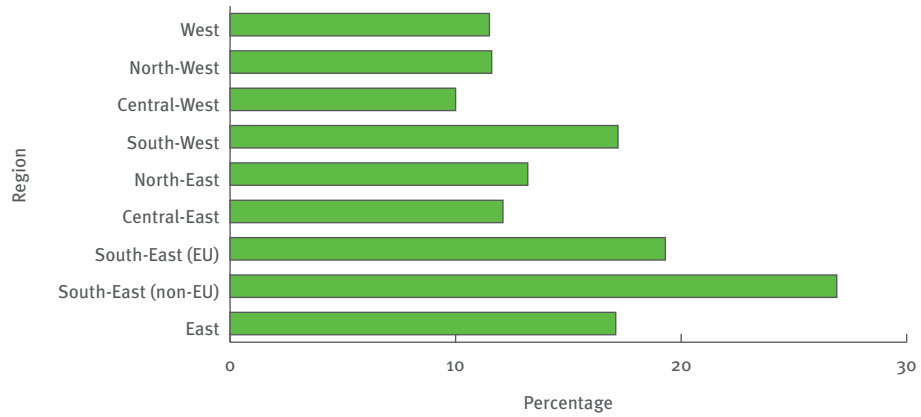
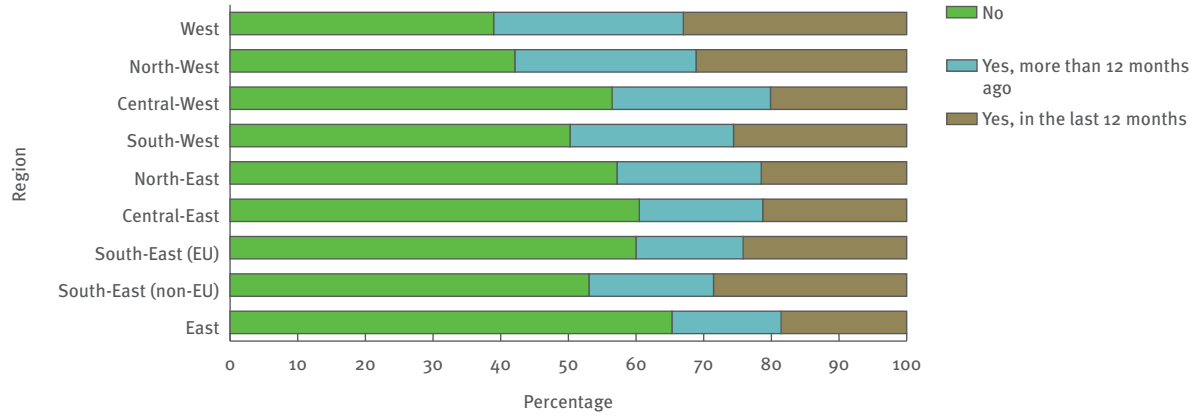


Figure 7.15: Sub-optimal condom use in the past 12 months, among men who used condoms for insertive anal intercourse

Frequency of sub-optimal condom use practices in the past 12 months (among men that used condoms for insertive anal intercourse)	%
Using saliva as a lubricant	41.7
Not using any lubricant	35.4
Not using lots of lubricant on the outside of the condom	25.5
Having intercourse for over half an hour without changing the condom	19.0
Using an oil-based lubricant	14.1
Using a condom that is too large or small for my penis	11.7
Putting lubricant inside the condom before putting it on	9.3

Figure 7.16: Sex abroad with a man who was not from the respondent's country of residence



to 36% (median 19%). Twenty-six per cent of respondents who had had sex with their last non-steady partner more than twice before engaged in UAI, compared with 20% of respondents who had sex with their last non-steady partner once before and 16% of respondents whose last non-steady partner was a new partner. UAI with the last non-steady partner was unrelated to age and settlement size but men with lower levels of education were more likely to report UAI than men with a higher educational attainment (21% vs. 16%; AOR=1.47; 95%-CI: 1.42–1.52). More HIV-positive men reported UAI than men who had not tested positive (39% vs. 17%; AOR=3.46; 95%-CI: 3.31–3.62). The highest UAI levels were reported in North-East and South-East Europe (non-EU) and the lowest in South-West and Central-East Europe (sub-region range 15–27%; Figure 7.12).

Respondents were asked what they had told their last non-steady partner about their own HIV status before or during sex. Among men who had not tested positive, 28% had said they did not know their status or that they were HIV negative, 66% had said nothing about their status, and 6% could not remember. Thirty-two per cent of men with diagnosed HIV infection had said that they were HIV positive, 62% had said nothing, 2% had told their partner they did not know their HIV status, 1% that they were HIV negative and 3% could not remember what they had said. Among men who reported UAI with their last non-steady partner 42% who did not have diagnosed HIV shared this information, compared with 47% of HIV-positive respondents. Sub-regional analyses on HIV status disclosure for UAI with the last non-steady partner cannot be provided since the numbers of HIV-positive men who had UAI with their last non-steady partner were too small in several sub-regions.

7.9 Access to condoms and sub-optimal condom use practices

Overall, 20% reported one or more instances in the past 12 months when they had wanted a condom but none was available (median 21%; range: 13–35%). Men under 25 years and men aged 25 to 39 years were more likely than men aged 40 and over to report that a condom had been needed but was not available (25% and 21% vs. 15%; respectively, AOR=1.96; 95%-CI: 1.89–2.03 and AOR=1.47; 95%-CI: 1.43–1.52). Educational level, settlement size and HIV status were unrelated to problems with condom availability. Not having condoms available when needed was reported most commonly in South-West and South-East Europe (non-EU) and least in North-West and Central-East Europe (sub-region range 16%-29%; Figure 7.13).

Thirteen per cent of respondents reported having had UAI in the past 12 months solely because no condoms were available at the time (median 14%; range: 8–33%). Being younger and having a lower level of education and HIV positive status were associated with UAI that occurred solely because no condoms were available (men under 25 years 17%, men aged 25 to 40 years 13%, and men 40 years and over 10% (AOR=0.72; 95%-CI: 0.70–0.75 and AOR=0.59; 95%-CI: 0.57–0.62); lower educational attainment 15%, higher educational attainment 11% (AOR=1.46; 95%-CI: 1.42–1.51); HIV-positive men 16%, HIV negative/untested men 13% (AOR=1.60; 95%-CI: 1.52–1.68)). The highest UAI levels were reported in South-East Europe (EU and non-EU) and the lowest levels in Central-West and West Europe (sub-region range 10%-27%; Figure 7.14).

Men who had worn a condom for insertive anal intercourse in the past 12 months were asked if they had engaged in any of the seven types of condom failure behaviour in Figure 7.15.

Using saliva as lubricant and not using any lubricant were the most commonly reported (42% and 35%, respectively). Not using lots of lubricant was reported by 26%, having intercourse for over half an hour without changing the condom by 19%, using an oil-based lubricant by 14% and using a condom that was either too small or too large by 12%.

7.10 Sex abroad

Travellers to foreign countries may disregard conventional norms of behaviour and indulge in risk-taking behaviour (Blatchford, 2000). Some studies suggest that the risk-taking behaviour of travellers on vacation (for example, alcohol or drug use, large numbers of sexual partners) (Downing et al. 2010) may play an important role in the dissemination of HIV infection and other STIs (Bellis et al. 2004; Benotsch et al. 2006; Marrazzo, 2005) and the spread of drug resistance for HIV and other STIs (Truong et al. 2008; Memish & Osoba, 2006). The consistency of these findings suggests that there is an increasing connectivity within the global MSM community. In the era of the internet and easier foreign travel this community is defined less by geographic boundaries and linked more by shared interests and social and sexual networks (Fenton & Imrie, 2005). Risk behaviour among MSM in Europe during their vacations has not been thoroughly examined.

Men were asked 'When did you last have sex in a country outside the one you live in, with a man who does not also live in [respondent's country of residence]?', which was how 'sex abroad' was defined in EMIS. Twenty-five per cent of the whole sample reported sex abroad in the previous 12 months (median proportion 26.3%). The countries with the lowest percentage of men who had sex in another country were Ukraine (12%), Germany (17%), Switzerland (18%) and Lithuania (19%). The countries with the highest percentage of men who had sex in another country were Luxembourg (57%), Switzerland (48%), Malta (45%) and the Netherlands (44%). The countries with the highest rates of men who reported sex abroad were in the West and North-West sub-regions (Figure 7.16).

Older men (≥ 25 years) were more likely to report sex abroad than younger men (28% vs. 16%; OR=1.79), as were men with higher levels of education (32% vs. 18%; OR=1.81). Men who lived in larger cities were also more likely to report sex abroad (31% vs. 20%; OR=1.57), as were HIV-positive men compared with HIV-negative and untested men (40% vs. 24%; OR=1.81).

The countries in which respondents most commonly had sex abroad were Spain (18%) and Germany (11%; Figure 7.17). Spain was visited more commonly by men from western countries and Germany by men from eastern countries. Other countries in Europe where men commonly had sex abroad were France (7%), the UK (6%), Italy (4%) and the Netherlands (3%). The countries outside Europe where men most commonly had sex abroad were the USA (7%), Thailand (3%) and Brazil (2%).

7.10.1 Places where men met sexual partners abroad

The most common way of meeting men for sex when abroad was by using the internet (32% of men met the last man they had sex with abroad this way). Potential sexual partners can be contacted this way before or during a trip abroad. In Europe, the internet was used particularly often for meeting sexual partners when visiting Moldova (77%), the former Yugoslav Republic of Macedonia (75%), Bosnia and Herzegovina (72%), Belarus (72%), Kosovo (67%), Serbia (59%), Russia (55%), and Romania (55%). Perhaps this

Figure 7.17: Countries in Europe where respondents had sex abroad most frequently

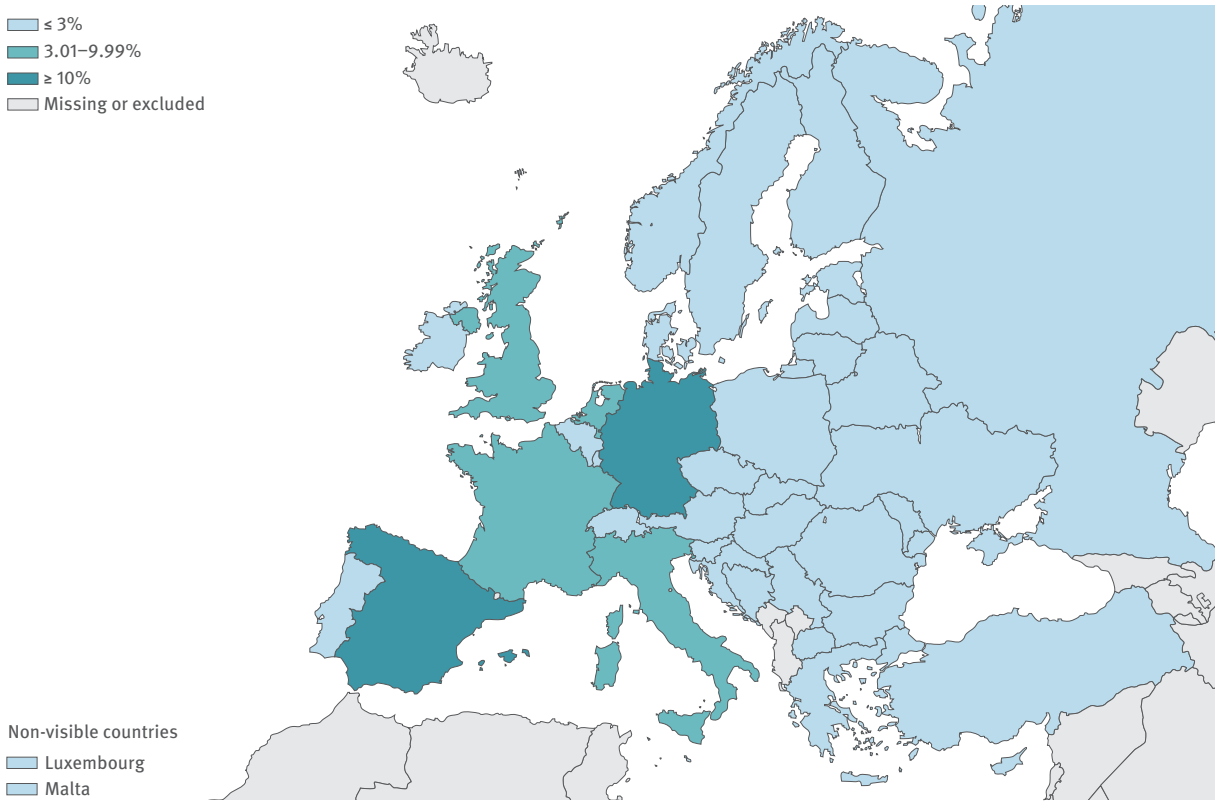


Figure 7.18: Place where last sexual partner abroad was met

Country	% gay centre, org. or social group	% gay café or gay bar	% Gay disco or nightclub	% backroom, sex club, public sex party	% gay sex party in a private home	% gay sauna	% porn cinema	% cruising location	% website for MSM	% else-where
Spain	0.3	10.3	20.5	15.4	0.3	11.7	0.6	15.3	15.0	10.6
Germany	0.8	7.2	11.5	18.9	1.1	15.4	1.7	3.9	30.4	9.1
France	1.0	5.7	8.4	13.1	0.8	19.1	0.7	9.0	30.1	12.2
USA	0.9	10.9	12.9	4.1	0.9	6.8	1.1	2.8	41.3	18.4
UK	1.2	8.3	15.9	5.2	0.4	19.3	0.2	3.4	34.0	12.3
Italy	0.7	5.3	8.3	6.7	0.3	14.9	0.7	11.5	36.1	15.3
Netherlands	1.0	8.1	10.6	16.6	2.5	19.4	4.0	3.5	27.2	7.2
Thailand	0.5	21.7	16.4	2.2	0.3	18.0	0.2	2.7	20.4	17.6
Brazil	0.6	4.5	16.9	2.6	1.4	21.4	1.4	6.5	25.3	19.4
Other	0.8	6.3	9.8	5.0	0.9	11.9	1.0	8.5	38.3	17.6
Total	**0.7**	**7.9**	**12.6**	**9.3**	**0.8**	**13.6**	**1.0**	**8.3**	**31.4**	**14.3**

may reflect the relative paucity of other ways in which foreigners could meet men in these countries.

The second most common meeting space abroad was gay saunas (14% met their last sexual partner abroad this way). Gay saunas were especially commonly used for meeting a sexual partner in Estonia (31%), Hungary (30%), Denmark (25%), Norway (23%), and the Czech Republic (21%). The third space where European MSM met sexual partners when abroad was a gay disco or nightclub (13%), and this was particularly common in Iceland (32%), Ireland (30%) Lithuania (24%) and Spain (21%). Figure 7.18 shows the meeting places most commonly used in the countries where respondents reported that their last sex abroad had happened.

7.10.2 Anal intercourse and condom use

EMIS explored the practice of anal intercourse on the last occasion that men had had sex abroad. Overall, 61% of men who reported having sex while abroad had had anal intercourse with the last sex partner they had met abroad (median proportion 62%). Outside Europe this practice was reported by 71% of men who had visited Latin America and the Caribbean.

Men who had anal intercourse with a partner they had met abroad were asked 'On that occasion did you and that partner have anal intercourse (fucking) without a condom?'. Twenty-six per cent of men who had had sex abroad in the last 12 months reported having had UAI the last time they had sex abroad (median 23.5% across the 38 countries). UAI was least common during sex abroad among men from Latvia (14%), the former Yugoslav Republic of Macedonia (16%), Portugal (16%), Bosnia and Herzegovina (17%), and Lithuania (17%). UAI was most common during sex abroad among men from Malta (38%), the Netherlands (35%), the UK (32%), Estonia (29%), and Sweden (29%). The sub-regions with the highest percentages of men who reported UAI when last having sex abroad were West (29%), North-West (27%), and Central-West (27%) (Figure 7.19).

Age was unrelated to UAI abroad, but men with a lower educational level reported UAI more than men with a higher educational level (30% vs. 23%; OR=1.38). The prevalence

Figure 7.19: Frequency (%) of anal intercourse among men who had sex abroad in the last 12 months and UAI during last sex abroad (UAI percentages are proportions of those men who had anal intercourse)

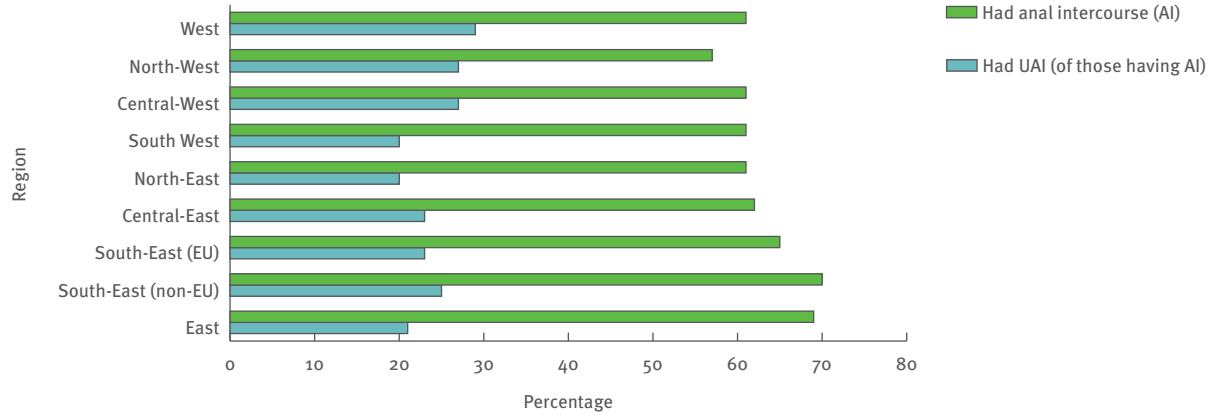


Figure 7.20: Countries where last sex abroad most commonly featured UAI (countries where sex abroad most commonly occurred)

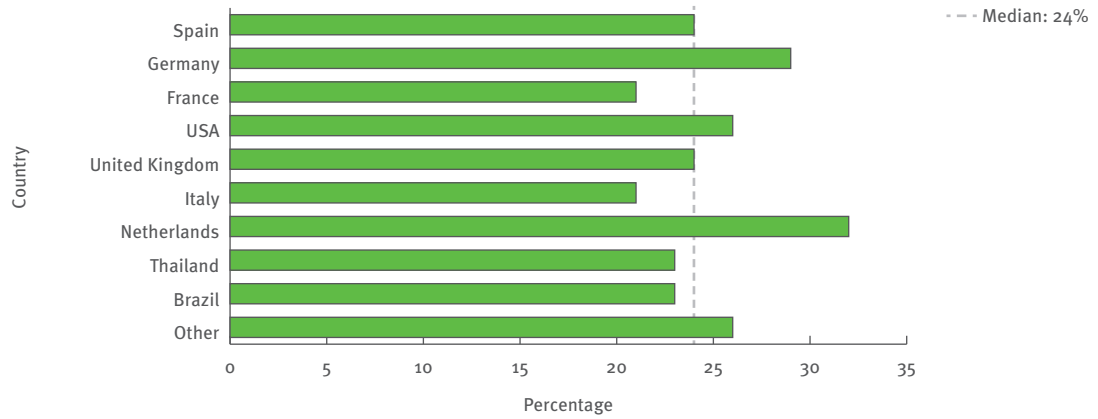


Figure 7.21: Place where men met a sexual partner and had UAI

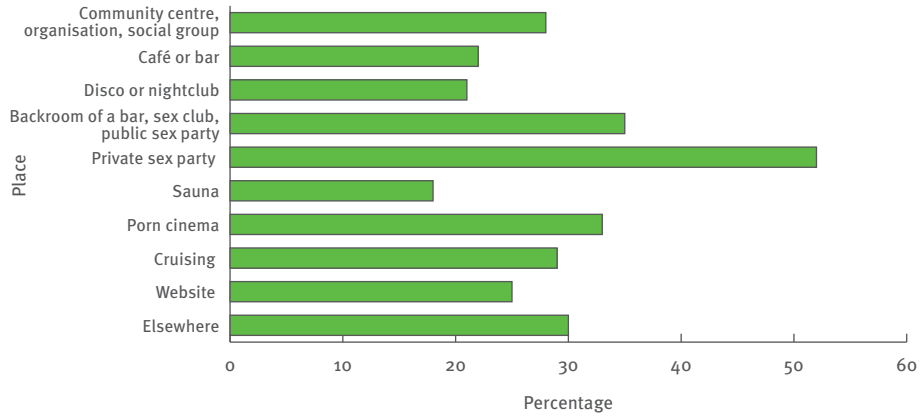


Figure 7.22: Percentage of men who bought sex in last 12 months

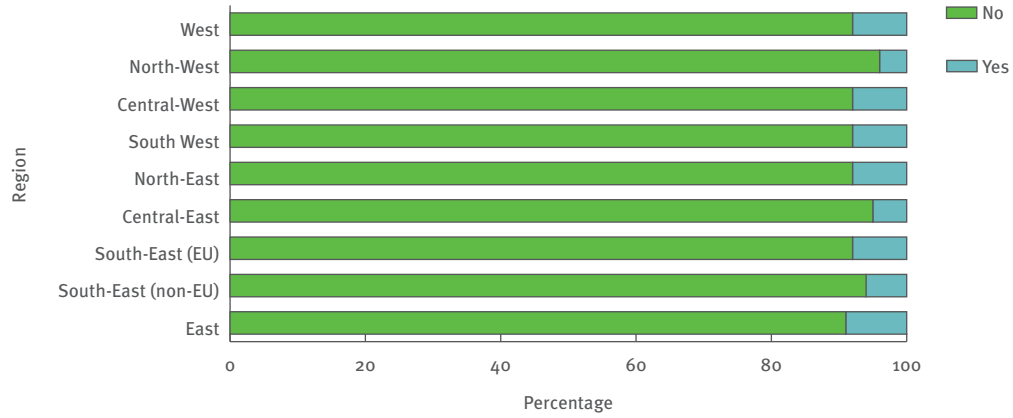
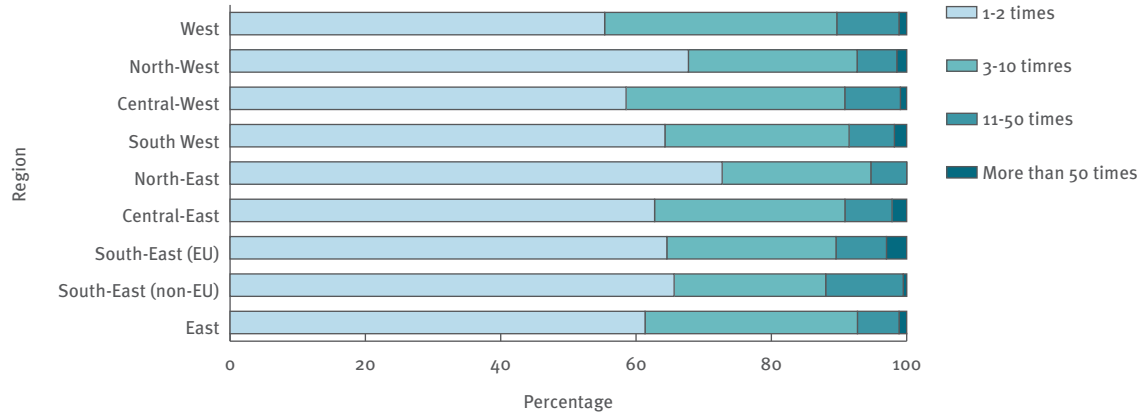


Figure 7.23: Number of times those buying sex had done so (last 12 months)



of UAI was higher among HIV positive men (49% vs. 21%). After controlling for country of residence, age, education level, and settlement size, HIV positive MSM were 3.75 times more likely (95% CI 3.47–4.04) to report UAI with a partner they had met abroad than HIV negative or untested MSM.

Engaging in UAI was consistent between the countries of residence and abroad. Thus, 89% of men who had had UAI with a partner they had met abroad had also had UAI with a non-steady male partner in the previous 12 months in their country of residence. Men who had had UAI with a non-steady male partner in the previous 12 months in their country of residence were 13.4 times more likely to report UAI with a partner they had met abroad (95%-CI: 12.27–14.71). The most common countries where men had UAI when travelling abroad were the Netherlands (32%), Germany (29%) and the USA (26%; figure 7.20).

Finally, EMIS looked at the association between how men met their last sex partner abroad and whether UAI occurred (among respondents who reported anal intercourse). The meeting venues with the highest levels of UAI were gay sex parties in private homes (52% of men who met their last sex partner abroad in this setting, and who had anal intercourse, did not use a condom) and in backrooms of a bar, gay sex club, or a public gay sex party (35%; Figure 7.21).

A higher proportion of HIV positive men than HIV negative and untested men met their last sexual partner abroad in the backroom of a bar, gay sex club, or in a gay sex party. Overall, however, the internet was the most common meeting place for the last sexual partner abroad for all three groups.

7.11 Buying and selling sex

Men who sell sex to other men are exposed to several health risks (Baral et al. 2010; Belza, 2005; Chemnasiri et al. 2010). The practice of selling sex itself may not represent an increased risk for HIV transmission but men who sell sex can, nonetheless, be at markedly increased risk in other aspects of their lives (Prestage et al. 2007; Smith & Seal, 2008). In general, men who sell sex are neither visible nor easy to access. In addition, very little is known in the scientific literature about men who pay for sex. Men who sell sex are an important population to characterise,

Figure 7.24: Percentage of men who sold sex in past 12 months

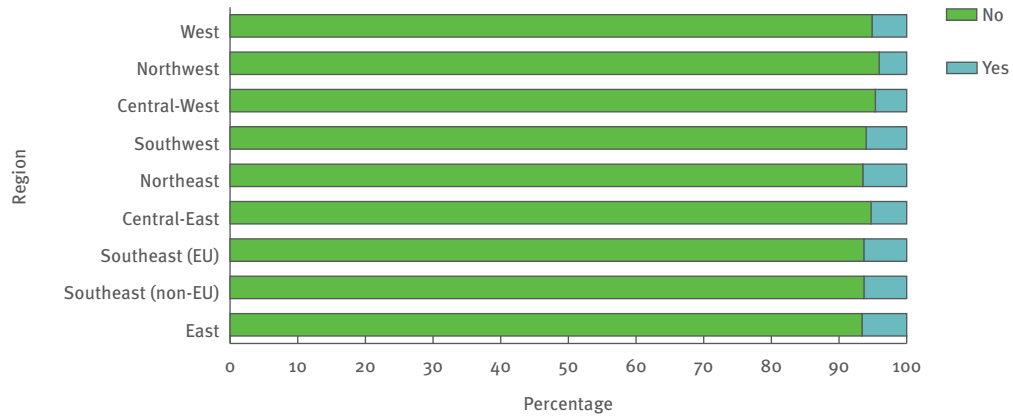
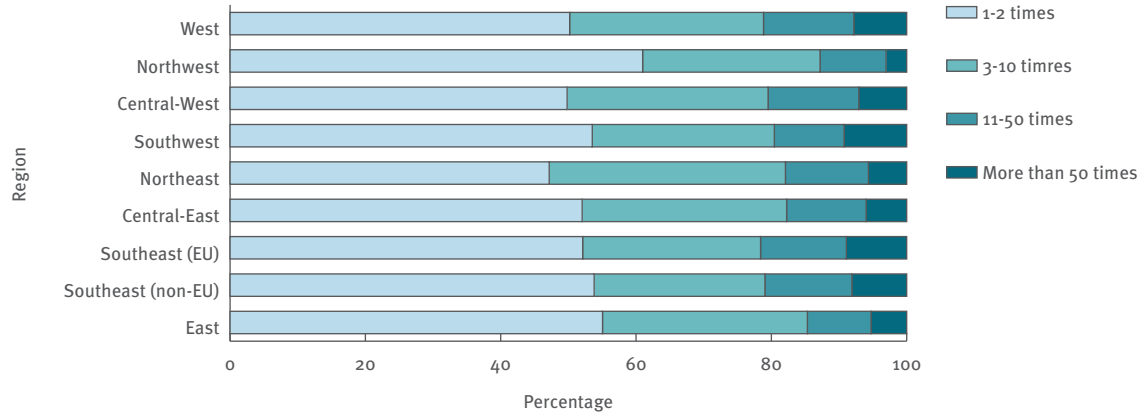


Figure 7.25: Number of times sex had been sold (past 12 months)



but they are a challenging group to identify and follow in the European context.

7.11.1 Buying and selling sex in country of residence

Respondents were asked 'In the last 12 months, how often have you paid a man to have sex with you in [respondent's country of residence]?' They were offered the following possible responses: not at all; 1-2 times; 3-10 times; 11-50 times; or more than 50 times. They were also asked 'In the last 12 months how often have you been paid by a man to have sex with him in [respondent's country of residence]?' with the same response set.

Figure 7.26: Sex for money in demographic sub-groups and other variables. Univariable analysis

	Paid for sex in the previous 12 months (%)	Sold sex in the previous 12 months (%)
Migration status		
Born in country of residence	7.6	5.0
Born abroad	7.4	5.6
Settlement size		
<500 000	6.8	4.8
Larger cities	8.5	5.7
Age (years)		
Younger than 25	1.5	10.0
25 to 39	6.4	4.8
40 or older	14.7	5.2
Education		
Low	7.2	9.0
Medium	6.8	6.2
High	8.4	3.8
Employment		
Employed	8.8	4.2
Unemployed	5.5	9.9
Other	4.4	7.2
Sexual identity		
Gay or homosexual	7.4	4.7
Bisexual	9.2	7.0
Other	7.4	6.6
Current relationship status		
Single	8.2	5.9
Male steady partner	6.3	4.3
Male and female steady partner	12.0	8.1
Female steady partner	11.7	5.0
Drug use		
Alcohol (preceding 24 hours)	8.2	5.1
Cannabis preceding 12 months)	6.8	8.4
Heroin or crack (preceding 12 months)	11.7	25.0
Drugs typically associated with sex and parties (preceding 12 months)	8.3	11.1
Poppers (preceding four weeks)	10.3	8.2
Viagra etc. (preceding four weeks)	16.0	8.4
Number of non-steady male partners in previous 12 months		
1	3.9	2.0
2-5	7.7	3.7
6-10	11.0	6.0
11-20	11.3	7.6
21-50	12.4	11.0
More than 50	13.9	20.3
HIV status		
Untested	6.4	5.1
HIV positive	11.1	7.9
HIV negative	7.7	4.9
UAI		
UAI with a steady partner of unknown/discordant HIV status	5.9	6.5
UAI with non-steady partners of unknown/discordant HIV status	11.0	10.0

Overall, 8% of men had bought sex in the last 12 months. Across the 38 countries the median proportion of men who had bought sex was 7.1%. The countries with the lowest percentages of men buying sex were Bosnia and Herzegovina (1%), Sweden (3%), Croatia (4%), Norway (4%), and Serbia (4%). The highest percentages of men buying sex were in Switzerland (13%), Cyprus (13%), Russia (11%), and Belgium (10%). The North-West and Central-East sub-regions had the lowest percentages of men buying sex (4% and 5%, respectively; Figure 7.22).

Among those who had bought sex, 60% had done so only once or twice in the last 12 months. Ten per cent of men who had bought sex had done so more than 10 times and this proportion was higher in Lithuania (40%), Finland (23%), and Poland (19%). The South-East (non-EU) (12%), West (10%), and South-East (EU) (10%) sub-regions were the regions with the highest percentages of men buying sex (Figure 7.23). In some countries (such as Lithuania) the highest percentages may be due to small numbers of participants.

Overall, 5% of men had sold sex in the last 12 months (median 5.1% for the 38 countries). The countries with the lowest percentages of men selling sex were Luxembourg (2%), Croatia (2%), and Norway (3%). Countries with the highest percentages of men selling sex were found in the former Yugoslav Republic of Macedonia (11%), Turkey (8%), Italy (8%), and Moldova (8%). The percentage of men selling sex varied little between sub-regions (highest percentage in East, 7%; lowest in North-West Europe, 4%; Figure 7.24).

Among those who had sold sex, more than half (52%) had done so only once or twice in the preceding 12 months. The highest percentages of men who had sold sex more than 10 times in the past 12 months were found in Luxembourg (50%), the Netherlands (33%), Romania (25%), Spain (25%) and Belgium (24%) and, sub-regionally, in the South-East (EU) (22%), South-East (non-EU) (21%) and West (21%) (Figure 7.25).

7.11.2 Characteristics of the men who paid for and sold sex

Figure 7.26 shows the proportion of respondents who bought or sold sex, stratified by socio-demographic characteristics and other variables.

In multivariable analysis adjusted by country of residence and source of recruitment, characteristics positively associated with having bought sex included: living in a city with over 500 000 inhabitants (AOR=1.27; 95%-CI: 1.21–1.33); being older than 25 years (25–39 years: AOR=3.78; 95%-CI: 3.42–4.18; 40 years and older: AOR=9.68; 95%-CI: 8.73–10.7); being employed (AOR=1.20; 95%-CI: 1.13-1.29); self-identifying as bisexual (AOR=1.10; 95%-CI: 1.03–1.17); being out to no-one or to only a few people (AOR=1.28; 95%-CI: 1.22–1.35); feeling lonely (AOR= 1.17; 95%-CI: 1.10–1.25) and the number of non-steady male partners in the past 12 months (>50 partners: AOR=4.50; 95%-CI: 4.00–5.06). Having used heroin or crack in the past 12

months (AOR=2.08; 95%-CI: 1.60–2.70) or drugs such as Viagra in the previous four weeks (AOR=1.56; 95%-CI: 1.46–1.66) were also independently associated with having bought sex.

Characteristics positively associated with having sold sex were: being younger than 40 years (25–39 years: AOR=3.00; 95%-CI: 2.73–3.29; ‹25 years: AOR=8.23; 95%-CI: 7.44–9.11); low or medium educational attainment (AOR=1.81; 95%-CI: 1.71–1.92); being unemployed (AOR=1.60; 95%-CI: 1.45–1.77); self-identifying as bisexual (AOR=1.99; 95%-CI: 1.86–2.14); feeling lonely (AOR=1.09; 95%-CI: 1.01–1.18); having used drugs associated with sex and parties (AOR=1.69; 95%-CI: 1.58–1.81) or heroin/crack (AOR=2.41; 95%-CI: 2.04–2.85) in the last 12 months. Further characteristics associated with having sold sex were having used poppers (AOR=1.34; 95%-CI: 1.25–1.43) or drugs such as Viagra in the preceding four weeks (AOR=1.51; 95%-CI: 1.38–1.66); the number of non-steady male partners in the past 12 months (2–5 partners: AOR=1.81; 95%-CI: 1.66–1.99; ›50 partners: AOR=13.83; 95%-CI: 12.24–15.62); having had ncUAI with a steady male partner (AOR=1.25; 95%-CI: 1.16-1.35); having had ncUAI with non-steady male partners (AOR=1.26; 95%-CI: 1.18-1.33); newly diagnosed STIs (AOR=1.32; 95%-CI: 1.28–1.45) and being diagnosed as HIV-positive (AOR=1.22; 95%-CI: 1.05–1.40).

7.11.3 Buying and selling sex abroad

Men who had had sex abroad in the past 12 months were asked 'On that occasion did you pay him?' and 'On that occasion did he pay you?' Overall, 5% had paid the last man with whom they had had sex abroad (median 4.3% for the 38 countries). Participants from Latvia (2%), Romania (2%), Bulgaria (2%), Poland (3%), Serbia (3%), Spain (3%) and Slovenia (3%) were least likely to have paid the last time they had sex abroad. Participants from Russia (10%), Finland (9%), Luxembourg (8%), Switzerland (8%), the Czech Republic (8%) and Malta (8%) were most likely to have paid the last man with whom they had had sex abroad. By sub-region the highest percentages of those who had paid were found in East (9%), North-East (6%) and Central-West (6%) (Figure 7.27).

Overall, 2% of men had been paid by the last man with whom they had had sex abroad (median 2.1% by country). Participants from Slovenia (0.4%), Norway (0.6%), the Czech Republic (0.7%), Finland (0.8%), Croatia (0.8%), Sweden (0.9%) and the UK (0.9%) had the lowest percentages paid for sex while travelling abroad. Respondents from Moldova (8%), Romania (7%), Latvia (6%), Estonia (6%) Lithuania (5%), Czech Republic (4%) and Belarus (4%) had the highest percentages paid for sex while travelling abroad. The sub-regions of North-East (6%) and South-East (EU) (5%) had the highest percentages of men who were paid for sex abroad (Figure 7.27).

Men whose last sex abroad was outside Europe were more likely to have paid their sexual partner than those having sex within Europe, and paying for sex was particularly common in Thailand (33%) and Brazil (14%). In Europe, the countries where most men paid for sex were the Czech Republic (15%), Romania (10%), Slovakia (9%) and Hungary (8%). The European countries where men were least likely to have paid the last time they had sex were Italy and Germany (2% each).

Having paid for sex and having been paid for sex were consistent in both the country of residence and abroad. Thus, 68% of men who had paid the last time they had had sex abroad had also paid for sex within their country of residence during the previous 12 months. Moreover, 80% of men who had been paid the last time they had sex abroad had also been paid for sex in their country of residence during the previous 12 months. Therefore, the socio-demographic characteristics and their sexual behaviour patterns are similar in these groups.

7.11.4 Conclusions regarding sex abroad and buying and selling sex

How men meet sexual partners abroad varies according to the country being visited. The internet was the primary means by which participants in this study met sexual partners when travelling. The internet permits the creation of social and sexual networks that facilitate contact and the security of having a sexual encounter. In some studies (Benotsch et al. 2011) men who used the internet to set up dates before travelling reported significantly more sexual partners and were significantly more likely to report having sex with a new partner. Interventions designed to reduce risk behaviour in this population are needed.

Sex abroad most commonly occurred in Spain and Germany, perhaps because these countries are often perceived to be open to people of diverse sexual identities and to offer a large number of venues for men who are looking for sex. Some studies have found that a common motivation for MSM to visit Spain is to have sex (Cliff & Forrest, 1999), which can contribute to the spread of HIV (Paraskevis et al. 2009).

Having been paid for sex does not necessarily indicate that a person is a sex worker. Many men who had sold sex in the last year had done so only once or twice, suggesting these are opportunistic exchanges. The number of times men received money for sex in the preceding 12 months

Figure 7.27: Percentage of men whose most recent sex abroad involved payment (among men who had sex abroad in the past 12 months)

Country	West	North-West	Central-West	South-West	North-East	Central-East	South-East (EU)	South-East (non-EU)	East	Total
Paid for sex on that occasion	4.2	6.0	5.6	4.1	3.2	3.0	3.4	3.2	9.2	**4.8**
Sold sex on that occasion	1.1	0.8	1.3	1.8	5.9	2.6	5.2	2.3	1.7	**1.5**

can be a good indicator, crossed with occupation status, for deducing whether they are sex workers.

Conceptualisation of sexual behaviour for men who sell sex may be required where HIV risk cannot be attributed to sex work per se, but to other influences such as economic and relational factors.

Interpretation of the data on sex for money must take into account that the proportion of men who exchange money for sex depends on legislation in each country. Such transactions are illegal in some countries but legal in others.

Men who have been paid for sex are an important at-risk population because they are more likely to engage in certain risk behaviour (drug use, large numbers of non-steady partners and UAI with both steady and non-steady partners).

The profile of men who had paid for sex suggests that many are older and have a hidden or clandestine sexuality (many had a female partner).

Respondents diagnosed with HIV were more likely to have UAI while travelling abroad, particularly by meeting partners at sex venues, perhaps because these are places where verbal communication between sexual partners rarely occurs. These venues may have felt like safe spaces that did not require disclosure of HIV status. HIV-positive men who have sex when travelling should be a target population for prevention at sex venues.

We suggest designing innovative prevention strategies in order to reach particular target populations, such as those who travel abroad. The internet has evolved as an important means of connecting with sexual partners when travelling; it could also be used to spread HIV prevention messages.

As men who buy sex are an important at-risk population, further analyses are needed to address their needs and explore prevention strategies. Specific prevention strategies should be designed to reach older men and those whose sexuality is hidden.

7.12 Summary

Half of the respondents had their first same-sex experience before the age of 18 (median) and their first experience of anal intercourse before they were 20 years old (with some variation between sub-regions). This indicates that education about sexual diversity and sexual health issues are appropriate themes for discussion in schools.

The major focus of the analyses presented in this report was to gain insight into levels of UAI. Overall, 58% of respondents had had a steady partner in the past 12 months, of which 67% had had UAI with a steady partner (i.e. 39% of all respondents reported UAI with a steady partner). Only twenty-two per cent of men with a steady partner had had ncUAI (i.e. UAI with a partner of unknown or discordant HIV status) with that partner (i.e. 13% of all respondents). Thus many men take their HIV status and that of their partner into account when deciding whether or not to use condoms for anal intercourse. Nevertheless, prevention efforts to promote mutual HIV testing and disclosure of HIV status in steady relationships should be continued as over a fifth of respondents with a steady partner engaged in ncUAI with their steady partner, and knowledge about their own HIV status is not always up-to-date. Special attention should be given here to younger MSM (‹25 years) and MSM with lower levels of education, as they reported significantly higher levels of ncUAI with steady partners.

Overall, 67% had had one or more non-steady partners in the past 12 months, of which 39% reported UAI with at least one non-steady partner (i.e. 26% of all respondents reported UAI with a non-steady partner in the past 12 months). However, only 25% of those with non-steady partners reported UAI with a non-steady partner whose HIV status was reported as unknown or discordant (17% of all respondents).

After adjusting for seroconcordance, age and settlement size were unrelated to ncUAI with non-steady partners; educational level was related only when looking at unadjusted UAI. HIV status, on the other hand, was strongly related to ncUAI. Both the unadjusted and adjusted UAI figures showed that among HIV-positive respondents almost twice as many reported UAI with non-steady sex partners as was reported by HIV-negative and untested men. These figures were corroborated with the results from the most recent non-steady partner where essentially the same pattern was seen. In addition, more than half of the respondents who had had UAI with their last non-steady partner did not disclose their HIV status – HIV-positive men were a little more likely to disclose than HIV-negative and untested respondents (47% vs. 42%). However, it would be misleading to interpret these figures as indicative of high HIV transmission risks, since most HIV-positive respondents were receiving antiretroviral treatment, had an undetectable viral load and thus posed little risk of HIV transmission to their partners. Nevertheless, these results warrant continuous investments in terms of prevention activities, either through the promotion of fewer new sexual partners, non-penetrative sexual practices, condoms for anal intercourse or through HIV testing and status disclosure.

A number of findings stand out from the results at sub-regional and country level. When looking at the seroconcordance-adjusted UAI variable combined for steady and non-steady partners (i.e. ncUAI with any male partner), respondents from Central-West Europe, France and Belgium reported the lowest rates and respondents from North-East and South-East Europe the highest rates.

The results at country level were slightly different. Countries with a score below the 25th percentile were Austria, Belgium, Germany, Finland, France, Greece, Luxembourg, Slovenia and Switzerland (i.e. countries in West, North-West, Central-West, and South-West Europe). Countries with a score above the 75th percentile were Belarus, Bulgaria, Croatia, Lithuania, Latvia, Moldova, Romania, Slovakia and Turkey. (It should be noted that some of the countries in the latter group had relatively small numbers of respondents.)

In sum, there appears to be a West-East divide in UAI rates. The proportion of MSM whose most recent anal

intercourse was unprotected, had had any UAI over the past year, or ncUAI with non-steady partners increased when moving from the older EU/EFTA countries towards the newer EU Member States and further to non-EU countries. Additional analyses should investigate the relationships between UAI figures at regional or country level on the one hand and other EMIS data on the other, including (but not limited to) access to HIV-testing and healthcare, exposure to prevention activities, discrimination and social and gay community support. Insights into potential mechanisms underlying the differences at country or sub-regional level may help to guide future investments in HIV prevention programmes.

7.13 Country table

Country		Region		Sexual behaviour								
Code	Name	EU region	EMIS region	Sex with a man before the age of 18 (%)	Ever had anal intercourse with a man (%)	First male anal intercourse before age 20 (%)	Female partners in previous 12 months (%)	Any UAI with a man in previous 12 months (%)	UAI in last 12 months solely because there were no condoms available (%)	Sex with a steady partner in previous 12 months (%)	UAI with a steady partner previous 12 months (only men with steady partner) (%)	ncUAI with steady partner previous 12 months (only men with steady partner) (%)
at	Austria	EU	Central-West	52.7	95.2	52.8	14.2	54.7	10.2	57.2	66.5	19.0
be	Belgium	EU	West	48.6	95.2	46.4	8.0	57.6	12.4	64.4	63.9	15.4
bg	Bulgaria	EU	South-East (EU)	52.4	95.5	57.2	24.6	62.5	17.9	64.3	71.9	26.3
cy	Cyprus	EU	South-East (EU)	55.1	93.8	54.3	17.4	63.4	22.6	56.0	74.8	31.9
cz	Czech Republic	EU	Central-East	52.2	92.9	51.9	10.2	63.9	10.7	69.3	71.3	30.4
de	Germany	EU	Central-West	50.7	94.1	49.6	13.5	54.1	10.1	56.2	64.1	21.4
dk	Denmark	EU	North-West	57.2	96.6	55.2	13.4	58.1	9.9	56.1	67.0	18.6
ee	Estonia	EU	North-East	46.9	90.6	48.7	19.1	59.1	12.5	64.4	70.5	27.6
es	Spain	EU	South-West	46.9	96.6	51.8	10.2	59.6	20.1	52.0	69.0	23.8
fi	Finland	EU	North-West	48.5	93.0	48.7	15.3	54.2	10.8	61.4	66.4	21.5
fr	France	EU	West	47.7	96.4	50.4	8.5	59.2	11.2	68.8	65.3	14.0
gr	Greece	EU	South-West	46.3	95.3	51.3	17.3	53.1	12.9	55.7	70.1	24.6
hu	Hungary	EU	Central-East	41.9	92.8	45.6	15.5	59.9	11.0	65.1	72.4	27.3
ie	Republic of Ireland	EU	West	49.6	93.8	47.2	13.9	56.9	15.8	53.3	66.3	24.5
it	Italy	EU	South-West	44.9	95.2	45.0	12.7	59.3	16.0	53.1	69.1	25.1
lt	Lithuania	EU	North-East	43.0	88.7	49.6	16.4	60.6	14.4	71.7	70.3	38.0
lu	Luxembourg	EU	Central-West	44.8	94.8	42.7	15.2	49.8	7.6	57.0	60.1	14.7
lv	Latvia	EU	North-East	41.8	93.0	44.3	19.5	65.1	12.7	62.6	74.1	35.5
mt	Malta	EU	South-East (EU)	51.3	91.5	40.4	12.1	65.8	18.8	60.0	70.6	22.1
nl	Netherlands	EU	West	49.4	96.5	44.9	8.2	58.7	11.4	56.3	67.2	18.6
pl	Poland	EU	Central-East	44.1	95.2	47.0	8.3	61.4	14.2	66.4	66.5	28.8
pt	Portugal	EU	South-West	55.6	97.1	60.9	15.4	61.9	16.1	64.4	69.0	24.8
ro	Romania	EU	South-East (EU)	45.3	94.0	52.2	25.9	66.5	19.6	66.3	73.0	37.8
se	Sweden	EU	North-West	51.4	93.1	50.6	13.4	58.2	11.0	56.9	70.8	18.9
si	Slovenia	EU	Central-East	44.0	91.6	48.5	24.3	48.5	10.5	60.9	60.7	24.5
sk	Slovakia	EU	Central-East	49.5	91.8	53.3	10.1	63.2	13.8	66.1	69.8	37.2
uk	United Kingdom	EU	West	55.7	95.3	52.3	10.1	56.6	11.0	54.8	64.1	20.6
ch	Switzerland	EEA/EFTA/acceding	Central-West	47.1	95.3	43.1	15.0	51.7	8.6	55.9	59.7	14.8
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	43.6	95.8	46.8	14.6	62.1	17.4	65.5	71	35.2
no	Norway	EEA/EFTA/acceding	North-West	54.6	94.6	55.8	10.5	57.7	14.8	49.1	70.5	22.9
ba	Bosnia & Herzegovina	other	South-East (non-EU)	52.6	92.1	47.7	27.7	57.7	29.7	65.1	66.3	39.3
by	Belarus	other	East	43.8	96.0	55.6	17.4	75.1	19.5	73.0	81.6	28.2
md	Moldova	other	East	50.5	95.4	59.8	20.7	67.6	24.8	65.4	71.2	34.8
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	45.8	94.5	55	24.3	57.3	28.4	63.7	63.1	29.2
rs	Serbia	other	South-East (non-EU)	41.8	93.9	48.0	20.5	57.4	22.8	68.0	62.4	30.1
ru	Russia	other	East	48.8	96.7	52.4	15.1	68.5	17	71.3	74.5	24.3
tr	Turkey	other	South-East (non-EU)	55.1	94.3	58.4	20.4	70.8	31.8	60.1	78.3	44.3
ua	Ukraine	other	East	49.2	95.6	51.2	19.9	62.5	16.4	68.3	68.7	32.4
	Low			41.8	88.7	40.4	8.0	48.5	7.6	49.1	59.7	14.0
	Median			**48.7**	**94.7**	**50.5**	**15.2**	**59.3**	**14.3**	**63.2**	**69.1**	**25.0**
	High			57.2	97.1	60.9	27.7	75.1	31.8	73.0	81.6	44.3
	EU27 median			**48.6**	**94.1**	**49.6**	**13.9**	**59.2**	**12.5**	**60.9**	**69.0**	**24.5**

Sexual behaviour							Sex abroad/paid sex								
Any sex with a non-steady partners in last year (%)	>10 non-steady partners in last year (%)	Any UAI with a non-steady partner in last year (men with a non-steady partner) (%)	ncUAI with a non-steady partner in last year (men with a non-steady partner) (%)	Meeting their last non-steady sex partner online (%)	UAI with last non-steady sex partner (men who had non-steady partners in previous 12 months) (%)	ncUAI with any male partner in the previous 12 months (%)	Men reporting sex abroad in previous 12 months (%)	Anal intercourse during the last episode of sex abroad (%)	UAI during the last episode of sex abroad1 (%)	Paying for sex in previous 12 months (%)	Paying a man for sex more than 10 times2 in previous 12 months (%)	Having been paid for sex in previous 12 months (%)	Having been paid for sex more than 10 times3 (%)	Paying for sex while travelling abroad in previous 12 months (%)	Having been paid for sex while travelling abroad in previous 12 months (%)
75.4	27.9	34.8	19.6	58.2	16.6	23.3	30.0	61.3	25.9	8.6	14.3	4.4	18.1	4.5	1.1
79.6	36.8	34.2	23.1	52.6	15.8	25.3	39.1	57.7	25.8	10.2	10.7	4.3	24.1	4.2	1.1
71.7	23.3	45.1	32.0	65.9	21.3	36.0	21.7	62.8	21.7	6.6	14.3	6.0	14.8	2.4	3.4
78.5	23.4	46.6	26.9	61.1	25.9	34.4	48.0	61.0	23.6	12.9		5.6	14.3	8.3	2.5
63.2	18.3	35.8	22.0	55.4	19.4	32.9	17.7	61.9	27.6	4.9		4.3	19.1	4.0	3.7
74.4	27.8	37.6	21.0	59.7	19.8	25.4	17.3	61.1	27.8	7.4	11.2	4.7	21.0	5.2	1.5
80.7	30.2	39.8	28.1	55.0	18.7	29.8	35.2	60.8	28.7	6.3		5.1	14.8	6.1	1.0
70.5	14.1	41.1	26.8	45.9	22.1	34.5	25.0	61.2	29.3	6.3		6.9	8.6	4.4	5.8
76.5	37.1	40.9	27.5	57.6	15.2	30.4	26.2	64.7	19.3	7.8	9.8	5.1	24.6	2.7	2.1
72.1	20.3	36.2	23.0	47.2	15.6	27.5	26.4	56.2	23.3	5.1	22.2	4.4	14.1	8.6	0.8
78.4	42.5	32.8	22.7	57.6	14.0	24.5	30.6	66.5	25.5	8.9	2.3	6.7	21.0	5.6	1.4
77.9	29.4	36.0	19.1	63.7	13.4	25.6	23.9	62.4	20.4	9.8	3.8	4.6	21.3	5.0	2.1
72.1	22.4	39.3	24.5	49.5	18.6	32.2	20.5	59.2	20.8	7.2	8.3	4.8	17.0	3.8	2.8
80.0	25.8	40.3	29.7	57.0	17.6	33.1	38.3	60.8	28.1	5.0		4.1	14.5	4.0	1.0
75.1	34.3	40.4	25.5	59.1	15.9	29.7	26.6	57.2	20.8	9.3	10.9	7.6	16.3	4.8	1.2
64.7	11.0	42.4	27.1	47.9	22.8	39.8	18.1	54.2	17.3	7.3	40.0	5.3	19.2	3.2	5.3
77.3	31.9	28.8	18.1	62.3	9.9	21.2	57.0	59.1	22.0	9.8		1.5	50.0	8.4	
72.6	15.9	46.7	28.5	54.1	27.2	38.2	21.3	64.7	13.6	10.1		7.1	24.4	2.1	6.4
78.3	33.3	46.1	27.8	55.1	16.9	31.6	45.3	54.7	37.9	7.8		5.2	16.7	7.5	1.9
83.3	40.2	41.1	26.6	50.6	21.7	29.9	44.3	57.6	35.2	7.8		3.8	33.3	4.1	1.2
73.7	23.6	37.0	23.0	60.3	17.7	32.1	21.9	64.7	21.2	4.8	18.8	6.4	17.4	2.6	2.5
73.7	23.5	37.1	24.2	56.3	15.4	30.1	21.9	66.4	16.3	6.8	10.3	4.0	21.4	4.8	2.6
70.3	18.5	47.0	33.7	62.8	23.4	41.6	21.3	67.9	22.1	8.0	16.7	6.6	25.2	2.2	7.2
76.8	23.4	42.6	28.3	56.7	20.7	30.0	30.4	57.3	29.0	2.9	11.1	3.8	15.2	3.4	0.9
66.6	14.5	29.5	16.4	64.5	14.8	23.7	26.9	63.0	19.3	4.4		4.7	15.0	2.9	0.4
63.3	14.6	36.8	23.3	63.6	20.6	37.2	26.7	58.2	28.2	3.4		6.5	20.6		2.8
81.1	34.9	41.8	28.9	57.1	21.4	31.6	30.1	58.6	31.5	6.3	15.3	4.7	19.3	3.5	0.9
80.5	34.3	33.0	19.5	57.5	15.0	22.2	41.0	60.8	24.7	13.3	3.4	4.4	16.5	7.8	0.7
71.4	13.9	37.5	24.1	70.4	14.8	35.8	26.0	63.0	22.5	3.6		2.3	9.1	4.8	0.8
75.8	19.5	43.8	30.4	56.6	20.4	32.0	33.4	54.4	26.6	3.6		3.3	4.7	7.6	0.6
70.8	6.5	48.9	23.0	77.2	31.1	33.6	23.6	69.7	13.0	0.8		6.2			3.0
69.6	15.2	49.6	33.0	67.7	27.1	40.1	23.4	67.9	18.9	5.7		6.3	4.8	3.7	3.7
62.5	16.9	50.8	30.8	64.6	14.1	37.3	23.1	72.0	27.8	8.7		7.8	12.5	4.2	8.0
82.2	13.3	43.2	23.2	62.7	19.5	31.0	30.0	78.1	16.0	5.0		10.9	18.2		3.0
71.5	11.1	35.1	23.1	67.3	18.1	33.2	21.8	71.3	27.2	3.8		4.8	25.0	2.7	1.3
72.2	22.5	44.7	31.2	61.4	22.2	35.4	19.1	70.0	20.3	10.5	8.5	6.6	16.5	10.2	1.1
73.7	29.5	62.4	46.7	70.7	36.1	48.9	33.7	70.0	25.6	8.1	5.6	8.1	22.0	3.3	3.0
72.3	12.8	39.9	24.8	64.1	18.0	35.5	14.7	66.5	22.6	7.0	6.7	6.6	11.5	7.2	3.3
62.5	6.5	28.8	16.4	45.9	9.9	21.2	14.7	54.2	13.0	0.8	2.3	1.5	4.7	2.1	0.4
73.7	**23.4**	**40.4**	**25.2**	**58.7**	**18.7**	**32.0**	**26.3**	**61.6**	**23.5**	**7.1**	**10.8**	**5.1**	**17.4**	**4.2**	**2.1**
83.3	42.5	62.4	46.7	77.2	36.1	48.9	57.0	78.1	37.9	13.3	40.0	10.9	50.0	10.2	8.0
75.1	**23.6**	**39.8**	**25.5**	**57.1**	**18.6**	**30.4**	**26.6**	**61.0**	**23.6**	**7.3**	**11.2**	**4.8**	**19.1**	**4.2**	**2.0**

8. Migration

8. Migration

8.1 Introduction

The term 'migrant' is used here to refer to men who were born in a country other than their current country of residence. Relatively little is known about the sexual health needs of migrant MSM in Europe. Migrants leave their home countries and move to others for many different reasons – in search of freedom, love or a sense of belonging (Keogh et al. 2004); in search of work or economic opportunities, or to experience other cultures. Migrants in general, and sub-populations of migrants in particular, may have specific HIV-related needs and these needs may be compounded by structural barriers to HIV prevention, care, and support within their current country of residence. The migration experience often involves a complex interplay of factors which influence an individual's decision to engage in various behaviour and activities that may place them at increased risk of HIV infection (Magis-Rodriguez et al. 2009).

This chapter considers the languages used to complete the EMIS survey in the different countries, the extent of migration from and to the 38 EMIS countries and the associations between migration status and several variables related to HIV transmission.

8.2 Languages used for survey completion

The EMIS questionnaire was available for completion in 25 different languages. A proxy for migration can be constructed by defining migrant status as having used a language for survey completion that is not an official language of the current country of residence.

Most respondents (94%) answered the survey in the official language(s) of their country of residence and only 6% did so in a different language (Figure 8.1). The countries with the largest proportions of respondents who used a language other than the primary language(s) spoken in their country of residence were Cyprus (31%), Latvia (29%), Luxembourg (23%), and the Netherlands (19%). Among men who were born abroad and completed the survey in a language other than that of their country of residence, the commonest language used was English (31%).

8.3 Country of birth and region of origin

Respondents were asked whether they were born in their current country of residence and if not, to indicate their country of birth. Country of birth was classified according to regions defined by EMIS and the World Health Organization (WHO). Men who were not born in their country of residence were defined as 'migrants'. Across Europe, 11.9 % (median) were migrants. The European countries with the highest percentage of migrants were Luxembourg (50%), Cyprus (34%), the UK (28%), Switzerland (27%), the Netherlands (23%), Belgium (23%), Spain (22%), Sweden (18%), Portugal (18%), and Malta (17%). Countries with the lowest percentages of migrants were Romania and Lithuania (3% each) (see country tables). The sub-region with the highest proportion of migrants was West Europe (22%) and the lowest was North-East Europe (5%) (Figure 8.2).

Most migrants were born in neighbouring countries. In most sub-regions the largest proportion of migrants originated in the same sub-region (Figure 8.3). Exceptions were South-West Europe (particularly Portugal and Spain), where the largest proportion of migrants (44%) was from the WHO Region of the Americas: Latin America & Caribbean and the North-East (the Baltic countries), where 48% of migrants were from East Europe (that is, other former Soviet countries). It was significant that in the EU countries of South-East Europe (Bulgaria and Romania), most migrants were from countries in West and South-West Europe. In total, the highest percentages of migrants were born in Germany (9%), Brazil (5%), the USA (5%), France (5%), Italy (5%), the UK (5%) and Poland (4%).

Respondents who had been born abroad were asked how long they had been living in their current country of residence. Overall, 8% of migrants had been living in their current country of residence for less than a year but most (63%) had been in their current country of residence for over five years. The South-East (non-EU), North-East, and East sub-regions had the highest percentages of migrants who had lived for more than 10 years in their current country of residence (63%, 69% and 70%, respectively). This most likely reflects the dissolution of the Soviet Union and Yugoslavia (Figure 8.4). West and South-East (EU) were the sub-regions with the highest percentages of recent migrants (9% each).

8.4 Expatriates

An alternative way of looking at migration is to consider the country of birth, rather than taking the perspective of the current country of residence, and looking at the proportion of people born abroad. We defined 'expatriates' as men born in one of the 38 EMIS countries but currently living in one of the other 37 EMIS countries. The proportion of expatriates for a country is the number of men born there but not living there, compared to the total number of men born in the country. These figures should be treated with caution, as they exclude men born in EMIS countries but now living outside those countries.

Germany had the lowest proportion of expatriates: only 4% of all EMIS respondents born in Germany were living in one of the other 37 EMIS countries. Bosnia and Herzegovina (56%) and Cyprus (34%). had spawned the highest proportions of expatriates (Figure 8.5) and high proportions were also identified for Moldova (33%), Luxembourg

Figure 8.1: Migration background/national minority based on survey language used

Country of residence	Among all respondents (N=174 209)		Among respondents born abroad (N=23 293)		
	% Language corresponds with country of residence	% Language different to country of residence	% Language corresponds with country of residence	% Language different to country of residence	Most common different languages used by men born abroad (%)
West					
Belgium (N=3982)	87.7	12.3	52.0	48.0	English (48), Spanish (14)
France (N=11 164)	92.9	7.1	50.9	49.1	English (38), Spanish (17)
Ireland (N=2194)	91.4	8.6	62.4	37.6	Polish (22), Portuguese (17)
Netherlands (N=3787)	81.0	19.0	25.6	74.4	English (45), German (15)
United Kingdom (N=17,718)	93.1	6.9	76.2	23.8	Spanish (16), Polish (13), Italian (13)
North-West					
Denmark (N=1742)	91.1	8.9	49.1	50.9	English (35), German (15)
Finland (N=2026)	94.6	5.4	37.9	62.1	English (27), Russian (22)
Norway (N=2096)	92.2	7.8	47.5	52.5	English (26), Swedish (17)
Sweden (N=3132)	91.5	8.5	55.7	44.3	English (33), Spanish (13)
Central-West					
Austria (N=4085)	94.1	5.9	69.6	30.4	English (25), Spanish (10)
Switzerland (N=5028)	91.5	8.5	72.2	27.8	English (48), Portuguese (17), Spanish(17)
Germany (N=54 387)	96.0	4.0	56.6	43.4	English (36), Spanish (13)
Luxembourg (N=280)	76.8	23.2	65.2	34.8	English (36), Spanish (14)
South-West					
Spain (N=13 111)	90.9	9.1	62.8	37.2	English (29), German (21)
Greece (N=2944)	93.5	6.5	66.3	33.7	English (41), German (10)
Italy (N=15 984)	95.6	4.4	54.7	45.3	English (31), Spanish (18)
Portugal (N=5187)	96.0	4.0	84.7	15.3	English (36), Spanish (17)
North-East					
Estonia (N=594)	84.7	15.3	22.2	77.8	Russian (33), Finnish (19)
Lithuania (N=595)	91.8	8.2	47.1	52.9	Russian (44), Latvian (22)
Latvia (N=708)	71.2	28.8	17.1	82.9	Russian (59), English (12)
Central-East					
Czech Rep. (N=2400)	94.6	5.4	56.1	43.9	English (37), German (18)
Hungary (N=2067)	93.6	6.4	54.4	45.6	English (43), German (20)
Poland (N=2746)	96.4	3.6	38.5	61.5	English (27), German (15)
Slovenia (N=990)	94.8	5.2	71.7	28.3	English (41), Serbian (29)
Slovakia	87.4	12.6	50.0	50.0	English (53), German (20)
South-East (EU)					
Bulgaria (N=1036)	94.9	5.1	34.1	65.9	English (35), Greek (14), Turkish (14)
Cyprus (N=267)	68.9	31.1	33.0	67.0	English (53), Romanian (24)
Malta (N=119)	89.1	10.9	35.0	65.0	German (23), Italian (23)
Romania (N=2327)	91.7	8.3	40.3	59.7	English (46), French (19)
South-East (non-EU)					
Serbia (N=1106)	93.4	6.6	86.0	14.0	English (44), Greek (22)
Turkey (N=1807)	92.8	7.2	41.9	58.1	English (47), German (17)
East					
Belarus (N=367)	98.6	1.4	97.7	2.3	German (100)
Moldova (N=117)	98.3	1.7	100.0		
Russia (N=5035)	98.1	1.9	89.1	10.9	English (43), Spanish (17)
Ukraine (N=1711)	98.1	1.9	90.6	9.4	English (58), Portuguese (11)
All countries	**93.8**	**6.2**	**62.8**	**37.2**	**English (31), Spanish (11)**

Figure 8.2: Migration status by European sub-region

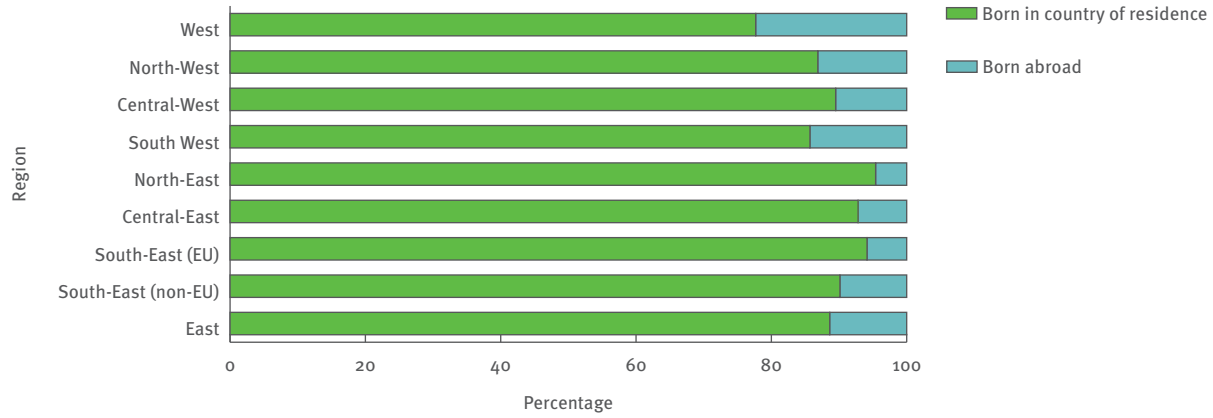


Figure 8.3: Region of origin (%), by European sub-region

European sub-region or WHO region of origin	West (N=8436)	North-West (N=1150)	Central-West (N=6503)	South-West (N=5200)	North-East (N=85)	Central-East (N=621)	South-East (EU) (N=214)	South-East (non-EU) (N=355)	East (N=807)
West	26.7	8.4	14.0	14.3	8.2	8.2	17.3	11.0	2.2
North-West	1.6	21.7	1.8	1.0	14.1	0.8	0.9	0.8	0.4
Central-West	9.2	12.3	18.0	12.1	7.1	12.4	9.8	18.9	4.2
South-West	12.6	6.1	11.7	7.3	1.2	5.0	17.3	5.9	1.0
North-East	1.5	3.9	0.5	0.3	11.8	1.0	0.5	0.6	4.6
Central-East	6.6	6.2	10.8	1.5	7.1	26.9	5.6	2.0	2.4
South-East (EU)	2.5	3.2	4.2	4.6	--	8.9	11.2	3.9	0.5
South-East (non-EU)	1.5	3.8	6.2	1.8	--	11.6	8.9	42.3	0.6
East	1.3	3.8	6.6	1.6	48.2	10.8	9.8	2.8	77.7
WHO Region of the Americas: Canada. USA	6.8	5.1	7.8	3.5	1.2	6.4	6.1	5.9	1.1
WHO Region of the Americas: Latin America & Caribbean	9.3	10.4	9.1	43.5	--	4.3	0.9	2.0	1.6
WHO Eastern Mediterranean Region (incl. Algeria)	3.8	3.5	2.0	1.7	--	1.0	1.4	2.3	0.4
WHO African Region (excl. Algeria)	6.6	1.1	1.9	5.0	--	0.8	5.1	0.3	0.9
WHO South-East Asia Region	2.5	3.8	2.0	0.3	--	0.3	1.4	--	0.5
WHO Western Pacific Region: Australia & New Zealand	3.9	1.2	0.7	0.5	1.2	0.2	1.4	0.8	0.1
WHO Western Pacific Region (excl. Australia & New Zealand	3.6	5.3	2.6	1.0	--	1.4	2.3	0.6	1.9

Figure 8.4: Length of time (year bands) living in country of residence by European sub-region among migrants, percentages for each band

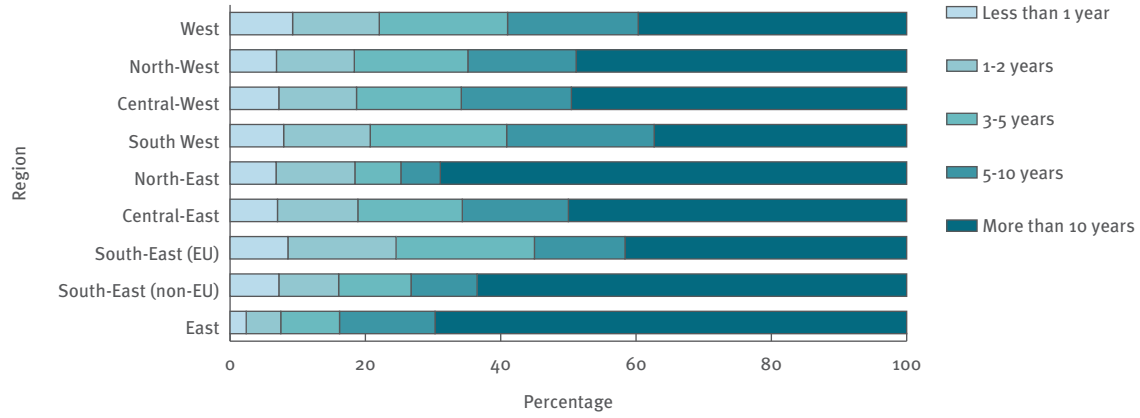


Figure 8.5: Proportion of men born in one country but now living in one of the other 37 EMIS countries

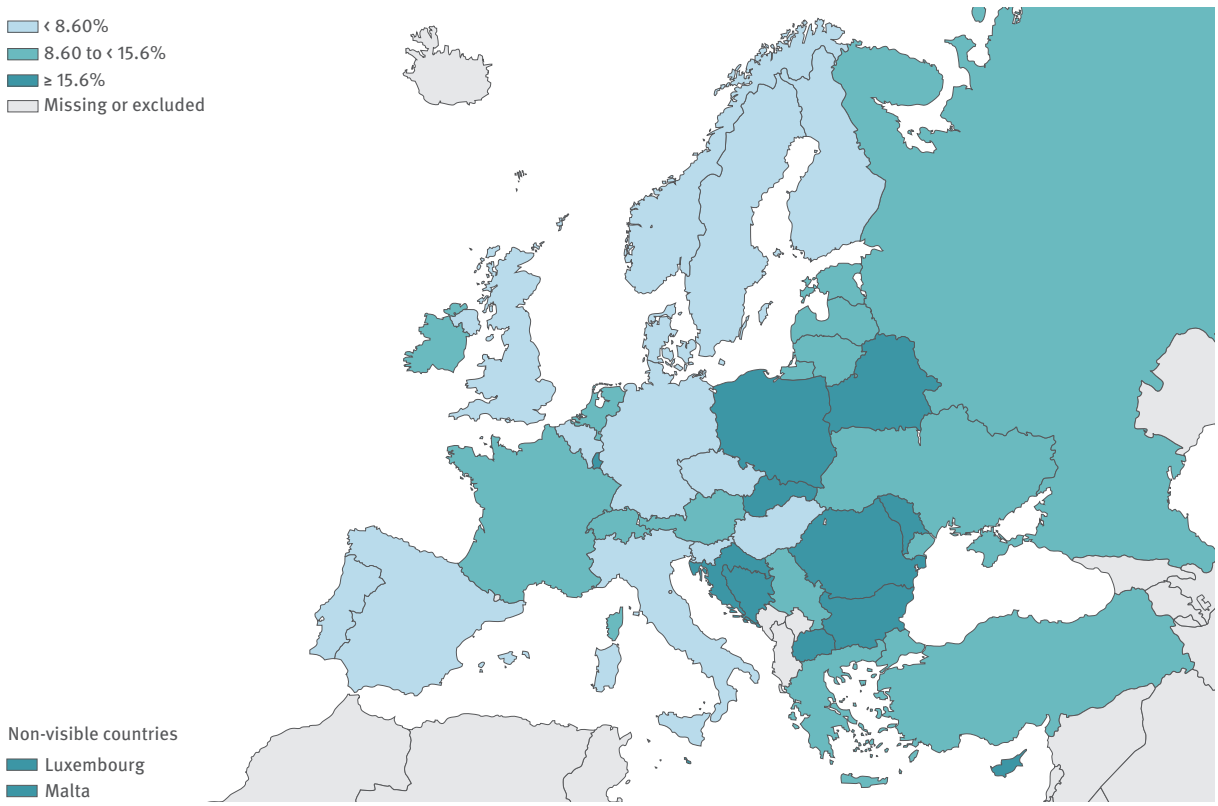
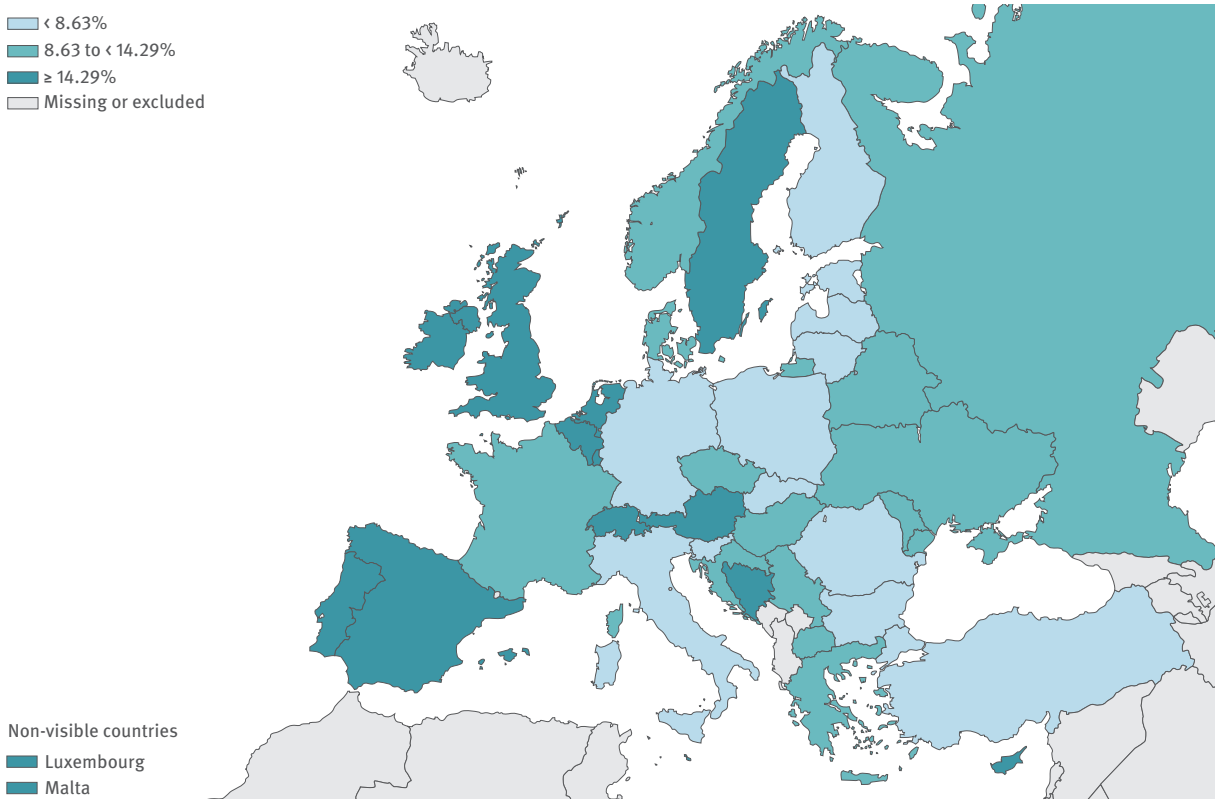


Figure 8.7: Proportion of migrants by country of residence



(32%), Slovakia (31%), the former Yugoslav Republic of Macedonia (29%), Croatia (28%), Belarus (20%), Romania (19%), Bulgaria (18%), and the Republic of Ireland (16%). These large proportions of men recruited outside their countries of birth may be partly attributable to a lack of active recruitment in their countries of birth. At the time of the survey there was limited or no targeted recruitment in Bosnia and Herzegovina, Cyprus, Moldova, Luxembourg, Slovakia, the former Yugoslav Republic of Macedonia, Croatia and Belarus. It is unlikely to be a pure coincidence, however, that many of the countries with particularly large proportions of expatriates are also among the countries with the highest proportions of men who reported unhappiness with their sex life (see Chapter 4, Figure 4.4).

Among all migrants, 60% were born in one of the 38 EMIS countries and 40% were born elsewhere. Figure 8.6 shows the countries with the percentages of expatriates distributed across the sub-regions (for example, 79% of the expatriates from Ireland live in West Europe).

8.5 Individual-level associations with migration background

This chapter explores the demographic characteristics, history of drug use, sexual behaviour and HIV and STI diagnosis/testing variables that are associated with migration status at the individual level.

8.5.1 Sociodemographics and migration status

EMIS identified no clear sub-regional pattern of migration (Figure 8.7). The countries with the highest proportion of migrants were Austria, Belgium, Cyprus, Ireland, Luxembourg, Malta, the Netherlands, Portugal, Spain, Sweden, Switzerland and the UK.

Compared with non-migrants, migrants were significantly more likely to: live in a city with over 500 000 inhabitants (61% vs. 43%), be over 25 years old (82% vs. 76%), have higher (ISCED 5–6) levels of educational attainment (66% vs. 47%), be employed (73% vs. 71%) and identify

Figure 8.6: Distribution of expatriates from EMIS countries across European sub-regions

Country of birth		Number born in one country now living in other EMIS countries	% born in one country now living in other EMIS countries	Distribution of expatriates across European sub-regions (%)								
Country code	Country name			West	North-West	Central-West	South-West	North-East	Central-East	South-East (EU)	South-East (non-EU)	East
at	Austria	377	10.0	12.2	2.4	70.8	9.5	--	4.0	0.3	0.8	--
ba	Bosnia & Herzegovina	161	55.6	4.3	9.3	41.6	3.7	--	8.1	--	32.9	--
be	Belgium	287	8.5	42.2	2.4	31.0	23.3	0.3	0.3	--	0.3	--
bg	Bulgaria	217	18.0	25.3	5.5	34.6	22.6	--	2.3	3.7	4.1	1.8
by	Belarus	83	20.5	4.8	3.6	10.8	7.2	6.0	10.8	--	--	56.6
ch	Switzerland	392	9.6	19.6	2.6	33.4	41.1	--	0.5	1.0	1.3	0.5
cy	Cyprus	89	33.5	33.7	1.1	4.5	51.7	--	3.4	--	5.6	--
cz	Czech Republic	140	6.1	25.7	5.7	47.9	4.3	0.7	10.7	0.7	0.7	3.6
de	Germany	2,086	4.0	30.7	5.8	34.9	20.2	0.3	2.9	0.8	2.8	1.5
dk	Denmark	138	8.4	29.0	29.0	30.4	10.1	0.7	--	0.7	--	--
ee	Estonia	62	9.9	29.0	33.9	9.7	11.3	3.2	--	--	1.6	11.3
es	Spain	575	5.3	53.2	5.6	31.5	7.1	--	1.0	0.5	0.9	0.2
fi	Finland	146	7.2	17.8	43.8	23.3	6.2	3.4	2.1	--	1.4	2.1
fr	France	1,184	10.9	35.6	2.1	34.2	24.7	0.2	1.0	0.8	1.0	0.5
gr	Greece	270	9.4	38.9	3.3	33.7	10.4	--	1.1	8.9	2.2	1.5
hr	Croatia	177	27.5	7.3	1.7	43.5	7.9	--	11.3	--	28.2	--
hu	Hungary	174	8.5	34.5	2.9	44.3	8.0	--	1.7	4.0	0.6	4.0
ie	Republic of Ireland	313	15.6	79.2	1.6	11.2	6.4	--	1.0	--	--	0.6
it	Italy	1,129	7.1	42.8	2.1	33.0	19.0	0.1	1.3	0.7	0.7	0.2
lt	Lithuania	102	15.0	53.9	8.8	11.8	5.9	5.9	3.9	--	--	9.8
lu	Luxembourg	64	31.5	20.3	1.6	62.5	15.6	--	--	--	--	--
lv	Latvia	109	14.1	46.8	13.8	13.8	1.8	1.8	1.8	0.9	0.9	18.3
md	Moldova	52	32.7	9.6		11.5	19.2	--	--	17.3	1.9	40.4
mk	The former Yugoslav Republic of Macedonia	43	28.7	18.6	7.0	27.9	7.0	--	2.3	16.3	20.9	--
mt	Malta	20	16.8	70.0	5.0	20.0	5.0	--	--	--	--	--
nl	Netherlands	405	12.2	34.3	3.0	38.0	19.3	--	2.2	1.0	1.5	0.7
no	Norway	106	5.4	29.2	49.1	12.3	7.5	0.9	0.9	--	--	--
pl	Poland	1,009	27.6	38.2	5.3	49.6	4.8	0.5	0.7	0.4	0.1	0.6
po	Portugal	375	8.1	44.0	1.3	30.4	21.3	--	1.9	0.5	0.5	--
ro	Romania	533	19.1	21.0	4.3	35.8	26.6	--	8.8	3.0	0.4	--
rs	Serbia	147	13.1	9.5	4.8	42.9	10.9	--	19.7	0.7	11.6	--
ru	Russia	554	11.0	9.9	6.3	39.5	7.2	4.7	4.2	1.6	0.9	25.6
se	Sweden	153	5.6	22.9	41.8	17.6	12.4	3.3	0.7	0.7	0.7	--
si	Slovenia	56	5.7	35.7	3.6	42.9	10.7	--	1.8	--	5.4	--
sk	Slovakia	244	30.5	24.2	1.2	14.8	1.2	--	57.8	--	0.4	0.4
tr	Turkey	198	10.7	21.2	3.0	59.6	7.6	--	2.0	5.1	--	1.5
ua	Ukraine	259	14.7	6.6	0.8	22.8	7.3	2.3	10.4	0.8	0.4	48.6
uk	United Kingdom	967	7.0	35.8	5.0	22.5	28.4	0.4	2.6	2.5	2.1	0.7

Figure 8.8: Proportion of migrants according to sociodemographic characteristics

	% born abroad
All respondents	**13.8**
Age (years)	
Under 25 years	10.5
25 to 39 years	15.5
40 years and older	13.5
Settlement size	
Less than 500 000 inhabitants	9.9
Larger cities	18.4
Education	
Low	9.6
Medium	9.2
High	18.3
Employment	
Employed	14.0
Unemployed	14.2
Other	12.8
Sexual identity	
Gay or homosexual	14.2
Bisexual	11.4
Other	13.8
Being out	
Out to all or almost all/more than half/less than half	14.7
Out to no-one or only few people	11.7
Lonely	
Neither or not sure	13.0
No	12.4
Yes	14.7

Figure 8.11: Proportion of migrants by sexual risk behaviour and drug use

	% born abroad
All respondents	**13.8**
UAI-steady[a]	
No/never	15.6
Yes	14.4
UAI-non-steady[b]	
No/never	15.6
Yes	15.2
Use of drugs typically associated with sex and parties[c]	
No/never	12.7
Yes	20.7
Use of cannabis (or LSD)[c]	
No/never	12.8
Yes	17.4
Use of heroin or crack[c]	
No/never	13.7
Yes	20.8
Use of poppers[d]	
No/never	13.0
Yes	17.2
Use of Viagra, etc.[d]	
No/never	13.3
Yes	18.8

a Unprotected anal intercourse among those who had anal intercourse with their steady partners (in the last 12 months)
b Unprotected anal intercourse among those who had anal intercourse with their non-steady partners (in the last 12 months)
c In the last 12 months
d In the last four weeks

Figure 8.9: Proportion of men born abroad by education level, stratified by age group

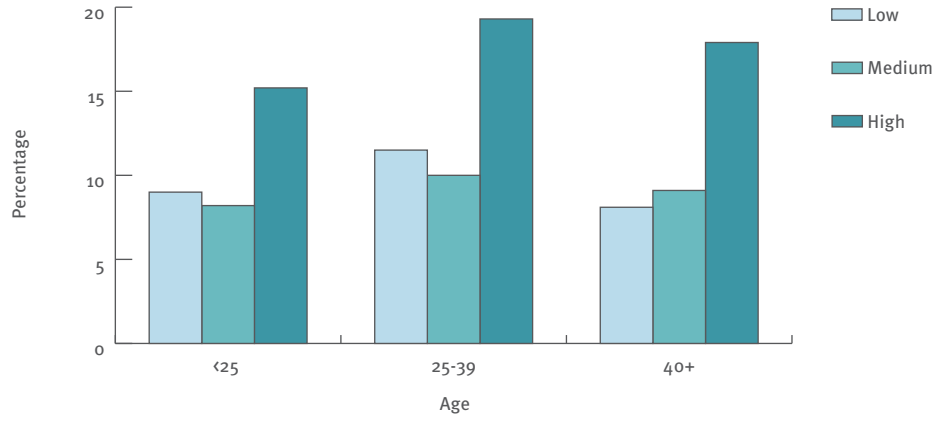
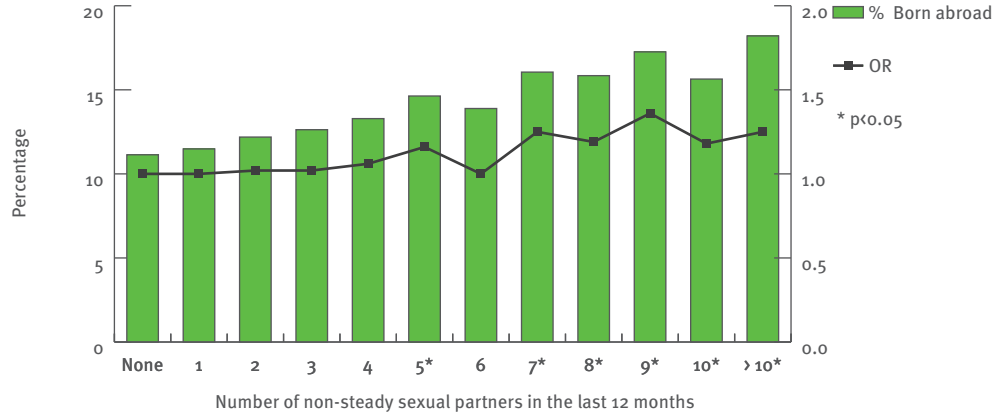


Figure 8.10: Proportion of migrants by number of non-steady sexual partners (last 12 months)



themselves as gay or homosexual rather than bisexual, straight/heterosexual, or by means of some other label (79% vs. 76%).

The proportion of respondents who were born outside of their country of residence is presented in Figure 8.8, stratified according to sociodemographic characteristics. After controlling for source of recruitment, country of residence, settlement size, age, education, and HIV diagnosis, migrant status was independently associated with being younger than 40 years (AOR=1.09; 95%-CI: 1.04–1.14 for those under 25 years, and AOR=1.26; 95%-CI: 1.22–1.31 for 25–39 years); living in a large city (AOR=1.99; 95%-CI: 1.93–2.05); having a high educational level (AOR=1.76; 95%-CI: 1.70–1.81); being unemployed (AOR=1.14; 95%-CI: 1.07–1.21) or having some other employment status (AOR=1.19; 95%-CI: 1.14–1.24); not self-identifying as homosexual or bisexual (some other label) (AOR=1.18; 95%-CI: 1.12–1.25); feeling lonely (AOR=1.10; 95%-CI: 1.05–1.16) and being 'out' to no-one or only few people (AOR=1.05; 95%-CI: 1.01–1.09).

Figure 8.9 shows the proportions of men born abroad by education level, stratified by age group. In all age strata, migrant MSM were more likely to have a university degree or higher educational level.

8.5.2 Sexual behaviour, drug use and migration status

Number of non-steady sexual partners

The number of non-steady sexual partners in the last 12 months reported by EMIS respondents in particular countries was positively associated with the proportion of migrants. After controlling for source of recruitment, country of residence, settlement size, age, education, and HIV diagnosis, men who reported more than six partners were more likely to be migrants than those who reported no partners (Figure 8.10).

Unprotected anal intercourse

Migrants accounted for 14.4% of those who reported UAI with a steady sexual partner and for 15.2% of those who reported UAI with a non-steady sexual partner (Figure 8.11). After controlling for source of recruitment, country of residence, settlement size, age, education, and HIV diagnosis, there was no association between migration status and the prevalence of UAI with either steady or non-steady sexual partners in the last 12 months.

Consumption of drugs

The proportion of migrants using drugs is shown in Figure 8.11. After controlling for source of recruitment, country of residence, settlement size, age, education and HIV diagnosis, migrants were more likely than indigenous respondents to use drugs typically associated with sex and parties (AOR=1.18; 95%-CI: 1.13–1.23), cannabis (AOR=1.18: 95%-CI: 1.14–1.22), heroin or crack (AOR=1.46; 95%-CI: 1.27–1.68), poppers (AOR=1.06; 95%-CI: 1.02–1.10), and drugs such as Viagra (AOR=1.13; 95%-CI: 1.07–1.19).

8.5.3 HIV and STI testing/diagnosis and migration status

Access to HIV and STI testing

After controlling for source of recruitment, country of residence, settlement size, age and education, access to HIV and STI testing in the last 12 months was negatively associated with migrant status (Figure 8.12).

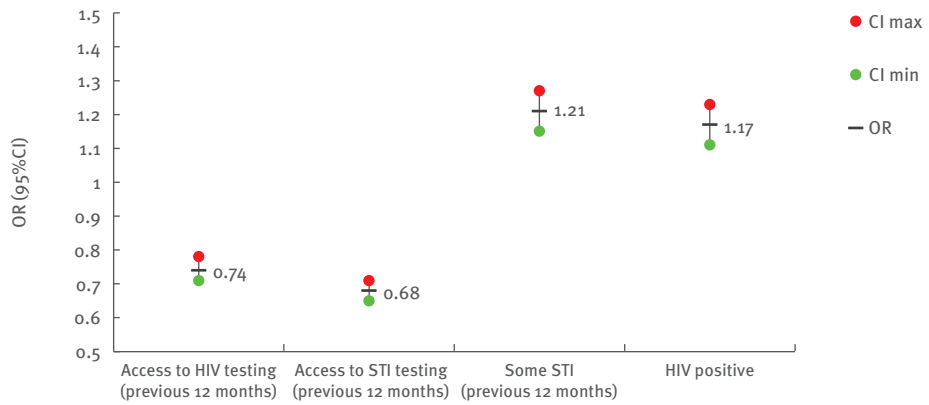
STI/HIV diagnosis

On the other hand, positive associations were noted between migration status and having been diagnosed HIV positive and between migration status and a newly diagnosed STI.

8.6 Conclusions and policy recommendations

A limitation to this analysis is the broad definition of a migrant. It is important to consider that the profile of someone seeking asylum, for example, is not the same as someone who migrates for economic reasons or to experience another culture. Different types of migrants could have different sexual health needs.

Figure 8.12: Individual-level associations between migration status and access to HIV/STI testing and HIV/STI status



Most migration in EMIS is migration within a sub-region, except for South-West Europe where most migrants are from Latin America/the Caribbean, and North-East Europe where most migrants are from East Europe (mostly from Russia). North-East Europe was also one of the sub-regions with one of the highest proportions of surveys answered in a different language to the official ones (Russian is spoken by substantial parts of the population although it is not recognised as an official language).

The fact that most migrants answered the survey in the official language(s) of their country of residence suggests integration into the host society/culture, at least from a linguistic point of view. Differences in culture and the difficulties of integrating or adapting to the country of residence may contribute to migrant MSM exhibiting higher risk behaviour.

Migrant status was associated with certain risk behaviour, such as drug use, that may place migrants at greater risk of HIV transmission. Indeed, a higher prevalence of HIV infection (or history of STIs) was found among migrant respondents, together with a lower level of access to free or affordable HIV and STI testing services.

Some behaviour and the high proportions of HIV/STI diagnoses among migrants identified by EMIS should make migrants a priority target group for sexual health promotion. The higher prevalence of HIV and STIs among migrant men, and their paucity of access to free or affordable HIV and STI testing services, indicate that specific prevention interventions should be tailored and targeted to this group. Efforts are needed to increase access to HIV/STI testing among migrant MSM.

Incorporating social support into the interventions may be a useful strategy, since EMIS as well as previous studies (Mimiaga et al., 2009; O'Donnell et al., 2002) identified an association between social isolation and sexual risk behaviour among MSM.

Further analysis of migration and mobility is needed, taking into consideration a more complex definition of migrant and mobility dynamics. In addition, further subgroup analysis of migrant MSM in Europe is required to contextualize migration experiences and assess which migrant populations need more support.

8.7 Country table

Country		Region		Born outside of the country (%)	Expatriates (living abroad in other EMIS countries) (%)	Number born in that country now living in other EMIS countries
Code	Name	EU region	EMIS region			
at	Austria	EU	Central-West	16.9	10.0	377
be	Belgium	EU	West	22.6	8.5	287
bg	Bulgaria	EU	South-East (EU)	4.3	18.0	217
cy	Cyprus	EU	South-East (EU)	33.8	33.5	89
cz	Czech Republic	EU	Central-East	10.9	6.1	140
de	Germany	EU	Central-West	8.3	4.0	2,086
dk	Denmark	EU	North-West	14.0	8.4	138
ee	Estonia	EU	North-East	4.7	9.9	62
es	Spain	EU	South-West	22.4	5.3	575
fi	Finland	EU	North-West	6.7	7.2	146
fr	France	EU	West	13.3	10.9	1,184
gr	Greece	EU	South-West	11.9	9.4	270
hu	Hungary	EU	Central-East	8.9	8.5	174
ie	Republic of Ireland	EU	West	22.8	15.6	313
it	Italy	EU	South-West	7.0	7.1	1,129
lt	Lithuania	EU	North-East	2.9	15.0	102
lu	Luxembourg	EU	Central-West	50.4	31.5	64
lv	Latvia	EU	North-East	6.0	14.1	109
mt	Malta	EU	South-East (EU)	16.9	16.8	20
nl	Netherlands	EU	West	23.1	12.2	405
pl	Poland	EU	Central-East	3.5	27.6	1,009
pt	Portugal	EU	South-West	17.7	8.1	375
ro	Romania	EU	South-East (EU)	2.7	19.1	533
se	Sweden	EU	North-West	17.7	5.6	153
si	Slovenia	EU	Central-East	6.2	5.7	56
sk	Slovakia	EU	Central-East	5.2	30.5	244
uk	United Kingdom	EU	West	27.7	7.0	967
ch	Switzerland	EEA/EFTA/acceding	Central-West	26.5	9.6	392
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	9.7	27.5	177
no	Norway	EEA/EFTA/acceding	North-West	11.9	5.4	106
ba	Bosnia & Herzegovina	other	South-East (non-EU)	14.3	55.6	161
by	Belarus	other	East	12.2	20.5	83
md	Moldova	other	East	8.6	32.7	52
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	8.8	28.7	43
rs	Serbia	other	South-East (non-EU)	12.1	13.1	147
ru	Russia	other	East	11.2	11.0	554
tr	Turkey	other	South-East (non-EU)	8.3	10.7	198
ua	Ukraine	other	East	12.0	14.7	259
	Low			2.7	4.0	
	Median			**11.9**	**11.0**	**13,396**
	High			50.4	55.6	
	EU27 median			**11.9**	**9.9**	**11,224**

Distribution of 'expatriates' across EMIS sub-regions								
West	North-West	Central-West	South-West	North-East	Central-East	South-East (EU)	South-East (non-EU)	East
12.2	2.4	70.8	9.5	--	4	0.3	0.8	--
42.2	2.4	31	23.3	0.3	0.3	--	0.3	--
25.3	5.5	34.6	22.6	--	2.3	3.7	4.1	1.8
33.7	1.1	4.5	51.7	--	3.4	--	5.6	--
25.7	5.7	47.9	4.3	0.7	10.7	0.7	0.7	3.6
30.7	5.8	34.9	20.2	0.3	2.9	0.8	2.8	1.5
29	29	30.4	10.1	0.7	--	0.7	--	--
29	33.9	9.7	11.3	3.2	--	--	1.6	11.3
53.2	5.6	31.5	7.1	--	1	0.5	0.9	0.2
17.8	43.8	23.3	6.2	3.4	2.1	--	1.4	2.1
35.6	2.1	34.2	24.7	0.2	1	0.8	1	0.5
38.9	3.3	33.7	10.4	--	1.1	8.9	2.2	1.5
34.5	2.9	44.3	8	--	1.7	4	0.6	4
79.2	1.6	11.2	6.4	--	1	--	--	0.6
42.8	2.1	33	19	0.1	1.3	0.7	0.7	0.2
53.9	8.8	11.8	5.9	5.9	3.9	--	--	9.8
20.3	1.6	62.5	15.6	--	--	--	--	--
46.8	13.8	13.8	1.8	1.8	1.8	0.9	0.9	18.3
70	5	20	5	--	--	--	--	--
34.3	3	38	19.3	--	2.2	1	1.5	0.7
38.2	5.3	49.6	4.8	0.5	0.7	0.4	0.1	0.6
44	1.3	30.4	21.3	--	1.9	0.5	0.5	--
21	4.3	35.8	26.6	--	8.8	3	0.4	--
22.9	41.8	17.6	12.4	3.3	0.7	0.7	0.7	--
35.7	3.6	42.9	10.7	--	1.8	--	5.4	--
24.2	1.2	14.8	1.2	--	57.8	--	0.4	0.4
35.8	5	22.5	28.4	0.4	2.6	2.5	2.1	0,7
19.6	2.6	33.4	41.1	--	0.5	1	1.3	0.5
7.3	1.7	43.5	7.9	--	11.3	--	28.2	--
29.2	49.1	12.3	7.5	0.9	0.9	--	--	--
4.3	9.3	41.6	3.7	--	8.1	--	32.9	--
4.8	3.6	10.8	7.2	6	10.8	--	--	56.6
9.6		11.5	19.2	--	--	17.3	1.9	40.4
18.6	7	27.9	7	--	2.3	16.3	20.9	--
9.5	4.8	42.9	10.9	--	19.7	0.7	11.6	--
9.9	6.3	39.5	7.2	4.7	4.2	1.6	0.9	25.6
21.2	3	59.6	7.6	--	2	5.1	--	1.5
6.6	0.8	22.8	7.3	2.3	10.4	0.8	0.4	48.6
4.3	0.8	4.5	1.2	0.1	0.3	0.3	0.1	0.2
29.0	**4.3**	**32.3**	**9.8**	**0.9**	**2.2**	**0.9**	**1.2**	**1.7**
79.2	49.1	70.8	51.7	6.0	57.8	17.3	32.9	56.6
34.5	**4.3**	**31.5**	**10.7**	**0.7**	**1.9**	**0.8**	**0.9**	**1.5**

9. Substance use

9. Substance use

9.1 Introduction

The European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) monitors drug use in the general population throughout Europe. Since MSM are not monitored as a distinct group, EMIS provided an opportunity to investigate their drug use. In future, it is imperative that general population surveys of drug use include a sexual identity question so that drug use can be properly compared by sexuality.

EMCDDA suggests that surveys on drugs should start with questions on licit substances such as tobacco, alcohol, and medicines. In this way, questions on licit drugs act as a 'warm up' for the other questions. EMCDDA recommends that a minimum set of substances should be considered: cannabis, ecstasy, amphetamines, cocaine, heroin, LSD and alcohol. This minimum set of substances was included in the EMIS study, with the addition of questions on anabolic steroids (testosterone), drugs such as Viagra (phosphodiesterase type 5 inhibitors), antidepressants (Purcell et al. 2005), methamphetamine (Plankey et al. 2007), and poppers (nitrites) (Ostrow et al. 1993), since the use of these drugs has been shown to be associated with sexual risk behaviour in MSM.

9.2 Alcohol and tobacco consumption

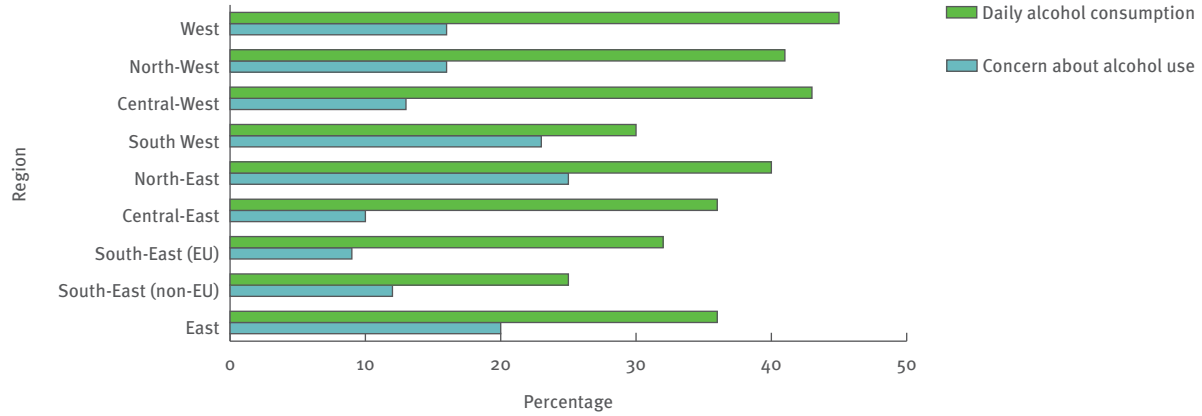
More than a third (39%) of the total sample reported having consumed alcohol in the 24 hours prior to responding to the survey (what we called 'daily consumption'). The proportion ranged from 22% in Serbia and 25% in Turkey (lowest) to 47% in Switzerland and 51% in the Netherlands (highest). The sub-regions with the lowest daily consumption of alcohol were in the southern parts of Europe and those with the highest were in the northern and western parts, with respondents from eastern countries in the middle of the range (Figure 9.1).

The association between sub-regions and alcohol consumption at a univariable level were confirmed by multivariable analysis after adjusting for other factors such as EMIS recruitment source, age, education, settlement size, HIV status, and outness. Sub-regions in southern parts of Europe were significantly less likely to consume alcohol on a daily basis (Figure 9.3).

The picture was much less clear when men were asked if they were worried about how much they drank – that is, if they 'agreed' or 'strongly agreed' with the statement 'I worry about how much I drink'. The highest percentages concerned about their alcohol consumption were not in countries with the highest consumption, but in South-West Europe, in countries such as in Italy (33%) and Portugal (33%), where the proportions who reported daily consumption were among the lowest (26% and 33% respectively). At the sub-regional level, the proportions concerned about alcohol consumption were lowest in Central and South-East Europe (never higher than 12%) and highest in North-East (25%), South-West (23%) and East (20%) Europe. Lower proportions than elsewhere were concerned about alcohol consumption in West (16%), North-West (16%), and Central-West Europe (13%), where we found the highest proportions who drank alcohol daily.

Those consuming alcohol on a daily basis were significantly older than others (35 years vs. 33 years). This result was also confirmed at the multivariable level after adjusting for the other factors, since the youngest group (under 25 years old) was significantly less likely to drink daily than those aged 25 to 39 and those older than 40 years.

Figure 9.1: Daily alcohol consumption and concern about alcohol use by European sub-region



Similarly, men in the middle age group were significantly less likely to drink daily than the older group (Figure 9.3).

Asking whether alcohol is consumed daily does not provide a complete understanding of its use at a cultural level – in other words, we cannot make inferences about consumption patterns. For example, drinking a glass of beer every day is not the same as having a drink with a higher percentage of alcohol on a daily basis, which is also different to drinking several drinks a day or drinking large amounts of alcohol on certain days (weekends) while abstaining for most of the week. Unfortunately, EMIS data do not allow such a detailed analysis as men were not asked what they drank, when or how much.

As long as the 'daily consumption' indicator is interpreted in the light of possible consumption patterns, EMIS results seem to tally with data reported by previous surveys in Europe (Special Eurobarometer 331, 2010). From this perspective, differences at sub-regional level may reflect a pattern whereby consumption in the South is polarised, as highlighted in the Eurobarometer survey. In this region many do not consume alcoholic beverages, but those who do tend to drink small amounts of alcohol quite regularly. According to the Eurobarometer results, the youngest group may be less likely to drink regularly, but more likely when they do to drink large amounts. Both patterns are poorly captured by an indicator such as 'daily consumption'.

Figure 9.2: Daily consumption of tobacco by European sub-region

European sub-region	Daily consumption of tobacco (%)
West	33.5
North-West	36.1
Central-West	42.3
South-West	39.2
North-East	45.0
Central-East	38.1
South-East (EU)	51.2
South-East (non-EU)	47.8
East	47.9

Figure 9.4: Use of Viagra and benzodiazepines by European sub-region

European sub-region	Viagra (preceding four weeks) (%)	Benzodiazepines (preceding four weeks) (%)
West	13.5	5.6
North-West	7.4	4.7
Central-West	7.3	2.9
South-West	6.0	7.4
North-East	4.1	5.3
Central-East	4.7	7.4
South-East (EU)	3.1	3.4
South-East (non-EU)	5.2	7.2
East	4.7	2.9

Figure 9.3: Daily consumption of alcohol and tobacco by control variables. Multivariable logistic regression

	Daily alcohol consumption			Daily tobacco consumption		
	AOR	95%-CI		AOR	95%-CI	
		Lower	Upper		Lower	Upper
Recruitment						
PlanetRomeo	1.00	0.97	1.02	1.14	1.11	1.17
Other	1			1		
Age						
<25	0.73	0.71	0.76	1.10	1.07	1.14
25-39	0.82	0.80	0.84	1.20	1.17	1.23
40+	1			1		
Education						
Low/medium	0.77	0.76	0.79	1.63	1.59	1.66
High	1			1		
Settlement size						
<500 000	0.86	0.84	0.87	0.95	0.93	0.97
Larger cities	1			1		
HIV status						
Untested or last test negative	1.26	1.21	1.31	0.76	0.73	0.79
Last test positive	1			1		
Outness						
Out to less than most	0.78	0.76	0.80	0.64	0.62	0.65
Out to most	1			1		
European sub-region						
West	1.34	1.27	1.41	0.44	0.41	0.46
North-West	1.18	1.11	1.27	0.49	0.46	0.52
Central-West	1.44	1.36	1.53	0.52	0.49	0.55
South-West	0.78	0.74	0.83	0.55	0.52	0.58
North-East	1.29	1.16	1.44	0.83	0.74	0.92
Central-East	1.08	1.01	1.15	0.56	0.52	0.60
South-East (EU)	0.95	0.87	1.03	1.03	0.95	1.12
South-East (non-EU)	0.64	0.58	0.70	0.94	0.87	1.03
East	1			1		
Constant	**0.73**			**1.26**		

At the univariable level, 42% who had visited gay social or sexual venues in the four weeks prior to responding to the survey reported daily consumption of alcohol, compared with 39% who had not – a small but significant association. Forty-five per cent of those who had visited a gay commercial venue and 42% who had visited a sex-themed venue in the four weeks prior to responding reported drinking alcohol in the preceding 24 hours, compared with 35% and 38% respectively of those who had not visited such venues.

Tobacco was consumed daily by 40% of the overall sample. In seven countries more than half of the respondents had smoked in the preceding 24 hours: Moldova (57%), Cyprus (54%), Bosnia and Herzegovina (53%), Bulgaria (53%), Romania (51%), Ukraine (51%) and Turkey (50%). The countries with the lowest percentages of smokers were Malta, the UK (both 31%) and Finland (33%). At a sub-regional level, lower proportions smoked in the western part of Europe (from 34% in West to 42% in Central-West Europe) than in the eastern regions (from 45% in North-East to 51% in the South-East (EU) Europe). The only exception to this was Central-East Europe, where 38% of respondents smoked (Figure 9.2).

9.3 Viagra and benzodiazepines

In this report, the widely known term Viagra is used to refer not only to the brand name for sildenafil but to all PDE-5 inhibitors/pro-erection drugs on the market. Eight per cent of the overall sample reported using Viagra in the preceding four weeks. Percentages above 10% were found only in the Netherlands (21%), Belgium (13%) and Switzerland (10%). At a sub-regional level, western parts of Europe reported the highest usage, ranging from 14% in West to 6% in South-West Europe, while the eastern parts showed the lowest usage, ranging from 3% in South-East to 5% in East and Central-East Europe (Figure 9.4).

As expected, those who had used Viagra in the preceding four weeks were also substantially older than those who had not used it recently or did not use it at all (44 vs. 33 years of age).

Figure 9.5: Use of Viagra and benzodiazepines. Multivariable logistic regression

	Viagra (preceding four weeks)			Benzodiazepines (preceding four weeks)		
	AOR	95%-CI		AOR	95%-CI	
		Lower	Upper		Lower	Upper
Recruitment						
PlanetRomeo	1.09	1.04	1.14	0.86	0.81	0.90
Other	1			1		
Age						
<25	0.09	0.08	0.10	0.63	0.58	0.67
25-39	0.32	0.31	0.33	0.78	0.74	0.82
40+	1			1		
Education						
Low/medium	0.96	0.92	1.00	1.00	0.95	1.04
High	1			1		
Settlement size						
<500 000	0.78	0.75	0.81	0.88	0.84	0.93
Larger cities						
HIV status						
Untested or last test negative	0.40	0.38	0.42	0.57	0.53	0.61
Last test positive	1			1		
Outness						
Out to less than most	1.02	0.97	1.06	0.71	0.68	0.75
Out to most	1			1		
European sub-region						
West	1.96	1.72	2.22	1.60	1.37	1.87
North-West	1.20	1.03	1.40	1.42	1.18	1.70
Central-West	1.03	0.90	1.17	0.92	0.79	1.09
South-West	0.91	0.80	1.04	2.56	2.19	2.98
North-East	0.98	0.74	1.28	2.07	1.60	2.67
Central-East	1.16	0.99	1.36	2.88	2.43	3.41
South-East (EU)	0.87	0.69	1.09	1.46	1.15	1.84
South-East (non-EU)	1.35	1.11	1.65	3.05	2.50	3.73
East	1			1		
Visited a gay community						
Never or before	1.14	1.08	1.21	0.93	0.87	1.00
Preceding four weeks	1			1		
Visited a gay commercial venue						
Never or before	0.75	0.72	0.78	1.05	1.00	1.11
Preceding four weeks	1			1		
Visited a gay sex venue						
Before	0.43	0.41	0.45	0.90	0.85	0.94
Preceding four weeks	1			1		
UAI with any male partner						
Never or before	0.48	0.46	0.50	0.96	0.91	1.00
Preceding four weeks	1			1		
Constant	**0.73**			**1.26**		

Those who had visited gay community centres, organisations or groups in the preceding four weeks were more likely to have used Viagra (10%) than those who had visited them less recently or never (6%). Ten per cent of MSM who had visited gay commercial venues and 16 % of those who had visited sex-themed venues reported using Viagra in the preceding four weeks compared with those who had visited such venues less recently or never (6% and 5%, respectively).

Recent use of Viagra was associated with a perception of reduced control over sexual risks and with an increased difficulty in saying 'No' to unwanted sex. This preliminary result might be explained by an association between the use of Viagra and the use of other sex drugs, but further analysis is needed.

Benzodiazepines had been used in the preceding four weeks by 5% of the sample overall. Percentages of at least 10% were found only in Bosnia and Herzegovina (10%), Serbia (11%), the Czech Republic (11%) and Portugal (12%). Recent consumption of benzodiazepines was associated with the older age groups: the average age of those who had used it in the preceding four weeks was around 36

Figure 9.6: Recreational drug use by European sub-region (percentages reported)

European sub-region	Poppers (preceding four weeks)	Cannabis (or LSD) (preceding four weeks)	Heroin/crack (preceding four weeks)	"Party drugs" (preceding four weeks)	Concern about recreational drugs use
West	28.3	13.8	0.4	10.6	4.7
North-West	13.8	6.2	0.3	3.1	2.2
Central-West	22.0	10.1	0.2	4.9	3.2
South-West	10.9	13.6	0.4	6.6	8.8
North-East	6.2	4.9	0.2	2.3	3.7
Central-East	15.2	10.2	0.3	4.9	2.9
South-East (EU)	7.9	5.9	0.3	3.0	4.1
South-East (non-EU)	7.7	8.6	0.4	2.5	4.3
East	8.3	5.2	0.3	2.4	2.1

Figure 9.7: Recreational drug use by those having recently visited gay venues and UAI (%). Univariable analysis.

	Poppers (preceding four weeks)	Cannabis (or LSD) (preceding four weeks)	Heroin/crack (preceding four weeks)	'Party drugs' (preceding four weeks)	Viagra (preceding four weeks)	Benzodiazepines (preceding four weeks)
Among those who visited a gay community centre, organisation or social group in the…						
… preceding four weeks	23.4	13.1	0.6	7.5	9.8	5.7
Before or never	18.4	10.8	0.3	6.0	7.8	4.8
Among those who visited a gay social commercial venue in the…						
… preceding four weeks	26.5	14.6	0.4	10.1	10.4	5.2
Before or never	12.5	8.0	0.2	2.9	6.0	4.6
Among those who visited a sex-themed venue in the…						
… preceding four weeks	33.8	13.6	0.5	10.3	15.7	5.7
Before or never	12.5	10.0	0.2	4.4	4.6	4.5
Among those who engaged in UAI with any male sex partner in the…						
… preceding four weeks	27.4	13.4	0.5	9.3	--	--
Before or never	14.6	9.9	0.2	4.6	--	--

Figure 9.8: Drug use, control over sex and sexual risk

	'The sex I have is always as safe as I want it to be.' (mean)	Test of association	'I find it easy to say 'No' to sex I don't want.' (mean)	Test of association
Poppers		F(8.173116)=121.79 p<0.001		F(8.172714)=28.183 p<0.001
Before or never	4.26		4.26	
Preceding four weeks	4.19		4.23	
Cannabis (or LSD)		F(8.173402)=217.054 p<0.001		F(8.173008)=131.907 p<0.001
Before or never	4.26		4.27	
Preceding four weeks	4.15		4.18	
Heroin or crack		F(8.173335)=79.228 p<0.001		F(8.172939)=52.090 p<0.001
Before or never	4.24		4.26	
Preceding four weeks	3.87		3.94	
'Party drugs'		F(8.173386)=365.820 p<0.001		F(8.172991) =98.141 p<0.001
Before or never	4.25		4.26	
Preceding four weeks	4.07		4.16	

years, compared with 34 years among those who had used it less recently or never.

9.4 Other recreational drugs

EMIS asked about the consumption of the following types of recreational drugs: poppers, cannabis, LSD, ecstasy, amphetamines, crystal methamphetamine, heroin (or related substances), mephedrone, GHB/GBL (gamma-hydroxybutrate/gamma-butyrolactone), ketamine, cocaine and crack cocaine.

The overall sample reported using an average of 1.5 recreational drugs in the preceding 12 months. The average slightly exceeded two in only two countries (Netherlands 2.19; UK 2.03) and was less than one in Moldova (0.83), Belarus (0.94), Ukraine (0.95) and Sweden (0.98).

There is no universal agreement on the classification of psychotropic substances so recreational drugs reported in EMIS were grouped for further analysis using theoretical and statistical criteria. Poppers were analysed as a category in their own right because of their popularity among MSM in our sample. All other recreational drugs were grouped according to the results of a factor analysis that suggested the possible extent and pattern of consumption. LSD was grouped with cannabis since its use could be combined with any of the clusters and its influence on data about cannabis was small enough to be irrelevant for interpretation purposes. Ecstasy, amphetamines, crystal methamphetamine, mephedrone, GHB/GBL, ketamine and cocaine were grouped together as 'party drugs' following a clear result from the factor analysis and the knowledge that all these drugs have stimulant ('high') effects in party and sex situations. Heroin and crack cocaine were grouped together following indications from factor analysis concerning consumption patterns and the knowledge that both could be taken by injection.

Poppers

Almost a fifth (19%) of the overall sample had used poppers (nitrite inhalants) in the four weeks preceding response to the survey. The highest percentages were in the Netherlands (34%), the UK (29%) and Belgium (28%), and the lowest were in Bosnia and Herzegovina (2%), Latvia, Moldova and Belarus (all around 5%). At a sub-regional level poppers were used most commonly in the west, ranging from 28% (West) and 22% (Central-West) to 14% (North-West) and 11% (South-West). In eastern sub-regions, with the exception of Central-East (15%), the use of poppers did not exceed 8% (Figure 9.6).

Poppers was the only recreational drug category whose use peaked among older respondents: those who had used them in the preceding four weeks were, on average, 37 years old, whereas those who had used it less recently or never were, on average, 33 years old. Use of poppers was associated with recent visits to all gay social or sexual venues (Figure 9.7). Twenty-three per cent of those who had visited gay community centres, organisations or groups in the preceding four weeks had used poppers, compared with 18% of those who had not. Use of poppers was reported by 27% of MSM who had visited social commercial venues and 34% who had visited sex-themed venues in the preceding four weeks, compared with 13% who had not.

As expected, recent popper consumption was associated with a perception of reduced control over sexual risks. MSM who had never or not recently used poppers reported having more control over the sex they had than those who had used poppers in the preceding four weeks. They were more likely to agree that the sex they had was always as safe as they wanted it to be (Figure 9.8) or that they found it easy to say 'No' to sex they did not want. Similarly, MSM who reported having had UAI in the same period were significantly more likely to report using poppers in the preceding four weeks than those who had not engaged in UAI (27.4% vs. 14.6%).

Cannabis and LSD

Cannabis had been used in the preceding four weeks by 11% of the overall sample, ranging from a maximum of 18% in Spain and 15% in Cyprus to a minimum of 2% in Belarus. EMIS data suggest higher levels of cannabis use in the preceding four weeks than those estimated by EMCDDA (mean 3.6%, ranging from 0.1% in Romania to 7.6%) at European level in the general population (EMCDDA 2011). This might reflect a difference in the age distributions of the EMIS and EMCDDA samples. The EMIS sample may have been younger than the population identified in EMCDDA reports, since young people in EMCDDA reports also reported high levels of cannabis use. At a sub-regional level (Figure 9.6), cannabis use was most prevalent in West and South-West (14% in both), and lowest in North-East and East Europe (5% in both). After adjustment for other factors (Figure 9.9), multivariable analysis confirmed this sub-regional distribution, in line with the EMCDDA reporting.

Unlike poppers, cannabis was more commonly used by younger MSM. Those who had used it in the preceding four weeks were around 32 years old, whereas those who had used it less recently or never were around 34 years. This result was confirmed at the multivariable level (Figure 9.9).

Those who had been to gay community centres, organisations, or groups in the preceding four weeks were more likely to have used cannabis (13%) than those who had used it less recently or never (11%) (Figure 9.7). Similar proportions reporting cannabis use were found among MSM who had visited commercial gay venues (15%) and sex-themed venues (14%) compared with those who had either visited them less recently or never (8% and 10%, respectively).

As with poppers, those who reported cannabis use in the preceding four weeks also reported having had less control over sex. Compared with those who had used cannabis less recently or never, they were less likely to agree that the sex they had was always as safe as they wanted it to be (Figure 9.8) or that they found it easier to say 'No' to sex they did not want.

LSD consumption was reported by few. Use of LSD in the preceding 12 months ranged from 0.4% in Luxemburg and

Bulgaria to 2.0% in the Netherlands and Portugal and 2.9% in the Czech Republic (median: 0.9%, data not shown).

Drugs typically used at (sex) parties ('party drugs')

Six per cent of the sample overall reported consumption of drugs typically used at (sex) parties in the preceding four weeks (ecstasy, amphetamines, crystal methamphetamine, mephedrone, GHB/GBL, ketamine or cocaine). The proportions exceeded 10% only in the Netherlands (17%), the UK (13%) and Spain (12%). At the sub-regional level, the highest proportions were reported in West (11%) and South-West Europe (7%), probably because of the weighting that the sample sizes from the above-mentioned countries contribute to these sub-regions (Figure 9.6). At multivariable level, even adjusted for other factors, men in West and South-West Europe were more likely to use 'party drugs' than those living in the East Europe sub-region (Figure 9.9).

At univariable level, no significant difference was found between age groups as regards recent use of party drugs, but at multivariable level, after adjusting for other factors, men aged 25 to 39 years and younger men were more likely to use 'party drugs' than older men (Figure 9.9).

As expected, the association between party drug use and venue attendance mirrored that of cannabis (Figure 9.7). Those who had visited gay community centres, organisations or groups in the preceding four weeks were more likely to have used 'party drugs' during the same period (8%) than those who had not (6%). Ten per cent of MSM who had visited gay commercial venues or sex-themed venues reported having used 'party drugs' in the preceding four weeks, compared with 3% and 4% respectively for those who had not.

The recent use of 'party drugs' was statistically associated with a perception of decreased control over sexual

Figure 9.9: Recreational drug use. Multivariable logistic regression

	Poppers (preceding four weeks)			Cannabis (or LSD) (preceding four weeks)			Heroin/crack (preceding four weeks)			'Party drugs' (preceding four weeks)		
	AOR	95%-CI		AOR	95%-CI		AOR	95%-CI		AOR	95%-CI	
		Lower	Upper		Lower	Upper		Lower	Upper		Lower	Upper
Recruitment												
PlanetRomeo	1.25	1.22	1.29	1.03	0.99	1.06	1.04	0.86	1.27	1.00	0.96	1.05
Other	1			1			1			1		
Age												
<25	0.49	0.47	0.52	2.22	2.11	2.33	2.96	2.25	3.91	1.47	1.37	1.57
25-39	0.86	0.84	0.89	1.52	1.46	1.59	1.86	1.45	2.38	1.53	1.45	1.61
40+	1			1			1			1		
Education												
Low/medium	0.98	0.95	1.00	1.07	1.03	1.10	1.31	1.09	1.58	1.13	1.08	1.18
High	1			1			1			1		
Settlement size												
<500 000	0.79	0.76	0.81	0.72	0.70	0.75	0.85	0.71	1.02	0.61	0.58	0.64
Larger cities	1			1			1			1		
HIV status												
Untested or last test negative	0.36	0.35	0.38	0.45	0.43	0.47	0.57	0.44	0.74	0.31	0.30	0.33
Last test positive	1			1			1			1		
Outness												
Out to less than most	0.71	0.69	0.73	0.57	0.55	0.59	0.83	0.67	1.01	0.52	0.50	0.55
Out to most	1			1			1			1		
European sub-region												
West	3.19	2.90	3.52	2.53	2.26	2.85	1.41	0.84	2.37	3.63	3.07	4.28
North-West	1.57	1.40	1.76	1.12	0.97	1.29	1.13	0.61	2.11	1.17	0.95	1.43
Central-West	2.32	2.11	2.56	1.85	1.64	2.08	0.73	0.42	1.25	1.65	1.39	1.96
South-West	0.94	0.85	1.04	2.70	2.40	3.04	1.38	0.82	2.33	2.38	2.01	2.82
North-East	0.87	0.70	1.08	1.11	0.87	1.41	0.94	0.32	2.82	1.24	0.87	1.77
Central-East	2.04	1.83	2.28	2.01	1.76	2.29	0.93	0.49	1.78	2.09	1.73	2.53
South-East (EU)	1.10	0.94	1.29	1.32	1.11	1.58	1.08	0.49	2.39	1.68	1.31	2.17
South-East (non-EU)	1.01	0.86	1.18	1.91	1.62	2.26	1.39	0.65	2.96	1.30	0.99	1.71
East	1			1			1			1		
Visited a gay community												
Never or before	1.16	1.11	1.21	1.08	1.03	1.13	0.58	0.47	0.73	1.35	1.27	1.43
Preceding four weeks	1			1			1			1		
Visited a gay commercial venue												
Never or before	0.59	0.57	0.61	0.72	0.69	0.74	0.78	0.64	0.95	0.43	0.40	0.45
Preceding four weeks	1			1			1			1		
Visited a gay sex venue												
Before	0.39	0.38	0.40	0.81	0.79	0.84	0.48	0.40	0.58	0.61	0.58	0.64
Preceding four weeks	1			1			1			1		
UAI with any male partner												
Never or before	0.52	0.50	0.53	0.82	0.80	0.85	0.62	0.52	0.73	0.61	0.58	0.63
Preceding four weeks	1			1			1			1		
Constant	**1.22**			**0.16**			**0.01**			**0.17**		

risks and with more difficulty in saying 'No' to unwanted sex (Figure 9.8).

Heroin and crack cocaine

Only 0.3% of the overall sample reported consumption of heroin or crack cocaine in the preceding four weeks, ranging from a maximum of 0.8% in the former Yugoslav Republic of Macedonia and the Netherlands to a minimum of 0.1% in Latvia and Hungary.

As with cannabis, recent use of heroin/crack was associated with younger respondents. Those who had used heroin or crack in the preceding four weeks were around 32 years old, while those who used them less recently or never were around 34 years old.

The recent use of heroin/crack was strongly associated with a recent visit to gay social or sexual venues (Figure 9.7). Those who had visited gay community centres, organisations, or groups in the preceding four weeks were more likely to use heroin/crack (0.6%) than those who had not (0.3%). Among MSM who had visited gay commercial venues in the preceding four weeks 0.4% reported using heroin/crack, and for sex-themed venues the proportion was 0.5% compared with those who had not visited such venues (0.2% in both cases).

Those who reported using heroin/crack in the preceding four weeks were less likely than other respondents to agree that the sex they had was always as safe as they wanted it to be, and also found it more difficult to say 'No' to sex they did not want (Figure 9.8).

9.5 Concerns about recreational drug use

Five per cent of the sample overall said they were worried about their use of recreational drugs. As with alcohol, such concerns were expressed most commonly in Italy (13%), Portugal (10%) and Malta (9%). In all other countries less than 7% reported worrying about their drug use. At a sub-regional level, concern about individual recreational drug use was thus particularly high in South-West Europe (9%), but did not exceed 5% in other sub-regions of Europe (Figure 9.6).

Finally, within the groupings of drugs identified in these analyses, consumption styles may differ in terms of individual drugs or combinations of them, quantities, situations, frequencies of use and perceived consequences. In other words, although the data may appear easy to interpret, further analysis is necessary to clarify the specific patterns behind the expressions of decreased or increased concern by MSM about their drug use.

9.6 Self injection

Questions about injecting drug use (IDU) were asked separately from the questions about other drug consumption, as drugs that are typically injected (such as heroin) can also be smoked and drugs that are typically taken by nasal inhalation (snorted; such as amphetamines) may be injected. Anabolic steroids are typically injected (though not intravenously), but might not be considered recreational drugs. Unlike other forms of drug consumption, however, any type of self-injection carries a risk of HIV transmission if injecting equipment is shared.

Because of a translation error in the French version of the questionnaire all respondents who answered 'Yes' to this question in French were excluded from the analysis (this mainly affected France, Belgium, Switzerland and Luxembourg). For these countries, the analysis regarding IDU is based on responses from those who used a different language. Similarly, language-specific analyses of this question have shown that the figures based on respondents who used the German version of the questionnaire might overestimate IDU.

Five per cent of the whole sample reported having self-injected recreational drugs or anabolic steroids at least once. In five countries the percentage that had ever injected exceeded 6%: Malta (8%), Ukraine (8%), the Netherlands (9%), Russia (9%) and Belarus (9%). At a sub-regional level, IDU was commonest in the East Europe sub-region (9%). In all other sub-regions, the prevalence ranged from 3% in North-East to 5% in Central-West Europe.

9.7 Conclusions and policy recommendations

More than a third of the overall sample had drunk alcohol in the preceding 24 hours the highest percentage was in the Netherlands where half of the sample had drunk alcohol the day before. In general, the sub-regions with the lowest consumption of alcohol were in the southern parts of Europe, and those with the highest were in the northern and western parts. Nevertheless, concern about personal alcohol consumption did not mirror this pattern, perhaps because our indicator of alcohol consumption asked only about frequency rather than strength or quantity consumed. We can only conclude that EMIS data suggest a need for further research on drinking styles in EU countries. This would help to determine whether the discrepancies observed reflect variation in awareness of the dangers of alcohol abuse or simply different cultural drinking habits in terms of amounts and types of drink consumed and the frequency of consumption.

Figure 9.10: History of IDU by European sub-region

European sub-region	History of IDU (%)
West	5.2
North-West	4.1
Central-West	5.3
South-West	4.9
North-East	3.4
Central-East	3.8
South-East (EU)	4.1
South-East (non-EU)	4.4
East	8.6

Only 5% of the overall sample reported ever having self-injected recreational drugs or steroids. Data on the use within the preceding month of heroin or crack cocaine confirmed that it was relatively rare, usually not exceeding 0.4% at sub-regional level. However, responses from East Europe, where almost 9% of respondents reported having injected drugs (or steroids) in their lifetime, suggest that in some eastern countries this topic may require further research and targeted policies.

Other recreational drugs were used by much higher proportions of respondents, particularly poppers. Cannabis and 'party drugs' (pooling ecstasy, amphetamines, crystal methamphetamine, mephedrone, GHB/GBL, ketamine, and cocaine) followed in terms of prevalence of use.

EMIS results concerning recreational drug consumption among MSM are particularly significant as they confirmed the role of drugs in reducing safer sex performance, although the respondents were not asked directly if they used drugs during or immediately before sex. What EMIS data showed is that those who reported recent drug use also hinted at reduced control over sex and sexual risk (reduced control over sexual safety and reduced capacity to say 'No' to unwanted sex), and reported more UAI in the same period.

In terms of prevention strategies, findings about the association between age, places visited and drug use have some important consequences. Prevention should be age-specific, especially for certain kinds of recreational drugs. For example, the use of poppers was reported more frequently by older MSM, while cannabis (or to a lesser extent heroin/crack) was reported more frequently by younger MSM. No age differences were found for 'party drugs'. The association between visiting non-virtual gay venues and alcohol or recreational drugs might prove useful for those wishing to design interventions against recreational drug use.

Findings relating to concerns about personal drug use may also be important when defining prevention strategies. The possible preliminary finding that consumption of poppers may be weakly perceived as problematic by respondents could lead to a better definition of the content of communication strategies on the increased risk associated with drug consumption (even poppers) during or before sex.

9.8 Country table

Country		Region		Drug use			
Code	Name	EU region	EMIS region	History of self-injection	% Daily use of alcohol	% Concerned about use of alcohol	% Daily use of tobacco
at	Austria	EU	Central-West	5.1	43.4	11.3	45.1
be	Belgium	EU	West	6.0	48.2	13.4	33.6
bg	Bulgaria	EU	South-East (EU)	5.0	36.6	13.0	52.8
cy	Cyprus	EU	South-East (EU)	5.6	32.3	8.2	53.7
cz	Czech Republic	EU	Central-East	3.7	39.1	9.2	36.2
de	Germany	EU	Central-West	5.3	42.9	12.6	42.7
dk	Denmark	EU	North-West	3.1	40.1	15.1	34.9
ee	Estonia	EU	North-East	2.4	39.3	26.9	42.1
es	Spain	EU	South-West	5.9	31.2	8.7	38.5
fi	Finland	EU	North-West	5.3	36.7	19.3	32.6
fr	France	EU	West	3.7	41.6	9.2	36.5
gr	Greece	EU	South-West	4.5	33.1	7.2	47.9
hu	Hungary	EU	Central-East	3.5	32.3	9.7	37.3
ie	Republic of Ireland	EU	West	2.9	40.5	23.6	36.3
it	Italy	EU	South-West	4.1	26.3	33.4	36.5
lt	Lithuania	EU	North-East	2.9	42.9	18.7	44.7
lu	Luxembourg	EU	Central-West	2.3	46.6	18.6	37.4
lv	Latvia	EU	North-East	4.8	37.8	28.1	47.6
mt	Malta	EU	South-East (EU)	7.6	35.6	14.4	27.4
nl	Netherlands	EU	West	8.6	50.9	12.8	34.6
pl	Poland	EU	Central-East	3.7	40.6	12.6	39.1
pt	Portugal	EU	South-West	4.7	33.6	32.7	44.8
ro	Romania	EU	South-East (EU)	3.3	30.2	7.8	51.4
se	Sweden	EU	North-West	3.3	41.5	11.0	34.2
si	Slovenia	EU	Central-East	5.3	29.9	7.0	42.0
sk	Slovakia	EU	Central-East	2.7	29.3	6.4	38.5
uk	United Kingdom	EU	West	5.2	44.7	21.3	31.1
ch	Switzerland	EEA/EFTA/acceding	Central-West	5.8	47.2	13.7	36.8
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	4.9	30.8	16.2	42.1
no	Norway	EEA/EFTA/acceding	North-West	5.2	43.5	22.3	43.6
ba	Bosnia & Herzegovina	other	South-East (non-EU)	4.0	27.8	11.9	53.3
by	Belarus	other	East	9.4	35.4	19.5	47.9
md	Moldova	other	East	5.3	41.6	12.4	57.1
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	2.6	29.1	13.8	39.7
rs	Serbia	other	South-East (non-EU)	4.8	22.0	8.4	46.6
ru	Russia	other	East	8.9	35.2	20.4	46.5
tr	Turkey	other	South-East (non-EU)	4.2	25.3	13.0	50.2
ua	Ukraine	other	East	7.8	36.3	20.9	51.4
	Low			2.3	22.0	6.4	27.4
	Median			**4.8**	**36.7**	**13.2**	**42.1**
	High			9.4	50.9	33.4	57.1
	EU27 median			**4.5**	**39.1**	**12.8**	**38.5**

	Drug use							
	Average number of different drugs used	% Concerned about use of recreational drugs	% Poppers use in previous 4 weeks	% Cannabis use in previous 4 weeks	% Viagra use in previous 4 weeks	% Benzodiazepine use in previous 4 weeks	% Party drugs use in previous 4 weeks	% Hard drugs use in previous 4 weeks
	1.33	2.3	24.5	11.6	6.0	3.3	4.4	0.2
	1.78	4.2	27.9	13.7	12.5	5.7	9.1	0.2
	1.43	5.5	6.4	7.0	2.4	5.3	4.7	0.2
	1.36	2.3	15.7	9.0	8.3	4.5	4.1	0.7
	1.52	3.1	12.5	15.3	4.1	11.1	5.4	0.2
	1.28	3.1	21.5	9.6	7.1	2.7	4.7	0.2
	1.32	3.2	18.0	10.0	9.4	2.9	4.9	0.5
	1.17	1.5	8.5	5.4	5.4	5.8	1.5	0.5
	1.95	5.1	15.3	18.3	7.2	8.3	11.5	0.5
	1.04	2.1	12.4	4.6	7.2	9.1	1.4	0.3
	1.59	2.8	25.6	14.4	7.0	7.2	6.3	0.4
	1.32	2.7	8.4	9.3	5.3	2.8	2.7	0.3
	1.48	2.1	13.7	8.4	5.9	7.6	4.9	0.1
	1.80	6.3	23.9	14.5	9.6	5.4	8.8	0.5
	1.32	12.5	8.2	10.8	5.8	6.0	3.8	0.4
	1.08	2.2	5.8	4.9	1.9	5.0	1.9	0.0
	1.32	3.6	25.2	10.4	9.3	5.4	5.4	0.0
	1.09	6.9	4.5	4.3	4.9	5.2	3.3	0.1
	1.67	8.5	24.6	5.1	8.7	5.9	6.8	0.8
	2.19	4.8	34.3	17.5	21.2	4.1	16.8	0.6
	1.26	3.0	20.2	6.1	4.7	4.8	4.6	0.4
	1.42	10.2	9.5	12.9	3.8	11.9	4.9	0.4
	1.25	3.5	6.9	5.1	2.5	2.4	1.9	0.2
	0.98	1.3	14.7	4.5	7.3	2.8	2.5	0.2
	1.46	3.7	14.7	12.9	3.7	4.0	5.2	0.2
	1.28	2.6	9.0	10.1	4.4	8.7	3.2	0.2
	2.03	5.7	29.3	12.5	16.7	4.8	12.5	0.5
	1.54	4.5	25.3	14.3	10.2	4.4	7.6	0.4
	1.43	5.4	11.8	11.7	4.9	6.4	3.7	0.0
	1.23	2.9	10.1	6.9	5.8	4.6	4.0	0.3
	1.19	2.0	2.0	5.3	1.3	10.0	2.6	0.0
	0.94	0.8	4.6	2.3	4.9	3.4	1.4	0.6
	0.83	3.6	4.5	5.4	1.8	5.5	0.9	0.0
	1.35	2.6	7.7	8.5	0.0	8.5	2.5	0.8
	1.31	2.2	5.0	10.6	4.3	10.6	2.7	0.5
	1.16	2.3	9.7	5.5	5.2	3.0	2.9	0.3
	1.19	5.6	8.7	6.7	6.5	4.9	2.0	0.4
	0.95	1.8	5.0	4.8	3.7	2.3	1.2	0.2
	0.83	0.8	2.0	2.3	0.0	2.3	0.9	0.0
	1.32	**3.1**	**12.1**	**9.2**	**5.6**	**5.3**	**4.1**	**0.3**
	2.19	12.5	34.3	18.3	21.2	11.9	16.8	0.8
	1.3	**3.2**	**14.7**	**10.0**	**6.0**	**5.3**	**4.7**	**0.3**

10. Stigma, discrimination and homophobia

10. Stigma, discrimination and homophobia

10.1 Introduction

Laws exist to protect LGBT (lesbian, gay, bisexual and transgender) people from violence and discrimination in several European countries, but stigma and homophobia (also known as 'homonegativity') remain widespread.

Sometimes stigma can take the form of internalised homonegativity, something that laws cannot protect against, as only a better social and cultural milieu can give LGBT people the opportunity to live their lives with self-esteem, free of the fear and shame attached to their desires and to the public expression of their identities.

Where homonegativity takes the form of overt stigma, discrimination and violence, laws and societies can offer protection. Corroborating previous observations from the Eurobarometer (European Commission, 2006), a recent study by Štulhofer and Rimac confirmed substantial differences in the degree of homonegativity in Europe (Štulhofer and Rimac, 2009). Countries that joined the European Union in 2004 and 2007 (new EU Member States) expressed stronger homonegativity than the older EU Member States (as of 1995). This difference was explained by the economical and sociocultural differences characterising the older and newer EU Member States. Most of the older EU Member States are economically more developed and politically more stable, with better functioning democratic institutions and more efficient legal systems. Some of the newer EU Member States are less developed in terms of generalised trust, involvement in civic organisations and confidence in institutions. Strong cultural and religious differences regarding attitudes towards sexuality and homosexuality were highlighted among both the older and newer EU Member States, suggesting that EU institutions need to take a more proactive approach to reduce social and institutional homophobic attitudes (Štulhofer and Rimac, 2009).

When talking about HIV among MSM, stigma may be manifested as homonegativity (enacted or internalised) and as HIV-related stigma. MSM diagnosed with HIV infection may face stigma and discrimination on both counts.

EMIS asked MSM to report all three forms of stigma: HIV-related stigma (for those who are HIV-positive), experience of anti-gay violence and internalised homonegativity. This chapter will highlight the prevalence of these three forms of stigma and discuss the ways they affect the lives of MSM and the variables associated with them.

10.2 HIV-related stigma

The association of stigma with disease is not a new phenomenon. Throughout history the stigma attached to epidemic illnesses and social groups associated with them has often hampered treatment and prevention, and has inflicted additional suffering on those who are sick and their loved ones (Herek, 1998). In this sense, people diagnosed with HIV infection face not only the physical and psychological consequences of their infection but also the stigmatising reactions of others. Moreover, HIV-related stigma (HIV-RS) and sexual stigma attached to homosexuals and bisexuals are often linked: this fact has led to the development of theoretical models that focus both on the cognitive-instrumental aspects, related to contagiousness and seriousness of the infection, and on the symbolic-associative aspects related to blaming and prejudice towards those who are at risk of infection because of their norm-violating sexual lifestyles.

Like sexual stigma, HIV-RS is not immediately apparent to others. Therefore, individuals may potentially, rather than automatically, be discredited. The stigmatised trait may be concealed from others in order to pass as 'normal', and individuals then use this as a way to cope with the expectation that their stigma will be recognised and result in discrimination. In this case, personal choice about disclosure becomes a key concern. Yet even those who successfully conceal their stigmatised trait may suffer from their own internal perception of being socially devalued, or from direct experience of prejudicial discourses about others with the same status.

HIV-RS has widely emerged as a major barrier to HIV care, as well as to primary and secondary prevention. It can inhibit protective behaviour, reduce the effectiveness of prevention measures (UNAIDS, 2009) and hinder voluntary counselling, testing and perceived access to care and treatment. Thus HIV-RS will, ultimately, increase morbidity and mortality. Moreover, HIV-RS can impair social relationships, access to resources, the provision of social support and psychological well-being (Schaalma & Pryor, 2008).

10.2.1 Construction of the HIV-related stigma scale

Several measures have been proposed for assessing HIV-RS. Some have focused on those responsible for stigmatising people; others have focused on those stigmatised. Among the latter, the proposed scales (HIV Stigma Scale or HASI-P) include more than one factor. The HIV Stigma Scale includes items related to worries and choices about disclosure, but the HASI-P does not. Therefore the HIV Stigma Scale was made up of four factors, two of which were labelled 'disclosure concern' and 'personalised stigma'.

In EMIS we used the Consumer's Experience of Stigma Questionnaire (CESQ), which was drawn up by Wahl (1999) and adjusted and used for people with HIV infection (Stutterheim, Bos & Schaalma, 2008). The Cronbach's alpha for their adaptation was 0.75. The scale presented to EMIS respondents had 11 items. Each item was answered on a frequency scale from 'Never' to 'Very often' with a

Figure 10.1: HIV-RS full score by EU region of residence and European sub-region

	HIV-RS full score
EU membership	
Older EU/EFTA Member States	2.38
Newer EU Member States	2.62
Non EU/EFTA countries	2.96
European sub-region	
West	2.43
North-West	2.49
Central-West	2.30
South-West	2.48
North-East	2.52
Central-East	2.60
South-East (EU)	2.71
South-East (non-EU)	2.85
East	2.99

Figure 10.3: Percentages of HIV-positive MSM who never disclosed their HIV status by EMIS sub-region

European sub-region	% of HIV-positive respondents who never disclosed their HIV+ status
West	3.7
North-West	5.7
Central-West	5.3
South-West	3.4
North-East	13.3
Central-East	3.8
South-East (EU)	10.3
South-East (non-EU)	1.4
East	3.5

Figure 10.2: HIV-RS by European sub-region and reasons for not taking ART. Multivariable linear regression

	B*	P-value	95% Confidence Interval	
			Lower	Upper
Recruitment				
Gay Romeo	-0.003	0.999	-0.069	0.069
Other	REF.			
Age				
<25	-0.080	0.136	-0.195	0.027
25-39	-0.007	0.840	-0.079	0.064
40+	REF.			
Education				
Low/medium	-0.025	0.460	-0.09	0.041
High	REF.			
Settlement size				
<500 000	0.004	0.894	-0.061	0.07
Larger cities	REF.			
Outness				
Out to no-one or only a few	0.064	0.124	-0.018	0.146
Out to more than a few	REF.			
European sub-region				
West	-0.461	0.000	-0.637	-0.285
North-West	-0.455	0.000	-0.699	-0.211
Central-West	-0.627	0.000	-0.808	-0.446
South-West	-0.456	0.000	-0.635	-0.276
North-East	-0.409	0.063	-0.840	0.022
Central-East	-0.299	0.010	-0.528	-0.071
South-East (EU)	-0.506	0.009	-0.884	-0.127
South-East (non-EU)	-0.061	0.746	-0.431	0.309
East	REF.			
Reasons for not taking ART				
My doctor says I don't need antiretroviral treatment at the moment	0.071	0.216	-0.042	0.184
Not for this reason	REF.			
To avoid the side-effects	0.083	0.222	-0.05	0.216
Not for this reason	REF.			
I feel it is not necessary	-0.096	0.134	-0.222	0.030
Not for this reason	REF.			
I'm afraid people will notice	0.345	0.003	0.121	0.569
Not for this reason	REF.			
I don't want to be reminded about HIV every day	0.244	0.003	0.081	0.407
Not for this reason	REF.			
The treatment is not available in the country I live in	0.216	0.391	-0.278	0.709
Not for this reason	REF.			
I can't afford the treatment	0.396	0.000	0.186	0.607
Not for this reason	REF.			
Intercept	**2.727**	**0.000**	**2.523**	**2.932**

* B: regression coefficient

score between one and five. The results of exploratory factor analysis showed that the scale had the capacity to distinguish disclosure concerns from other stigma perceptions and experiences. Principal factor analysis showed the emergence of two factors whose eigenvalue exceeded one, and the screen test supported this result. The first factor included nine items such as 'I have been treated less favourably by others when they have learned that I have HIV' and 'I have personally heard others say unfavourable or offensive things about people with HIV'. The second factor included the two remaining items: 'I have avoided telling others that I have HIV' and 'I have worried that others will view me unfavourably because I have HIV'. The two-factor structure was confirmed for the English language sample. Following the theoretical hypothesis about stigma, the two factors were labelled 'enacted stigma' and 'disclosure concerns'. The overall HIV-RS scale's internal consistency (Cronbach alpha) was high (α=0.83). Similar reliability was found for the 'enacted stigma' subscale (α=0.84), while the 'disclosure concerns' subscale was lower (α=0.58).

This analysis was coherent with previous studies, especially as regards the internal consistency of the overall scale and the theoretical distinction between 'enacted stigma' and 'disclosure concerns'. Nevertheless, there are serious limitations which should be taken into consideration and the data should be interpreted with caution. Respondents were presented with a set of possible answers; one of which was added to the original set of the CESQ scale. 'Does not apply to me' did not appear in the original version of the scale, but was added in the EMIS questionnaire. When the data were analysed, however, it became clear that for most of the questions the meaning of the answer 'Does not apply to me' was almost the same as the meaning of 'Never'. Choices made about the treatment of the answer 'Does not apply to me' – excluding it from the analysis or merging it with those who answered 'Never' – might in some cases have led to very different results and interpretations. For example, merging 'Does not apply to me' with 'Never' would lower the scores of those who perceived HIV-RS.

For this report we examined scores for the HIV-RS scale overall, after listing as missing those who answered any statement with 'Does not apply to me'. Further results concerning the subscales are specified when needed. The HIV-RS full scale scores were examined for each country and for sub-regions. Associations between HIV-RS and sociodemographic, psychosocial and behavioural variables were assessed. Analysis of variance (ANOVA) was used to test the association between HIV-RS and dichotomous or ordinal variables. Linear regression was used to assess the correlation between HIV-RS as a dependent variable and continuous or dichotomous variables as independent.

Finally, given the possible limitations in the construction and interpretation of our version of the scale, we decided to show the means for any single item, both at country and at sub-regional level. Some of these results per item will be presented in the next sub-chapter, while the HIV-RS results will be shown subsequently.

10.2.2 Average figures per item by European sub-region

Disclosure of one's own HIV positive status showed the highest average frequency ('Often') in almost every sub-region, the only exception being South-East Europe (non-EU), where a slightly higher figure was registered for the item 'I have personally heard others say unfavourable or offensive things about people with HIV'.

Among the items related to direct or indirect stigmatisation, having heard offensive things about HIV-positive people from others or in the media showed the highest means, from 'Sometimes' (2.82) to 'Often' (4.17) in all sub-regions. Sexual avoidance by others after disclosure ('I have been shunned or avoided sexually when it was known that I have HIV') was higher than social avoidance ('I have been shunned or avoided socially when it was known that I have HIV') in all sub-regions. While on average sexual avoidance occurred 'Sometimes', social avoidance happened more 'Rarely'. In general, compared with the other forms of enacted stigmatisation, and excluding indirect forms such as 'Things heard or read about HIV positive people', sexual avoidance after disclosure had the highest figures in all sub-regions. At country level, differences in means for sexual avoidance were very large, ranging from 'Rarely' in Norway (2.13) to 'Often' (4.0) in Spain.

Compared with the other items, denial of medical help had the lowest means in all sub-regions. Although the average frequencies ranged from 'Never' to 'Rarely' in all sub-regions, denial of medical help was reported more frequently in all eastern sub-regions, with the highest average frequency in the East.

10.2.3 HIV-RS at country and sub-regional level

The mean overall HIV-RS score for all respondents with a valid score was 2.40 (SD=0.71), ranging from 2.23 in the Netherlands to 3.18 in Ukraine. However, country level data should be considered with caution because of some very small sample sizes, even though samples of fewer than 10 HIV-positive respondents were excluded (Figure 10.1). Sub-scale scores were significantly different. The 'enacted stigma' scores were always lower than 'Disclosure concern' scores, both at the overall sample level and at country level.

As shown in Figure 10.1, there was a significant difference among the overall scores for the three European regions. Scores were associated with the inclusion-exclusion process of the European Union, with the lowest score in the older EU Member States (2.38), the highest in the non-EU countries (2.96), and the newer EU Member States in the middle (2.62). Similar results were found by analysing data for each sub-region. Eastern sub-regions had scores higher than 2.52, ranging from 2.52 in North-East to 2.99 in East Europe, but all other sub-regions had scores below 2.50, although South-West and North-West Europe were only slightly lower than 2.50. 'Disclosure concerns' and 'enacted stigma' subscale scores had similar patterns, both for regions and sub-regions.

Multivariable analysis in a unique model (Figure 10.2), after adjusting for other variables, confirmed that men in western sub-regions were less likely to suffer HIV-RS than those living in East Europe.

Individuals disclosed their own HIV positive status – very often, often, or sometimes in the large majority of the overall sample – although 5% stated that they had never disclosed their health status. Differences between sub-regions were significant, perhaps due to the relatively high percentages in North-East (13%) and South-East (10%) Europe where respondents never disclosed their HIV infection (Figure 10.3).

10.2.4 HIV-RS and homosexuality

When the association between HIV-RS and internalised homonegativity (IH) was assessed, it was found that IH scores were significantly and positively associated with HIV-RS scores (β=0.211, p<0.001), although variations in IH explained only 4.4% of the variance in HIV-RS (R2=0.044).

We also assessed the association between HIV-RS and being out as a gay or bisexual man and found that those who were out to most of the people they knew had a significantly lower stigma score than those who were out to fewer people. The result was similar for both subscales. Linear regression modelling confirmed that IH and 'Not being out' were positively and independently associated with HIV-RS.

Figure 10.4: Association between HIV-RS full score and ART treatment. Univariable analysis

	HIV-RS full score	Test of association
Have you ever taken ART for your HIV infection?		F(1, 9104)=38.596 , p<0.001
Yes	2.43	
No	2.31	
Reasons for not starting ART		
My doctor says I don't need ART at the moment		F(1, 1927)=1.680 , p=0.195
Yes	2.31	
No	2.38	
To avoid the side-effects		F(1, 1990)=17.172, p<0.001
Yes	2.55	
No	2.30	
I feel it is not necessary		F(1, 1927)=0.128, p=0.720
Yes	2.33	
No	2.31	
I'm afraid people will notice		F(1, 1927)=32.907, p<0.001
Yes	2.90	
No	2.30	
I don't want to be reminded about HIV every day		F(1, 1927)=21.839, p<0.001
Yes	2.64	
No	2.30	
The treatment is not available in the country I live in		F(1, 1927)=17.774, p<0.001
Yes	3.24	
No	2.31	
I can't afford the treatment		F(1, 1927)=29.197, p<0.001
Yes	2.83	
No	2.30	

10.2.5 HIV-RS and disclosure of one's own HIV-positive status

Examination of the association between HIV-RS and disclosure of one's own HIV positive status to non-steady male partners before or during sex revealed that having omitted or lied about one's own HIV positive status was significantly associated with a higher HIV-RS score. Logistic regression analysis confirmed that those who scored higher in terms of HIV-RS were 25% more likely to have omitted or lied about their HIV status during or before sex. This association was significant only for the 'disclosure concerns' subscale; it was not confirmed for the 'enacted stigma' subscale. This result may appear predictable, but it should be considered that 'HIV disclosure' in the HIV-RS scale refers not only to one's own disclosure to sexual partners but also to disclosure in general, and the latter does not necessarily follow the former.

10.2.6 HIV-RS and antiretroviral treatment

We assessed the association between HIV-RS and the decision to start or not to start antiretroviral therapy (ART). EMIS data showed that a decision to start ART was associated with a higher HIV-RS score. Logistic regression showed that those who scored lower in terms of HIV-RS were also 21% less likely ever to have taken ART: lower perceived stigma was correlated with not being on ART. However, people diagnosed with HIV infection have to choose whether to receive ART. A lower HIV-RS and lower probability of having ever taken ART could therefore simply be the result of a more recent diagnosis of HIV infection. When focusing on the reasons why a man might decide not to start ART, we assessed associations between specific reasons and HIV-RS. Significant reasons were: worrying about side effects, fear that people would notice, not wanting to be reminded of one's HIV status and personal inability or inability at country-level to afford the treatment. Individual-level, multivariable analysis (see Figure 10.2) sustained the following associations: fear that people would notice, not wanting to be reminded of one's HIV status and personal inability to afford the treatment.

Further analysis through linear regression showed that HIV stigma explained no more than 1.6% of the variance for the variables.

10.2.7 HIV-related stigma and sexual happiness

Finally, there was also a significant difference in stigma perception between those who declared that they were happy about their sex life and those who said they were not. The former had lower HIV-RS scores than the latter (F (1,8603)=364.576, p<0.001). This is consistent with findings about personal and public comfort with one's own sexual identity, since stigma perception and internalisation (both for HIV status and sexual identity), coming out and sexual happiness are probably interrelated factors of psycho-social wellbeing.

10.3 Abuse and anti-gay violence

10.3.1 Abuse at country and sub-regional level

Abuse towards men who are attracted to men was assessed by means of three questions:

- When was the last time you were stared at or intimidated because someone knew or presumed you are attracted to men?
- When was the last time you had verbal insults directed at you, because someone knew or presumed you are attracted to men?
- When was the last time you were punched, hit, kicked or beaten because someone knew or presumed you are attracted to men?

Intimidation: having been stared at or intimidated

Of the overall sample, a third (34%) reported having been stared at or intimidated in the last 12 months. In two countries, 50% or more of respondents had been intimidated in the last 12 months (Portugal (54%) and Romania (50%)). More than one in three MSM reported intimidation in 20 other countries. The lowest proportions were found in the Czech Republic (14%) and Slovakia (21%). At a sub-regional level, the highest proportions were in West (43%) and South-East (EU) Europe (44%) and the lowest in Central-West (27%), Central-East (29%) and North-West Europe (29%) (Figure 10.5). If we consider the EU inclusion process in the light of findings reported by previous studies about homonegativity in Europe, we can see that non-EU/EFTA countries showed the highest percentage (38%) of staring or intimidation, but that levels in the older EU/EFTA Member States (34%) were similar to those in the newer EU Member States (33%). As is shown further on the report, this last unexpected result is reversed when verbal insults or physical abuse are taken into account.

Verbal abuse: having been verbally insulted

Over a quarter (27%) of MSM in the total sample had been insulted in the last 12 months. This happened to over a third of men in six countries: Lithuania (42%), Bulgaria (39%), Belarus (39%), Moldova and Poland (both 36%), and Slovakia (34%). Verbal abuse was most common in eastern sub-regions, ranging from 32% in East and Central-East to 34% in South-East (EU) Europe, with the exception of South-East (non-EU; 22%) (Figure 10.5). If we consider the inclusion process of the EU, we see that the lowest percentage was in the older EU Member States (26%), followed by non-EU/EFTA countries (29%) and the newer EU Member States (33%).

Physical abuse: having been punched, hit, kicked or beaten

Overall, one in 40 (2.5%) had been physically abused because of his sexuality in the last 12 months. This had occurred more commonly in 12 countries– 4% in Slovakia, the Czech Republic, Ireland, Estonia and Bulgaria; 5% in Serbia, Moldova and Bosnia and Herzegovina; 6% in the former Yugoslav Republic of Macedonia, Belarus and Lithuania and 7% in Poland.

The EMIS abuse score

In order to have an overall measure of abuse in the last 12 months, we constructed an abuse score ranging from 0 to 7, as follows:

0 No violence in the last year
1 Stared at or intimidated
2 Verbal violence only
3 Stared at and verbal violence
4 Physical violence only
5 Stared at and physical violence
6 Verbal and physical violence
7 All three forms of violence.

The mean score for the overall sample was 0.98. This does not mean that there may not be MSM who suffered, for example, all three forms of abuse (score 7), but only that the average value was 0.98. All country means were lower than 2. At sub-regional level, eastern sub-regions showed the highest scores, ranging from 0.96 (South-East non-EU) to 1.27 (South-East EU), with the only exception being West Europe (1.16) (Figure 10.5). If we consider the inclusion process of EU, the newer EU Member States scored highest (1.16), followed by the non-EU/EFTA countries (1.09) and the older EU Member States (0.95).

10.3.2 Demographic and socio-sexual identity variables associated with abuse

Demographic variables such as age, education and settlement size were statistically associated with abuse

Figure 10.5: Intimidation, verbal abuse, physical abuse and abuse score by European sub-region

European sub-region	% stared at or intimidated in last 12 months	% verbally insulted in last 12 months	% punched, hit, kicked, or beaten in last 12 months	Abuse score in the last 12 months
West	42.5	30.2	3.2	1.16
North-West	29.0	26.5	2.7	0.93
Central-West	27.1	26.6	2.0	0.88
South-West	36.8	21.2	1.6	0.85
North-East	31.9	32.6	4.4	1.15
Central-East	28.6	32.0	4.7	1.11
South-East (EU)	44.0	34.0	3.8	1.27
South-East (non-EU)	34.9	22.2	4.2	0.96
East	39.5	32.0	3.1	1.16

(Figure 10.6). This was especially true for age and education, while for the settlement size the difference between those living in larger cities and those living in cities with fewer than 500 000 inhabitants was small, although statistically significant. Younger MSM (under 25 years) had the highest abuse score (1.55), followed by men aged 25 to 39 years (0.90) and men over 40 (0.63). Those who reported low levels of education scored 1.14, while those who reported medium and higher levels of education had lower abuse scores (1.03 and 0.91, respectively).

Variables typically related to socio-sexual identity were all significantly associated with the abuse score. Those who identified themselves as gay reported more abuse (1.04) than those who self-identified as bisexual (0.71) or other (0.90). Those who were out to most of the people they knew reported more abuse (1.08) than others (0.84). Those whose friends were mostly men attracted to men reported more abuse (1.06) than MSM with only some (1.02) or few or no (0.85) male friends who were attracted to men.

Participation in the gay scene in the preceding four weeks was also associated with the abuse score. This was particularly relevant for those who visited a gay community centre, organisation or social group (1.31), compared with those who had visited less recently or never, but the association was statistically significant for other reported venues too.

Multivariable analysis confirmed previously presented data, after adjusting for other factors such as country and age (Figure 10.7). Younger men, men with low levels of education, and those who were out to most of the people they knew were significantly more likely to report abuse.

Figure 10.6: Abuse score by sexual identity, outness, gay network, age group, education and settlement size. Univariable analysis

	Abuse score in the last 12 months (mean)
Sexual identity	
Gay or homosexual	1.04
Bisexual	0.71
Other	0.90
Outness	
Out to most people I know	1.08
All other answers	0.84
Proportion of male friends attracted to men	
Most or all	1.06
Some	1.02
None or few	0.85
Age	
<25	1.55
25-39	0.90
40+	0.63
Education	
Low	1.14
Medium	1.03
High	0.91
Settlement size	
<500,000	0.97
Larger cities	0.99

10.4 Internalised homonegativity

Self-stigma is one dimension of sexual stigma (Herek, 1998). Meyer and Dean (1998) describe this as internalised homophobia: 'the gay person's direction of negative social attitudes towards the self, leading to a devaluation of the self and resultant internal conflict and poor self-regard' (p. 161). Internalised homophobia, more often referred to as internalised homonegativity (IH) (Hudson and Ricketts, 1980), has been described as a source of stress for MSM and linked with mental health problems (Berghe et al. 2010; Meyer 2003; Williamson 2000), poorer sexual health outcomes (Rosser et al. 2008), and –most significantly – behaviour that place them at risk of HIV transmission (Ratti et al. 2000; Ross et al. 2001).

10.4.1 Internalised homonegativity scale

The Reactions to Homosexuality scale, first developed by Ross and Rosser in 1996 and recently revised (Smolenski et al. 2010), was presented to EMIS respondents in order to measure internalised homonegativity. The eight-item scale was used, although one item ('Obviously effeminate homosexual men make me feel comfortable') was dropped prior to analysis because confirmatory factor analyses showed the scale's validity was improved without it (Smolenski et al. 2010). The statements that made up the scale were:

- I feel comfortable in gay bars
- Social situations with gay men make me feel uncomfortable
- I feel comfortable being seen in public with an obviously gay person
- I feel comfortable discussing homosexuality in a public situation
- I feel comfortable being a homosexual man
- Homosexuality is morally acceptable to me
- Even if I could change my sexual orientation, I wouldn't.

Each of the seven items or statements was answered using a five-point Likert scale from 'Strongly disagree' to 'Strongly agree'. Respondents could also check the answer 'Does not apply to me', but were then coded as missing cases, as were those who skipped an item. Some of the items were reverse-coded to prevent acquiescent response set: thus, prior to computing a mean, all items were scaled to show an increase in internalised homonegativity (IH) with an increased manifest score. The score range was 0 to 6.

10.3.2 Internalised homonegativity scale results

Due to an error during the data collection phase, the Spanish language version was short of one scale item. To allow the retention of a substantial number of cases (N=13 603) that would otherwise have been lost in analyses, the value of the item having the highest correlation with the missing item in alternative languages was imputed for the missing item. This made it possible to avoid case-wise deletion. The great majority of these cases were from respondents residing in Spain. It is therefore important to be mindful of the adjustment when interpreting the IH results for Spain.

Due to the fact that we only calculated an IH score for those respondents who provided an answer to all seven items, we did not get an IH score for the full analytic sample of 174 209 MSM, but rather for 144 177 MSM. In total, 17.2% (N=30 032) of respondents skipped one or more of the seven statements and/or answered 'Does not apply to me'. Taking all statements together, the proportion of respondents who skipped a statement varied from 1.3% to 1.4%. In other words, respondents did not skip any one statement more often than another. With respect to the answer option 'Does not apply to me', the proportion of respondents who chose this answer varied from 1.9% to 6.6% across the statements. Slightly less than 2% of respondents answered 'Does not apply to me' when presented with the statement 'I feel comfortable discussing homosexuality in a public situation'. A total of 6.6% answered 'Does not

Figure 10.7: Abuse score by country, adjusting for sociodemographic variables. Multivariable linear regression

	B*	P-value	95% Confidence Interval	
			Lower	Upper
Recruitment				
Gay Romeo	-0.090	0.000	-0.107	-0.073
Other	REF.			
Age				
<25	0.931	0.000	0.911	0.951
25-39	0.278	0.000	0.262	0.295
40+	REF.			
Education				
Low/medium	0.089	0.000	0.074	0.103
High	REF.			
Settlement size				
<500 000	-0.020	0.007	-0.034	-0.006
Larger cities	REF.			
Outness				
Out to no-one or only a few	-0.306	0.000	-0.320	-0.291
Out to more than a few	REF.			
Country of residence				
at	-0.334	0.000	-0.385	-0.284
ba	-0.144	0.231	-0.378	0.091
be	-0.050	0.050	-0.100	0.000
bg	0.001	0.987	-0.090	0.092
by	0.196	0.012	0.043	0.349
ch	-0.316	0.000	-0.363	-0.269
cy	-0.057	0.529	-0.234	0.120
cz	-0.552	0.000	-0.614	-0.491
de	-0.338	0.000	-0.366	-0.311
dk	-0.212	0.000	-0.283	-0.142
ee	-0.270	0.000	-0.391	-0.150
es	-0.408	0.000	-0.441	-0.374
fi	-0.179	0.000	-0.246	-0.113
fr	-0.154	0.000	-0.189	-0.119
gr	-0.324	0.000	-0.382	-0.266
hr	-0.258	0.000	-0.386	-0.130
hu	-0.167	0.000	-0.233	-0.101
ie	-0.029	0.386	-0.093	0.036
it	-0.376	0.000	-0.409	-0.343
lt	0.250	0.000	0.131	0.370
lu	-0.278	0.002	-0.451	-0.105
lv	-0.227	0.000	-0.338	-0.117
md	0.079	0.561	-0.187	0.345
mk	0.049	0.711	-0.212	0.311
mt	-0.069	0.607	-0.334	0.195
nl	-0.089	0.001	-0.140	-0.038
no	-0.440	0.000	-0.505	-0.375
pl	0.101	0.001	0.043	0.160
pt	-0.160	0.000	-0.205	-0.115
ro	0.056	0.085	-0.008	0.120
rs	-0.271	0.000	-0.360	-0.182
ru	-0.083	0.000	-0.130	-0.036
se	-0.429	0.000	-0.484	-0.374
si	-0.002	0.959	-0.096	0.092
sk	-0.337	0.000	-0.456	-0.219
tr	-0.193	0.000	-0.264	-0.121
ua	-0.059	0.117	-0.133	0.015
uk	REF.			
Intercept	**1.015**	**0.000**	**0.990**	**1.040**

* B: regression coefficient

apply to me' when presented with the statement 'I feel comfortable in gay bars'. A disproportionate number of men who answered that this statement did not apply to them described themselves as straight or heterosexual (23%). Another large group of men who answered that these two statements did not apply to them were men from Bosnia and Herzegovina, Lithuania, Moldova, Slovakia, and Slovenia. Between 14.2% and 16.7% from each of these countries chose the answer 'Does not apply to me' when presented with the statement 'I feel comfortable in gay bars'. These patterns suggest that the item is less suitable for measuring IH among MSM who think of themselves as straight. In addition, the fact that 6.6% of the respondents felt that the statement about being comfortable in gay bars did not apply to them may reflect the fact that gay bars are not available in all areas of Europe and that not all MSM go to gay bars.

The efficiency of a scale is determined by such aspects as the internal consistency, or reliability, of the final score for a sample of respondents. A common statistic for reliability is Cronbach's alpha. A Cronbach alpha value above 0.70 is considered to indicate that the scale is reliable (Streiner and Norman, 2003). For the IH scale used in EMIS, Cronbach alpha in the full data set was α=0.76, but varied across the 25 survey languages, from α=0.68 in Russian to α=0.87 in Polish. Among English language respondents, the scale showed an inter-item reliability of α=0.79.

How to interpret internalised homonegativity results

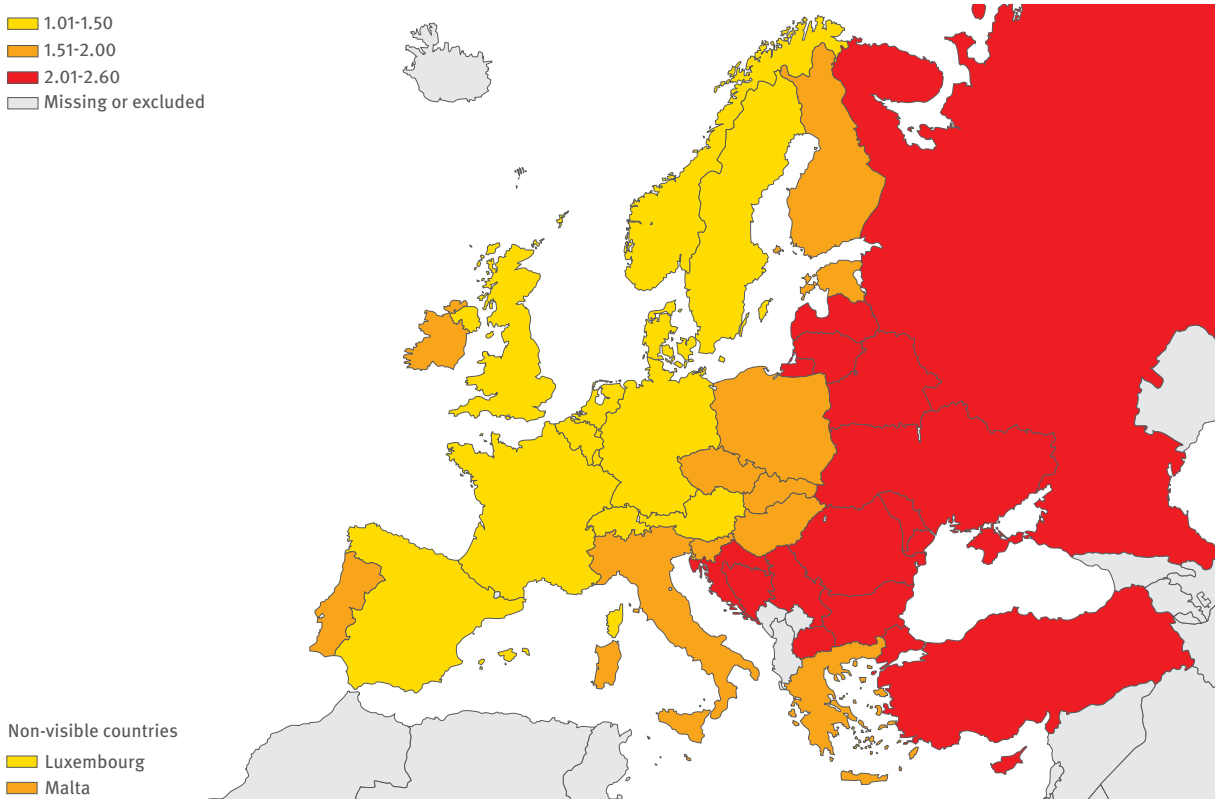
The IH scale used in EMIS is a validated scale, which should be treated strictly as a continuous variable. Therefore, it is neither appropriate to report results for single items (except when describing the scale's psychometric properties) nor to create categories, such as low, medium, or high levels of IH. In our analysis we consistently present the mean IH score. In addition, because the scale range is 0–6, the differences between groups of individuals or countries are most visible at the decimal level and not by comparisons between whole numbers. In other words, the decimals are important when examining differences in IH scores.

10.4.3 Internalised homonegativity across countries and sub-regions

For this report we examined scores for IH for each country and for sub-regions, as well as the association between IH and select sociodemographic, psycho-social and behavioural variables. Linear regression was used for continuous and dichotomous predictor variables and ANOVA for ordinal variables. In cases where the significance test for homogeneity of variance was <0.05 the Welch and Brown Forsythe statistic was used. For post-hoc tests Games-Howell was applied because it does not rely on homogeneity of variance.

The mean IH for all respondents with a valid score (N=144 177) was 1.50 (range 0–6; SD=1.23). Mean IH scores

Map 10.1: Internalised homonegativity scores across Europe



for countries ranged from 1.22 in the Netherlands (lowest) to 2.58 in Bulgaria (highest) (Map 10.1).

There was a significant difference in the IH score among all nine sub-regions, except between North-West and Central-West, between South-West and Central-East, and between South-East (EU) and South-East (non-EU) (Figure 10.8). Therefore six sub-regions emerged in terms of IH levels. From lowest to highest mean IH scores, these were: 1) North-West and Central-West, 2) West, 3) South-West and Central-East, 4) North-East, 5) East and 6) South-East Europe.

Countries in West, North-West and Central-West Europe are known for being more liberal – politically, socially and otherwise – than neighbouring European areas, so the lower IH scores among MSM in these areas are unsurprising. The finding that respondents in North-West and West Europe show the lowest IH reflects results from the European Values Survey, in which the least homonegative cluster of countries included the Nordic countries, plus the Netherlands (Štulhofer and Rimac 2009). Similarly, we found that MSM in East and South-East Europe expressed the highest IH. The European Values Survey results showed that the most homonegative cluster appeared to be concentrated in South-East and east European societies, in countries such as Romania, Lithuania, Ukraine and Russia. For MSM, it is likely that societal anti-homosexual attitudes have a bearing on self-devaluation as expressed through the internalisation of homonegativity.

10.4.4 Internalised homonegativity and socio-demographic variables

When we assessed the association between IH and age, we found that younger respondents had significantly higher IH scores, although age explained only 1.3% of the variance in IH (R2=1.3%, Figure 10.8). Until homosexually oriented men come out, many may lack access to affirmative gay community reference groups, as well as mentors and role models to channel the development of a positive socio-sexual identity. As proposed by Meyer and Dean (Meyer and Dean, 1998), it therefore seems logical that IH was found to be higher among younger MSM.

Analyses showed that the association between IH and not being out about being attracted to men was statistically significant (Figure 10.8). Those men who were out to no-one or only a few people had a higher IH score than those who were out to more people about being gay. Not being out explained around 21% of the variance in IH scores (R2=20.6%). This result is consistent with data reported in Ross and colleagues (2008), in which IH had a strong association with not being out. It also confirms the theories and data presented by others (Gonsiorek 1991; Meyer and Dean 1998), notably that IH is likely to be heightened before and in the early stages of coming out.

In line with the previous results, there was a significant difference between IH with regard to all four modes of meeting the last non-steady sex partner (Figure 10.8). Those with a lower IH score tended to meet their sex partner in social venues, whereas those with a higher IH score tended to use a website. This finding reinforces the observation that MSM with higher IH are less likely to be out and, by extension, are less likely to socialise in gay settings.

10.4.5 Internalised homonegativity and psycho-social variables

A statistically significant relationship was found between IH and respondents' experiencing various forms of violence because someone took them to be gay (Figure 10.9). Games-Howell post hoc test showed that 1) experiencing no violence was significantly different from being stared at, 2) being stared at was significantly different from verbal violence, being stared at and verbal violence or all three forms of violence. In contrast to men who are not out, it is more

Figure 10.8: Internalised homonegativity and socio-demographic variables

Variables	Mean IH scores	Test of association
European sub-region		F(8, 144168)=845.54, p<0.001
Central-West	IH score=1.30	
North-West	IH score=1.34	
West	IH score=1.40	
South-West	IH score=1.65	
Central-East	IH score=1.76	
North-East	IH score=1.96	
East	IH score=2.11	
South-East (EU)	IH score=2.31	
South-East (non-EU)	IH score=2.31	
Age		β=-0.109, p<0.001
Outness		β=1.258, p<0.001
Out to no-one or only a few	IH score=2.41	
Out to more than a few	IH score=1.16	
Location of meeting last sex partner		F (3, 102788)=460.88, p<0.001
Social venues	IH score=1.16	
Sex-focused venues	IH score=1.31	
A website for MSM	IH score=1.57	
Elsewhere	IH score=1.46	

Figure 10.9: Results for test of association between internalised homonegativity and sociodemographic variables

Variables	Mean IH scores	Test of association
Experience of violence in last 12 months		F (7, 143395)=70.91, p<0.001
No violence	IH score=1.47	
Stared at or intimidated	IH score=1.67	
Verbal violence	IH score=1.41	
Stared at and verbal violence	IH score=1.47	
Physical violence	IH score=1.79	
Stared at and physical violence	IH score=1.52	
Verbal and physical violence	IH score=1.51	
All three forms of violence	IH score=1.52	
Reached via targeted HIV prevention programmes		β =-0.139, p<0.001
Yes	IH score=1.38	
No	IH score=1.75	
Knowledge of HIV testing		β =-0.139, p<0.001
Can correctly identify one to four items	IH score=1.84	
Can correctly identify five items	IH score=1.42	

likely that MSM who are open about their sexual attraction to other men face harassment and physical attacks in community settings.

As shown in Figure 10.9, IH was negatively associated with exposure to targeted HIV prevention programmes (UNGASS 9). Those respondents who had been reached by targeted prevention had a lower IH score (mean IH=1.38) than those who had not been reached (mean IH=1.75), although being reached by targeted HIV prevention programmes explained only about 2% of the variance in IH (R2=1.9%).

The same relationship was true for IH and knowledge of HIV testing (Figure 10.9). Those respondents who could correctly identify five statements related to HIV testing had a lower IH score (mean IH=1.42) than those who could correctly identify only one to four such statements (mean IH=1.84). However, this variable explained only around 2% of the variance in IH (R2=1.9%).

Collectively, these analyses show that men who have lower IH are more likely to have escaped physical violence, to have been reached by relevant HIV prevention programmes and to possess greater knowledge about HIV testing.

Figure 10.10: Results for test of association between internalised homonegativity and behavioural variables

Variables	Mean IH scores	Test of association
HIV status		F(2, 143466)=2569.07, p<0.001
No, never received HIV test result	IH score=1.85	
Yes, last test was negative	IH score=1.40	
Yes, tested positive	IH score=1.11	
Seen physician for monitoring of HIV in last six months		β =-0.027, p=0.004
Yes	IH score=1.10	
No	IH score=1.25	
Have ever taken ART		β =-0.045, p<0.001
Yes	IH score=1.08	
No	IH score=1.19	
Ever taken STI test (other than HIV)		β =-0.147, p<0.001
Yes	IH score=1.33	
No	IH score=1.70	
STI test in last 12 months		β =-0.107, p<0.001
Yes	IH score=1.31	
No	IH score=1.59	
Consumption of 'party drugs' last 12 months		β =-0.095, p<0.001
Yes	IH score=1.20	
No	IH score=1.54	
UAI with non-steady partner in the last 12 months		β =-0.006, p=0.047
Yes	IH score=1.45	
No	IH score=1.47	
Sex with women in the last 12 months		β =0.196, p<0.001
Yes	IH score=2.23	
No	IH score=1.42	

10.4.6 Internalised homonegativity and behavioural variables

HIV testing and monitoring

There was a significant difference in the IH score with respect to HIV testing. Respondents who had tested positive for HIV had a lower score (mean IH=1.11) than both those whose last HIV test was negative (mean IH=1.40) and those who had never received an HIV test result (mean IH=1.85). The fact that those respondents who had never had an HIV test showed higher IH suggests that higher IH may discourage HIV testing, which is unfortunate because of the relevance of testing to HIV prevention, treatment and care efforts. This result confirms previous findings by Shoptaw and colleagues (2009) among MSM in Los Angeles.

IH was significantly associated with both seeing a physician for the monitoring of HIV infection in the last six months and ever having taken ART (Figure 10.10). Compared with those respondents who had not seen their physician in the last six months those who said they had seen their physician had a lower IH score, but the variable explained less than 1% of the variance in IH (R2=0.1%). Furthermore, compared with respondents who had never taken ART, those who said they had taken ART had a lower IH score, although taking ART explained less than 1% of the variance in IH (R2=0.2%).

STI testing

As with HIV testing, we identified a significant relationship between IH and STI testing (Figure 10.9). Respondents who had never tested for an STI other than HIV had a higher IH score (mean IH=1.70) than men who had tested for an STI (mean IH=1.33). Taking an STI test explained 2.2% of the variance in IH (R2=2.2%). The relationship persisted when we examined STI testing in the last 12 months (Figure 10.10). Again, respondents who had not tested for an STI in the last 12 months had a higher IH score than men who had tested for an STI, although taking an STI test in the last 12 months explained only 1.2% of the variance in IH (R2=1.2%). In conclusion, higher IH appears to discourage testing for both HIV and STIs.

Substance use

As shown in Figure 10.10, the association between IH and the use of 'party drugs' was statistically significant. Those respondents who reported using drugs in the past 12 months had a lower IH score than those who did not use 'party drugs', but the variable explained less than 1% of the variance in IH (R2=0.9%). The proposal that use of substances covers feelings of IH in MSM, possibly to facilitate sexual behaviour that are not as easy when not under the influence (Halkitis et al. 2008; Larkins et al. 2006) was not substantiated in this analysis. Rather, use of 'party drugs' was associated with lower IH, which may suggest that it is men with lower IH who frequent arenas and scenes where 'party drugs' are part of the social milieu. This fits with the earlier finding that MSM who are out about being gay also have less IH.

Sexual behaviour

A marginally significant association was identified between IH and having UAI with a non-steady male partner in the last 12 months (p=0.047), with virtually identical IH scores (IH=1.45 and IH=1.47) (Figure 10.10). Those respondents who reported sex with women in the past 12 months had a significantly higher IH score than those who did not have sex with women (Figure 10.10). This variable explained about 4% of the variance in the IH score (R2=3.8%) and was supported by results showing that IH was higher among men who identified themselves as heterosexual (mean IH=2.81) or bisexual (mean IH=2.37) and lower among MSM who saw themselves as gay/homosexual (mean IH=1.31). The result is similar to data presented by Fernandez-Cerdeno (2010) and Vu et al. (2010), who found that levels of IH differed between MSM who reported past but no recent female sex partners.

10.5 Conclusions and policy recommendations

As regards HIV-RS, 'disclosure concerns' expressed through avoidance of disclosure and worries about the possible negative reactions by others after one's own disclosure were found to play the biggest role in the stigmatisation process.

When the associations between 'disclosure concerns' or 'enacted stigma' subscales and disclosure with non-steady sexual partners were assessed, significance emerged only for 'disclosure concerns'. This could be interpreted in two ways. Firstly, that the expectation of refusal, stigmatisation and negative reaction, rather than actually having suffered such reactions, is at the basis of the decision regarding disclosure before or during sex. The other interpretation is that those MSM who in general disclose their HIV positive status are also more likely to disclose it during or before sex with non-steady partners.

Given this association between general disclosure and disclosure with non-steady sexual partners before sex, even in terms of prevention strategies the EMIS findings suggest that efforts should be made to promote a cultural and social climate which will lower stigmatisation and make disclosure easier.

The association between IH, not being out, and HIV-RS suggests that MSM who do not have enough resources to publicly and personally manage their sexual identities also have fewer resources when they have to cope with HIV-RS. If we also consider the association with sexual happiness, we can conclude that for HIV-positive MSM, stigma perception and internalisation (both for HIV status and sexual identity), coming out and sexual happiness are probably interrelated factors of psychosocial wellbeing.

Finally, our preliminary analysis suggests that HIV-RS may play a role for some MSM diagnosed with HIV infection but not starting ART, since stigma attached to the side-effects of treatment and its lack of affordability were associated with HIV-RS. Further analysis is needed on this topic.

In conclusion, EMIS preliminary findings suggest that efforts to reduce stigmatisation and promote social acceptance and a more affirmative image of HIV-positive people could help to encourage disclosure of one's own HIV positive status before sex, improving psycho-social wellbeing and access to ART.

With regard to abuse and violence against MSM, at country and sub-regional level generally, lower levels of more subtle abuse often coexisted with higher levels of reported overt abuse (verbal, physical or both) and low levels of verbal abuse often coexisted with more severe forms of abuse, such as physical violence. Therefore, when levels of singular forms of abuse are compared at country and sub-regional level, low levels of minor forms of abuse do not necessarily indicate a higher acceptance of homosexuality. They are compatible with more intolerant attitudes towards homosexuality, expressed by more frequent severe forms of abuse including physical violence.

Moreover, since abuse due to sexual orientation is predominantly directed towards men who can be recognised as MSM, those who hide their identity and sexual orientation are unlikely to experience abuse. This is also confirmed by EMIS findings about the association between abuse suffered and self-identification as gay, level of outness, participation in gay networks and places visited, especially gay community centres.

These findings have at least two consequences: one relates to the reality behind the picture offered by EMIS data (or any survey on this topic) and the other relates to the policies needed to protect gay and bisexual people from violence and homophobia. Firstly, differences in the levels of abuse and anti-gay violence between European regions and countries may be even higher than suggested by our analysis, particularly in the sub-regions where lower proportions of men are out and the reported levels of abuse and anti-gay violence are quite high. Secondly, EMIS data suggest that even where gay and bisexual men are out and living their lives freely and satisfactorily, it cannot be taken for granted that the society they live in is accepting. For this reason, protection policies should be strengthened to support adequate levels of civil liberty and personal security.

Finally, the associations identified between abuse and age and abuse and educational levels give an important preliminary pointer for targeting prevention strategies against violence and abuse, confirming that younger and less educated people are particularly vulnerable.

IH is the final dimension of sexual stigma that we analysed through EMIS data. Many MSM appear to internalise living in prejudiced societies where their same-sex romantic attraction fails to conform to societal norms. As a result, many seem to opt for a safer path, which may mean not being open about being attracted to men. Those with higher levels of IH tend to be less open about their attraction to men They tend to be younger, use websites to find sex partners, and express a more bisexual orientation, so the strategies needed to reach these subsets of MSM cannot be the community-based strategies typically used to reach gay

men. In building a positive self-awareness it is important to promote self-acceptance of an individual's gay identity and feeling comfortable about being gay, perhaps particularly among MSM in South-East and eastern Europe and those who are not open about their attraction to men, as this has the potential to foster improved mental wellbeing and to encourage health-seeking behaviour.

The fact that higher levels of IH appear to discourage both HIV and STI testing has serious implications, given the relevance of testing to HIV prevention, treatment and care efforts. It is likely that initiatives to promote self-awareness among MSM would help increase HIV and STI testing which is integral to curbing the spread of HIV. Similarly, efforts to build a more positive self-awareness among MSM who struggle with IH may also affect the likelihood of such men seeking HIV care, receiving treatment for HIV infection or being reached by targeted prevention programmes, including initiatives to foster knowledge about HIV testing.

10.5 Country table

Country		Region			Stigma/discrimination						
Code	Name	EU region	EMIS region	Age median	HIV-RS full score	'Enacted stigma' score	'Disclosure concerns' score	% of HIV-positive respondents who never disclosed their HIV+ status	% who avoided disclosure of HIV+ status	% treated less favourably	% friends were unsupportive
at	Austria	EU	Central-West	31.0	2.25	3.30	1.68	3.3	3.88	1.92	1.60
be	Belgium	EU	West	34.0	2.46	3.61	1.85	3.6	4.44	3.00	1.73
bg	Bulgaria	EU	South-East (EU)	28.0	2.77	4.10	2.03	6.3	3.89	2.02	1.64
cy	Cyprus	EU	South-East (EU)	30.0	≤ 10	≤ 10	≤ 10	≤ 10	3.52	2.13	1.38
cz	Czech Republic	EU	Central-East	27.0	2.46	3.92	1.79	3.3	4.13	2.08	1.59
de	Germany	EU	Central-West	33.0	2.30	3.22	1.74	5.5	4.33	2.46	1.75
dk	Denmark	EU	North-West	34.0	2.27	3.31	1.70	6.0	3.93	2.32	1.68
ee	Estonia	EU	North-East	30.0	≤ 10	≤ 10	≤ 10	≤ 10	4.19	2.67	1.65
es	Spain	EU	South-West	32.0	2.47	3.98	1.79	3.0	4.80	3.75	2.00
fi	Finland	EU	North-West	33.0	2.69	3.86	2.00		4.08	2.70	1.73
fr	France	EU	West	34.0	2.37	3.68	1.73	5.1	3.98	2.86	1.69
gr	Greece	EU	South-West	30.0	2.77	3.99	2.07	4.4	4.14	2.23	1.82
hu	Hungary	EU	Central-East	28.0	2.67	3.83	1.97	3.1	4.33	2.15	1.56
ie	Republic of Ireland	EU	West	31.0	2.62	3.91	1.94	4.7	4.35	2.17	2.00
it	Italy	EU	South-West	33.0	2.46	3.91	1.78	3.9	3.43	2.13	1.61
lt	Lithuania	EU	North-East	27.0	2.92	3.83	2.30	27.3	4.17	2.46	1.98
lu	Luxembourg	EU	Central-West	36.0	2.56	4.00	1.84	10.0	4.25	2.67	1.77
lv	Latvia	EU	North-East	30.0	2.53	4.06	1.81	3.8	4.30	2.12	1.67
mt	Malta	EU	South-East (EU)	32.0	≤ 10	≤ 10	≤ 10	≤ 10	4.27	2.57	1.79
nl	Netherlands	EU	West	40.0	2.23	3.02	1.70	7.3	3.96	2.60	1.62
pl	Poland	EU	Central-East	28.0	2.62	3.98	1.92	3.6	4.04	2.68	2.00
pt	Portugal	EU	South-West	30.0	2.41	3.80	1.75	2.8	4.30	2.80	2.02
ro	Romania	EU	South-East (EU)	27.0	2.71	3.52	2.07	12.3	3.69	2.61	1.64
se	Sweden	EU	North-West	35.0	2.59	3.69	1.95	2.7	4.44	3.00	1.73
si	Slovenia	EU	Central-East	30.0	2.60	4.02	1.91	8.7	3.89	2.02	1.64
sk	Slovakia	EU	Central-East	26.0	≤ 10	≤ 10	≤ 10	≤ 10	4.15	2.13	1.53
uk	United Kingdom	EU	West	36.0	2.51	3.56	1.89	6.0	4.13	2.08	1.59
ch	Switzerland	EEA/EFTA/acceding	Central-West	37.0	2.25	3.33	1.68	4.1	3.69	2.16	1.71
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	29.0	3.47	4.40	2.71		3.36	2.22	3.57
no	Norway	EEA/EFTA/acceding	North-West	31.0	2.63	4.01	1.97	4.3	4.35	1.95	1.65
ba	Bosnia & Herzegovina	other	South-East (non-EU)	26.0	≤ 10	≤ 10	≤ 10	≤ 10	3.93	2.29	1.77
by	Belarus	other	East	27.0	≤ 10	≤ 10	≤ 10	≤ 10	4.15	2.13	1.53
md	Moldova	other	East	25.0	≤ 10	≤ 10	≤ 10	≤ 10	3.70	2.63	1.98
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	28.0	≤ 10	≤ 10	≤ 10	≤ 10	4.00	2.37	1.81
rs	Serbia	other	South-East (non-EU)	28.0	2.76	3.96	2.08	3.3	3.88	1.92	1.56
ru	Russia	other	East	30.0	2.92	4.10	2.18	3.5	3.93	2.29	1.77
tr	Turkey	other	South-East (non-EU)	27.0	2.76	3.88	2.11		3.69	2.16	1.71
ua	Ukraine	other	East	29.0	3.18	4.17	2.42	4.1	3.52	2.13	1.38
	Low			25.0	2.23	3.22	1.68	2.8	3.36	1.92	1.38
	Median			**30.0**	**2.60**	**3.90**	**1.92**	**4.1**	**4.06**	**2.26**	**1.70**
	High			40.0	3.47	4.40	2.71	27.3	4.80	3.75	3.57
	EU27 median			**31.00**	**2.53**	**3.83**	**1.85**	**4.55**	**4.14**	**2.46**	**1.68**

Stigma/discrimination								Abuse				IH	
% who were socially avoided	% who were sexually avoided	% who heard offensive comments about HIV+	% who were advised to lower their expectations	% who were treated unfairly	% who read offensive things in the media	% who worried about reactions	% denied medical help	Abuse score in previous 12 months	% stared at or intimidated in previous 12 months	% verbally insulted in previous 12 months	% punched, hit, kicked or beaten in previous 12 months	Internalised Homo-negativity Score (mean)	Internalised Homo-negativity Score (SD)
1.76	2.50	3.00	1.63	1.72	2.92	2.73	1.35	0.93	28.6	28.6	1.8	1.32	1.15
2.23	2.33	2.88	2.19	2.69	3.19	3.80	2.00	1.18	45.3	30.6	3.0	1.36	1.13
1.79	2.49	2.82	1.66	1.71	2.74	2.79	1.20	1.27	31.2	39.0	4.4	2.58	1.26
1.74	2.88	3.18	1.58	1.73	2.81	3.10	1.09	1.09	39.9	27.1	3.7	2.26	1.33
1.83	2.50	3.61	1.88	1.79	2.95	3.84	1.22	0.85	14.1	27.4	4.0	1.56	1.15
2.32	3.00	3.48	1.90	2.10	3.05	3.40	1.32	0.88	26.8	26.8	2.0	1.29	1.18
1.83	2.63	3.03	1.67	1.76	2.69	3.45	1.34	1.03	30.7	29.5	3.3	1.26	1.21
2.25	3.37	3.84	1.83	2.00	2.87	3.80	1.72	0.98	28.4	26.4	4.2	1.70	1.16
2.71	4.00	4.33	2.09	2.86	3.62	3.77	1.18	0.85	32.8	21.9	2.0	1.40	1.27
1.74	2.47	3.45	2.10	1.94	2.97	3.60	1.88	1.05	32.3	30.3	3.0	1.57	1.15
2.12	3.04	3.54	1.74	2.02	3.11	3.83	1.16	1.08	45.0	26.2	2.7	1.46	1.15
1.93	2.65	3.43	1.75	1.64	2.69	3.67	1.19	0.82	34.4	20.9	1.6	1.99	1.36
2.09	2.64	2.90	2.17	1.71	2.63	3.66	1.24	1.08	32.9	31.5	3.1	1.69	1.19
2.00	2.67	3.33	2.20	1.64	2.96	3.64	1.57	1.23	40.9	32.6	4.1	1.60	1.31
1.76	2.42	2.94	1.94	1.70	2.85	2.66	1.15	0.79	34.9	19.7	1.2	1.76	1.23
1.98	2.69	3.69	1.97	1.95	3.45	3.88	1.22	1.50	41.4	42.0	6.1	2.06	1.23
2.10	2.83	3.56	1.97	1.85	3.18	3.67	1.54	0.85	30.2	24.6	1.4	1.40	1.28
1.73	2.37	3.64	1.86	1.66	2.81	3.32	1.34	1.00	26.9	30.0	3.2	2.12	1.22
2.11	3.18	3.87	3.24	2.05	3.28	3.94	2.01	1.05	45.8	28.0	0.8	1.92	1.31
1.86	3.28	3.49	1.90	2.03	3.33	3.42	1.39	1.07	38.4	29.6	2.3	1.22	1.10
2.45	2.89	3.92	2.04	2.17	3.70	3.68	1.74	1.35	33.2	36.3	7.1	1.99	1.29
2.60	3.45	4.05	3.26	2.23	3.24	4.03	1.96	1.09	54.3	24.0	1.6	1.78	1.23
1.98	2.81	3.35	1.86	2.04	3.06	3.43	1.31	1.30	50.0	32.9	3.6	2.22	1.28
2.23	2.33	2.88	2.19	2.69	3.19	3.80	2.00	0.81	24.8	23.5	2.3	1.23	1.12
1.79	2.49	2.82	1.66	1.71	2.74	2.79	1.20	1.23	46.8	30.9	3.7	1.99	1.33
1.76	2.86	2.93	2.90	1.61	2.57	3.70	1.79	1.05	21.1	34.0	4.0	1.71	1.22
1.83	2.50	3.61	1.88	1.79	2.95	3.84	1.22	1.21	41.5	32.4	3.6	1.39	1.21
1.78	2.51	2.86	1.87	1.81	2.84	2.76	1.41	0.81	29.5	22.5	1.5	1.37	1.18
2.33	2.43	4.44	2.30	2.25	4.00	4.11	1.33	0.89	36.8	20.0	3.1	2.10	1.19
2.06	2.13	3.88	1.73	2.00	3.25	3.75	1.43	0.91	30.6	24.5	2.7	1.32	1.13
2.02	2.69	3.29	1.97	1.92	2.86	3.33	1.31	1.07	37.1	24.0	5.3	2.56	1.49
1.76	2.86	2.93	2.90	1.61	2.57	3.70	1.79	1.47	44.7	38.9	6.0	2.26	1.28
1.88	2.98	3.66	2.14	2.14	3.13	3.24	1.80	1.42	48.7	36.3	5.3	2.50	1.19
1.96	3.29	4.30	2.07	2.19	3.18	3.96	1.52	1.15	37.6	26.5	6.0	2.24	1.32
1.76	2.50	3.00	1.63	1.72	2.92	2.73	1.35	0.90	35.0	18.0	4.8	2.25	1.28
2.02	2.69	3.29	1.97	1.92	2.86	3.33	1.31	1.13	38.5	31.3	3.0	2.07	1.08
1.78	2.51	2.86	1.87	1.81	2.84	2.76	1.41	0.99	34.0	25.0	3.8	2.40	1.34
1.74	2.88	3.18	1.58	1.73	2.81	3.10	1.09	1.16	40.7	32.5	2.6	2.18	1.11
1.73	2.13	2.82	1.58	1.61	2.57	2.66	1.09	0.79	14.1	18.0	0.8	1.22	1.08
1.95	**2.68**	**3.39**	**1.92**	**1.89**	**2.95**	**3.65**	**1.35**	**1.06**	**35.0**	**28.3**	**3.2**	**1.77**	**1.22**
2.71	4.00	4.44	3.26	2.86	4.00	4.11	2.01	1.50	54.3	42.0	7.1	2.30	1.49
1.98	**2.67**	**3.45**	**1.90**	**1.85**	**2.96**	**3.67**	**1.34**	**1.05**	**33.20**	**29.50**	**3.10**	**1.69**	**1.22**

11. Knowledge about HIV, STIs and PEP and coverage by targeted prevention programmes

11. Knowledge about HIV, STIs, PEP and coverage by targeted prevention programmes

11.1 Knowledge about HIV, STIs and PEP

11.1.1 Introduction

EMIS included questions intended to assess the extent to which prevention needs were unmet among MSM in Europe. Responses to questions designed to evaluate knowledge about HIV, STIs and post exposure prophylaxis (PEP) should help inform the content of future educational and other prevention programmes. What do MSM across Europe and in different sub-regions already know about HIV, STIs and PEP? What knowledge areas should be addressed in prevention programmes, and where in Europe have programmes for MSM reached a satisfactory level? An overall knowledge score is presented to compare general knowledge about HIV, STIs and PEP across Europe.

As with the preceding chapters, all data should be read with national socio-demographic differences and sample sizes in mind. In addition, the European sub-regions (defined in Chapter 2) are used, unless otherwise stated. We refer to indicators that were developed by the Joint United Nations Programme on HIV/AIDS (UNAIDS, 2009) in response to the Declaration of Commitment on HIV/AIDS – a document adopted during the 2001 UN General Assembly Special Session (UNGASS) to help monitor HIV worldwide. UNGASS 14, for example, defines recommendations to assess knowledge of HIV prevention. In addition, we address UNGASS 9, which refers to coverage by HIV prevention programmes. Although EMIS did not follow all of the UNAIDS recommendations, the data provided here should be of particular value to UNAIDS and other organisations interested in monitoring knowledge of HIV, STIs, PEP, and coverage of HIV prevention programmes among MSM in Europe.

Sixteen questions were included to assess respondents' knowledge of HIV, STIs and PEP. Questions were formulated not only to assess respondents' knowledge but also to educate them. All knowledge statements were true, and respondents were told this beforehand. For each question (beginning 'Did you know that…') respondents could choose one of the following answers:

- I already knew this
- I wasn't sure about this
- I didn't know this already
- I don't understand this
- I do not believe this.

Only those who responded 'I already knew this' were considered to have had correct pre-existing knowledge. Mean national scores were tabulated for each knowledge area, based on the percentage of correct answers per respondent.

This approach probably overestimates knowledge, but any bias in the data should be consistent across populations. Thus, all knowledge scores should be treated as upper estimates of the likely knowledge in any specific population. Moreover, the presentation of these questions serves as an intervention in itself – educating respondents about HIV, STIs and PEP.

11.1.2 HIV test-related knowledge

Five questions assessed knowledge about HIV in general and about testing for HIV in particular. Respondents were asked if they knew that the following statements were true:

- AIDS is caused by a virus called HIV.
- There is a medical test that can show whether or not you have HIV.
- If someone becomes infected with HIV it may take several weeks before it can be detected in a test.
- There is currently no cure for HIV infection.
- HIV infection can be controlled with medicines so that its impact on health is much less.

Mean national scores on questions about test-related knowledge ranged from around 82% in Turkey to nearly 97% in the Netherlands and Sweden, and the median of national mean scores was about 93%. Only residents of 10 countries scored below 90% on average – all either in South-East (from lowest to highest: Turkey, Cyprus, Romania), North-East (Lithuania, Latvia) or East Europe (Ukraine, Moldova, Russia, Belarus), and Finland (90%) was the only country from North-West Europe to have scored below 90%. The 10 countries scoring highest on this variable were all in West (the Netherlands, the UK, Belgium), North-West (Sweden), Central-West (Switzerland, Luxembourg, Germany, Austria) or South-West Europe (Portugal), with the exception of Croatia (96%), which is in South-East Europe and not part of the EU. All countries in West and Central-West Europe scored above the median (93%) apart from Ireland, with a score of 93%.

11.1.3 HIV transmission-related knowledge

Questions about HIV transmission differed from the five questions suggested under UNGASS 14 covering 'Knowledge about prevention of HIV transmission'[1] in order to better reflect the lives of MSM in Europe. Rather than asking about the risk of transmission via mosquitoes, sharing meals and monogamous relationships, EMIS respondents were asked if they knew that the following statements were true:

1 UNGASS 14 questions designed to measure knowledge about the prevention of HIV transmission include: (1) Can having sex with only one faithful, uninfected partner reduce the risk of HIV transmission? (2) Can using condoms reduce the risk of HIV transmission? (3) Can a healthy-looking person have HIV? (4) Can a person get HIV from mosquito bites? (5) Can a person get HIV by sharing a meal with someone who is infected? (UNAIDS, 2009).

- You cannot be confident about whether someone has HIV or not from their appearance.
- Effective treatment of HIV infection reduces the risk of HIV being transmitted.
- HIV cannot be passed during kissing, including deep kissing, because saliva does not transmit HIV.
- You can pick up HIV through your penis while being 'active' in unprotected anal or vaginal sex (fucking) with an infected partner, even if you don't ejaculate.
- You can pick up HIV through your rectum while being 'passive' in unprotected anal sex (being fucked) with an infected partner.

In addition, the calculation of knowledge scores in EMIS differed from the calculation used by UNAIDS, where knowledge scores were based on those who answered all questions correctly. Instead, EMIS calculated the percentage of statements that each respondent claimed to have known already. National scores are based on the mean of respondents' scores.

The median of the national mean knowledge scores about HIV transmission was about 81%. Scores ranged from 75% in Lithuania and Turkey to 88% in the Netherlands. The 11 countries where scores were highest were broadly located in western Europe - in West (from highest to lowest in each sub-region: the Netherlands, the UK, France, Belgium), North-West (Denmark, Sweden, Finland), Central-West (Switzerland) and South-West Europe (Portugal, Spain, Italy), although Ireland (80%) – in West – and Austria (80%) – in Central-West had relatively low scores. The 10 countries where scores were lowest were all in North-East Europe (from lowest to highest in each sub-region: Lithuania, Latvia) South-East (Turkey, Romania, Cyprus, Malta), East (Moldova, Ukraine, Russia) and Central-East Europe (Slovakia). Compared with other countries in North-East Europe, Estonia had a relatively high score (81%); Croatia and Bosnia and Herzegovina – both in the South-East and neither part of the EU – scored over 82%.

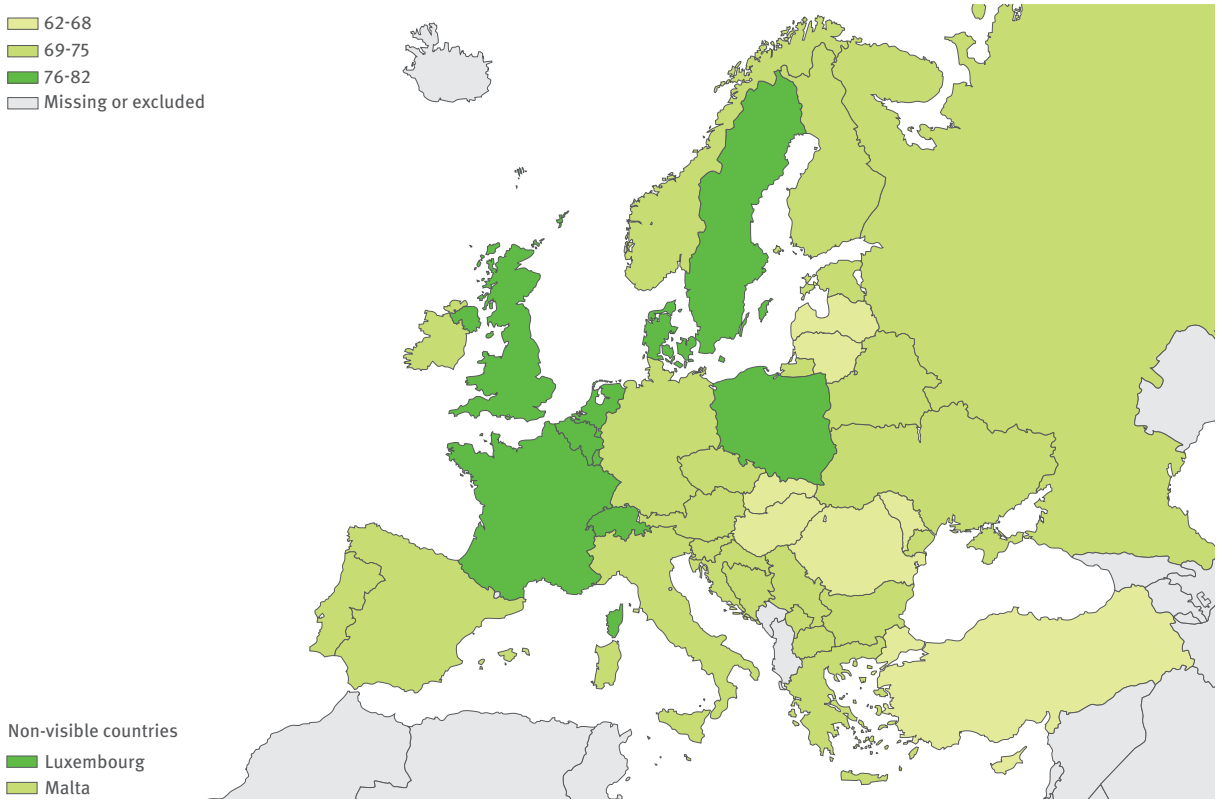
11.1.4 STI-related knowledge

In addition, EMIS assessed respondents' general knowledge about other STIs. Questions in this set asked whether respondents knew that the following three statements were true:

- Even without ejaculation, oral sex (sucking and being sucked) carries a risk of infection with syphilis or gonorrhoea.
- When HIV infected and uninfected men have sex together, the chances of HIV being passed on are greater if either partner has another sexually transmitted infection.
- Most sexually transmitted infections can be passed on more easily than HIV.

National mean scores ranged from around 56% in Cyprus to 78% in the Netherlands. The median of national mean scores was about 65%. The eight countries where scores

Figure 11.1: Mean overall knowledge scores across 38 countries



were highest were in the West (the Netherlands, the UK), North-West (Sweden, Finland, Norway), Central-West (Germany, Switzerland), and South-West Europe (Portugal). The countries with the next highest scores were from Central-East (Poland), South-East outside the EU (Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia), and East Europe (Belarus). The only countries to score over 70% were Finland (71%), the UK (72%), Sweden (73%), and the Netherlands (78%). The ten countries with the lowest scores – all around 60% or below – were in the South-East (Cyprus, Turkey, Romania), North-East (Lithuania, Estonia, Latvia) and Central-East Europe (Hungary, Slovakia, the Czech Republic), along with Greece from the South-West. All South-East European countries within the EU (Cyprus, Romania, Malta, Bulgaria) scored below the median of national mean scores (65%).

11.1.5 PEP-related knowledge

The final set of knowledge items dealt with knowledge about post exposure prophylaxis (PEP). More detailed information about the use of PEP by respondents is available in Chapter 5.4. Respondents were asked if they knew that the following three statements were true:

- Post-exposure prophylaxis (PEP) attempts to stop HIV infection from occurring after a person is exposed to the virus.
- PEP is a one month course of anti-HIV drugs.
- PEP should be started as soon as possible after exposure, preferably within hours.

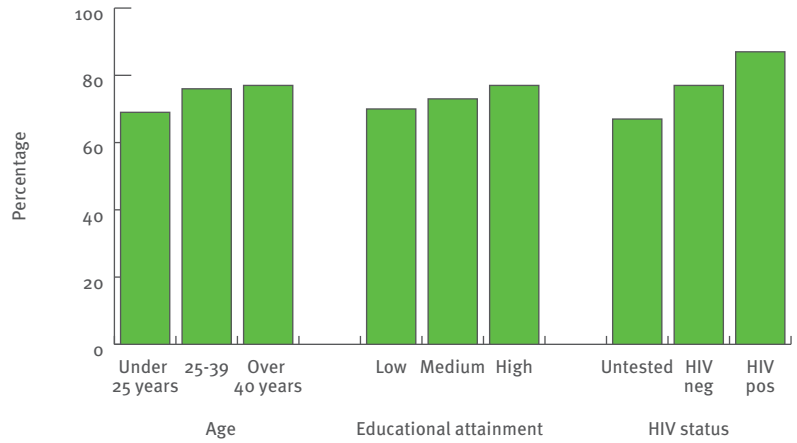
The median of national mean scores about PEP-related knowledge was slightly less than 30%. This relatively low score indicates that knowledge of PEP is significantly less common than knowledge of HIV and other STIs. However, it may also reflect the fact that the questions about PEP were more detailed and respondents may have been less likely to know the answers.

Scores ranged from around 14% in Hungary to 61% in France. The country scoring closest to France was the UK (54%). Knowledge about PEP among respondents from France was particularly high compared to all other participating countries, which reflects the more frequent use of PEP among French respondents, as discussed in Chapter 5.4. The ten countries where scores were highest in PEP-related knowledge were all from West (France, the UK, the Netherlands, Belgium) and Central-West Europe (Switzerland, Luxembourg, Austria, Germany), with two exceptions: Denmark (54%), in North-West Europe, had the third highest score, and Poland (42%), in Central-East, had the eighth highest score. The only countries in North-West to score below the median were Finland (22%), where PEP is not available free of charge after sexual exposure to HIV, and Norway (27%), where PEP has only recently been made available. Countries where respondents scored the lowest in knowledge of PEP were predominantly from the East, but were mixed across the various sub-regions. In particular, six countries scored 20% or less, including Cyprus (20%), Slovakia (19%), Serbia (18%), Lithuania (17%), Turkey (17%) and Hungary (14%).

11.1.6 Determinants of overall knowledge

Taking all 16 questions together, mean national scores ranged from 62% in Turkey to 81% in the Netherlands. The median of national mean scores was 71%. Although this range is relatively small, there was a clear divide between the WHO regions of Eastern and Western Europe, and between old, new and non-EU/EFTA Member States (Figure 11.1). Indeed, the 16 countries scoring highest were all in the WHO region of Western Europe and were all older EU/EFTA Member States, with the exception of Poland (76%), which ranked ninth in terms of overall knowledge. Next in the ranking came responses from Croatia and Bosnia and Herzegovina (both 73%). Both of these countries are in the WHO region of Central Europe and are non-EU/EFTA Member States. Western European and older EU Member States that scored lower in terms of overall knowledge include Finland (72%) and Greece (71%). Among the countries with the lowest scores are a broad range from the WHO regions of Eastern and Central Europe, including Romania

Figure 11.2: Mean overall knowledge scores by age, educational attainment and HIV testing history



(67%), Cyprus (65%) and Turkey (62%), as well as the Baltic countries of Latvia (66%) and Lithuania (63%).

In general, knowledge scores were positively associated with age, education, settlement size, identifying as gay or homosexual (rather than bisexual or by means of some other label), being out to others and having been diagnosed with HIV infection. For example, the mean knowledge score for respondents under 25 years was 69%, compared with 76% for respondents aged 25 to 39 years and 77% for those over 40 (Figure 11.2). Respondents with low educational attainment scored 70% in terms of overall knowledge, compared with 73% for those with medium-level educational attainment and 77% for those with high levels of educational attainment. Most significantly, differences in overall knowledge were strongly correlated with HIV status: respondents diagnosed with HIV infection had a mean knowledge score of 87%, those who last tested negative scored 77% and those who had never been tested for HIV scored 67%.

11.1.7 Conclusions and policy recommendations

EMIS measures assessing knowledge about HIV, STIs and PEP present a complicated picture, but certain conclusions and recommendations are possible. Respondents across Europe were more knowledgeable about HIV testing than other topics. In general, knowledge of HIV transmission was greater than that of STIs and knowledge of PEP was low in every country. However, the amount of detail included in each knowledge area varied significantly, so direct comparisons of knowledge across topics (testing, transmission, etc.) should be approached with caution. Certain outliers in each knowledge area indicate important points for future analysis. France, for example, scored particularly high on knowledge of PEP, as might have been expected because PEP has been available and widely promoted for MSM after sexual exposure for much longer in France than in any other country. The UK has mounted a similar campaign recently and this is reflected in the relatively high level of knowledge there.

Although knowledge of PEP was relatively limited overall and varied widely across countries and regions, drawing conclusions and making recommendations based on these data requires the consideration of issues concerning local accessibility to and support for PEP (see Chapter 5.4). MSM should be able to access the best available information on health and sexuality, but this may involve keeping them informed of continuing debates concerning the benefits, costs and effectiveness of PEP. The low levels of knowledge about the existence and use of PEP highlight this as a possible topic for intervention.

Turkey, where virtually no prevention programmes for MSM exist, had a significantly low score in all of the knowledge areas. Ireland and Finland had lower scores than their neighbouring countries, whereas Croatia and Bosnia and Herzegovina had higher scores than Slovenia and Serbia. These differences may in part be due to the sociodemographic profile of MSM reached in each country, but they may also reflect the national response to HIV prevention for MSM. The difference in knowledge scores based on respondents' HIV status is also noteworthy, especially compared to differences by education or age.

11.2 Coverage by targeted prevention

11.2.1 Introduction

EMIS included questions about respondents' contact with HIV and STI prevention programmes targeting MSM to determine unmet prevention needs. In general, information was sought about access to HIV testing, condoms and MSM-specific issues related to HIV. Each of these three factors is indicative of contact with some form of prevention support – through either HIV testing sites, efforts to distribute condoms, or directly by the provision of information on HIV prevention specifically for MSM. In addition, MSM with diagnosed HIV infection were asked about the monitoring of their infection. This question attempted to determine the sub-regions where MSM are most likely to be exposed to prevention and those where more effective efforts are needed. Analysis at the end of the chapter includes correlations between prevention programme coverage and overall knowledge scores per country. In addition, national data for each set of variables are presented in a table at the end of the chapter.

Several questions were designed to assess the percentage of MSM reached via targeted HIV prevention programmes (UNGASS indicator 9)[2]. To establish whether a respondent was in contact with such programmes they had to indicate that they:

- were quite or very confident of being able to get an HIV test if they wanted, or, if they had diagnosed HIV, that they had seen a doctor to have their infection monitored in the last 12 months;
- did not report having unprotected anal intercourse (UAI) solely due to not having a condom in the last 12 months; and
- had seen or heard MSM-specific information on HIV or had called a telephone helpline in the last 12 months.

While UNGASS 9 suggested asking about having received condoms from an outreach worker, EMIS asked about condom accessibility in general, and about having received MSM-specific information on HIV and STIs. EMIS criteria also differed significantly from the criteria defined by UNGASS in that we included assessment of the extent to which respondents who had been diagnosed with HIV were covered by infection monitoring efforts.

11.2.2 Confidence in being able to get an HIV test

The first variable incorporated into our measurement of prevention programme coverage concerned access to HIV testing. Data on this variable should be read in combination with other information on HIV testing in Chapter 5. Respondents who had not yet been tested for HIV were

2 Questions suggested by UNGASS 9 to assess coverage by prevention programmes include: (1) Do you know where you can go if you wish to receive an HIV test? (2) In the last twelve months, have you been given condoms (e.g. through an outreach service, drop-in centre or sexual health clinic)? (UNAIDS, 2009)

asked: 'How confident are you that you could get a test for HIV if you wanted one?' Similarly, those whose last test had been negative were asked: 'How confident are you that you could get another test for HIV if you wanted one?' Response options for both questions were: 'Very confident'; 'Quite confident'; 'A little confident'; 'Not at all confident'; and 'I don't know'.

Respondents were considered confident about their ability to get tested for HIV if they gave the answer 'Quite confident' or 'Very confident'. Around 91% were confident of their ability to get tested if so desired. In eight countries, 95% or more of respondents were confident of being able to get tested (in order from most to least confident: France, Finland, Denmark, Luxembourg, Switzerland, Sweden, Belgium and the Netherlands). The only West European country to rank below the median (91%) was Ireland (88%) but other countries in Western Europe [Portugal (South-West) 91%, Germany (Central-West) 91%, and Norway (North-West) 92%] also ranked at or close to the median. Ninety-one per cent or more of respondents from the east European countries of Belarus (91%), Russia (91%) and Moldova (93%) were confident of being able to access testing. The only country where less than 80% of respondents answered that they were confident of being able to get tested was Turkey (73%), but less than 85% of respondents were confident about accessing an HIV test in Cyprus, Serbia, Bosnia and Herzegovina and Slovakia (from least to most confident).

11.2.3 UAI solely for lack of a condom

To measure access to condoms as part of prevention efforts, respondents were asked:

- When was the last time you had unprotected anal intercourse (UAI) solely because you did not have a condom?

The answer options for this question were the standard response options described earlier in this report. To be considered covered by prevention programmes in the last 12 months, respondents needed to reply that they had not had UAI in the corresponding timeframe solely because they had not had a condom available. This distinction differentiates between those who had UAI because they did not have a condom and those who had UAI by choice or for some other reason. The focus on not having a condom is intended to draw attention towards the success of prevention efforts promoting condom accessibility.

As a whole, around 14% of the sample responded that they had had UAI at least once in the preceding 12 months solely because they lacked a condom. Luxembourg (8%), Switzerland (9%) and Denmark (10%) were the only three countries in which less than 10% of respondents answered that they had engaged in UAI due to an absence of condoms. The countries with the highest rates were the former Yugoslav Republic of Macedonia (28%), Bosnia and Herzegovina (30%), and Turkey (32%). Spain was the only country in western Europe where the rate of UAI due to lack of condoms exceeded 20%. Three countries in Central-East Europe fared particularly well in condom accessibility compared with other countries from eastern sub-regions: Slovenia (11%), the Czech Republic (11%), and Hungary (11%). Among non-EU countries condom inaccessibility was below 20% in Ukraine, Russia, Croatia and Belarus.

11.2.4 Access to information about HIV or other STIs

To establish that MSM in Europe were connected to relevant HIV prevention programmes, two questions were asked about access to information on HIV or other STIs:

- When was the last time you saw or heard any information about HIV or STIs specifically for men who have sex with men?
- When did you last call a telephone helpline for information about HIV or STIs?

The answer choices for both questions were the same as in the previous section. To have been considered covered by prevention programmes, respondents needed to reply to at least one of these two questions that they had accessed HIV or STI-related information within the last 12 months.

The percentage of respondents per country who called a telephone hotline for information about HIV or STIs was quite low. The only countries where more than 5% of respondents accessed information by telephone were Spain (8%), the Netherlands (6%), Bosnia and Herzegovina (6%), Belarus (7%) and the former Yugoslav Republic of Macedonia (7%), though the latter three countries had relatively small national samples (Belarus had the largest of the three with 360 respondents). This question was included because many European countries use telephone hotlines as part of their prevention response.

Responses from both questions were combined and the median of national mean scores for overall access to information was 79% (range: 57% in Latvia to 90% in the Netherlands). Given that very few respondents indicated having used a telephone helpline in the past 12 months, these rates indicate that a relatively high percentage of respondents had seen or heard information on HIV or STIs specifically for MSM. Over 85% of respondents had accessed information about HIV or STIs in all countries of the West sub-region (from highest to lowest: the Netherlands, the UK, Belgium, France and Ireland), Switzerland (Central-West). The same applied to Norway, Denmark and Finland in North-West Europe and also to Croatia (South-East; 87%) and Spain (South-West; 86%). Less than 75% of respondents from the North-East (Latvia, Lithuania and Estonia), East (Russia, Moldova and Ukraine) and South-East Europe reported having accessed information about HIV or STIs.

11.2.5 Monitoring of HIV infection among HIV-positive respondents

As noted earlier, a final variable was included in the evaluation of prevention programmes that was not in the original definition of UNGASS 9 as developed by UNAIDS. This was the monitoring of HIV infection among respondents diagnosed with HIV infection. This addition to the UNGASS indicator was designed to prevent the exclusion of HIV-positive MSM from the assessment of prevention efforts. As discussed in Chapter 5.3, the *Guidelines for Clinical Management and Treatment of HIV-infected adults*

in Europe (European Aids Clinical Society, 2011) recommend that people diagnosed with HIV infection monitor their infection at least every six months. For this variable, however, respondents with HIV whose infection had been monitored within the last 12 months were considered covered by relevant programmes. Monitoring patterns over the last 12 months were very similar to patterns over the last six months; these were presented in Chapter 5.3 and are not duplicated here.

11.2.6 Determinants of coverage by targeted prevention programmes

Figure 11.3 presents an overview of the proportion of respondents per country who were reached by prevention programmes targeting MSM throughout Europe. The colours indicate ranges that are based on an even distribution of national percentages. Given that even in Switzerland – where coverage was the highest – only 77% of MSM were reached by prevention efforts, there is still much to be done to establish HIV prevention programmes and make them equally accessible to all MSM.

Individual level analysis

Logistic multivariable regression analyses were used to assess potential correlations between coverage by HIV prevention programmes and possible determinants at an individual level. After controlling for age, education, and country, prevention coverage was negatively associated with those who identified themselves as bisexual (AOR=0.88, 95%-CI: 0.86–0.91 & 0.83) or other than gay or homosexual (95%-CI: 0.80–0.87), having frequented sex venues in the last 12 months (AOR=0.87, 95%-CI: 0.85-0.89), not having any friends who also have sex with men (AOR=0.82, 95%-CI: 0.80-0.86), and being born outside Europe [in particular, respondents were less covered by targeted prevention

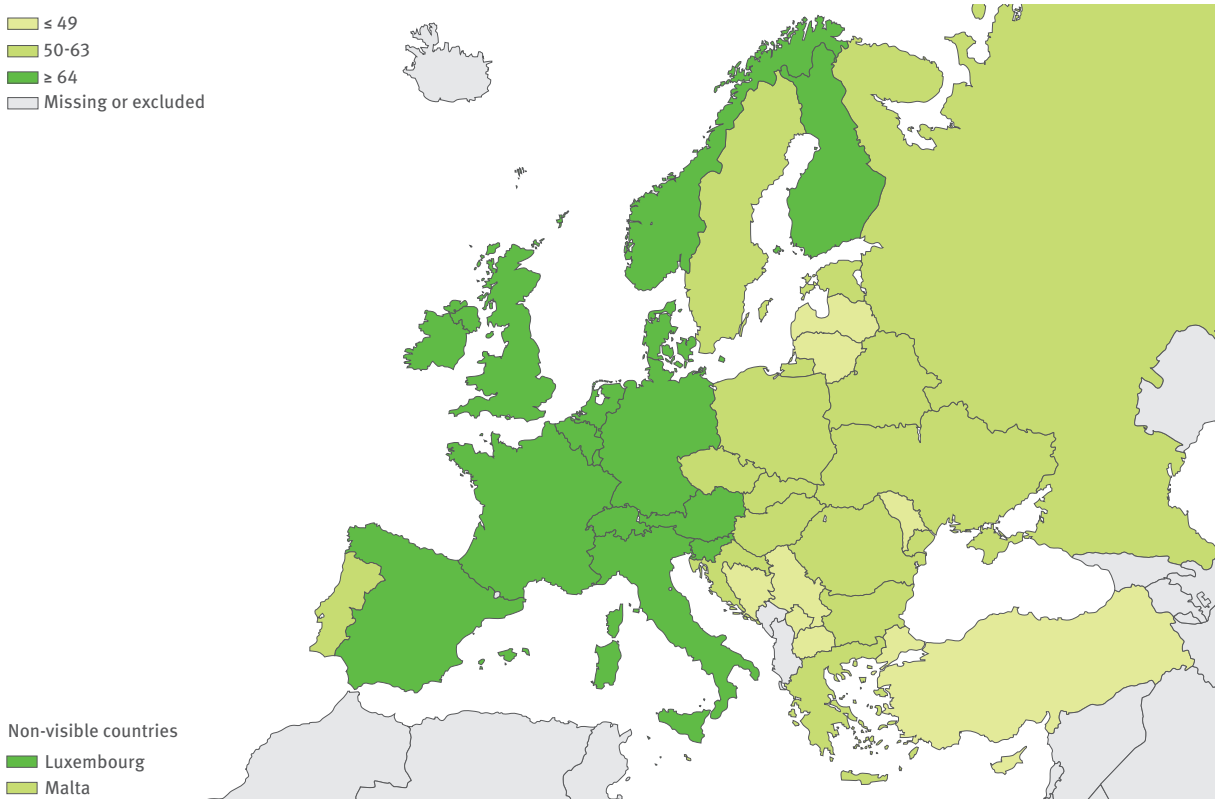
programmes if they came from the WHO-defined region of the Americas: Latin America and the Caribbean (AOR=0.63, 95%-CI: 0.57–0.70) or the WHO-defined South-East Asian region (AOR=0.58, 95%-CI: 0.47–0.72)]. Prevention coverage was positively associated with outness (AOR=1.21, 95%-CI: 1.18–1.24) and having visited a gay social venue in the last 12 months (AOR=1.41, 95%-CI: 1.37–1.44).

Country level analysis

At country level, there was a strong correlation between the mean of respondents covered by targeted prevention efforts per country and the national inequality-adjusted Human Development Index (R2=69%) as described in the UN Human Development Report, 2010[3] (Figure 11.4). This correlation indicates a relationship between coverage by prevention programmes and a range of development standards – including literacy and life expectancy - that

3 Human Development Report 2010
Available at http://hdr.undp.org/en/reports/global/hdr2010/

Figure 11.3: Proportion of respondents reached by prevention programmes targeting MSM



are connected with a country's economic and political situation (see Chapter 5.3). Similarly, Figure 11.5 presents a scatter plot, which demonstrates a correlation between overall knowledge and coverage by targeted prevention programmes. With an R2 value of 70% there is a strong correlation between the two variables, although the exact pathways that connect them remain unclear.

11.2.7 Conclusions and policy recommendations

EMIS measures assessing coverage by prevention programmes have revealed a range of unmet prevention needs across Europe. Any comparison of national data should always consider the number and sociodemographic profiles of the respondents from each country (see Chapter 3). Furthermore, the construction of each variable must be assessed carefully for its meaning, value and comparability. This is especially true given that EMIS definitions diverged from UNAIDS definitions in the area of improving knowledge of transmission and coverage by prevention programmes.

The map presenting coverage by prevention programmes (Figure 11.3) shows distinct differences in coverage by prevention programmes that reflect the nine sub-regional divisions developed by EMIS (see Chapter 2) and used throughout this report. This clear division into sub-regions highlights that coverage in each country is best understood by comparison with coverage in neighbouring countries. Exceptions were observed in sub-regional groupings, however, highlighting specific deficits in coverage. For example, UAI due solely to not having a condom was relatively common in Spain, but relatively rare in Slovenia, the Czech Republic and Hungary. Similarly, in Ireland, a relatively low percentage of respondents indicated access to HIV testing, but access to HIV testing was relatively good in Belarus, Russia and Moldova.

Importantly, coverage by targeted prevention programmes across Europe appears to privilege respondents born in Europe, as well as respondents with an established gay social life (visiting gay social venues, out to a wide number of people and having friends who are MSM). Consequently, reaching men beyond these groupings should be a goal

Figure 11.4: Mean percentage reached by targeted prevention efforts per country according to the national inequality-adjusted Human Development Index

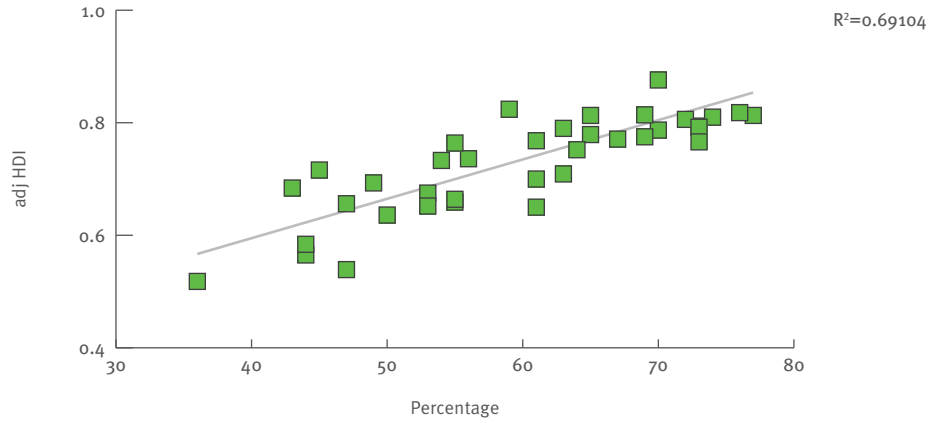
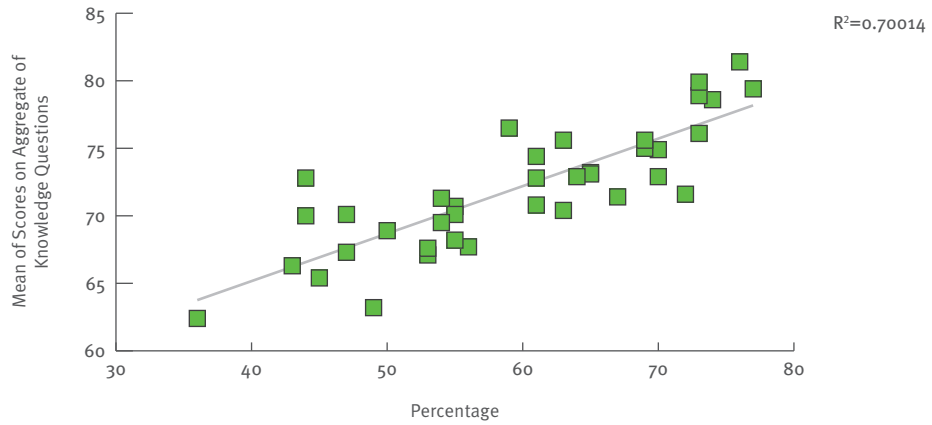


Figure 11.5: Mean percentage reached by targeted prevention efforts per country according to mean scores on the overall measure of HIV knowledge



for future interventions. Given the strong correlations between programme coverage and knowledge of HIV, other STIs, PEP, and between programme coverage and equality-adjusted HDI, prevention needs appear to be connected with each other and with a wide range of factors related to quality of life. For this reason, structural interventions addressing economic, social and political inequalities should be essential to efforts to improve knowledge related to HIV and coverage by prevention programmes.

11.3 Country table

Country		Region		Knowledge/reached by prevention			
Code	Name	EU region	EMIS region	Overall knowledge score	Knowledge related to HIV testing	Knowledge related to HIV transmission	STI-related knowledge
at	Austria	EU	Central-West	74.9	95.3	80.3	66.6
be	Belgium	EU	West	76.1	95.3	82.9	66.1
bg	Bulgaria	EU	South-East (EU)	70.7	90.1	80.1	64.9
cy	Cyprus	EU	South-East (EU)	65.4	87.9	76.8	55.9
cz	Czech Republic	EU	Central-East	70.4	94.8	80.4	60.6
de	Germany	EU	Central-West	75.0	95.8	81	69.7
dk	Denmark	EU	North-West	78.6	94.7	86.2	64.8
ee	Estonia	EU	North-East	71.3	92.1	80.6	58.3
es	Spain	EU	South-West	73.2	93.1	82.9	64.6
fi	Finland	EU	North-West	71.6	90	83.5	70.8
fr	France	EU	West	78.9	94.7	83.7	63.2
gr	Greece	EU	South-West	70.8	90.2	80.4	57.8
hu	Hungary	EU	Central-East	67.7	93.4	80.5	57.6
ie	Republic of Ireland	EU	West	73.1	92.9	79.6	66.3
it	Italy	EU	South-West	72.9	93.7	82.7	62.7
lt	Lithuania	EU	North-East	63.2	83.1	75.1	57.3
lu	Luxembourg	EU	Central-West	75.6	95.9	80.9	66
lv	Latvia	EU	North-East	66.3	86.1	76.2	60.8
mt	Malta	EU	South-East (EU)	69.5	92.8	79	64.1
nl	Netherlands	EU	West	81.4	96.5	87.5	78.2
pl	Poland	EU	Central-East	75.6	94.8	81.9	67.9
pt	Portugal	EU	South-West	74.4	95.6	84.1	67.9
ro	Romania	EU	South-East (EU)	67.1	89.6	76.6	59.9
se	Sweden	EU	North-West	76.5	96.3	85.2	72.8
si	Slovenia	EU	Central-East	71.4	91	81.3	62.4
sk	Slovakia	EU	Central-East	68.2	93	79	57.6
uk	United Kingdom	EU	West	79.9	95.7	84.8	72.3
ch	Switzerland	EEA/EFTA/acceding	Central-West	79.4	95.9	85.1	69.5
hr	Croatia	EEA/EFTA/acceding	South-East (non-EU)	72.9	94.2	81.5	69.2
no	Norway	EEA/EFTA/acceding	North-West	72.8	94.6	82.3	67.8
ba	Bosnia & Herzegovina	other	South-East (non-EU)	70.1	86.9	80.3	67
by	Belarus	other	East	72.8	95.5	82.4	67.5
md	Moldova	other	East	67.3	86	77.4	61.7
mk	The former Yugoslav Republic of Macedonia	other	South-East (non-EU)	70.0	90.5	80.4	67.3
rs	Serbia	other	South-East (non-EU)	70.1	93.2	81.1	66
ru	Russia	other	East	68.9	86.3	79.2	65.2
tr	Turkey	other	South-East (non-EU)	62.4	81.9	75.2	57.3
ua	Ukraine	other	East	67.6	84.2	77.9	64.1
	Low			62.4	81.9	75.1	55.9
	Median			**71.5**	**93.2**	**80.8**	**65.1**
	High			78.7	95.8	84.9	70.0
	EU27 median			**72.9**	**93.4**	**80.9**	**64.6**

Knowledge/reached by prevention				
PEP-related Knowledge	% Overall coverage by targeted prevention programmes	% Quite or very confident of being able to get HIV test	% Had UAI due solely to lack of condom	% Heard or saw info on HIV or STI for MSM or called hotline for info
40.9	70.0	94.2	10.2	83.0
43.3	72.9	95.4	12.4	87.5
29.3	54.7	84.7	17.9	77.6
19.6	45.1	79.8	22.6	70.9
23	63.4	89.6	10.7	78.9
36.8	68.8	91.1	10.1	83.3
53.7	73.5	96	9.9	85.1
34.6	53.5	88.9	12.5	70.2
33.2	65.0	93.8	20.1	86.2
22.3	72.3	96.3	10.8	84.6
61	73.2	96.6	11.2	85.8
36.1	60.5	84.6	12.9	81.0
14.4	56.3	89.3	11	70.8
36.6	65.2	88.4	15.8	85.1
33	63.8	93.9	16	81.9
17.1	48.6	87.4	14.4	64.4
43.2	68.8	95.9	7.6	79.8
24.8	43.4	85.7	12.7	57.0
21.8	54.2	87.7	18.8	73.7
50.1	76.1	95	11.4	90.1
42	63.2	91	14.2	81.3
30.8	61.2	90.8	16.1	79.8
22.6	52.6	91.8	19.6	71.3
33.4	58.5	95.4	11	68.8
32.9	66.7	89.2	10.5	84.4
19.4	55.1	81.8	13.8	76.9
53.9	73.4	93.0	11.0	87.9
52.8	77.0	95.6	8.6	88.6
27.3	69.6	91.9	14.8	87.9
26.1	44.3	80.3	29.7	74.3
29.8	55.0	90.6	19.5	75.7
25.8	61.1	84.5	17.4	87.2
26.1	47.0	93	24.8	70.4
24.6	44.0	85.6	28.4	74.8
18.3	47.4	80.2	22.8	75.1
27.3	50.4	91.3	17	67.5
15.9	35.9	73.2	31.8	69.4
27.9	53.0	88.4	16.4	73.3
14.4	35.9	73.2	7.6	57.0
29.6	**60.8**	**90.7**	**14.3**	**79.4**
50.9	73.3	95.7	23.4	87.6
33.2	**63.4**	**91.0**	**12.5**	**81.0**

12. ECDC behavioural indicators: regional comparisons

12. ECDC behavioural indicators: regional comparisons

12.1 ECDC indicators in the European MSM Internet Survey

Since the 1990s several recommendations have been made for a set of common behavioural surveillance indicators (Bochow et al. 1994, Paccaud and Dubois-Arber 1995, Hubert 1998). Even the most standardised indicators such as the United Nations General Assembly Special Session (UNGASS) indicators do not, however, specifically address the MSM community (UNAIDS, 2009).

In late 2000, several consensus-building initiatives were arranged, with representation from experts in Europe and worldwide and involvement of governmental and non-governmental organisations. The need was stressed to harmonise behavioural indicators for MSM in Europe (Robert Koch Institute, 2007; Editorial team, 2008). In 2009, ECDC's HIV/STI behavioural surveillance study mapped the current state of behavioural surveillance programmes related to HIV and STI in Europe, addressing eight key populations (ECDC, 2009). The study revealed that nine European countries had not introduced behavioural surveillance among MSM although MSM is the group most affected by HIV in Europe (Elford et al. 2009).

Despite considerable diversity in behavioural indicators, there was a general consensus regarding the most important indicators among MSM, which were grouped under four main headings: HIV testing, number of partners, condom use, and UAI (Elford et al. 2009). Based on the experience of the harmonization process and the mapping exercise for the European HIV/STI behavioural surveillance, a key set of HIV/STI behavioural indicators was proposed for Europe (ECDC, 2009), including six core indicators applicable in all populations surveyed and 11 population-specific behavioural indicators to be used in MSM populations in all countries.

ECDC core indicators for all populations

1. Number of sexual partners in the preceding 12 months:
   a) male partners,
   b) female partners.
2. Use of condoms:
   a) use of condom at last intercourse (in the preceding 12 months),
   b) with identification of the type of partner: stable/casual/paid.
3. HIV test:
   a) ever, date of the last test or whether tested in the preceding 12 months,
   b) result of the test (reported or measured).
4. Commercial sex:
   a) having paid for sex in the preceding 12 months,
   b) use of condom at last paid intercourse (in the preceding 12 months).
5. Contextual indicators:
   a) level of education (ISCED classification),
   b) nationality/ethnic origin,
   c) sexual orientation (Kinsey modified classification – i.e. sexual orientation based on gender of sex partners in preceding 12 months).
6. Knowledge.

ECDC specific indicators for MSM population

7. Age at first intercourse and/or becoming sexually active.
8. Recent STI.
9. Condom use with different types of partners.
10. Having been paid for sex in the preceding 12 months.
11. Concurrency of sexual partners.
12. Condom use for different types of sexual practices.
13. Comprehensive indicator of exposure to risk (preceding 12 months).
14. Hepatitis C test:
    a) ever or date of the last test,
    b) result of the test (reported or measured).
15. Types of drugs consumed.
16. Variables related to HIV treatment:
    a) being in treatment,
    b) CD4 count,
    c) viral load.
17. Where men met their sexual partners in preceding 12 months (saunas, bars, clubs, internet, etc.).

The way in which suggested indicators were implemented and collected in the EMIS survey is explained in the annex.

12.2 Data presentation: regional analysis

As well as using the nine EMIS regions (see Chapter 2), the ECDC indicators are presented and discussed within three European regions based on membership and enlargement of the European Union, as follows:

Table 12.1: Division of European regions for data presentation

European region	Specific countries
EU/EEA before 2004	
North-West	Denmark, Finland, Sweden, Norway
West	Belgium, France, Ireland, the United Kingdom, the Netherlands
Central-West	Austria, Switzerland, Germany, Luxembourg.
South-West	Italy, Portugal, Greece, Spain.
Joining EU/EEA after 2004	
North-East	Estonia, Latvia, Lithuania
Central-East	Czech Republic, Hungary, Poland, Slovakia and Slovenia
South-East (EU)	Bulgaria, Cyprus, Malta, Romania
Non-EU/EEA	
South-East (non-EU)	Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Serbia, Turkey.
East	Belarus, Moldova, Russia, Ukraine

The purpose of this regional analysis is to consolidate data from the large number of countries involved in the EMIS survey to correspond with the structures applied by ECDC for cooperation with the EU/EEA Member States. In this chapter the areas described are referred to as 'regions' and 'sub-regions'. The term 'old EU/EFTA' refers here to the EU Member States which joined the EU before 2004 and to EFTA countries. The term 'new EU' refers to those Member States joining after 2004.

Within each region non-weighted numbers and percentages of ECDC indicators have been computed for (a) the total MSM population, (b) four demographic sub-domains: age, education, sexual orientation and migration status (Table 12.0) and (c) the sub-regions. Migration status was defined by matching a respondent's country of residence with survey language instead of country of birth. This solution was better suited to capturing second generation migrants, particularly in Eastern Europe, whose social integration has been shaped by their knowledge of the language in their country of residence (Kirch, 2001).

No weights or adjustments were used. The statistical significance of overall associations of the indicators with the demographic sub-domains within each region was evaluated using Chi-square tests, indicating that the categories being compared are not all equal at the $p< 0.05$ level.

The non-probability nature of the sample limits direct comparison of the proportions between regions, consequently this regional analysis focuses on the trends found in the demographic distribution of ECDC indicators within each region. Sources of error in estimates from the survey arise from the lack of internet access and the self-selection bias inherent in the recruitment process, which differs in each country. The data limitations, described in detail in Chapter 2, need to be taken into account when interpreting the results.

Table 13.1 in the Annex provides the definitions of the ECDC indicators, first as suggested by the ECDC HIV/STI behavioural surveillance report (ECDC 2009), then with observations and suggestions on their adaptation by EMIS,

Figure 12.1: Ten or more non-steady male sexual partners in the preceding 12 months in nine European sub-regions

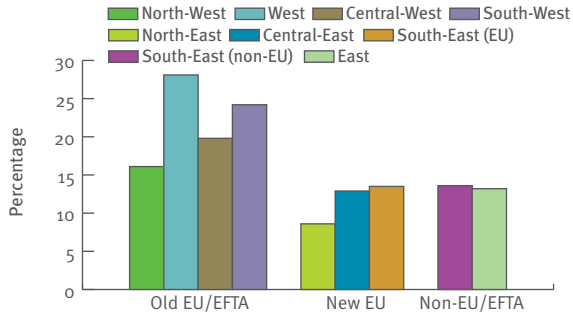
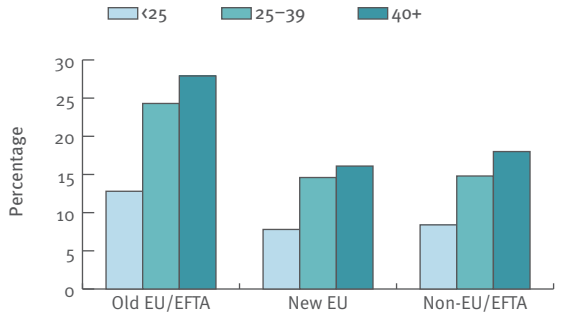
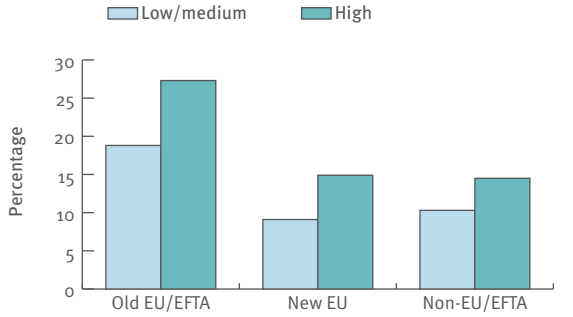


Figure 12.2: Ten or more non-steady male sexual partners in the preceding 12 months by age, level of education, sexual orientation and migration status in three European regions

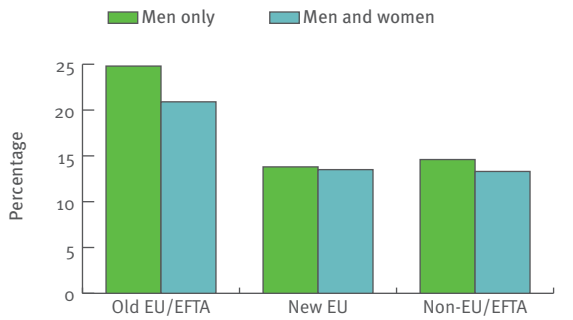
Age



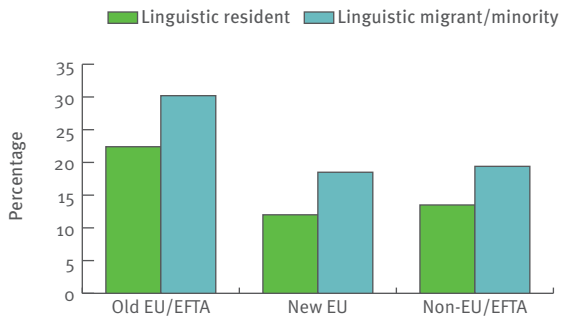
Level of education



Sexual orientation



Migration status



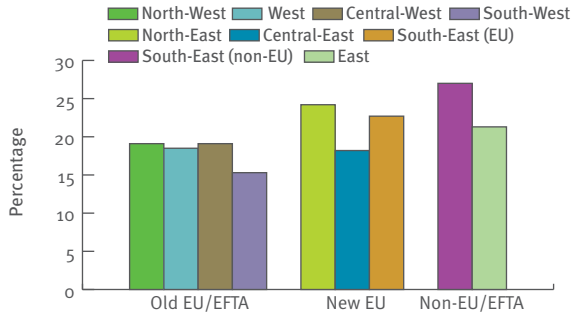
including methods of measurement (questions), numerators, and denominators used in the analysis.

12.3 Core indicators common to all populations

12.3.1 Number of sexual partners

EMIS respondents were asked to state the number of sexual partners they had had in the preceding 12 months and answer separate questions regarding steady, non-steady, and female (penetrative only) partners (Figures 12.1 and 12.2).

Figure 12.3: Unprotected anal intercourse during most recent sex with a non-steady partner in the preceding 12 months in nine European sub-regions



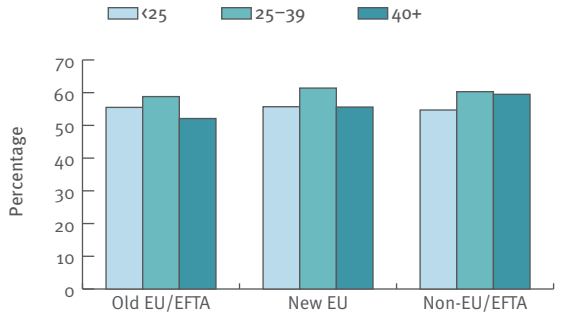
Just over a third of MSM in all regions reported having had only one steady sex partner over the past year (EU/EEA countries before 2004 – 35%; countries having joined EU/EEA after 2004 – 35%; non-EU/EEA countries – 37%), while almost half of MSM in the EU/EEA countries before 2004 and a third in the countries having joined EU/EEA after 2004 and in non-EU/EEA countries reported not having had a steady partner in the previous 12 months. Sub-regional differences in reporting one steady partner within the EU/EEA countries before 2004 were minor (35–36%). In countries that had joined EU after 2004 and non-EU regions, the South-East sub-regions reported significantly lower percentages (25% and 21%) of steady partnerships in the past year than other sub-regions.

In all regions, respondents aged 25–39 years more commonly reported only one steady sex partner in the past year than younger and older age groups. Differences in reporting one steady partner by education level and migration status were minor, but men who were attracted only to men were more likely to report one steady partner than those attracted to men and women, with similar trends found in all regions.

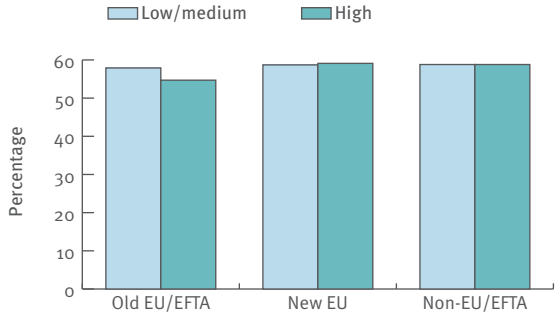
With regard to the number of non-steady sex partners in the last 12 months, 23% of men in EU/EEA countries having joined before 2004, 13% in EU/EEA countries having joined after 2004, and 13% in non-EU/EEA countries reported ten or more non-steady sex partners. In EU/EEA countries having joined before 2004 MSM who reported ten or more sex

Figure 12.4: Unprotected anal intercourse during most recent sex with a steady partner in the preceding 12 months, by age, education and sexual orientation in three European regions

Age



Level of education



Sexual orientation

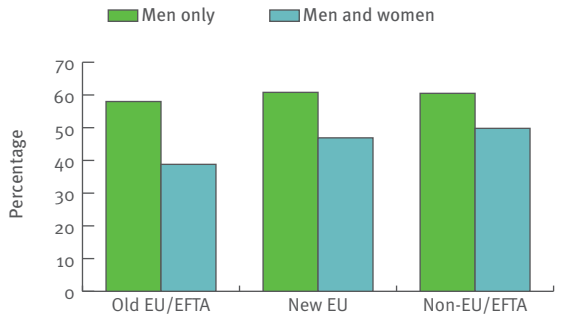
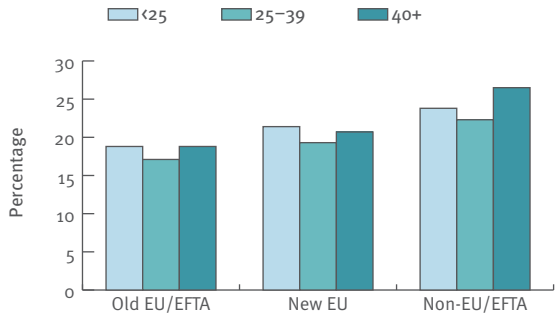
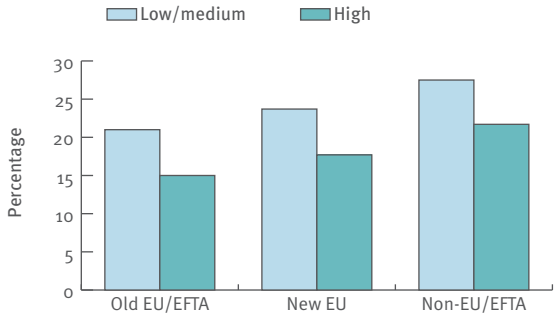


Figure 12.5: Unprotected anal intercourse during most recent sex with a non-steady partner in the preceding 12 months, by age, education and sexual orientation in three European regions

Age



Level of education



Sexual attraction

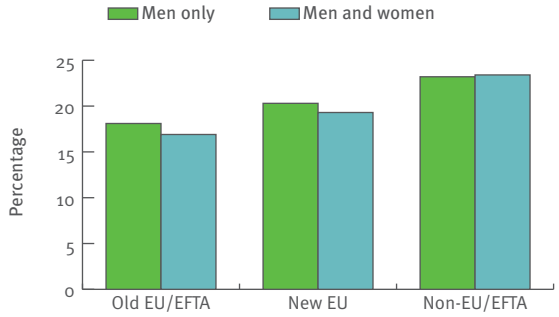
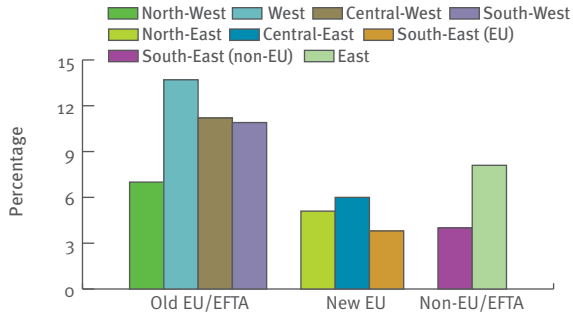
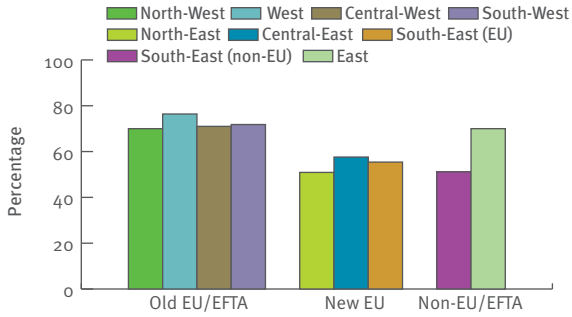


Figure 12.6: MSM having ever been tested and having been tested during the last 12 months for HIV in nine European sub-regions

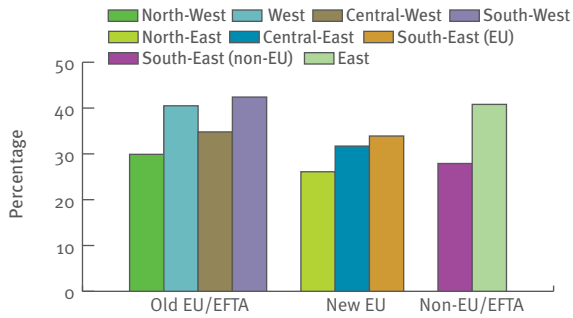
Tested positive for HIV



Ever tested for HIV



Tested and received results for HIV in the last 12 months



partners were most common in the West sub-region (28%) and least common in the North-West (16%) (Figure 12.1). The sub-regional variation of multiple sex partners within EU/EEA countries after 2004 (9–14%) and non-EU/EEA countries (13–14%) was minor.

The associations with having ten or more sex partners were similar in all regions (Figure 12.2). Older men, highly-educated men and migrants were more likely to report ten or more non-steady sex partners in the preceding 12 months than younger men, men with a lower level of education and non-migrants. Differences between men attracted only to men and men attracted to both men and women were minor within all regions.

Every seventh man in the older EU/EEA Member States, every ninth man in the newer EU Member States and every tenth man in non-EU-EFTA countries reported having had at least one female partner in the preceding year. In all regions the demographic associations with female partners were either minor or insignificant due to small numbers.

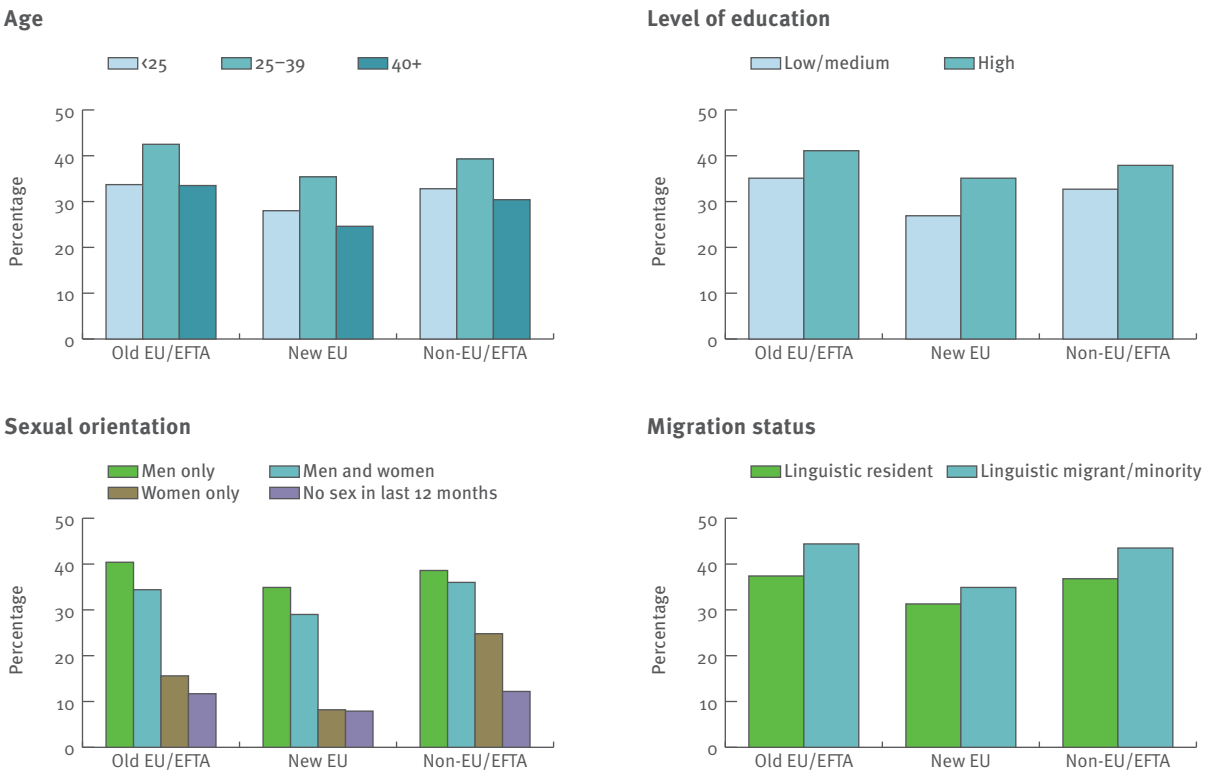
12.3.2 Use of a condom during most recent anal intercourse

EMIS distinguished between most recent occasions of sexual and anal intercourse by asking whether anal intercourse had featured the last time the respondent had had sex (with steady and non-steady partners separately). If the answer was yes, the respondent was then asked whether a condom had been used, among those who reported sex with their last steady and non-steady male partner. Figures 12.4 and 12.5 show the percentages of men who used a condom when they had last had anal intercourse with steady and non-steady male partners in the preceding 12 months.

In all regions, a little over half of MSM reported not using a condom when they had last had intercourse with a steady sex partner (old EU/EEA Member States 56%; new EU Member States 59%; non-EU/EEA countries 59%) and about one fifth did not use a condom when they last had intercourse with a non-steady sex partner (old EU/EEA Member States 18%; new EU Member States 20%; non-EU/EEA countries 23%). Sub-regional differences in non-use of a condom during the most recent anal intercourse with a non-steady partner ranged from 15% in South-West Europe (old EU/EEA Member States) to 27% in South-East Europe (non-EU/EEA countries) (Figure 12.3).

In general, demographic associations with non-use of a condom during the most recent intercourse (with steady and non-steady partners) were similar within all regions (Figures 12.4 and 12.5). Age was not associated with non-use of a condom during the most recent intercourse with either steady or non-steady partners. A somewhat higher percentage of MSM who were attracted to men only (as opposed to men and women) reported not using a condom when they had last had anal intercourse with a steady partner than with a non-steady partner. Unprotected anal intercourse (UAI) with a non-steady partner (but not

Figure 12.7: Tested for HIV in the last 12 months and having received results by age, level of education, sexual orientation and migration status in three European regions



a steady partner) was more common among those with a lower level of education (see Figure 12.4). No association was found with migration status and UAI for steady or non-steady partners.

12.3.3 HIV testing and HIV prevalence

EMIS asked all respondents about their lifetime experience of receiving HIV test results. Those who had tested HIV positive were asked how long ago they had first had a positive test. Those whose last test was negative were asked when they had last been tested. Figure 12.6 shows the three indicators related to HIV testing; ever tested, tested and received results in the last 12 months, and results of the last test among those ever tested.

Well over half of MSM had been tested for HIV at some point in their lives (old EU/EEA Member States 73%; new EU Member States 56%; non-EU/EEA countries 64%) and about one third had been tested in the last 12 months (38%, 32% and 36%, respectively). The prevalence of those diagnosed HIV positive was 12% in the older EU/EEA Member States, 5% in the newer EU Member States and 7% in non-EU/EEA countries (Figure 12.6).

At the sub-regional level there were correlations between the proportions having ever been tested, having recently been tested and having been diagnosed positive. In all regions, wherever testing occurred more frequently, the prevalence of HIV infection was higher and recent testing for HIV was reported more often (Figure 12.6). The South-East (EU) deviated from this trend; the proportion having ever been tested was low, yet high levels of recent testing were reported. This may reflect a number of aspects such as changes in testing policy or access to testing (see Chapter 5, Testing for HIV).

MSM having been tested at some point in their lives were most common in the older age groups (25–39 years and 40+ years), and recent testing was most common among those aged 25–39 years in all regions (Figure 12.7). In all regions, both having ever been tested and having been tested recently were most common among MSM with a higher level of education, those sexually attracted to men only and among migrants.

The association between being older and being HIV-positive levels out (particularly between the two older age groups) when moving from older EU/EEA Member States to newer EU Member States, and even more so in non-EU/EEA countries. This trend is most likely to reflect the different starting points of the epidemic (see Chapter 5, Prevalence diagnosed HIV). Where significant associations with demographics were found in older EU/EEA countries, being HIV positive was more common among those attracted only to men than among those attracted to both men and women or to women only. Differences in HIV prevalence related to education and migration status in the old EU/EEA region were minor.

12.3.4 Buying and selling sex during the preceding 12 months

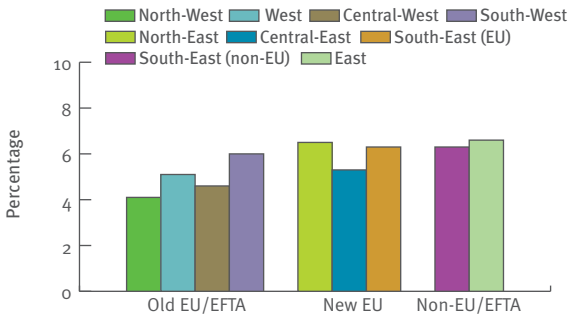
EMIS asked respondents about buying (paying for) and selling (being paid for) sex in their country of residence during the preceding 12 months (Figure 12.8).

In all regions smaller proportions reported having bought sex (old EU/EEA Member States 5.1%; new EU Member States 5.7%; non EU/EEA countries 6.5%) than having sold sex (old EU/EEA Member States 7.7%; new EU Member States 6.3%; non-EU/EEA countries 8.2%), (Figure 12.8). Both the regions and sub-regions showed increasing amounts of sex being sold from west to east. Within the old EU/EEA Member States (but not in other regions) buying sex became more common when moving from the northern towards the southern sub-regions.

The demographic associations with buying and selling sex were similar in all three regions (Figures 12.9–10). Older and more educated men were more likely to report having bought sex and younger, less educated men to have sold sex. Both buying and selling sex were more common among those who reported being attracted to men and women than among those attracted only to men. In the old EU/EEA Member States, buying sex was more common among non-migrants and having sold sex was more common among migrants. In the new EU Member States and non-EU/EEA countries a reverse trend was found (although in the new EU the association between migration and selling sex was not significant).

Figure 12.8: Buying and selling sex during the preceding 12 months in nine European sub-regions

Has been paid for sex in the last 12 months



Has paid for sex in the last 12 months

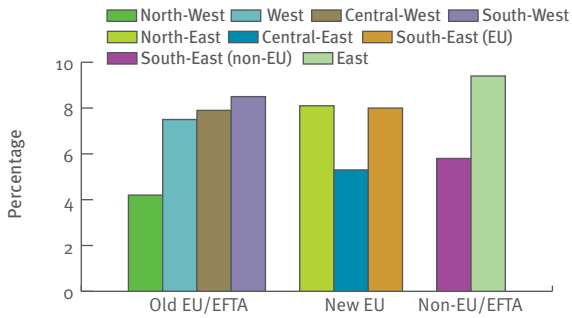
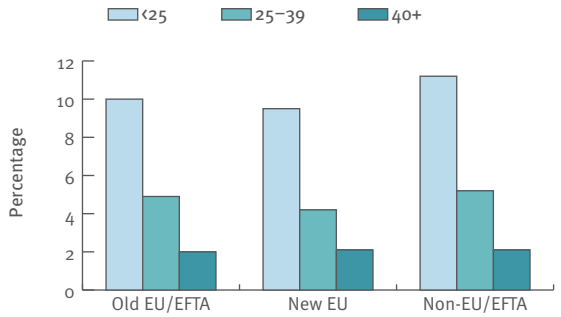
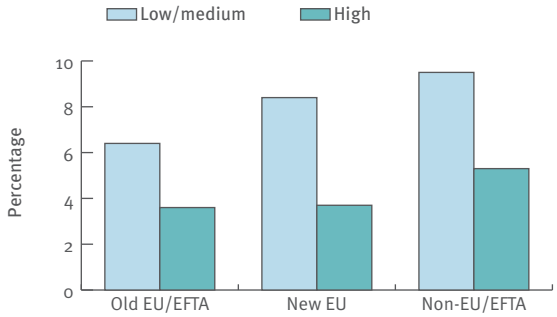


Figure 12.9: Selling sex during the preceding 12 months – by age, level of education and migration status in three European regions

Age



Level of education



Migration status

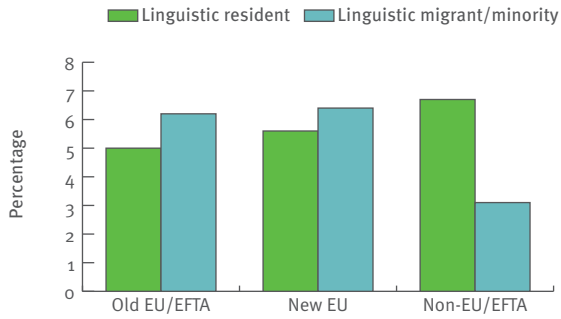
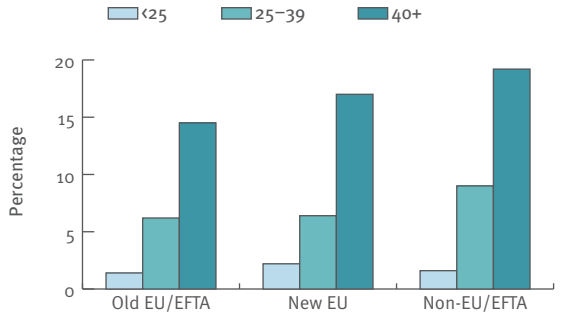
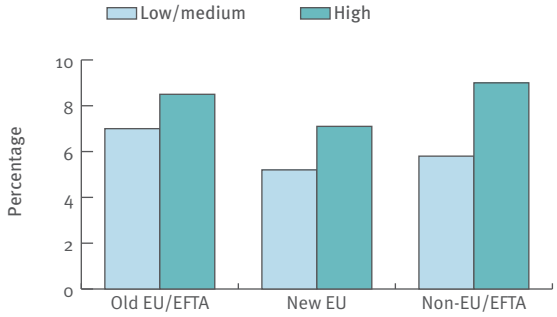


Figure 12.10: Buying sex during the preceding 12 months – by age, level of education and migration status in three European regions

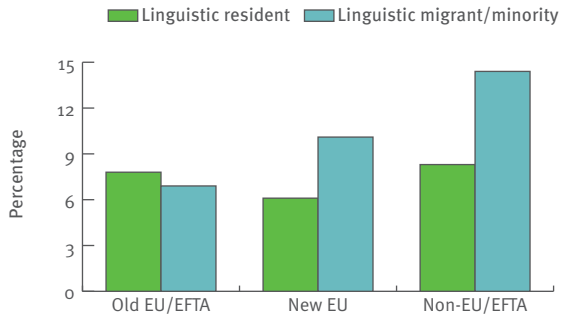
Age



Level of education



Migration status



12.3.5 Knowledge

EMIS took a different approach to UNGASS (UNAIDS, 2009) in order to measure knowledge of HIV transmission. The survey offered respondents five statements of fact about the sexual transmission of HIV and asked them if they already knew these facts. EMIS calculated the proportion of facts men already knew. National scores were based on the mean of respondents' scores.

The five statements were: i) you cannot be confident about whether someone has HIV or not from their appearance, ii) effective treatment of HIV infection reduces the risk of HIV being transmitted, iii) HIV cannot be passed during kissing, including deep kissing, because saliva does not transmit HIV, iv) you can pick up HIV through your penis while being 'active' in unprotected anal or vaginal sex with an infected partner, even if you don't ejaculate, v) you can pick up HIV through your rectum while being 'passive' in unprotected anal sex with an infected partner. Table 12.2 presents the responses in numerical and percentage form, comparing those who claimed to already know the facts in the five statements with those who recognised between one and four of them.

Around 41% of the respondents in the old EU/EEA Member States and 36% in both new EU Member States and non-EU/EEA countries indicated that they already knew the five facts. Knowledge was more widespread in North-West, West and South-West Europe (over 40%), while in all other sub-regions at least 30% of the respondents indicated they already knew the statements.

Increasing age and higher education were both positively correlated with knowledge in all regions (see Chapter 11, Knowledge).

12.4 MSM specific indicators

12.4.1 Age at first sex

EMIS asked men their age at their first homosexual experience, as well as the age at which they had had their first anal intercourse with a man or boy (See chapter 7, Figures 7.1 and 7.2). The median age for the first anal intercourse varied between 17 and 22 years in the old EU/EEA Member States, between 17 and 24 years in the new EU Member States, and between 18 and 22 years in non-EU/EEA countries (see Chapter 7, Sexual Experience and Sexual Behaviour).

12.4.2 Recent STI diagnosis

EMIS included several questions on STI transmission and asked whether men had ever been diagnosed with

Table 12.2: Number and percentage of MSM correctly identifying methods of HIV transmission and rejecting major misconceptions about HIV transmission, according to selected characteritics, in three European regions

	Old EU/EFTA					New EU					Non-EU/EFTA				
	Correctly identifying				Total	Correctly identifying				Total	Correctly identifying				Total
	0–4 items		5 items			0–4 items		5 items			0–4 items		5 items		
	n	%	n	%	n (100%)	n	%	n	%	n (100%)	n	%	n	%	n (100%)
All respondents	**88230**	**59.4**	**60381**	**40.6**	**148611**	**9193**	**40.6**	**5185**	**36.1**	**14378**	**6936**	**63.7**	**3958**	**36.3**	**10894**
Age group (years)															
< 25	21880	*67,3	10621	*32,7	32501	3385	*68,2	1578	*31,8	4963	2045	*66,1	1049	*33,9	3094
25-39	40583	57.3	30205	42.7	70788	4788	62.2	2904	37.8	7692	4074	62.0	2499	38.0	6573
40 +	25767	56.9	19555	43.1	45322	1020	59.2	703	40.8	1723	817	66.6	410	36.3	1227
Education (ISCED)[a]															
Low/medium	49640	*64,1	27794	*35,9	77434	4136	*67,8	1960	*32,2	6096	2052	*68,2	959	*31,8	3011
High	37854	53.9	32364	46.1	70218	4975	60.8	3213	39.2	8188	4820	61.7	2991	38.3	7811
Sexual orientation[b]															
Men only	70532	*57,7	51608	*42,3	122140	6862	*62,5	4111	*37,5	10973	5197	*62,8	3074	*37,2	8271
Men and women	10267	64.7	5613	35.3	15880	1266	65.9	654	34.1	1920	1050	63.6	602	36.4	1652
Women only	1452	69.1	650	30.9	2102	269	67.6	129	32.4	398	157	70.7	65	29.3	222
No sex in the past 12 months	5032	70.5	2105	29.5	7137	689	72.3	264	27.7	953	393	69.6	172	30.4	565
Migration status[c]															
Linguistic resident	83251	*59,5	56532	*40,5	139747	8621	64.1	4835	35.9	13456	6469	64.0	3634	36.0	10103
Linguistic migrant/ minority	5015	56.6	3849	43.4	8864	572	62.0	350	38.0	922	145	58.7	102	41.3	247
Sub-region															
North-West	4780	53,2	4208	46,8		.	.	.	.		.	.	.	.	
West	21733	56.0	17059	44.0	38792	.	.	.	.		.	.	.	.	
Central-West	39863	62.6	23818	37.4	63681	.	.	.	.		.	.	.	.	
South-West	21854	58.8	15296	41.2	37150	.	.	.	.		.	.	.	.	
North-East	.	.	.	.		1221	64,6	668	35,4	1889	.	.	.	.	
Central-East	.	.	.	.		5400	61.7	3354	38.3	8754	.	.	.	.	
South-East (EU)	.	.	.	.		2572	68.9	1163	31.1	3735	.	.	.	.	
South-East (non-EU)	.	.	.	.		.	.	.	.		2442	66,4	1238	33,6	3680
East	.	.	.	.		.	.	.	.		4494	62.3	2720	37.7	7214

[a] ISCED International Standard Classification of Education Degrees, ISCED 6, Low 1-2, Medium 3-4, High 5-6
[b] Sexual orientation in past 12 months
[c] Linguistic resident = survey language corresponds with the country of residence. Linguistic migrant/minority = survey language differs from the country of residence
* Within the European regions, difference in the percentages between the categories of a specific variable are significant at the p< ,05 using Pearson Chi-Square test

an STI and when they were last diagnosed with an STI. Diagnostic approaches to STI testing differ across Europe, and syphilis is likely to be the STI that can be compared with the highest reliability. However, as syphilis is unevenly distributed across Europe, relying on syphilis only might result in under-reporting of STIs. Therefore three indicators of 'recent' STI diagnoses were used:

- diagnosis of syphilis, gonorrhea, chlamydia, or a first diagnosis of anogenital herpes or anogenital warts in the last 12 months;
- diagnosis of any of three bacterial STIs (chlamydia, gonorrhea or syphilis) in the last 12 months;
- diagnosis of syphilis in the last 12 months.

In the old EU/EEA Member States 9% of MSM reported having had a newly-diagnosed STI, 6% a bacterial STI, and 2% syphilis diagnosed in the past year (Figure 12.11). In the new EU Member States the corresponding percentages were 6%, 4% and 2% and in non-EU/EEA countries 10%, 7% and 3%. The sub-regional differences for syphilis ranged from 1.1% to 3.1% in the old EU/EEA Member States, 0.6% to 1.7% in the new EU Member States and 0.6% to 4.8% in non-EU/EEA countries, where the highest proportion of syphilis was reported in eastern Europe.

The age distribution of MSM with diagnosed STIs showed different trends in the three regions (Figures 12.12 to 12.14). In the older EU/EEA Member States a newly-diagnosed STI or bacterial STI were more common among men in the older age groups (25–39 years and ≥40 years), while in non-EU/EEA countries the trend was reversed, and in the new EU Member States age differences for MSM with a newly-diagnosed STI or bacterial STI were minor. The age group in which the highest proportion of MSM reported having a newly-diagnosed STI or bacterial STI, in all regions, was that of 25–39 years. Syphilis (similar to any or bacterial STI) was most frequently reported by men in the older age groups (25–39 and ≥40 years) in the EU/EEA Member States and new EU Member States, but in non-EU/EEA, age differences in those reporting syphilis were minor (insignificant).

One of the few differences identified in demographic trends between the regions was in the association of the STI indicators and gender of sexual partners (Figures 12.12 to 12.14). In non-EU/EEA countries a newly-diagnosed STI, bacterial STI and syphilis were more commonly reported among men with both male and female partners, but in the old EU/EEA Member States and new EU Member States among those with male partners only. This may be partially explained by the higher proportion of respondents in non-EU countries who reported being attracted to both men and women (see Chapter 2 Sexual orientation and Chapter 10 Internalised homonegativity).

STI diagnosis is closely related to STI testing practices. EMIS asked men about STI testing during the preceding 12 months. Further analysis of recent STI diagnoses and

Figure 12.11: Newly-diagnosed STIS other than HIV during the preceding 12 months in nine European sub-regions

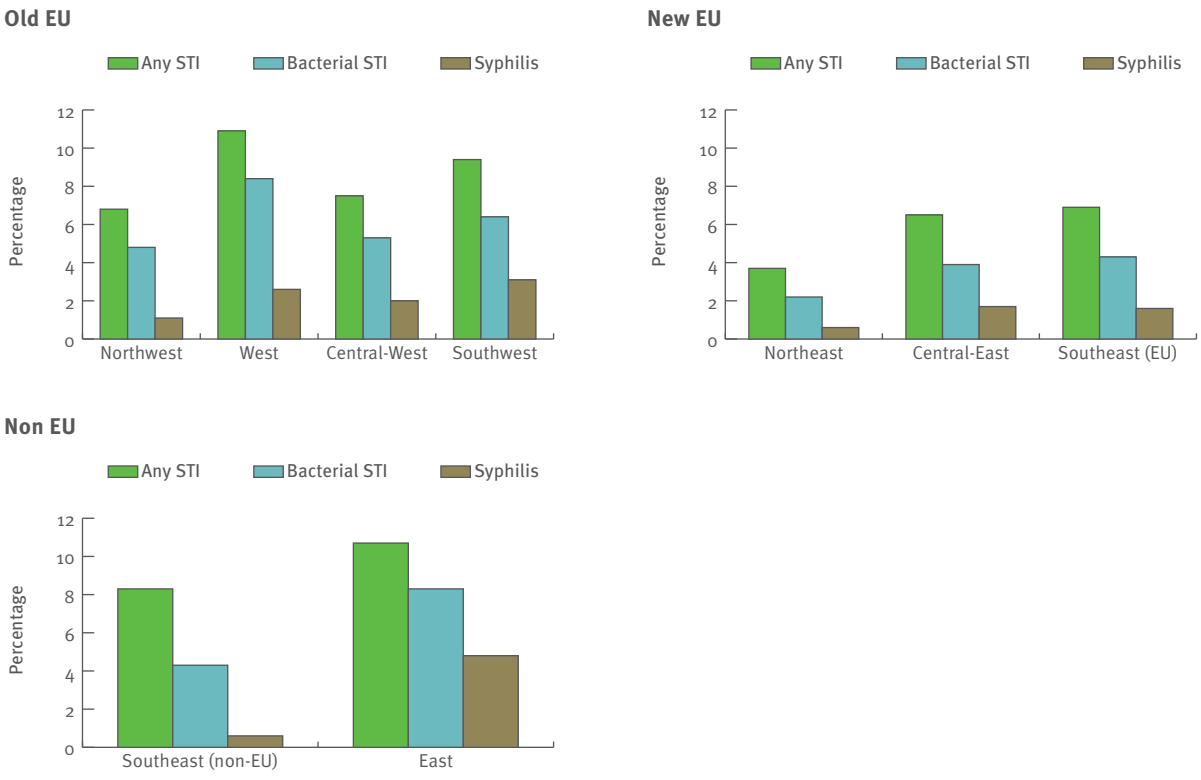
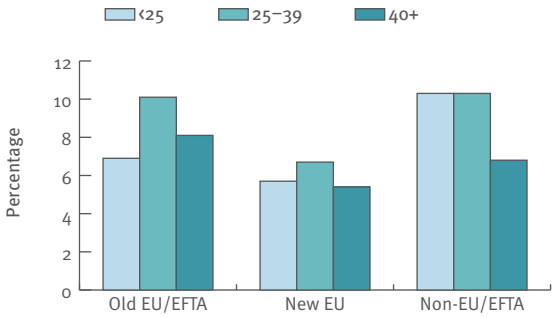


Figure 12.12: Newly-diagnosed STIs other than HIV during the preceding 12 months by age and sexual orientation in three European regions

Age



Sexual orientation

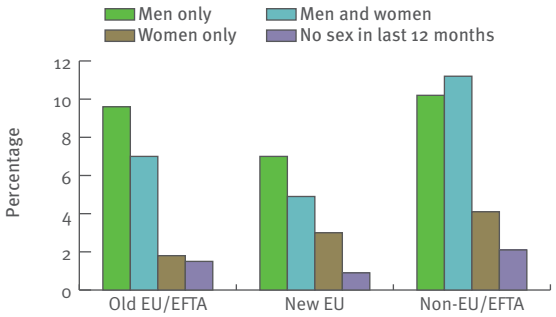
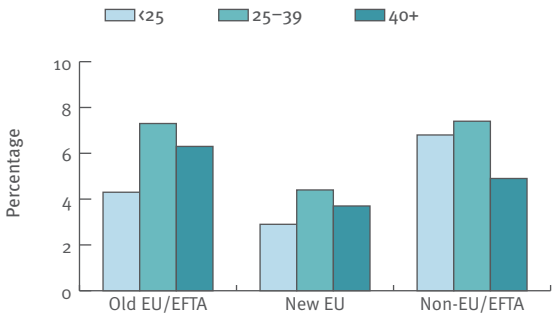


Figure 12.13: Diagnosed with syphilis, gonorrhoea or chlamydial infection and any first diagnosis of anal/genital warts or anal/genital herpes during the preceding 12 months by age and sexual orientation in three European regions

Age



Sexual orientation

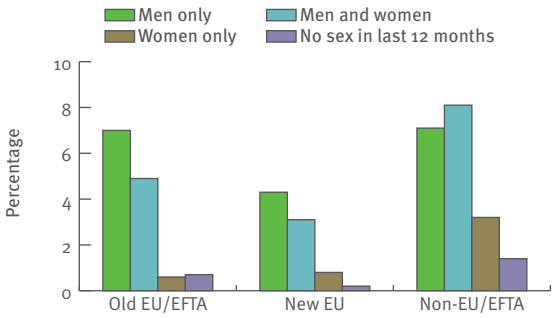
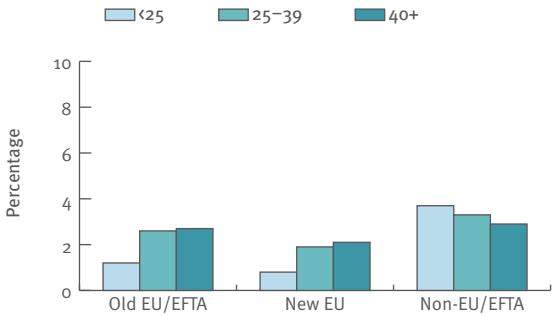


Figure 12.14: Diagnosed with syphilis during the preceding 12 months, by age and sexual orientation in three European regions

Age



Sexual orientation

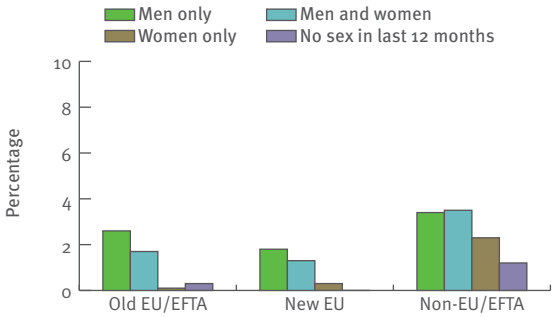
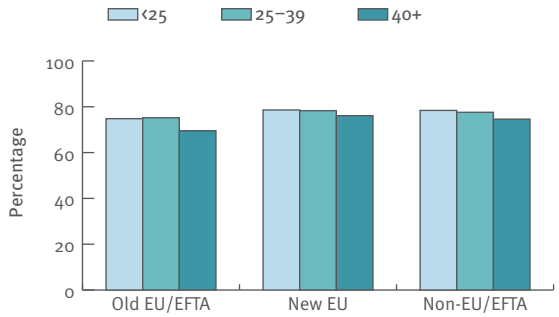
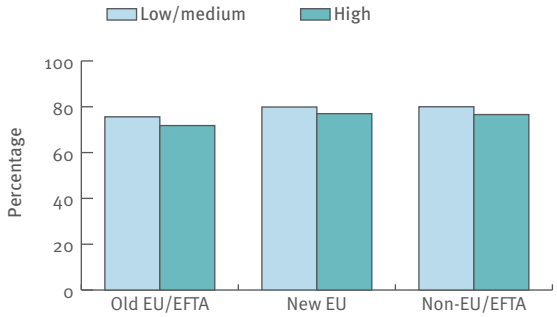


Figure 12.15: UAI with steady male partner during the preceding 12 months, by age, level of education and sexual orientation in three European regions

Age



Level of education



Sexual orientation

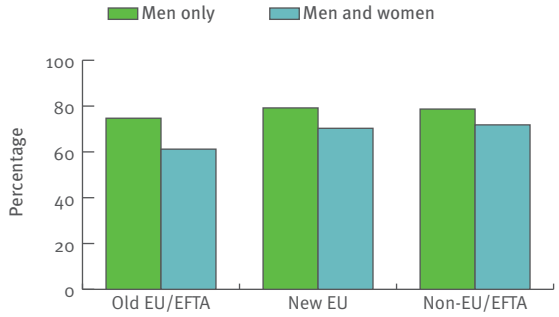
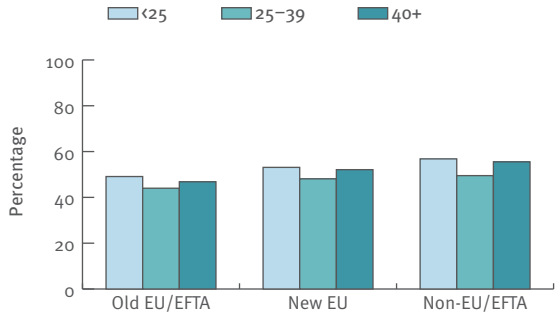
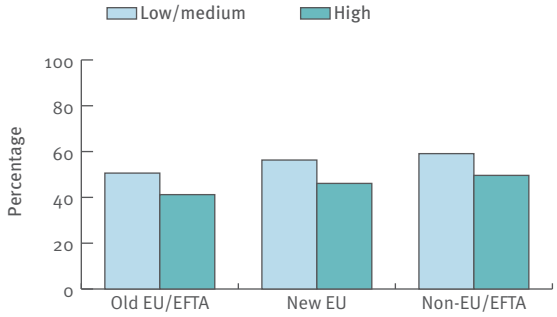


Figure 12.16: UAI with non-steady male partner during the preceding 12 months by age, level of education and sexual orientation in three European regions

Age



Level of education



Sexual orientation

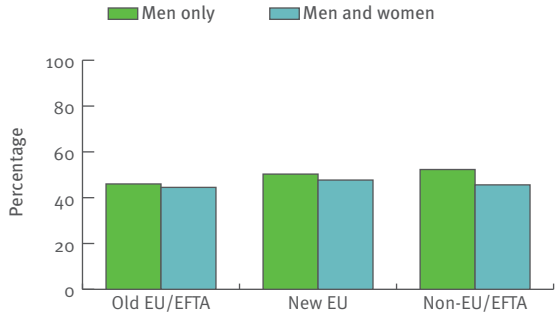


Figure 12.17: Non-concordant UAI with a steady partner during the preceding 12 months by age, level of education, sexual orientation and migration status in three European regions

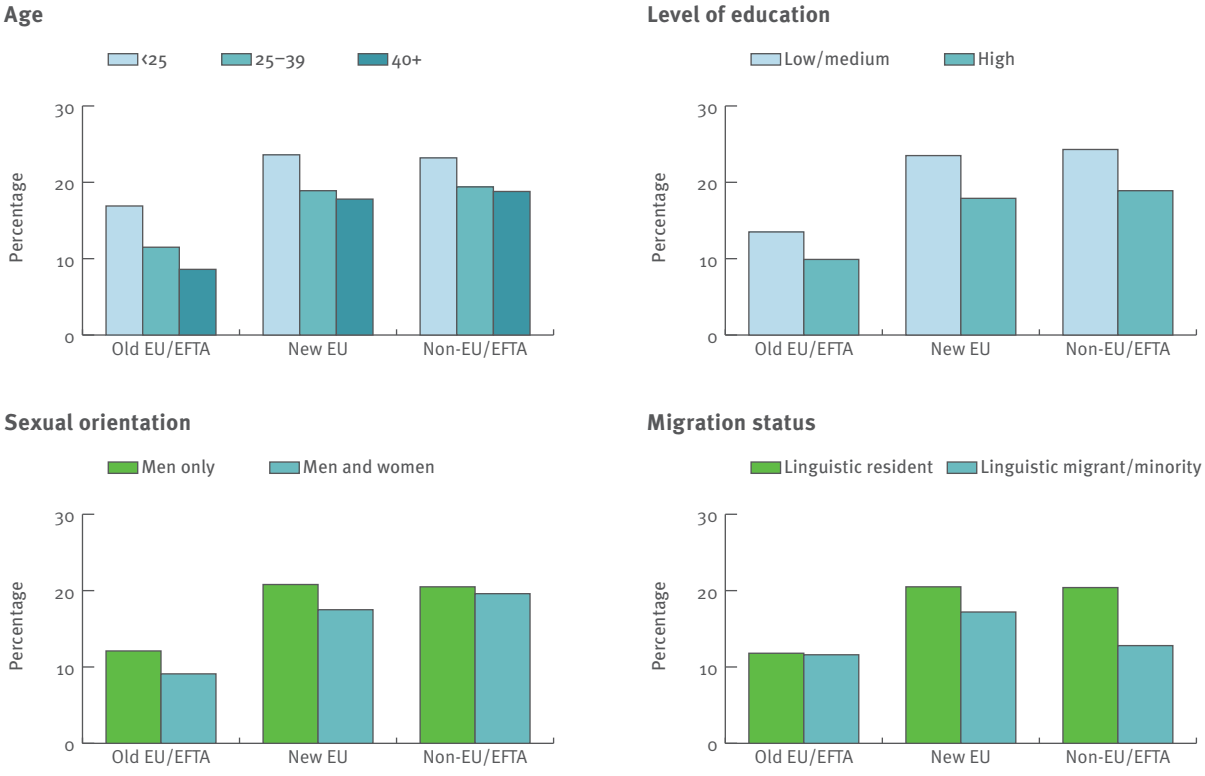
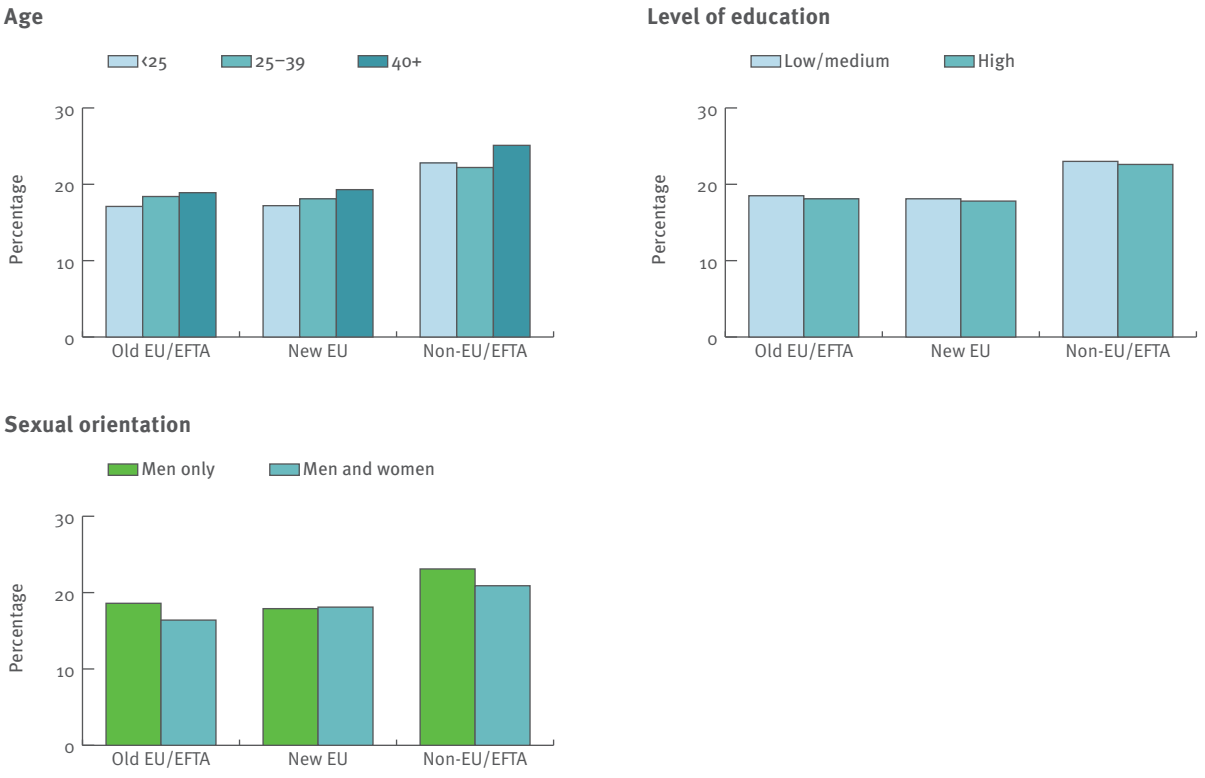


Figure 12.18: Non-concordant UAI with a non-steady partner during the preceding 12 months by age, level of education and sexual orientation in three European regions



testing for STIs may overcome some of the variance in testing practices across Europe (see Chapter 6, STIs).

12.4.3 Unprotected intercourse with steady male, non-steady male and female partners

Respondents were asked about how recently they had had anal intercourse and whether a condom was used, separately for steady male, non-steady male and female partners. Table 12.11 shows the numbers and proportions who engaged in UAI with steady and non-steady male partners and unprotected (vaginal or anal) intercourse (UI) with a female partner in the preceding 12 months.

In all regions, UAI was reported most frequently with steady partners (old EU/EEA Member States 74%; new EU Member States 78%; non-EU/EEA countries 78%), less frequently with female partners (64%, 68% and 67%, respectively) and with the lowest frequency in relation to non-steady male partners (46%, 50% and 52%, respectively). With regard to sub-regional trends, North-West Europe in the old EU/EEA Member States, North-East and South-East Europe in the new EU Member States and South-East Europe (non-EU) had the highest proportions of men who reported UAI irrespective of partner type.

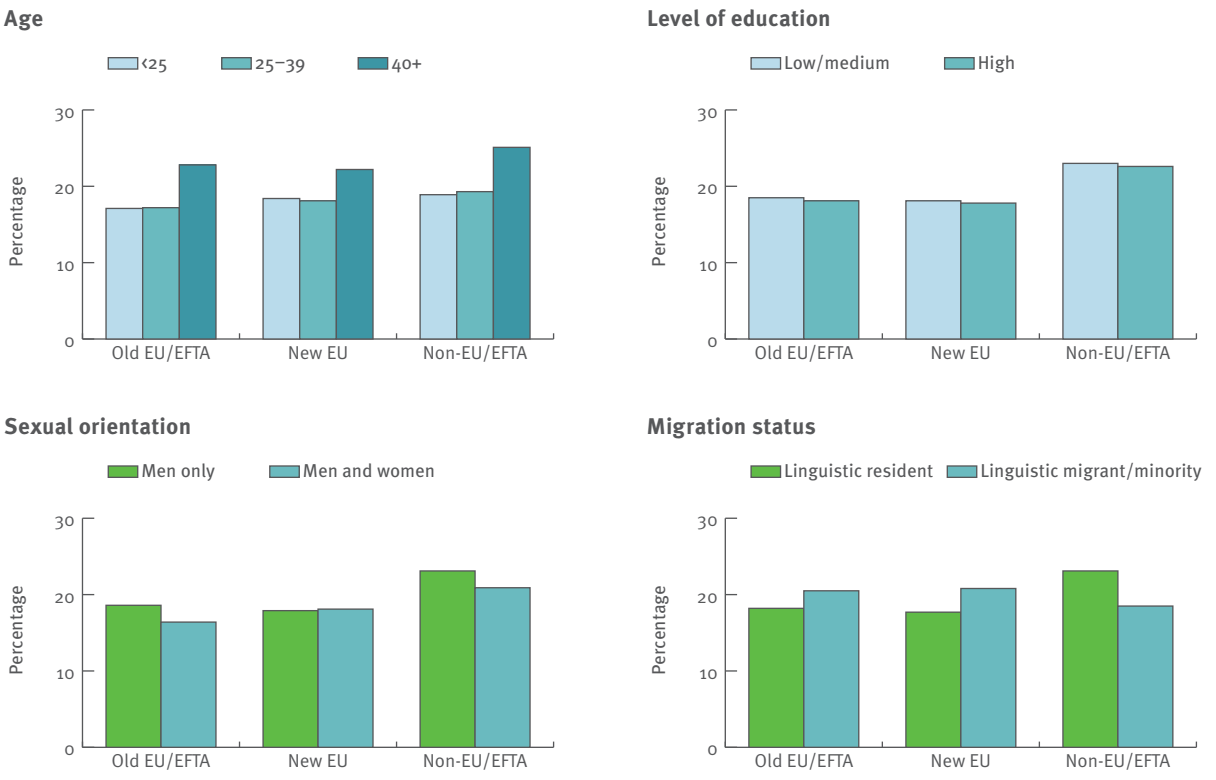
The demographic associations for UAI with male partners in the preceding 12 months were minor and similar in all regions (Figures 12.15 and 12.16). UAI with a non-steady partner was slightly more common in those aged 25–39 years and among MSM with a lower level of education in all regions. A clear age trend was observed for UI with female partners: the proportion engaging in UI with a female partner was higher in older age groups across all regions.

12.4.4 Unprotected intercourse with male partners of non-concordant HIV status

EMIS respondents were asked whether they had had UAI with a partner whose HIV status they thought was positive, negative, or unknown and they were asked separately for steady and non-steady partners. The numbers and proportions of men having UAI with steady and non-steady partners of unknown or suspected discordant HIV status (non-concordant UAI, ncUAI), and having UAI with non-steady partners thought to be of concordant HIV status (concordant UAI, cUAI) during the preceding 12 months are shown in Figures 12.17–12.19.

Non-concordant UAI with a steady partner was almost twice as common in the newer EU and non-EU/EEA countries as in the old EU/EEA (old EU/EEA Member States 12%; new EU Member States 20%; non-EU/EEA countries 20%). On the other hand, ncUAI with a non-steady partner was almost equally common in all regions (old EU/EEA Member States 18%; new EU Member States 18%; non-EU/EEA countries 23%), a finding that – besides methodological issues – may indicate higher proportions of untested MSM or greater stigma associated with HIV in eastern parts of Europe.

Figure 12.19: UAI with a non-steady partner believed to be of concordant HIV status during the preceding 12 months by age, level of education, sexual orientation and migration status in three European regions



In the old EU/EEA Member States and non-EU/EEA countries, ncUAI was more common with a non-steady than a steady partner. In the new EU Member States it was slightly more common with steady partners.

Significant and consistent demographic differences in ncUAI were only observed for steady partners (Figures 12.17–12.19): ncUAI with a steady partner was reported more often by younger (<25 years), less educated MSM, by those sexually attracted only to men (rather than to men and women) and by non-migrants.

12.4.5 Hepatitis C

EMIS asked respondents whether or not they had been diagnosed with the hepatitis C virus infection (HCV) and if so how long ago HCV had first been diagnosed, as well as their current HCV status. Table 12.3 provides the numbers and proportions of those ever diagnosed and currently infected with HCV.

The proportions of MSM ever diagnosed and currently infected with HCV were highest in non-EU/EEA countries, where 2.2% reported having at some point been diagnosed and 1.3% reported that they were currently infected with HCV. The respective proportions in the old EU/EEA Member States were 1.6% and 0.5% and in the new EU Member States 0.7% and 0.3%. Among non-EU/EEA countries, the sub-region East Europe had the highest proportion of men ever having been diagnosed with HCV (3.0%). In the old EU/EEA countries, it was most common to have at some point been diagnosed with HCV in the West sub-region (2.0%) and in the new EU countries in the North-East (1.4%). In non-EU/EEA countries and the new EU Member States, where significant differences were found for HCV and migration status, migrants were more likely to report having at some point been diagnosed with HCV infection.

The likelihood of HCV being diagnosed depends on testing and screening practices which vary between countries (ECDC, 2010). Another important factor affecting HCV figures is HIV infection which increases susceptibility to HCV transmission. Further analysis of EMIS data should therefore provide additional information on the correlates of HCV, such as STI testing and HIV prevalence.

12.4.6 Types of drugs taken

EMIS asked men how recently they had taken a range of specific drugs – sedatives and tranquillizers (benzodiazepines), cannabis, LSD, ecstasy, amphetamine, crystal

Table 12.3: Number and percentage of MSM with cumulated diagnosis and current status of hepatitis C, in three European regions, according to selected characteristics

	Old EU/EFTA					New EU					Non-EU/EFTA				
	Ever diagnosed with hepatitis C n=147906		Currently infected with hepatitis C n=147854		Total	Ever diagnosed with hepatitis C n=14327		Currently infected with hepatitis C n=14324		Total	Ever diagnosed with hepatitis C n=10828		Currently infected with hepatitis C n=10817		Total
	n	%	n	%	n[a]	n	%	n	%	n[a]	n	%	n	%	n[a]
All respondents	**2403**	**1.6**	**793**	**0.5**		**101**	**0.7**	**38**	**0.3**		**242**	**2.2**	**146**	**1.3**	
Age group (years)															
< 25	91	0.3	29	0.1	32577	12	0.2	2	0.0	4993	38	1.2	26	0.8	3103
25-39	783	1.1	280	0.4	70889	65	0.8	27	0.4	7709	145	2.2	85	1.3	6595
40 +	1529	3.4	484	1.1	45381	24	1.4	9	0.5	1733	59	4.8	35	2.9	1229
Education (ISCED)[b]															
Low/medium	1351	1.8	460	0.6	77479	45	0.7	18	0.3	6107	81	2.7	51	1.7	3013
High	1036	1.5	326	0.5	70252	55	0.7	20	0.2	8195	157	2	93	1.2	7822
Sexual orientation[c]															
Men only	2079	1.7	694	0.6	122178	81	0.7	28	0.3	10982	173	2.1	101	1.2	8275
Men and women	187	1.2	45	0.3	15899	11	0.6	5	0.3	1924	43	2.6	28	1.7	1655
Women only	19	0.9	8	0.4	2109	2	0.5	2	0.5	399	7	3.2	3	1.4	222
No sex in the past 12 months	87	1.2	37	0.5	7143	3	0.3	2	0.2	958	10	1.8	7	1.2	567
Migration status[d]															
Linguistic resident	2207	1.6	739	0.5	139958	87	0.6	30	0.2	13507	235	2.3	144	1.4	10131
Linguistic migrant/ minority	196	2.2	54	0.6	8889	14	1.5	8	0.9	928	6	2.5	2	0.8	248
Sub-region															
North-West	83	0.9	26	0.3	8996	.	.	.	.		.	.	.	.	
West	772	2.0	285	0.7	38845	.	.	.	.		.	.	.	.	
Central-West	931	1.5	264	0.4	63780	.	.	.	.		.	.	.	.	
South-West	617	1.7	218	0.6	37226	.	.	.	.		.	.	.	.	
North-East	.	.	.	.		27	1.4	16	0.9	1897	.	.	.	.	
Central-East	.	.	.	.		43	0.5	15	0.2	8789	.	.	.	.	
South-East (EU)	.	.	.	.		31	0.8	7	0.2	3749	.	.	.	.	
South-East (non-EU)	.	.	.	.		.	.	.	.		26	0.7	9	0.2	3697
East	.	.	.	.		.	.	.	.		216	3.0	137	1.9	7230
Total N[e]					**148847**					**14435**					**10927**

[a] Numbers may not add up to total due to missing values
[b] ISCED International Standard Classification of Education Degrees, ISCED 6, Low 1-2, Medium 3-4, High 5-6
[c] Sexual orientation in past 12 months
[d] Linguistic resident = survey language corresponds with the country of residence. Linguistic migrant/minority = survey language differs from the country of residence
[e] Total after removing non-qualifying and inconsistent data (see Chapter 2 for detailed explanation). Numbers may not add up to total due to missing values.

methamphetamine, mephedrone, GHB, ketamine, cocaine, heroin, crack cocaine, poppers (nitrite inhalants) and drugs such as Viagra. Based on a factor analysis of drug use in the preceding 12 months, cannabis was grouped with LSD, heroin with crack, and the rest were classed as drugs associated with sex and parties ('party drugs'). With regard to injecting drugs, EMIS asked separately about recreational drugs (broadly intravenous) and steroids (intramuscular).

Drug use in general was reported most commonly within the old EU/EEA Member States, whereas injecting drug use, both recreational and steroids, was most common within non-EU/EEA countries (1.6% and 2.2%), with the injection of recreational drugs particularly common in the East sub-region (2.8%). Broad sub-regional variation in drug use was observed. Cannabis was the drug reported most often in all sub-regions (over 10%). Party drugs were reported at similar levels to cannabis only in the West and South-West sub-regions, and sedatives and tranquillizers in South-West, Central-East and South-East (non-EU). In the old EU/EEA Member States, where significant differences were found for drug use and demographic factors, it was more common to inject drugs (other than steroids) among older men (25–39 and ≥40 years) and men with a lower level of education, while party drugs were more commonly used by men aged 25–39 years and men with a higher education (see Chapter 9 Recreational drugs).

12.4.7 Venues for meeting sexual partners

EMIS asked where MSM had met their most recent non-steady sexual partner and where they had met their most recent sexual partner abroad, providing a list of potential meeting places (Table 12.4).

The most common setting for meeting the most recent non-steady male sex partner in all regions was the internet, used by half of the respondents who had met a non-steady partner in the last 12 months. A regional trend could be identified: the proportion that used a website as a meeting point increased when moving from west to east. This result probably reflects the lack of commercial gay venues and a lower likelihood of being out and socialising in gay settings in the east (see Chapter 10 Stigma, discrimination and homonegativity).

12.4.8 HIV treatment and care

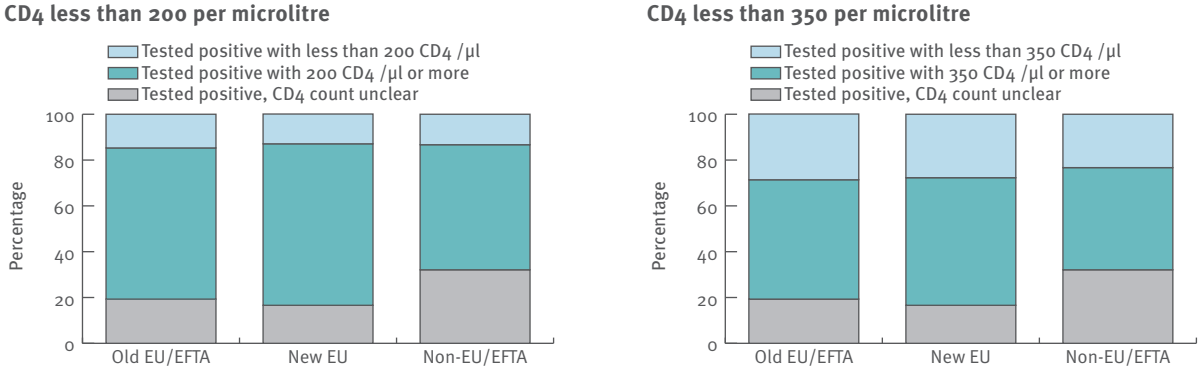
Being on antiretroviral treatment, the last viral load test result and the last CD4 count are considered priority indicators among people living with HIV. EMIS asked men with diagnosed HIV infection whether they had ever taken

Table 12.4: Number and percentage of venues where MSM met their last sexual non-steady partner[a], in three EU regions

Meeting venue	Old EU/EFTA		New EU		Non-EU/EFTA	
	n	%	n	%	n	%
Gay community centre, organization or social club	761	0.7	76	0.8	93	1.3
Gay cafe or bar	3378	3.2	156	1.7	104	1.5
Gay disco or nightclub	5253	5.0	579	6.5	299	4.2
Backroom of a bar, gay sex club or a public gay party	4148	3.9	247	2.8	120	1.7
Gay sex party in a private home	876	0.8	103	1.2	81	1.1
Gay sauna	7008	6.7	383	4.3	234	3.3
Porn cinema	1774	1.7	81	0.9	10	0.1
Cruising location[b]	8842	8.4	569	6.4	338	4.7
Website for gay or bisexual men	60920	58.0	5176	57.8	4615	64.8
Elsewhere	12097	11.5	1586	17.7	1225	17.2
Total	**105057**	**100**	**8956**	**100**	**7119**	**100**

[a] Denminator: Sex with non-steady partner in the past 12 months.
[b] Street, roadside, service area, park, beach, baths, lavatory.

Figure 12.20: MSM who tested positive with CD4 less than 200 per microlitre and CD4 less than 350 per microlitre



and were currently taking ART and about the results of their most recent viral load test. EMIS also asked those diagnosed within the last ten years what the CD4 count had been at the time of diagnosis. Figures 12.20–12.22 presents the percentages and numbers of HIV-positive MSM by CD4 counts at the time of diagnosis, viral load test results and history of ART.

Similar proportions of MSM with a CD4 count of less than 200 at the time of diagnosis were observed in all regions (13–15%), while the proportion with a CD4 count of less than 350 was lower in non-EU/EEA countries (23%) than in the other two regions (28–29%) (Figures 12.20–12.22). In relation to HIV treatment, while the proportion on ART and with undetectable viral load decreased from 59% to 31% moving from west to east, the proportion of MSM never having received ART increased, from 24% to 52%. A similar west-east gradient was observed between undetectable (from 65–35%) and detectable (27–37%) viral loads.

12.5 Conclusions

This chapter has focused on demographic associations with ECDC indicators in three regions to provide insight into the factors that make MSM vulnerable to HIV transmission. The regional analysis provides overall estimates within the three regions, but this does not imply that country level estimates would be homogenous within each region, or that regional overall estimates would pre-empt country level estimates, allowing more precise analysis of the diversity of the MSM population and the varied societal settings in which they reside across Europe.

In the current analysis, although the levels of the ECDC indicators across the regions and sub-regions have to be compared with caution due to the sampling method, the trends in demographic associations with the indicators are somewhat consistent across the three regions. This suggests that a convenience sample can be a useful method for conducting pan-European behavioural surveillance among MSM.

When combined with HIV/AIDS disease surveillance data (ECDC, 2012) and the most recent WHO recommendations for the public health approach to prevention and treatment of HIV and STIs among MSM and transgender people (WHO, 2011), the results in this and previous chapters may help to provide the best possible understanding of the epidemic to inform HIV prevention strategies.

The ECDC indicators do not include a specific indicator of anti-gay or anti-HIV stigma or discrimination. An important focus for further analysis would be to reveal the association of the ECDC indicators with those for stigma and discrimination, which may have a profound impact on the sexual health of MSM through various mechanisms. Internalised homophobia may affect men's ability to make healthy choices, including decisions about sex and substance use, and limit the willingness of MSM to access HIV prevention and care, as well as compromising the quality of services when they are accessed.

Highlights of the regional analysis include the following:

- The proportion of MSM whose most recent anal intercourse was unprotected, who reported any UAI over the past year and who reported ncUAI with non-steady partners was lower in the older EU/EEA Member States, higher in the newer EU Member States and highest in the non-EU regions.
- Although patterns were similar in the three European regions, the demographic distribution of most recent UAI, UAI over the past year and ncUAI, differ for steady and non-steady partners.
- The prevalence of HIV testing varied considerably between and within the regions. However, the demographic associations were similar in all regions and suggested that MSM with a lower level of education were less likely to test for HIV but more likely to test HIV positive.
- Migrants were more likely than non-migrants to test for HIV and also more likely to be diagnosed with HIV infection.
- Older and more educated men bought sex and younger and less educated men sold sex in all European regions. In the older EU/EEA Member States, non-migrants were more likely to buy sex and migrants were more likely to receive payment for sex, while in the non-EU countries the reverse applied.

Figure 12.21: Viral load at last check up

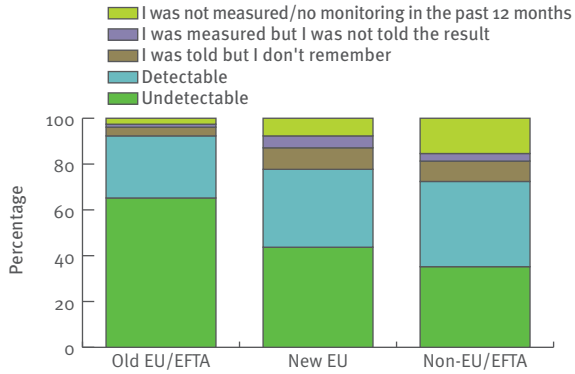
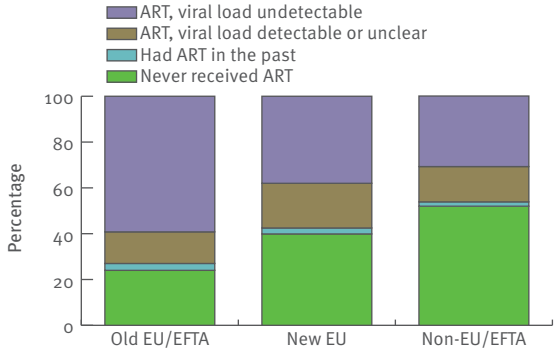


Figure 12.22: Receiving antiretroviral treatment (ART)



- In non-EU countries, self-reported syphilis was common in all age groups, while in the older EU/EEA and newer EU Member States it was more common among older men.
- Within the older EU/EEA Member States (where significant differences were observed), the distribution of recent STI diagnoses by demographic factors showed a similar trend for any form of STI, bacterial STIs and syphilis.
- In the older EU/EEA Member States, where significant associations were found between drug use and demographics, injecting drugs (other than steroids) was more common among older men and those with a lower level of education, while 'party' drugs were more common among younger men and men with a higher level of education.
- Earlier HIV diagnosis, when measured by CD_4 count at diagnosis, was more common in the older EU/EEA and newer EU Member States than in non-EU countries.
- Among men diagnosed with HIV infection, the likelihood of receiving HIV-treatment and having an undetectable viral load at the most recent check-up showed a clear west-to-east gradient, indicating increasing barriers to HIV monitoring and treatment moving from western Europe towards eastern Europe, new EU Member States, and non-EU countries.

Annex

ECDC indicators

Figure 13.1: ECDC indicators in EMIS 2010 (European Centre for Disease Prevention and Control (2009) Mapping of HIV/STI behavioural surveillance in Europe. Stockholm: ECDC)

ECDC proposed indicator	EMIS adapted ECDC indicator	EMIS observations and suggestions
Core indicators common to all populations		
1. Partners Number of sexual partners in the past 12 months (male and female)	**1a. Number of steady male sexual partners in the past 12 months** - Questions: Q148, Q155–158 - Denominator: all respondents **1b. Number of non-steady male sexual partners in the past 12 months** - Questions: Q148, Q163–165 - Denominator: all respondents **1c. Number of female sexual partners in the past 12 months (penetrative sex only)** - Questions: Q208–209 - Does not account for female sex partners where no vaginal or anal intercourse is present - Denominator: all respondents	EMIS underlines that a substantial proportion of the sexual interactions between men do not feature anal intercourse. Thus, EMIS asked for numbers of male sexual partners in the past 12 months (not only anal sex partners) separately for steady and non-steady partners. To keep the questionnaire as short as possible and given that the survey focus was on MSM and HIV, EMIS decided to restrict the question on the number of female sexual partners to those who engaged in vaginal or anal intercourse. We feel this is a negligible limitation. The number of steady male partners and female partners was truncated at '10 or more' in the questionnaire. The number of non-steady male partners was grouped as '11–20', '21–30','31–40' and '41–50' and truncated at 'more than 50'. This was done to acknowledge that high numbers of sexual partners are not counted but estimated as best guesses. If numbers of sexual partners are compared, the median should be used.
2. Use of condom Use of condom during most recent anal intercourse (in the past 12 months), ideally for casual and main partners separately ECDC suggested the indicator for use among people having had at least one sexual partner in the past 12 months.	**2a. Use of condom during last anal intercourse with a steady male partner, in the past 12 months** - Questions: Q148, Q155, Q157, Q159–161 - Denominator: men having anal intercourse with a steady male partner in the past 12 months - Corresponds to: **UNGASS #19*, WHO #C5d** (*For UNGASS #19, the denominator refers to the last six months, which can also be constructed from EMIS). - Alternative denominator: men having sex with a steady male partner in the past 12 months **2b. Use of condom during last anal intercourse with a non-steady male partner, in the past 12 months** - Questions: Q148, Q163, Q176, Q187–188, Q190 - Denominator: men having anal intercourse with a non-steady male partner in the past 12 months. - Alternative denominator: Men having sex with a non-steady male partner in the past 12 months.	EMIS asked about the last time that respondents had had sex with men (Q148), and whether condoms were used on the last occasion of anal sex with a steady (Q161) or non-steady (Q188, Q190) partner. Not engaging in anal intercourse, particularly with non-steady partners, may reflect a choice made in order to reduce HIV transmission risk. Therefore to measure preventive sexual behaviour more comprehensively, as an alternative EMIS suggests looking at whether the most recent sex (separate for steady and non-steady partners) included unprotected anal intercourse or not. The denominators are: men having sex with a steady/non-steady male partner during the past 12 months.
3. HIV test a) Ever tested b) Tested for HIV in the past 12 months c) Percentage who are HIV-positive (result of the last test) ECDC proposed the indicator should be constructed around three questions: firstly, experience of the test (having ever been tested), secondly a question on the date (year) of the last test and finally a question on the result of the test.	**ECDC 3a. Ever tested for HIV** - Questions: Q71 - Denominator: all respondents **ECDC 3b. Tested in the past 12 months and received results** - Questions: Q71-73, Q104 - Denominator: respondents who did not report a long-standing HIV infection (i.e. diagnosed before the 12 months preceding the survey) - Corresponds to: **UNGASS #8, WHO #A4** **ECDC 3c. Diagnosed HIV-positive (result of the last test)** - Question: Q71 - Denominator: ever tested for HIV - Corresponds to: **UNGASS #23, WHO #C6c**	EMIS asked men about their lifetime experience of testing and receiving test results, and separately for those who had ever tested positive, it asked for the year of the first positive test (including information on whether this had been in the past 12 months or not), and for those who tested negative it asked about the recency of the last HIV test. We suggested excluding respondents who were diagnosed HIV-positive over 12 months ago from indicator ECDC 3b/UNGASS #8, as people with long-standing HIV infections stop getting tested for HIV. By doing so, the indicator becomes independent of the proportion of HIV-positive men in the national samples.
4. Paid sex a) Having paid for sex in the past 12 months b) Use of condom during most recent paid intercourse (in the past 12 months)	**ECDC 4a. Having paid a man for sex in the past 12 months (in country of residence)** - Question: Q148, Q197, Q202 - Denominator: Sex with men in the past 12 months.	EMIS asked men about paying other men for sex within the past 12 months, and only in the respondent's country of residence. Paying for sex abroad is queried separately and both questions cannot be combined. EMIS did not ask questions to construct the indicator ECDC 4b. However, as sexual partners who are given money for sex are non-steady partners, a proxy can be cross-tabulated with condom-use for anal intercourse with non-steady partners.

ECDC proposed indicator	EMIS adapted ECDC indicator	EMIS observations and suggestions
5. Contextual indicators a) Level of education ECDC proposed ISCED classification. b) Nationality/ethnic origin ECDC recognised this as important but found no commonly agreed indicator for nationality or ethnic origin. c) Sexual orientation ECDC proposed using a 'modified Kinsey' scale for having had sex: only with males (or a male), never with a female; more often with males, and at least once with a female; about equally often with males and with females; more often with females, and at least once with a male; only with females (or a female), never with a male.	**ECDC 5a. Level of education** - ISCED (6) classification scale: low (1–2), medium (3–4), high (5–6) - Question: Q275 **ECDC 5b. Nationality/ethnic origin** - Question: Q4, Q6, Q7 - Survey language + Q4 **ECDC 5c. Sexual orientation (5-point-scale for sexual attraction)** - Question: Q9 - Alternatives: 1. Sexual identity (Q10) 2. A 3-point scale based on the gender of sexual partners during the past 12 months: sex with men only, sex with both men and women, sex with women only (Q148,Q208) 3. A 5-point scale based on the recency of sex (Q148, Q208)	Educational attainment is based on 6-level ISCED (International Standard Classification of Education Degrees) classification. Respondents were asked about their highest level of educational qualification. The response set of education varied for each language version of the questionnaire, corresponding with the six levels of ISCED. The broader categories Low (ISCED 1-2), Medium (ISCED 3-4) and High (ISCED 5-6) are preferable for comparing levels of education among respondents across Europe. No consensus was established among EMIS partners as how to ask for nationality or ethnic minority status. There are pitfalls associated with both concepts. In this report, two approximations were used to measure migration background. One was based on the country of birth, and the other on the language used for completing the survey. Both approximations may fail to identify migrants other than first generation. The concepts of ethnicity are not clearly defined for a European questionnaire. However, asking for 'nationality' will also fail to identify migration background, depending on the different immigration policies across Europe. To identify second generation migration background we suggest asking for the mother and father's countries of birth. EMIS did not ask for the frequency but for the recency of sex with men and women. Therefore, a five-point scale could only be based on the recency, not on the frequency, of sexual encounters (Only with men in the past 12 months, more recently with men, about equally recent with men and women, more recently with women, only with women in the past 12 months). However, for the purpose of the survey we suggest using the five-point scale for sexual attraction instead.
6. Knowledge Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission. ECDC recognised that the existing UNGASS indicator should not be proposed.	**ECDC 6. Being able to both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission** - Questions: Q62, Q68, Q241–243 - Denominator: all respondents - Corresponds to: **UNGASS #14*** (*The five statements used for this indicator are different for EMIS and UNGASS.) EMIS: (i) You cannot be confident about whether someone has HIV or not from their appearance (ii) Effective treatment of HIV infection reduces the risk of HIV being transmitted (iii) HIV cannot be passed during kissing, including deep kissing, because saliva does not transmit HIV (iv) You can pick up HIV through your penis while being 'active' in unprotected anal or vaginal sex with an infected partner, even if you don't ejaculate (v) You can pick up HIV through your rectum while being 'passive' in unprotected anal sex with an infected partner. UNGASS: (i) Can a healthy-looking person have HIV? (ii) Can using condoms reduce the risk of HIV transmission? (iii) Can having sex with only one faithful, uninfected partner reduce the risk of HIV transmission? (iv) Can a person get HIV from mosquito bites? (v) Can a person get HIV by sharing a meal with someone who is infected?	Knowledge appeared in three blocks in EMIS and took the form of statements supplied to respondents that they had been told were true. They were then asked if they knew the information already. In this way, the survey served as an intervention to spread correct knowledge. EMIS calculated two different indicators on knowledge of HIV transmission. One – as suggested by ECDC – is the proportion of respondents who answered correctly for all five items. However, this indicator cannot distinguish between those who had no knowledge at all and those who knew say, three or four of the five items. EMIS suggests comparing national means of knowledge scores instead. The score for knowledge of HIV transmission features the same five questions and is calculated as the percentage of questions answered correctly by each respondent. National scores are then based on the mean
ECDC population-specific indicators for MSM		
7. Age at first intercourse and/or becoming sexually active	**ECDC 7a. Age when first became (homo)sexually active** - Questions: Q148–149 - Denominator: respondents reporting sex with men **ECDC 7b. Age at first (anal) intercourse with a man** - Questions: Q150–151 - Denominator: respondents reporting sex with men	EMIS asked men about their age at first sex of any kind with a man/boy, as well as age at first anal intercourse with a man/boy.
8. Diagnosed with STIs in the past 12 months (recent STIs) ECDC included this as a core indicator among MSM, but found no commonly agreed indicator for recent STI acquisition and did not define which STIs should be included.	**ECDC 8. Diagnosed with syphilis, gonorrhoea, or chlamydial infection, or first diagnosis of anal or genital herpes or warts in the past 12 months** - Questions: Q131–140 - Denominator: all respondents - Alternatives: 1. Diagnosed with syphilis, gonorrhoea, or chlamydial infection in the past 12 months 2. Diagnosed with syphilis in the past 12 months, among those who received a blood test - Corresponds to: **WHO #F5**	EMIS asked whether men had ever been diagnosed with an STI and when were they last diagnosed with an STI. EMIS suggests using any diagnosis of syphilis gonorrhoea, chlamydia, or 1st diagnosis of anogenital herpes, or anogenital warts in the past 12 months as a proxy for recent STIs. This report also explored any diagnosis of bacterial STIs (chlamydia, gonorrhoea, syphilis) or syphilis alone over the past 12 months. Given the differences in diagnostic approaches to STI testing across Europe, syphilis is likely to be the only STI that can reliably be compared. However, given that the spread of syphilis across Europe is uneven, relying on syphilis only might result in the under-reporting of STIs.

ECDC proposed indicator	EMIS adapted ECDC indicator	EMIS observations and suggestions
9. Condom use with different types of partner	**ECDC 9a. UAI with steady male partner during the past 12 months** - Questions: Q148, Q155, Q157–158 - Denominator: men having sex with a steady male partner in the past 12 months **ECDC 9b. UAI with non-steady male partner in the past 12 months** - Questions: Q148, Q163, Q165–166 - Denominator: men having sex with a non-steady male partner in the past 12 months. **ECDC 9c. UVAI with women in the past 12 months** - Questions: Q208–210 - Denominator: Intercourse (anal or vaginal) with women	EMIS asked men about the recency of sexual intercourse and whether it included unprotected anal intercourse, separately for steady male, non-steady male and female partners. Not engaging in anal intercourse, particularly with non-steady partners may reflect a conscious choice to reduce HIV transmission risk. Therefore, in order to measure preventive sexual behaviour more comprehensively, EMIS proposed looking at whether sex with men in the past 12 months (separate for steady and non-steady partners) included unprotected anal intercourse or not. The denominators are men having sex with a steady/non-steady male partner in the past 12 months. Indicators for unprotected anal intercourse at last sexual encounter with steady and non-steady male sexual partners are covered by ECDC 2. Non-concordant unprotected anal intercourse is covered by ECDC 13.
10. Having been paid for sex in the past 12 months	**ECDC 10. Having been paid by a man for sex in the past 12 months (in the country of residence)** - Questions: 148, 198, 203 - Denominator: sex with men in the past 12 months.	EMIS asked men about being paid by other men for sex within the last 12 months, and only in the respondent's country of residence. Being paid for sex abroad is queried separately; both questions cannot be combined.
11. Concurrency ECDC used concurrency to refer to regularly having sexual intercourse with more than one partner. Although they recognised concurrency as important, they found no agreed indicator for its measurement, and suggested that more research was required on the formulation of questions to obtain valid information for this indicator. ECDC suggested that 'the percentage of men and women regularly having sexual intercourse with more than one partner in the past 12 months' might be used.	**ECDC 11. More than 10 sexual partners in the past 12 months**	Like the MSM chapter in ECDC's technical report, EMIS does not recommend 'regularly having sexual intercourse with more than one partner' as a definition for concurrency since the large majority of MSM sampled have had sex with more than one partner in the past 12 months. EMIS proposes using the 'proportion of MSM with more than 10 sexual partners over the past 12 months' instead of concurrency.
12. Condom use for different types of sexual practices	**ECDC 12. Condom use for different types of sexual practices** **ECDC 12a. Condom use for anal intercourse with steady male partners in the past 12 months** - Questions: Q148, Q155, Q157–158 - Denominator: men having anal intercourse with a steady male partner in the past 12 months. **ECDC 12b. Frequency of condom use for anal intercourse with steady male partners in the past 12 months** - Questions: Q148, Q155, Q159–160 - Denominator: Men having anal intercourse with a steady male partner in the past 12 months. **ECDC 12c. Condom use for anal intercourse with non-steady male partner in the past 12 months** - Questions: Q148, Q163, Q165–166 - Denominator: men having anal intercourse with a non-steady male partner in the past 12 months **ECDC 12d. Frequency of condom use for anal intercourse with non-steady male partner in the past 12 months** - Questions: Q148, Q163, Q177–178 - Denominator: men having anal intercourse with a non-steady male partner in the past 12 months.	HIV transmission among MSM is broadly, if not exclusively, based on anal intercourse. For other sexual practices than oral or anal intercourse, asking about condom use is not applicable. EMIS asked men about the use of condoms in anal sex with men, and – without distinguishing between the two – in anal or vaginal sex with women. Like the MSM chapter in ECDC's technical report, EMIS does not recommend querying condom use for oral sex.
13. Comprehensive indicator of exposure to risk (in the past 12 months) ECDC included 'unprotected anal intercourse (UAI) with a partner of unknown or discordant HIV status, and UAI with a partner of the same HIV status' (overall and separately for casual and main partners, in the past 12 months) as core indicators for MSM.	**ECDC 13a. Unprotected anal intercourse with any male partner of unknown or discordant HIV serostatus (non-concordant UAI=ncUAI) in the past 12 months** - Questions: Q69, Q71, Q148, Q155, Q157, Q159–163, Q166, Q176-181, Q188 - Denominator: sex with a male partner in the past 12 months. **ECDC 13b. Unprotected anal intercourse (UAI) with a steady male partner of unknown or discordant HIV serostatus in the past 12 months.** - Questions: Q71, Q148, Q155, Q157, Q159–162 - Denominator: sex with a male partner in the past 12 months. **ECDC 13c. UAI with a non-steady male partner of unknown or discordant HIV serostatus in the past 12 months.** - Questions: Q69, Q71, Q163, Q166, Q176–181, Q188, Q190 - Denominator: sex with a male partner in the past 12 months. **ECDC 13d. UAI with a non-steady male partner of concordant HIV serostatus in the past 12 months** - Questions: Q69, Q71, Q69, Q163, Q166, Q176–181, Q188, Q190 - Denominator: Sex with a male partner in the past 12 months.	EMIS asked men whether they had had UAI with a partner whose HIV status they knew to be positive, negative or unknown, separately for steady and non-steady partners. EMIS proposes UAI for partner type and for partners' HIV status as a comprehensive indicator of risk. For further in-depth analyses, EMIS can provide information on how HIV status has been communicated (for non-steady male partners), by looking at typical forms of HIV status via verbal, textual (such as an online profile) and non-verbal communication, with a varying likelihood of correctness.

ECDC proposed indicator	EMIS adapted ECDC indicator	EMIS observations and suggestions
14. Hepatitis C test a) Whether a respondent had ever been tested and if so, the date of the last test b) Result of the test (reported or measured)	**ECDC 14a. Ever being diagnosed with hepatitis C** **ECDC 14b. Recency of being first diagnosed with hepatitis C** **ECDC 14c. Current status of HCV infection** - Questions: Q141–143 - Denominator: all respondents - Alternative denominators: respondents with diagnosed HIV who deny IDU, respondents with a history of IDU.	EMIS asked if respondents had been diagnosed with hepatitis C and about the recency (e.g. in the past three, six or 12 months) of the first diagnosis of hepatitis C. EMIS did not ask if men had ever been tested for hepatitis C.
15. Types of drugs consumed ECDC recognised this indicator as important in certain groups and suggested the wording should be adapted to the particular situation	**ECDC 15. Types of drugs consumed** - Questions: Q220–221, Q227–240 - Denominator	EMIS asked men about how recently they had consumed a large number of specific drugs, including alcohol, tobacco, sedatives and tranquilisers (benzodiazepines), cannabis, LSD, ecstasy, amphetamines, crystal methamphetamine, mephedrone, GHB, ketamine, cocaine, heroin, crack, poppers or Viagra (etc.). In this report indicators related to 'injecting steroids' and 'injecting drugs (other than steroids) in the last 12 months' were also used. EMIS asked separately about injecting recreational drugs (broadly intravenous) or steroids (intramuscular), as this involves two different populations.
16. Variables related to HIV treatment a) Being on antiretroviral treatment b) CD4 count c) Viral load ECDC recognised the importance of obtaining medical information from individuals recruited outside medical settings. Being on Highly-Active ART (HAART), last viral load and last CD4 count were considered priority indicators among people living with HIV/AIDS (PLWHA).	**ECDC 16a. Currently receiving antiretroviral treatment** - Questions: Q83, Q93 - Denominator: MSM living with diagnosed HIV **ECDC 16b. CD4 count (at diagnosis)** - Questions: Q74 - Denominator: MSM living with HIV diagnosed 2001–2010 **ECDC 16c. Viral load (last count)** - Questions: Q103 - Denominator: MSM living with diagnosed HIV	EMIS asked HIV-positive men whether they had ever taken or were currently taking antiretroviral treatment for their HIV infection and about the results of the viral load test when they were last monitored. Men diagnosed with HIV are likely to remember their viral load and whether it was undetectable or not. Once on the treatment, the CD4 count is not the focus of monitoring so they may be less likely to remember their last CD4 count. Therefore EMIS did not ask men what their last CD4 count was, but instead asked those diagnosed within the last ten years what their CD4 count had been at diagnosis.
17. Where men met their sexual partners in past 12 months (saunas, bars, clubs, internet, etc.)	**ECDC 17. Where MSM met their most recent non-steady sexual partner in the last 12 months** - Questions: Q148, Q163, Q182 - Denominator: sex with non-steady partner in the past 12 months. - Alternatives: Where MSM met in the past 12 months, but not necessarily in order to have sex: Q31–39	For planning of prevention intervention, it is important to know what types of sub-cultural venues MSM visit. Questions were asked about these places regardless of whether sexual partners were met there or not (Q31-39). EMIS did not ask men where they had met sexual partners during the past 12 months. Instead, to compare different populations, respondents were asked about the place where they had first met their last non-steady partner (including meeting online) separately for the country of residence and abroad.

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