



TECHNICAL REPORT

EMIS-2017

The European Men-Who-Have-Sex-With-Men Internet Survey

Key findings from 50 countries

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EMIS-2017 was undertaken by Sigma Research at the London School of Hygiene and Tropical Medicine in association with the Robert Koch Institute in Berlin. EMIS-2017 was part of the ESTICOM project¹ which involved nine European organisations in a consortium led by the Robert Koch Institute (RKI) in Berlin, Germany. ESTICOM was directed by an Advisory Board which included one representative each from the European Commission²; Chafea³; the HIV/AIDS, viral Hepatitis and Tuberculosis Civil Society Forum (CSF)⁴; the European Centre for Disease Prevention and Control (ECDC)⁵; the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)⁶, and the Joint United Nations Programme on HIV/AIDS (UNAIDS).

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¹ <https://www.esticom.eu/Webs/ESTICOM/EN/about-project/about-project-node.html>

² https://ec.europa.eu/commission/index_en

³ http://ec.europa.eu/chafea/index_en.htm

⁴ <https://www.aidsactioneurope.org/en/civil-society-forum>

⁵ <https://ecdc.europa.eu/en/home>

⁶ http://www.emcdda.europa.eu/emcdda-home-page_en

⁷ https://ec.europa.eu/health/funding/programme_en

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Abbreviations

AI	anal intercourse
AIDS	Acquired immune deficiency syndrome
ART	antiretroviral treatment
ARV	antiretroviral (drugs)
CAGE4	'Cut down, annoyed, guilty, eye-opener': screening technique for alcohol dependence
Chafea	Consumers, Health, Agriculture and Food Executive Agency of the European Commission
CHW	community health worker
DDM	Dublin Declaration Monitoring
EaP	Eastern partnership (sub-group of ENP)
ECDC	European Centre for Disease Prevention and Control
ECHOES	European Community Health Workers Online Survey
EEA	European Economic Area
EFTA	European Free Trade Association
EMIS	European MSM Internet Survey
ENP	European Neighbourhood Policy
ESTICOM	European Surveys and Training to Improve MSM Community Health
EU	European Union
GAM	Global AIDS monitoring
GHB/GBL	gamma hydroxybutyrate/gamma butyrolactone
GPS	global positioning system
HAART	highly active anti-retroviral therapy
HAV	hepatitis A virus
HBV	hepatitis B virus
HCV	hepatitis C virus
HPV	human papilloma virus
HIV	Human immunodeficiency virus
ITU	International Telecommunications Union
LGBT	Lesbian, gay, bisexual, transgender
LGV	<i>Lymphogranuloma venereum</i> (disease caused by <i>C. trachomatis</i> serovars L1-L3)
LSD	lysergic acid diethylamide
MSM	Men who have sex with men
PEP	post-exposure prophylaxis
PHQ-4	patient health questionnaire
PrEP	pre-exposure prophylaxis
SIHS	short internalised homonegativity scale
SPS	social provisions scale
STI	sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
U=U	Undetectable equals Untransmittable
URL	uniform resource locator
WHO	World Health Organization

Executive summary

EMIS-2017 (the European MSM Internet Survey) was one component of ESTICOM (European Surveys and Training to Improve MSM Community Health). ESTICOM was a three-year project (2016–2019) funded by the European Commission Health Programme 2014-2020 through a tender by Chafea (the Consumers, Health, Agriculture and Food Executive Agency). The tender requested evidence about the sexual health of gay men, bisexual men and other men who have sex with men (MSM) across Europe.

The overall aim of EMIS was to generate data useful for the planning of HIV and STI prevention and care programmes and the monitoring of national progress in this area. This was done by describing the level and distribution of HIV transmission risk and precautionary behaviour related HIV prevention needs, and by assessing self-reported STI testing behaviour, testing performance, and various STI diagnoses, including viral hepatitis.

The EMIS-2017 questionnaire was based on a previous version of the survey (EMIS 2010, EMIS Network, 2013). Development was informed by a scoping exercise of available MSM questionnaires published since 2010 followed by three public consultation rounds among our partners, a time trial and a formal pilot of the online version in English only. Ultimately the survey was available online in 33 languages simultaneously, between 18 October 2017 and 31 January 2018.

The narrative element of this report is based on the response by 127 792 men that have sex with men (MSM) living in 48 countries (all 28 EU countries, three EFTA countries, four non-EU European microstates, seven countries of the EU enlargement area, three countries from the Eastern Partnership (EaP), two countries from the Southern Neighbourhood and Russia). In chapters 3–7 and 9 the key findings are presented in tables by country of residence at the end of each chapter. We also show residents of Canada and the Philippines in the country tables but they are not included in the narrative description in the main body of the report. Key variation between the residents of specific countries is also illustrated in maps throughout the report. To increase readability, in the narrative of the report we use one decimal place only for percentages less than 2%.

Sample description

Chapter 3 describes the characteristics of participants that HIV/STI and health promotion programmes cannot change or are not usually trying to change. The characteristics reported sometimes describe a target group for interventions (for example, trans men or young men).

- Sex at birth and current gender identity – being male was a requirement of participation. A total of 99% defined themselves as 'male' and 1% considered themselves to be 'trans men'.
- Age – the average (median) age was 36 years old (range 14 to 100, mean 37.2, standard deviation 12.8). Average age varied substantially by country of residence.
- Country of residence – 85% were resident in the EU; 5% in EFTA countries; 3% in EU Enlargement Area countries; 3% in EU Neighbourhood Policy countries; and 5% in Russia.
- Migration history – 13% were not born in the country where they currently lived.
- Education – 97% had some education post 16 (median number of years was 6) and 89% had two or more years post-16 education.
- Employment – 72% were in employment, with over half employed full-time. More than 1 in 20 were unemployed and there was a sizable minority of students (14%).
- Financial coping – 17% reported struggling financially; 34% neither struggling nor comfortable and 49% reported they were financially comfortable.
- Sexual attraction – <1% indicated they were not attracted to anyone, 5% were attracted to non-binary people (a category for gender identities that are not exclusively masculine or feminine), 16% to women and 99% to men. All those who did not indicate they were attracted to men had previously had sex with men.
- Sexual identity – 77% identified as gay or homosexual and 16% as bisexual.
- 'Outness' – of those attracted to men 59% were out about that attraction to the majority of people they knew.
- Current partnerships – 39% had a current steady partner, most commonly one male partner (31% of all participants). 54% were currently single.
- Buying and selling sex – more participants had bought sex than had sold it, both in their lifetime (18% vs. 15%) and in the last 12 months (10% vs. 5%). The majority who had either sold or bought sex in the last 12 months had done so once or twice only.

Morbidities

Chapter 4 describes physical and psychological ill health. For a health programme, reduction in, and prevention of, morbidities are the ultimate outcomes. EMIS-2017 asked about two areas of sexual health morbidity: mental ill-health and sexually transmitted infections.

- Anxiety and depression – using PHQ-4, 18% reported at least moderate anxiety/depression in the last two weeks and 8% reported experiencing severe anxiety and depression.
- Suicidal ideation – 21% had thought of harming themselves in the past two weeks and 6% thought of harming themselves on at least half of the days during that time.
- Sexual unhappiness – 22% indicated sexual unhappiness on a self-rating scale.
- Alcohol dependency – using the CAGE4 screening measure 18% met the criteria for potential alcohol dependency.
- HIV diagnoses – 10% of the entire sample self-reported having ever been diagnosed with HIV. Excluding participants who had already been diagnosed 12 months ago, the proportion who received an initial HIV diagnosis in the last 12 months was 1.1%.
- Unsuppressed diagnosed HIV infection – 1% of the entire sample reported non-suppressed HIV infection.
- Diagnoses of bacterial sexually transmitted infections (STIs) – 4% had been diagnosed with syphilis in the last 12 months, 5% with gonorrhoea and 5% with chlamydia or LGV.
- Diagnosis of anal or genital warts (human papilloma virus (HPV) infection) – 16% had a history of anal/genital warts
- Hepatitis – 7% had a history of hepatitis A, 6% of hepatitis B, and 2% of hepatitis C. Just over 1% of the whole sample reported HIV/hepatitis co-infection.

Risk and precaution behaviour

Chapter 5 reports on the behaviour that contributes to or detracts from the morbidities described in Chapter 4 – i.e. sexual health risk and precaution behaviour. We asked about two groups of risk behaviour (having sex, taking drugs and doing them together) and four precautionary types of behaviour (taking antiretroviral drugs, sharing HIV status information, using condoms and getting vaccinations).

- HIV diagnosis and taking treatment – 10% indicated they had ever been diagnosed with HIV, 94% of these people were currently taking anti-retroviral therapies (ART).
- Post-exposure prophylaxis (PEP) – Among participants not diagnosed with HIV 7% had ever tried to get PEP, 5% had ever taken PEP. This means that 28% of those who tried to obtain PEP had not been able to.
- Pre-Exposure Prophylaxis (PrEP) – Among participants not diagnosed with HIV 3% were currently using PrEP, and two-thirds of these used it daily.
- Hepatitis A and B vaccination – 53% were potentially vulnerable to hepatitis A infection and 49% were potentially vulnerable to hepatitis B infection.
- Sex with men – in the last 12 months 85% had engaged in anal intercourse and 61% had condomless intercourse with a man.
- Sex with women – 47% had ever had sex with a woman, 19% in the last five years and 11% in the last year. Condom use during intercourse with women was polarised, with 43% never using them and 31% always using them.
- Alcohol and tobacco – alcohol was the most commonly used drug for all time intervals, with almost universal lifetime use (94%) and 70% during the previous week. A total of 34% had used tobacco in the last 24 hours and 39% in the previous week.
- Illicit drug use – the most commonly used illicit drug for every time period was cannabis, used by 39% ever and 13% in the last four weeks. Four other drugs had ever been taken by 10–20% of respondents and 20%: cocaine, ecstasy, amphetamine and gamma hydroxybutyrate/gamma butyrolactone (GHB/GBL). Of the other drugs (ketamine, LSD, crystal methamphetamine, mephedrone, synthetic cannabinoids, other synthetic stimulants, heroin and crack cocaine) none had been used by more than 2% in the last four weeks; or 4% in the last year.
- Injecting drug use – slightly more had ever injected anabolic steroids (3%) than had injected to get high (2%). A quarter of those who had ever injected had done so with a used needle or syringe (1% of all respondents).
- Combined sex and drug use – 15% had ever had chemsex, two thirds of which had done so in the last 12 months. Multi-partner chemsex was common, but the majority of sessions occurred between two men.

Needs

Chapter 6 describes sexual health needs, defined as the capabilities, opportunities and motivation to engage in sexual-health-related behaviour, both precautions and risks. A central research objective of EMIS was to identify sexual health needs that are commonly unmet so those needs can be prioritised for intervention.

- Social support – using two sub-scales of the social provisions scale (SPS) 7% lack reliable alliance and 9% lack social integration.
- Internalised 'homonegativity' – 12% showed evidence of internalised 'homonegativity'.
- Unmet need for safer sex – a variety of needs are reported: a total of 28% did not know that most STIs are easier to transmit than HIV; in all, 26% had condomless sex in the last year solely because they lacked access to a condom; 22% are not as sexually safe as they want to be and 17% do not find it easy to say no to unwanted sex.
- Unmet need for viral hepatitis vaccination – a variety of needs are reported including the fact that 41% do not know that doctors recommend vaccination against hepatitis A & B for MSM.
- Unmet need in relation to post-exposure prophylaxis (PEP) – a variety of needs are reported, including the fact that 39% have not heard of PEP.
- Unmet need for Pre-Exposure Prophylaxis (PrEP) use – a variety of needs are reported, including the fact that 37% of the sample had not heard of PrEP.
- Unmet need for HIV testing and treatment – 43% do not know that people on effective treatment cannot transmit HIV and 4% are 'unsure' of their HIV status.

Interventions

Chapter 7 describes interventions which can be positive (meeting needs) or negative (undermining needs and generating unmet need). Positive interventions include education, health and social services as well as the myriad ways in which community members help each other. Negative interventions include homophobic legislation, exclusion and abuse.

- Homophobic abuse: intimidation, insults, and violence – In the last 12 months, 3% of participants had been physically assaulted; 21% had been verbally insulted and 27% had been intimidated because someone had known or presumed they were attracted to men.
- Access to free condoms – 32% reported having received free condoms from civil society organisations, clinics, bars, or saunas in the last 12 months.
- HIV/STI education services – 88% had seen MSM-specific information about HIV or STIs in the last year and more than half (57%) had done so in the last four weeks.
- HIV testing – 56% had received an HIV test result in the last 12 months, most commonly in clinical settings. Community-based testing accounted for just over one fifth of tests.
- HIV cascade of care – our data allows the construction of the last four stages of the HIV care cascade: linked to care, retained in care, on ART, undetectable viral load. Among HIV-diagnosed participants, the second and third of UNAIDS' three 90-90-90 goals were reached across the European Union, EFTA countries, and in Israel, but not in other European Neighbourhood Policy (ENP) countries, the EU enlargement area, or Russia.
- STI testing services – 46% had tested for STIs other than HIV in the last 12 months. A full STI screen, defined as an HIV-test, a blood test for STIs, a urine sample or urethral swabbing, and anal swabbing was reported by 13% of non-HIV-diagnosed participants in the last year.
- Partner notification – the majority of participants diagnosed with either syphilis or gonorrhoea had informed at least some of their sexual partners that they should seek a test or treatment.
- Hepatitis vaccination – just over half had ever been offered a hepatitis vaccination in a healthcare setting; 43% reported having had a full course of vaccination against hepatitis A; and 49% reported having had a full course of hepatitis B.

Health inequalities

Chapter 8 describes the levels of morbidities, behaviour, unmet prevention needs and use of interventions across various groups of MSM that are targets for sexual health promotion. To do this we consider how the indicators described in Chapters 4 to 7 vary across key target groups for sexual health promotion identified in Chapter 3.

First we look at the indicators across four key demographics: age; 'outness'; relationship status; and HIV diagnosis. We then consider four minority MSM groups (trans MSM; MSM injecting drugs; asylum seeking and refugee MSM; and MSM selling sex) using the same set of indicators.

We provide data on a total of 54 binary health indicators: 12 morbidity indicators; seven behaviour indicators; 20 needs indicators; and 15 intervention indicators. We provide these binary indicators for a total of 24 groups: four age groups; three 'outness' groups; three relationship groups; two HIV diagnosis groups; four sex/gender identity groups; two injecting groups; four migrant groups; and two selling sex groups. In total, this chapter supplies 1 296 measures.

Last sex session with a non-steady partner

Chapter 9 presents information on the last sexual encounter with one or more non-steady male sex partners provided by 75% of all respondents (94 463) who reported having had sex with a non-steady male partner in the last 12 months.

- The number of partners involved -78% of the last sexual encounters with a non-steady sex partner involved just two people while the other 22% of encounters included three or more men.
- Where they initially met partner(s) – non-steady sex partners had first been met online (68%), in gay sex venues (17%) or gay social venues (15%).
- Sexual acts in the sex session – the majority of encounters featured masturbation, oral and/or anal intercourse. Anal intercourse was common (74%): 34% reported receptive only, 28% reported insertive only, and 12% reported both insertive and receptive in the session.
- Condom use – among participants without diagnosed HIV, 60% of the most recent anal intercourse with a non-steady partner was protected by a condom and/or anti-retrovirals (PrEP).
- HIV status communication and assumptions – sero-status disclosure was most common among participants with a last negative HIV test result, but the majority of encounters with a male non-steady partner did not involve discussions about HIV status.
- Substance use before or during the session – just under half of the encounters involved the use of at least one substance, most commonly alcohol, nitrite inhalers, erectile dysfunction medication or cannabis. Sexualised drug use and injecting drug use were strongly associated with multi-partner sex, and more commonly reported by participants with diagnosed HIV.

1. Introduction

1.1 Overview

EMIS-2017 (the European MSM Internet Survey) was one part of ESTICOM (European Surveys and Training to Improve MSM Community Health). ESTICOM was a three-year project (2016-2019) funded by the European Commission Health Programme 2014-2020 through a tender by Chafea (the Consumers, Health, Agriculture and Food Executive Agency). The tender requested evidence about the sexual health of gay men, bisexual men and other men who have sex with men (MSM) across Europe.

The overall aim of EMIS was to generate data useful for the planning of HIV and STI prevention and care programmes and the monitoring of national progress in this area, by describing the level and distribution of HIV transmission risk and precautionary behaviour, related HIV prevention needs, and by assessing self-reported STI testing behaviour, testing performance, and various STI diagnoses, including viral hepatitis.

1.2 Project purpose and drivers

The survey described in this report was the outcome of collaboration between many parties. EMIS-2017 is one component part of ESTICOM. ESTICOM was a three-year project funded by the European Commission Health Programme 2014–2020 through a tender commissioned by Chafea. The tender sought evidence about the sexual health of gay men, bisexual men and other men who have sex with men (MSM) across Europe.

ESTICOM involved nine European organisations in a consortium led by the Robert Koch Institute (RKI) in Berlin, Germany. The project had an Advisory Board which included one representative each from the European Commission; Chafea; the HIV/AIDS, Viral Hepatitis and Tuberculosis Civil Society Forum (CSF); the European Centre for Disease Prevention and Control (ECDC); the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); and the Joint United Nations Programme on HIV/AIDS (UNAIDS).

The goal of ESTICOM was to strengthen community response and to raise awareness of the persisting legal, structural, political and social barriers hindering a more effective response to the syndemics of HIV, hepatitis viruses B and C, and other sexually transmitted infections (STI) among gay, bisexual and other men that have sex with men. To achieve this ESTICOM partners devised three inter-linked projects or objectives:

- Objective 1: A European online survey of gay, bisexual and other MSM (EMIS-2017);
- Objective 2: A European online survey of community health workers who provide sexual health support in a community setting directly to gay, bisexual and other MSM (ECHOES);
- Objective 3: Development and piloting of a training programme for MSM-focused community health workers⁸ to be adaptable for all EU countries.

Sigma Research at the London School of Hygiene & Tropical Medicine (LSHTM) led Objective 1 alongside the Robert Koch Institute (RKI) in Berlin. Objective 1 contained the first four Work Packages (WP 1-4) of ESTICOM and is known as EMIS-2017. Between them, these two organisations delivered all work packages associated with Objective 1 (EMIS-2017).

ESTICOM funding facilitated the (re-)establishment of the EMIS Network, development of the EMIS-2017 questionnaire and recruitment infrastructure, a three-month period of data collection, preparation and distribution of national and international datasets, and the preparation of a variety of outputs, this report being one of them. Representatives of the EMIS Network met once during the funding period and the ESTICOM partners met a further four times. All other business was conducted electronically.

This is the final report of the online survey for MSM which was the primary commissioned output of Objective 1. The survey was built on four Work Packages (WP): a review of MSM knowledge, attitudes and practices relating to the sexual health of gay, bisexual and other MSM [1], WP1; a collaborative pan-European survey-design process, WP2; promotion and execution of the survey, WP3; and an analysis and survey report, WP4).

1.3 Background

HIV infection remains a major public health concern in European countries, with 30 000 to 33 000 new infections in the European Union/European Economic Area (EU/EEA) reported each year. In most European countries, HIV infections are concentrated in a relatively small number of specific sub-populations, such as men who have sex with men (MSM), specific migrant populations and people who inject drugs. MSM accounted for precisely 50% of all HIV infections newly diagnosed in 2017 in the EEA whose route of transmission was determined [2].

⁸ <https://www.esticom.eu/Webs/ESTICOM/EN/training-programme/training-programme-node.html>

Several countries, including Belgium, Greece, the Netherlands, Spain, Switzerland, and the United Kingdom, have reported a decline in rates of new diagnosis in recent years, even after adjusting for reporting delay, among MSM [2-5]. In the EEA, five countries account for upward of 70% of new HIV diagnoses in MSM: UK, Spain, Germany, Italy and France. Since 2014, all five of these countries have observed a decline in the number of new HIV diagnoses in MSM over the past two years [2]. Consequently, the number of new diagnoses of HIV infections acquired during sex between men in the EEA overall is currently in decline, although this is not observed in all countries.

With respect to HIV, EU policy focuses on prevention and support for people living with HIV or AIDS, which it seeks to enhance by strengthening cooperation between national authorities, civil society and interest groups across Europe. The Commission communication on combating HIV/AIDS in the EU and neighbouring countries (2009-2013) identifies policies to help reduce the number of new infections and improve quality of life for those living with HIV, with a focus on increasing collaboration to enhance responses.

Other sexually transmitted infections (STIs) remain common among MSM⁹, for example syphilis [6] and gonorrhoea [7], as well as outbreaks of rarer STIs such as *lymphogranuloma venereum* [8]. The availability of data on diagnoses of HIV and other STIs among MSM, as well as on sexual risk behaviour and prevention needs, remains very variable between EEA countries. Surveillance systems differ in terms of coverage, comprehensiveness and representativeness so it can be difficult to compare reported rates among countries. Addressing this knowledge gap is key to tailoring an effective response, which European Commission's policy aims to do by enhancing the comparability of data through improved notification; raising awareness of the risks of STIs; supporting the prevention of STIs and providing guidance on the control of STIs. EMIS-2017 seeks to support these goals by working collaboratively to generate data for the planning of HIV and STI prevention and care programmes and by supporting research capacity development in the process.

European HIV and STI epidemics need to be monitored to inform public health responses. The European Commission works with ECDC to strengthen the capacity of EU countries for the prevention and control of infectious diseases, including HIV and STIs. Reliable surveillance data are essential for monitoring the HIV/STI disease burden and public health responses. ECDC is working to strengthen and coordinate surveillance of infectious diseases at EU-level and support countries conducting behavioural surveillance related to STIs and HIV. EMIS-2017 contributes to comparable country-level behavioural surveillance, to increase the understanding of trends in diseases and to facilitate planning and the evaluation of prevention responses.

It remains challenging to gather robust information on the prevention needs and behaviour of stigmatised minority groups. Difficulties in defining groups such as men who have sex with men make it difficult to estimate the size of the true population. Moreover, the continuing stigma attached to homosexual activity and the absence of sampling frames mean that random sampling is challenging, if not impossible in most countries. Therefore, most studies of MSM prior to 2010 relied on convenience samples recruited in clinical sexual health services (also known as STI or HIV clinics) or at community venues (such as bars, saunas, or events). In the last decade 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, sexual identity and geographical distribution than those recruited through gay community settings [9].

Where infrastructures exist for MSM surveys, most surveys concentrate on regional or national populations of MSM. Comparability is thus hampered by differing questions and response sets, recruitment methods and biological surveillance and healthcare systems. Moreover, different ways of accessing and defining MSM lead to diverse sample compositions; and different questions targeting the same concept often result in incomparable results.

Collaboration on data collection across EU countries regarding MSM communities has become more common in the last ten years, mainly funded by the EU Health Programme (EMIS-2010¹⁰; EUROHIV EDAT¹¹ SIALON I¹² and II¹³). To consolidate this progress, the second European MSM Internet Survey, or EMIS-2017, was conceived as a multi-language, pan-European, collaborative HIV prevention needs assessment for MSM, encompassing behavioural and morbidity measures and indicators of unmet needs for prevention. The survey was designed to facilitate comparisons with past and future national and regional surveys. It was also designed to allow the construction of national HIV response indicators suggested by UNAIDS and ECDC.

As in EMIS-2010, EMIS-2017 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 change over time in behaviour, morbidities, needs, and interventions among MSM. Following on from EMIS-2010, it serves as the second wave of a pan-European, second-generation HIV surveillance system that encompasses data on prevention needs, as well as morbidities and behaviour.

⁹ <https://ecdc.europa.eu/en/annual-epidemiological-reports>

¹⁰ <http://emis-project.eu/publications.html>

¹¹ <https://eurohivedat2.eu/>

¹² <http://www.sialon.eu/en/projects/former-sialon.html>

¹³ <http://www.sialon.eu>

The population of concern was men living in Europe who had sex with men and/or felt attracted to men. The criteria for inclusion in the study were:

- men living in Europe,
- at or over the age of homosexual consent in the country they lived in,
- who are sexually attracted to men and/or had sex with men, and
- who indicate that they understand the nature and purpose of the study and consent to take part.

Transwomen are a very important target group for HIV prevention, as they are disproportionately affected by HIV and require dedicated, funded and targeted HIV prevention services as well as research to develop those services. However, EMIS-2017 was commissioned as a survey for people who identify as men (whether cis-men¹⁴ or trans-men). Transwomen (and cis-women) are not part of the population of concern for this survey and were never intended to be. If they had been we would have developed the survey differently, actively engaged transwomen organisations and developed a different recruitment strategy.

The survey design was intended to provide data for the planning of interventions and to facilitate the monitoring of changes over time in the behaviour, morbidities, needs, and interventions affecting HIV and STI incidence among MSM. Questions addressed HIV/STI diagnoses, sexual risk and precaution behaviour, sexual health promotion needs, and the performance of prevention interventions (including clinical services). The prevention-planning objective was to identify prevention needs commonly unmet across diverse groups of MSM (priority aims), and to identify subgroups of men who have multiple prevention needs poorly met (priority target groups).

Other objectives of EMIS-2017 included research capacity building and knowledge transfer relating to online surveys among MSM; the generation of datasets in countries with fewer research resources; facilitating dialogue between community, academic and public health sectors and maximising the educational impact of survey completion for respondents.

Ultimately, EMIS-2017 collected comparable data in 33 languages, advertised and promoted on at least 280 national and trans-national apps and websites for MSM and via civil society organisations. As the second major pan-European survey using a multilingual online questionnaire and comparable recruitment procedures across a large number of countries, it achieved a viable country sample in 43 countries, including all of the 38 countries reached with EMIS-2010.

EMIS results have been and continue to be analysed and interpreted with a view to a common understanding of HIV and STI prevention challenges and to foster cooperation between sectors (civil society, academia, non-profit) and agencies (governmental, public health). These benefits are particularly valuable for new EU Member States in which MSM communities and HIV prevention responses are less well established.

1.4 Report structure

This report presents a comprehensive analysis of the EMIS-2017 results. All variables in the survey are described. Results are not adjusted for national population sizes, MSM population sizes, national age composition, or access to the Internet. This report contains only data from EMIS-2017. We have not made comparisons between the 2017 survey and our earlier EMIS 2010 survey, for a number of reasons. This report, which contains only the 2017 data, is already long and addressing differences across the two surveys would make it unwieldy. Secondly, since there are numerous small differences in the demographic profile of the two samples, raw comparisons between findings in the two years are not advisable. Thirdly, since the recruitment procedures were not identical for the two years, even checking for demographic differences in the two samples does not produce very strong evidence of change. Finally, this is only one output from EMIS-2017. Future research papers will consider what can be learnt from these data concerning population-level change among MSM in Europe.

Chapter 2 describes the methods used to undertake EMIS-2017, the opportunities and the challenges faced in coordinating such a large multi-country study and the solutions applied to problems that arose.

The next five chapters provide an overview of the entire content of the survey. Each chapter from 3 to 7 introduces a number of questions in a thematic area and investigates some key questions in more depth. The findings for key indicators relating to individual countries are presented at the end of each chapter for all the 33 countries in the EU Health Programme; and another ten countries with a viable national sample.

¹⁴ Cisgender (sometimes cissexual, often abbreviated to simply cis) is a term for people whose gender identity matches the sex that they were assigned at birth. For example, someone who identifies as a man and was assigned male at birth is a cisgender man. The term cis(gender) is the opposite of the word trans(gender).

The content of the survey is described in five main sections:

Chapter 3 – Demographics: characteristics of people we cannot or are not trying to change.

Chapter 4 – Morbidities: health outcomes we are trying to change.

Chapter 5 – Behaviour: actions of individuals that causes (risks) or detracts from (precautions) morbidities.

Chapter 6 – Needs: opportunities, capabilities and motivation for risk and precaution behaviour.

Chapter 7 – ‘Interventions’: actions of others that meet or undermine needs.

Chapter 8 describes how the core variables (summarised at the end of each chapter) vary by key sub-groups of the population. Chapter 9 describes the specific section of the questionnaire where we asked all participants to describe in detail the content and context of their last sexual encounter with a non-steady partner.

2. Survey design and methods

2.1 Overview

Questionnaire design – the questionnaire was based on a previous version of the survey (EMIS 2010). Development was informed by a scoping exercise of available MSM questionnaires published since EMIS 2010, followed by three consultations among our partners, an observed pre-test including assessment of completion time ('time trial') and a formal pilot of the online version in English only.

Final questionnaire content – the final version included:

- Demographics: 34 descriptive items.
- Morbidities: 16 items concerning health outcomes.
- Behaviour: 83 items concerning people's actions.
- Needs: 22 items or sets of needs-related items relating to opportunities, capabilities and motivations for risk and precaution behaviour.
- Interventions: 35 items or sets of items on the actions of others that meet or undermine needs.
- From these items, we were able to construct 17 ECDC Dublin Declaration Monitoring (DDM) indicators¹⁵ and another two Global AIDS Monitoring (GAM)¹⁶ indicators.

Translation and online preparation – after translation from English and checking by partners, online versions were checked for structural homogeneity. National partners confirmed the terminology fitted with their perceptions of the norm for the target group in their country, reviewed the final survey, and signed-off their main language version. The survey was available in 33 languages, including 23 of the 24 official languages of the EU.

Online recruitment – online promotion began on 18 October 2017 and ran until 31 January 2018. Country leads co-ordinated national advertising including the number, size and specification of promotional materials. Sigma staff commissioned advertising from ten multi-country dating platforms.

Final sample – the narrative element of this report is based on 127 792 MSM living in 48 countries (all 28 EU countries, three EFTA countries, four non-EU European microstates, seven countries of the EU enlargement area, three countries from the Eastern Partnership, two countries from the Southern Neighbourhood and Russia). The two other countries that were included – Canada and the Philippines – appear only in the country tables at the end of each chapter, and are not included in the report's narrative description of the findings.

Country-specific findings – in Chapters 3–7 and 9 the key findings are presented in tables by country of residence at the end of the chapter, with countries presented alphabetically in the four primary country groupings listed above. Key variation between the residents of specific countries is also illustrated in maps throughout the report.

Ethics approval was granted by the Observational Research Ethics Committee at the London School of Hygiene and Tropical Medicine (reference 14421 /RR/8805) on 31 July 2017.

2.2 Countries participating in EMIS-2017

As a minimum, we sought to recruit 100 000 MSM resident in 33 countries where funding existed for translation of the survey and its promotion. These 33 countries included all 28 EU Member States and two EEA EFTA countries (Norway and Iceland), and three other countries – Bosnia & Herzegovina, Moldova and Serbia - that are members of the third European Health Programme (EHP)¹⁷.

We did not exclude residents of the four non-EU European microstates that adjoin or are encompassed by larger countries already included in the sample. Although we did not expect to recruit a viable sample in these microstates we included men living in them in the dataset for adjoining or encompassing countries – Andorra with Spain; Liechtenstein with Switzerland; Monaco with France and San Marino with Italy.

Outside the EU Health Programme, we included only countries where we had an established relationship with national partners who were actively seeking to be involved. Although our main funding disallowed dedicated investment in recruitment for these countries, these partners provided any required translation themselves and invested time and energy, and sometimes money in promoting the survey in their country.

Outside the main budget for translation and promotion we accepted participation from Switzerland (as the only EFTA country not in the EU Health Programme); and from residents in eight other countries which are either EU

¹⁵ <https://ecdc.europa.eu/en/all-topics/hiv-infection-and-aids/prevention/monitoring-implementation-dublin-2018>

¹⁶ <http://www.aidsinfoonline.org/gam/libraries.aspx/Home.aspx>

¹⁷ https://ec.europa.eu/health/programme/who_can_participate_en

Enlargement Area countries¹⁸ or are part of the European Neighbourhood Policy (ENP)¹⁹. This group of countries includes all remaining EU Enlargement Area countries (Albania, Kosovo⁵, North Macedonia, Montenegro, and Turkey). The other two enlargement area countries – Bosnia & Herzegovina and Serbia – were already included as members of the Health Programme.

We also accepted participation from two of the six countries in the Eastern Partnership (EaP)²⁰ of the European Neighbourhood Policy (Belarus and Ukraine but not Armenia, Azerbaijan and Georgia). The EaP is a joint policy initiative which aims to deepen and strengthen relations between the European Union and its six eastern neighbours. Moldova is the third country in the Eastern Partnership but it was already included as a contributing member of the Health Programme. In all three of the countries included (Belarus, Ukraine and Moldova) we had partners keen to be involved. We excluded residents in the other three Eastern Partnership countries – Armenia, Azerbaijan, Georgia – as we were not able to find partners in these countries.

We also included two of the ten countries participating in the Southern Neighbourhood²¹ within the framework of the European Neighbourhood Policy. Partners in Israel and Lebanon translated and promoted the survey at their own cost. We excluded MSM living in all the other ENP Southern Neighbourhood countries – Algeria, Egypt, Jordan, Libya, Morocco, Palestine, Syria and Tunisia – as we could not identify gay or MSM organisations with which we could work.

The final group of countries where participation was allowed included Russia, Canada and the Philippines. Russia was included as a majority of its population resides in Europe and it had also participated in EMIS 2010, so we had a pre-established partnership with local stakeholders willing to undertake translation into Russian. Russian participation was funded by the Arctic University of Norway and University Hospital of North Norway. The Public Health Agency of Canada approached us and asked us to extend the availability of our questionnaires to Canadian provinces (since EMIS-2017 included both of Canada's official languages). Promotion in Canada was funded by the Public Health Agency of Canada. The World Health Organization's Regional Office for the Western Pacific approached the Robert Koch Institute and asked if the questionnaires could be made available to the Philippines. Online translations into the main languages of the Philippines were provided free of charge in collaboration with the Philippines Ministry of Health. Promotion in the Philippines was funded by the Office of the WHO Representative in the Philippines.

In each of these 50 countries, except for the microstates described above, we sought to recruit at least 100 residents to ensure a viable reporting sample, although we recognised this may not be possible in countries with a small overall population, such as Iceland (350 000), Malta (475 000), Luxembourg (600 000) or Montenegro (680 000). We also committed to create and pass back a national dataset to all lead agencies for countries with 100+ respondents, which included all valid participants resident in the country.

Our partnership development process ensured we had a national lead for the promotion of EMIS-2017 and/or a national lead for data analysis in all countries except Luxembourg and Kosovo.

The narrative element of this report includes men resident in all EU countries and adjoining microstates²²; all countries in the European Free Trade Association; men resident in the above candidate or potential candidate countries in the current EU Enlargement area; men resident in countries in the Eastern and Southern Partnership countries of the European Neighbourhood Policy area and men resident in Russia. In this chapter and Chapters 3–7 and 9 the key summary figures are presented in tables by country of residence, with countries presented alphabetically for the four primary groupings above. We also show residents of Canada and the Philippines in these country tables, but they are not included in the narrative element of the report.

⁵ This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the International Court of Justice Opinion on the Kosovo declaration of independence.

¹⁸ https://ec.europa.eu/neighbourhood-enlargement/countries/check-current-status_en

¹⁹ https://eeas.europa.eu/headquarters/headquarters-homepage/330/european-neighbourhood-policy-enp_en

²⁰ The Eastern Partnership (EaP) is a joint initiative involving the EU, its Member States and six Eastern European Partners: Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine. The Eastern Partnership, which is a dimension of the European Neighbourhood Policy, aims to build a common area of shared democracy, prosperity, stability and increased cooperation. https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/eastern-partnership_en

²¹ EU cooperation with the ten partner countries of the Southern Neighbourhood takes place within the framework of the European Neighbourhood Policy (ENP https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/southern-neighbourhood_en)

²² The United Kingdom includes England, Scotland, Wales, Northern Ireland and British Overseas Territories and Crown Dependencies. France includes French Overseas Departments, Territories and Collectivities. Denmark includes the Faroe Islands and Greenland. Finland includes Åland. Italy includes the Vatican City. Norway includes Svalbard. Portugal includes the Azores and Madeira. Spain includes the Canary Islands. The Netherlands does not include the Caribbean island territories of Aruba, Curaçao, or Sint Martin.

2.3 Designing the questionnaire

The EMIS-2017 report was based on the questionnaire successfully used in EMIS 2010 [10]. As part of its re-development for use in EMIS-2017 there were four conflicting imperatives:

- Retaining topics from EMIS 2010 to be able to examine change versus replacing them with new topics we had not covered before.
- Keeping questions identical to EMIS 2010 for comparability versus changing questions to improve measurements.
- Using larger numbers of possible responses to better reflect people's experience and increase data specificity versus smaller numbers of responses to increase ease of completion and data management.
- Having a longer survey capturing more variables but with more people dropping out and the sample becoming less representative of disadvantaged groups versus having a shorter survey capturing fewer variables while retaining more men, especially those from disadvantaged groups.

The survey was informed by a review of evidence [1] which considered the prevalence and incidence of HIV and STIs including viral hepatitis (B/C) and the risk and precautionary behaviour of gay men, bisexual men and other MSM with regard to HIV and other STIs. The review also included a policy and practice mapping exercise to consider the probable barriers (legal, structural, provider and individual) for the effective implementation of prevention, diagnosis and treatment interventions targeting gay, bisexual, and other MSM.

The EMIS-2017 development process was also informed by a scoping exercise of available MSM questionnaires, designed since EMIS 2010. Those included were:

- A behavioural risk assessment by the STOP AIDS Project, USA.
- Euro HIV EDAT²³ by CEEISCAT and partners - a survey about new HIV testing technologies that included seven EU countries.
- Flash! PrEP in Europe 2016²⁴ by the University of Amsterdam, Plus and AIDES - a survey for MSM about PrEP that was distributed across Europe.
- 'Gay Men's Sex Survey 2014'²⁵ - an MSM survey about sex and HIV that was distributed across the UK.
- 'L'Enquête Presse Gays 2011'²⁶ - an MSM health survey organised in France.
- MSM Internet Survey Ireland (MISI 2015)²⁷.
- Prevagay 2015²⁸ by ENIPS - an MSM survey about HIV and hepatitis organised in France.
- 'Prueba del VIH' by Instituto de Salud Carlos III - a survey for MSM about HIV testing organised in Spain.
- The American MSM Internet Survey²⁹ 2013 by Emory University, USA.
- The HIV Incidence Risk Index for Men who have Sex with Men (HIRI-MSM, USA) [11].

Prior to our first public consultation on the broad content of the EMIS-2017 questionnaire (which began in late November 2016) we invested time in the development and promotion of an ESTICOM emailing list (hosted online at www.mailchimp.com and shared across ESTICOM). We initiated the list by merging the EMIS 2010 email lists of RKI and Sigma Research. This list received an 'Introduction to ESTICOM' email on 4 November 2016. The email was sent to 289 unique email addresses and successfully delivered to 264. In the three weeks following this introductory email, 25 email addresses were excluded from the list (as non-functioning) and 54 new email addresses joined the list. In January 2017, further additions to the shared ESTICOM email list were made by Objective 2 partners at the European AIDS Treatment Group (Brussels) and the Centre d'Estudis Epidemiològics sobre les ITS i la Sida de Catalunya (CEEISCAT, Barcelona).

2.3.1 Consultation round one – questionnaire stems

In parallel with the network building activities, following the ESTICOM kick-off meeting (September 2016), work commenced on developing the conceptual map for the EMIS-2017 questionnaire, taking into account the emerging findings of the MSM review [1]. This document became the basis for the first round of full consultation from late November to early January 2017, based on the question stems successfully used in EMIS 2010.

We decided that the starting point for the EMIS-2017 questionnaire was the EMIS 2010 questionnaire, but prior to consultation we reviewed the contents of EMIS 2010 and omitted content that had either been too difficult to analyse or had generated little interest among data collaborators or partners. We also added question areas that

²³ <https://eurohivedat.eu/>

²⁴ <https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/pre-exposure-prophylaxis-hiv-prevention-europe.pdf>

²⁵ <http://sigmaresearch.org.uk/projects/item/project21>

²⁶ <https://doi.org/10.1177/0759106315572568>

²⁷ <http://www.misi.ie>

²⁸ <http://invs.santepubliquefrance.fr/Publications-et-outils/Rapports-et-syntheses/Maladies-infectieuses/2017/Rapport-Prevagay-2015-Paris>

²⁹ <http://emoryamis.org/about-us/>

had not been included in EMIS 2010 but we knew would prove important given developments in sector since – Pre-Exposure Prophylaxis (PrEP) and chemsex, for example.

The first round of consultation on the broad contents of the EMIS-2017 questionnaire began on 25 November 2016 after a period of development and discussion among the partners concerning the goals and aspirations of the survey and the method of promote and execution. The initial email was sent to 318 unique email addresses. On 19 December we sent a reminder email to the whole email list extending the deadline to 3 January 2017. The consultation document remains available at: [http://sigmaresearch.org.uk/files/EMIS_2017_Priorities_Consultation_December_2016_\(to_Collaborators\).docx](http://sigmaresearch.org.uk/files/EMIS_2017_Priorities_Consultation_December_2016_(to_Collaborators).docx)

The consultation document was a summary of almost all the questions asked in EMIS 2010. The questions were not in the order they appeared in the survey but in conceptual order. They were arranged in five groups: health end-points (morbidity); behaviour; needs; interventions; and demographics. New topics required for 2017 were added (in red). The basis for consultation was the question stems without response sets. We asked people to identify questions that should be cut, suggest new topics to be included and highlight problems with existing question stems.

Overall, more than 50 agencies responded from 21 European countries, plus pan-European agencies and organisations from Chile and the USA (survey improvement only). The consultation gave us very clear information on how to modify the EMIS 2010 survey for 2017. We made numerous changes to existing questions and took decisions to include/exclude or change items.

Based on the feedback received in round one, Sigma staff built the first full draft of the proposed EMIS-2017 questionnaire. The first full draft (the 'acceptability draft') represented a compromise between inclusivity and brevity. While prioritising respondent experience, we aimed to make the survey as useful as possible to the largest number of stakeholders.

2.3.2 Consultation round two – full draft on paper

The initial first full draft of the questionnaire was developed by the end of February 2017 on paper. Several small-scale pre-testing activities were then undertaken during February-March 2017 with gay men known to the research team. The purpose of these pre-pilots was to test out discrete sections of the questionnaire as they became available, checking for acceptability, completeness, phrasing and comprehension in English.

In collaboration with University of Brighton (Work Package 6, Objective 2), the first full draft of the EMIS-2017 questionnaire was sent out for public consultation alongside the first full draft of the ECHOES³⁰ questionnaire on 24 March 2017 and was open until Monday 10 April 2017. The EMIS-2017 consultation document is still available at <http://sigmaresearch.org.uk/files/EMIS-2017-survey-Acceptability-Consultation-24032017.docx>

This document contained the proposed complete text of the EMIS-2017 online questionnaire in English. It included the introductory text, exit texts and page headings. Routing instructions and notes appeared within square brackets. Questions were not numbered but were in the proposed order of appearance.

For the purposes of this consultation we asked participants to download the full draft of the proposed questionnaire, and use the Review-Comment tool in Microsoft Word to answer the following questions:

- 'Is this survey acceptable?' If a question is offensive, illogical or obscure, please tell us.
- This is the second open consultation on EMIS-2017. If, in the first round, you made a suggestion you feel strongly about that is not reflected here, please make it again and if possible provide a justification. If you did not comment last time, now is your chance to suggest additions or deletions.

Please look at the regional/area codes for your country in the appendix. Is this a useful breakdown of your country?

On 24 March 2017, the initial email was sent to 412 unique email addresses and successfully delivered to 400. Overall, 40 responses were received from 37 organisations in 19 countries. Responses included European agencies, national government agencies and services, academics, specialist non-governmental organisations (in sexual health, HIV and LGBT) and individuals. Four responses were received from countries which had not replied to the prioritisation consultation.

Overall, the consultation provided very clear guidance on modifying the EMIS-2017 questionnaire to develop it further for online piloting and finalisation. In summary, nine participants confirmed that the questionnaire was fit for purpose (and added few or no other comments) and a further 31 gave substantial feedback on specific elements that they believed could be improved.

³⁰ <https://www.esticom.eu/Webs/ESTICOM/EN/echoes/echoes-node.html>

In responding to the outcomes of the consultation, every proposed amendment (cut/add/change), comment and criticism was considered by the development team. The proposals resulted in certain questions being dropped or changed and others added.

The EMIS-2017 questionnaire could never satisfy all stakeholders and at the same time be acceptable to all the MSM who we wanted to complete it. As slang and colloquialisms are often used in normal conversations, we decided that relatively informal language would be used throughout the questionnaire. During translation, civil society organisations were asked to confirm whether the terms used matched their perceptions of common speech in their country.

The resulting full version of the survey was transferred to an online survey application, Demographix.com in English. The transfer of a paper survey to an online survey requires numerous small (and occasionally larger) modifications.

The initial online survey was subject to pre-testing. We recruited ten MSM through community sources in London to take part in 'talk-aloud' interviews. An interviewer sat beside the respondent, who was asked to work their way through the online survey and to talk aloud about what they were thinking, including how the questions seemed and any ideas that occurred to them as they proceeded. In response to user comments we changed very many small details of the survey, including the correction of typographic errors and routing errors; standardisation of the way in which individual questions were presented; re-ordering of pages; re-ordering of questions on the page; rewording/clarification of question stems; reordering of response sets and expansion of response sets.

No whole questions (items) were deleted during this process, although notes were made on what men found repetitive or confusing. The 'talk-aloud' pre-testing and corrections resulted in the first online consultation draft.

2.3.3 Consultation round three – full draft online

For the third round of questionnaire consultations the EMIS Network was invited to test and provide feedback on a full online draft of the proposed questionnaire. Invitations were sent on 16 May with a deadline of 30 May 2017. Overall, 17 agencies responded from 12 countries, a pan-European civil society organisation and one non-European stakeholder. Responders raised a very wide range of larger and smaller issues with the survey. Every issue raised was considered and an answer given to the respondent. The process resulted in many larger and smaller changes to the survey, as well as helping to identify potential cuts.

Following the processing of all comments, items were analysed and discussed among the core design team to identify the least essential questions while retaining as much topic balance as possible. Several questions were deleted, resulting in 325 items over 50 pages. This version of the questionnaire was then subject to an online time-trial.

We engaged with five health promotion agencies in the UK working with MSM and asked them to recruit up to ten men each to test the questionnaire online, in order to estimate the average completion times. After adding in three time-trials carried out by English speakers in Germany, we estimated the median completion time to be 21 minutes with a very wide range (12 to 64 minutes). As this was a marginally longer completion time than EMIS 2010, we again considered cuts to the survey and identified a small number of questions to drop.

Numerous minor issues, mainly relating to layout and design, were also addressed and corrected as they arose. Our interim proposal for the content of EMIS-2017 was presented to Chafea, accompanied by an item analysis illustrating how much of the questionnaire was new compared with EMIS 2010. These documents were discussed at an ESTICOM Steering Group Meeting, but no consensus could be reached about further major cuts.

We acknowledged that the final proposed EMIS-2017 questionnaire would take no less time to complete than EMIS 2010 – approximately 20 minutes on average. Although we had hoped to make the questionnaire shorter, we believed that the majority of stakeholders would feel that most of their priority question areas were included. We also stated to potential participants (on the entry page to the survey) that the average completion time would be twenty minutes and encouraged people to allow this amount of time for completion.

After some small adjustments, the proposed online version of the EMIS-2017 English-language survey was signed-off by Chafea. The final questionnaire sought up to 409 data items from respondents, although very few men were asked all questions. To minimise completion time, the survey was tailored using intra-questionnaire filters (routing) wherever possible. For example, questions regarding non-steady sexual partners were not shown if the respondent had already stated they had not had any non-steady partners in the last year.

The final version of the questionnaire was presented on 34 core web pages and, depending on answers to certain questions (for example, HIV testing history, sexual partners and substance use), another 25 non-core web pages. Whether these additional 25 pages were shown depended on answers to previous questions. One of the pages was an information page on the age of sexual consent for sex with men in each of the qualifying countries, which was only shown to those who said they did not know the age of consent. Four were exit pages for non-qualifiers, thanking them for their interest, telling them the approximate date of reporting and then exiting them from the

survey. Whether the remaining 20 pages were shown depended on answers to questions which were shown to everyone.

The signed off copy of the English-language questionnaire formed the basis for the ethics approval of EMIS-2017, which was approved by the Observational Research Ethics Committee at the London School of Hygiene and Tropical Medicine (reference 14421 /RR/8805) on 31 July 2017.

2.3.4 Final questionnaire content

The final version of the questionnaire³¹ allowed us to generate seventeen ECDC Dublin Declaration Monitoring³² indicators and another two Global AIDS Monitoring (GAM)³³ indicators. All Dublin Declaration Monitoring indicators also have a GAM number which is not reported here. EMIS was not primarily designed to measure these indicators – the following are best approximations. In particular, the GAM indicator 3.12 (active syphilis) cannot be constructed from self-reported survey data. Given that syphilis testing among MSM is common thanks to widespread availability of rapid tests, recently diagnosed syphilis gets as close to the indicator as possible with this data.

Dublin Declaration Monitoring (DDM) indicators

DDM Indicator # 2.50: MSM sexualised drug use: prevalence [Derived from: using stimulant drugs for sex in the last 4 weeks].

DDM Indicator # 3.1a: MSM Condom promotion and distribution coverage [Derived from: got free condoms from civil society organisations, clinics, bars, or saunas].

DDM Indicator # 3.3a: STI testing and treatment services coverage [Derived from: full STI screen last 12 months: HIV, blood test, anal swab + urethral swab (or vaginal, or urine sample), excluding men with diagnosed HIV longer than 12 months ago].

DDM Indicator # 3.5a: MSM Health promotion or behaviour change programme coverage [Derived from: saw or heard any information about HIV or STIs specifically for MSM in the last 12 months?].

DDM Indicator # 3.10a: MSM coverage of HAV vaccination programmes [Derived from: full course of hepatitis A virus vaccination, excluding men with a history of hepatitis A].

DDM Indicator # 3.10b: MSM coverage of HBV vaccination programmes [Derived from: full course of hepatitis B virus vaccination, excluding men with a history of hepatitis B].

DDM Indicator # 3.27: Condomless sex [Derived from: condomless anal sex with a non-steady partner of unknown HIV status, last 12 months].

DDM Indicator # 3.29 (3.28-3.33): MSM PrEP use [Derived from: currently taking PrEP daily or on demand].

DDM Indicator # 4.53 (4.54-55, 4.57-59): MSM HIV testing in last 12 months [Derived from: tested for HIV in the last 12 months, excluding men with diagnosed HIV longer than 12 months ago].

DDM Indicator # 4.13a: MSM testing modalities coverage: community-based HIV-testing [Derived from: used community-based HIV-testing, last HIV test].

DDM Indicator # 4.13b: MSM testing modalities coverage: HIV self-sampling [Derived from: used self-sampling for HIV-testing, last HIV test].

DDM Indicator # 4.13c: MSM testing modalities coverage: HIV self-testing [Derived from: used self-HIV-testing, last HIV test].

DDM Indicator # 6.79: MSM with diagnosed HIV

DDM Indicator # 6.244 (# 6.243): MSM HIV care cascade stage 3 (linked to care) [Derived from: ever had HIV infection monitored].

DDM Indicator # 6.282 (6.278-279, 6.283): MSM HIV care cascade stage 4 (retained in care) [Derived from: had HIV infection monitored in the last six months].

DDM Indicator # 6.84 (6.85): MSM HIV care cascade stage 5 (Receiving ART) [Derived from: taking ART].

DDM Indicator # 6.91 (6.92): MSM HIV care cascade stage 6 (undetectable) [Derived from: reporting to be undetectable].

Global AIDS Monitoring

GAM Indicator #3.12: Active syphilis [Derived from: diagnosed with syphilis, last 12 months].

GAM Indicator #3.14: Prevalence of hepatitis and coinfection with HIV among key populations (HBV+HCV) [Derived from: co-diagnosed with HIV and either HBV or HCV].

These questions on behavioural surveillance appeared with other information required for prevention planning, including needs for policy and structural interventions. The final questionnaire contained five core areas:

Demographics: 34 descriptive items about people that we are not trying to change, all of which are described in Chapter 3.

³¹ <http://sigmaresearch.org.uk/questionnaires/tags/tag/EMIS-2017>

³² <https://ecdc.europa.eu/en/all-topics/hiv-infection-and-aids/prevention/monitoring-implementation-dublin-2018>

³³ <http://www.aidsinfoonline.org/gam/libraries.aspx/Home.aspx>

Morbidities: 16 items concerning health outcomes that we are trying to change, all of which are described in Chapter 4. These include four items concerning mental health (including anxiety/depression (patient health questionnaire PHQ-4), suicidal ideation, sexual (un)happiness and alcohol dependency (CAGE4), plus 12 items concerning self-reported diagnosis of infections including HIV, syphilis, gonorrhoea, chlamydia, ano-genital warts, and hepatitis A, B and C.

Behaviour: 83 items concerning acts that generate risks or detract from precautions, all of which are described in Chapter 5. These include 42 items on sexual behaviour (including first and most recent sex with men; steady and non-steady male sex partners in last year; condom use; sex with women; last session with non-steady male partner); 20 items on drug use (including use of alcohol and tobacco and a wide range of illicit drugs) and five items on injecting drug use; six items on combining sex and drugs (chemsex); two on seeking and taking PEP and two on seeking and taking PrEP; four items on HIV testing and treatment; two items on vaccination uptake for hepatitis A and B; and two items on syphilis and gonorrhoea diagnosis disclosure to partners. All variables related to the last session with a non-steady male partner are described in Chapter 9.

Needs: 22 items or sets of needs-related items that concern opportunities, capabilities and motivations for risk and precaution behaviour, all of which are described in Chapter 6. These include two validated scales concerning all health-related behaviour (SPS and internalised homonegativity); four sets of needs items relating to safer sex; one set of needs items relating to drug use concerns; three sets of needs items relating to PEP; three sets of needs relating to PrEP; five sets on needs items relating to HIV testing and treatment; three sets of needs items relating to viral hepatitis; one set of needs items relating to bacterial STIs.

Interventions: 35 items or sets of items on the actions of others that meet or undermine needs, all of which are described in Chapter 7. Three items on homophobic abuse; two sets of items on access to condoms; three items on access to drug services; six items on PrEP-related services; one item on HIV/STI education services; seven items on HIV testing services; one item on viral hepatitis vaccination offers; 12 items on STI testing services.

2.4 Translation and online preparation

To maximise time and cost-efficiencies as well as to simplify the process and reduce the burden on contact points in Member States, translation of the final approved questionnaire was conducted in close collaboration with the Objective 2 lead for ECHOES and the ESTICOM project coordinator.

All translations were outsourced to translators suggested by the national collaborating partners. All translators in the EU were offered payment for the translation, though some did not charge. All translators were provided with the EMIS 2010 questionnaire in their language and asked to use identical translations for the 26% (107/409) of data items that were identical and the 19% (78/409) that were comparable, unless they had a very good reason to change the translation. 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 key national partners checked the translated versions for visual integrity and layout online. Sigma staff ensured that all language versions were structurally identical, had the same routing between questions, and saved their data in an identical format. National partners confirmed the terminology fitted with their perceptions of the norm for the target group in their country, then reviewed the final survey, and signed-off their main language version.

We also involved several multi-language proof-readers to compare the translations with the English original and with each other (for example comparing French, Spanish and English; or Czech, Slovak, Polish and English; or Russian, Ukrainian and English). The proof-readers ensured that the multi-language questionnaire was harmonised while deliberately maintaining certain differences identified as culturally appropriate (e.g. explicitness of language or whether to address respondents formally or informally.) In all languages, simple rather than specialised terms were the agreed ideal.

Ultimately the survey was available in 33 languages simultaneously, including 23 of the 24 official languages of the EU: Bulgarian, Bosnian/Croatian/Serbian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovak, Slovenian, Spanish and Swedish. Unlike EMIS 2010, Maltese and Slovak versions were available while Gaelic Irish was not. The survey was also available in 10 other languages including Norwegian (Norway contributes to the Health Programme) and key migrant languages including Russian (a minority language in Poland, Lithuania, Latvia and Estonia, and the most frequent immigrant language in the EU), and Turkish (a minority language in Bulgaria and second most frequent immigrant language in the EU). It was also available in Arabic (the majority language among refugees coming to Europe since 2014), Albanian, Hebrew, Macedonian, Ukrainian, and two languages from the Philippines (Cebuano and Tagalog). These translations were provided at no cost as a pre-requisite for participation by EMIS-2017 partners in those countries.

2.5 EMIS-2017 recruitment

2.5.1 Recruitment planning

In terms of recruitment, EMIS-2017 could not replicate exactly what happened in EMIS 2010. At that time smartphone apps were only just being launched and all recruitment had occurred via websites. By 2017, smartphone apps were understood to be the way most MSM made contact with each other. Sigma Research successfully used smartphone apps to promote MSM surveys in the United Kingdom in 2014 [12]. However, doing this across Europe was one of the largest challenges encountered.

We planned to promote EMIS-2017 by advertising on:

- websites of supportive organisations (national/trans-national, public/commercial/civil society organisation/HIV/LGBT, etc.);
- general-population social networking services (such as Facebook, Twitter and Instagram);
- MSM targeted geo-spatial 'dating' smartphone applications and websites (henceforth, apps).

Online searching for platforms

From March 2017, Sigma staff used multiple online search strategies to identify how many apps in the European marketplace were specific to MSM (including sub-groups or sexual sub-cultures).

We identified 38 apps, available in English and at least one other language, the majority of which were apps that worked on mobile devices using the Global Positioning System (GPS, often known as mobile apps). Although they are not technically mobile apps, we also included cross-platform web applications accessible via any web browser. These services draw on location-based technology which allow users to specify a location and order search returns by distance.

Network intelligence gathering

We undertook online consultation in relation to promotional strategies in specific countries. On 16 May 2017 we emailed 412 unique addresses, to report on our progress and invite input for the promotion strategies:

'We are also seeking support to start planning how EMIS will be promoted. The survey will be available online in multiple European languages and we plan to use apps, websites and social media for recruitment. If you have 10 minutes to help us plan the recruitment strategy in your country please complete the short online survey at <https://tinyurl.com/EMISrecruitment>. With thanks for your ongoing support.'

Responders were asked which apps/sites they recommended for promotion in their country using free text responses followed by a selection of five from a prompted list of 38 multi-lingual apps. We also asked about other preferred social media and networking platforms and any other websites which they thought important for reaching MSM in their country.

We received 54 complete survey responses, representing 38 target countries. Responses established the likely top ten apps for EMIS recruitment utility and their country variation. We also received intelligence on other significant websites and social media.

Advertising management

EMIS-2017 study staff commissioned advertising from ten multi-country online platforms: three intended to use all 33 languages and recruited in all 50 target countries (PlanetRomeo, Grindr, Hornet) and seven focussed on specific sub-sets of countries/languages (Qruiser, RECON, Scruff, Gaydar, Manhunt/Jack'd, GROWLr and Bluesystem).

The national partners were also asked to take an active part in recruitment – both in terms of advising on the best way to recruit in their country; agreeing and translating promotional texts for paid recruitment; and leading national promotion of EMIS in their country. Many actively promoted EMIS via their own websites and social media channels and encouraged other organisations in their country to participate. We also supported national leads in contacting webmasters and reaching agreements on promotional activities and any fees payable. Our objective was maximum visibility for minimum investment. For advertising fees, study-staff liaised directly with webmasters and drew-up precise contracts. Local partners covered national advertising fees wherever feasible.

Tracking entry points

All promotion of EMIS, paid or unpaid, should have included a unique 'source code' embedded at the end of the Uniform Resource Locator (URL), that allowed us to track the source of each individual entering the survey. For national advertising the embedded code should have revealed the country of origin, the organisation placing the advert and the place where the advert occurred. In the final database for the entire sample we have a source code for 90% of all the valid recruits (12 942, or 10%, do not have a valid source code). We tracked the websites or apps that respondents were recruited through in real time, enabling us to monitor advertising success (and failure) on a daily basis and make adjustments to our strategy as required.

Promotional materials

EMIS-2017 re-used the visual and linguistic content of the online promotional materials that were used in EMIS 2010. The agreed English language version of the slogan was 'Be part of something huge!' and this was used to promote participation in a variety of ways. The slogan was intended to be intriguing and mildly suggestive of the sexual content, but national partners were permitted to modify it if they did not believe it was appropriate, and some did so. Our view was that repeating the broad linguistic approach had some benefits and no obvious drawbacks.

All online promotional materials for EMIS-2017 used the basic image depicted in Figure 2.1, designed by Social Spark (an external contractor managed by LSHTM), adapted to the size and resolution required by each online platform and including words in the required language. The image of people putting their hands up was perceived to represent our desire for people to get involved and the large-scale communitarian nature of EMIS-2017.

Figure 2.1 EMIS-2017 visual identity



2.5.2 'Soft' launch

Following testing of translations by Network members, we 'soft-launched' the survey on 13 October 2017 without promotion. The first few days were used as a final test to ensure that the online system supported the questionnaire in correct languages and to consolidate the data from all language versions into a single database. The research team submitted a number of (imaginary) cases, which were flagged as tests in the final response and removed before analysis. The 'soft' launch recruited 204 qualifying respondents and revealed only some spelling errors and a small routing error that was remedied without interrupting the survey implementation.

We did not try to 'make a splash' with the launch, but rather to slip into potential users' cyber-environment and expand our presence. Our objectives were repeat exposure in different settings and offering an opportunity to participate. Active promotion began on 18 October 2017 in Swedish and on 19 October 2017 for all other languages. The survey was open for submissions for 15 weeks, from 13 October 2017 to 31 January 2018. From the start, submissions were monitored as recruitment tactics were operationalised and subsequent recruitment moderated to maximise return on investment and spread.

2.5.3 Returns from international recruitment

In addition to the national recruitment, co-ordinated by our EMIS-2017 partners, Sigma staff commissioned advertising from ten multi-country 'dating' platforms including PlanetRomeo, Grindr, Hornet, Quiser, RECON, Scruff, Gaydar, Manhunt/Jack'd, GROWLr and Bluesystem. The first three of these apps were intended to use all EMIS languages and to reach potential respondents in all 50 target countries, with the remaining seven focussed on specific sub-sets of countries/languages.

PlanetRomeo was very important in the recruitment of respondents for EMIS-2017, accounting for 49 924 valid recruits (39% of the total), while charging only a very nominal fee for advertising the survey. Primary promotion was via a lengthy direct message to its members in every EMIS target country and in all EMIS languages (and some banner advertising on its website). Although its influence was not uniform geographically, it contributed between two thirds and three quarters of all recruits in Germany, Austria, and Luxembourg; between half and two thirds of the whole sample in nine countries (Serbia, North Macedonia, Belgium, Greece, Switzerland, Bosnia & Herzegovina, Italy, Hungary and Portugal); and between a quarter and a half of all recruits in another ten countries. PlanetRomeo was important to recruitment in almost all countries apart from Nordic and English-speaking countries, Spain and Portugal. Table 2.1 below shows PlanetRomeo recruitment by country in Column 2.

The next most important source of recruitment was Grindr, with 20.3 % (n=25 979) of the sample. Grindr discounted advertising did not begin until week 5 of recruitment (late November 2018), after the first tranche of advertising via PlanetRomeo was completed, and ran right through to the end of the survey (31 January 2018). This enabled us to target countries who had received less response via PlanetRomeo. While all countries received some targeted Grindr advertising, repeated advertising was focussed specifically on those countries where other advertising had been less productive. Since Grindr country-targeting was very precise and its advertisements expired after 24 hours, we used repeated (weekly) advertisements to boost recruitment in some countries where recruitment targets had not been met from other sources. Ultimately Grindr accounted for more than half of all recruits in four countries (Poland, Israel, Lebanon and Slovakia) and between a quarter and a half of all recruits in a further eight countries (Spain, Czech Republic, Portugal, Iceland, North Macedonia, Bosnia & Herzegovina, Ireland and the United Kingdom). Table 2.1 shows Grindr recruitment by country in Column 3.

The only other recruitment source to bring in more than 5% of the entire sample was Hornet, which accounted for at least 7 013 recruits (6% of all recruits). Some Hornet broadcasts were sent out with a damaged tracking code so their

contribution to recruitment may be underestimated. Hornet's discounted advertising began after PlanetRomeo and ran alongside Grindr in weeks 6 to 10 (late-November 2017 to early January 2018). Geographical targeting was hard to achieve, and responses varied substantially between countries. Ultimately Hornet accounted for more than half of all recruits in two countries (Ukraine and Belarus) and between a quarter and a half of all recruits in a further three countries (Russia, Turkey and France). Table 2.1 shows Hornet recruitment by country in Column 4.

Recruitment by other paid multi-country dating platforms included Qruiser, RECON, Scruff, Gaydar, Manhunt/Jack'd, GROWLr and Bluesystem. Based on feedback from partners, none of these recruitment sites was a priority for more than a half of all countries, though all were important for more than one country. The volume of recruits from all these seven websites is presented as a single summary (Column 5) in Table 2.1.

Qruiser was considered essential by partners in the Nordic countries, especially Sweden, and EMIS recruitment via Qruiser was arranged and funded by the Swedish Ministry of Health. Ultimately promotion via instant messages and banner advertisements in Swedish and English yielded 4 160 recruits (3% of all), including 81% of the entire Swedish sample and 32% of those in Finland.

Table 2.1 Key recruitment sources for EMIS-2017

Country	% via Planet-Romeo	% via Grindr	% via Hornet	% via other trans-national sites	% national recruitment via Facebook, Twitter, Instagram	% national recruitment via national websites and email lists	% where recruitment source unknown
Total (used throughout this report)	39.1	20.3	9.6	9.0	7.0	9.0	6.1
EU Health Programme	41.4	21.7	6.5	9.8	7.4	8.3	4.9
All EU Member States	42.2	22.3	6.8	10.2	6.1	7.6	4.8
Austria ^o	70.8	6.6	3.9	1.8	1.2	8.4	7.3
Belgium ^o	62.4	11.3	7.8	3.1	6.2	5.8	3.4
Bulgaria ^o	20.4	45.0	5.6	0.9	1.1	1.5	25.5
Croatia ^o	41.2	19.6	0.3	0.0	16.6	20.6	1.7
Cyprus ^o	47.6	16.9	1.6	0.7	17.9	9.8	5.5
Czech Republic ^o	24.0	42.3	5.3	1.0	0.4	18.0	9.0
Denmark ^{o*}	8.8	9.7	10.2	1.5	19.0	45.2	5.6
Estonia ^o	44.3	9.9	4.7	2.4	21.2	4.7	12.8
Finland ^{o*}	15.8	11.8	2.7	35.7	4.3	25.6	4.1
France ^{o*}	44.1	19.3	25.1	6.4	2.1	1.7	1.3
Germany ^o	75.2	5.2	5.3	1.8	2.5	4.9	5.1
Greece ^o	61.7	16.9	0.2	3.0	9.2	5.2	3.8
Hungary ^o	56.2	13.3	0.5	0.6	16.0	10.8	2.6
Ireland ^o	4.7	32.2	4.8	8.7	17.6	17.7	14.3
Italy ^{o*}	59.4	22.1	10.5	4.3	0.1	0.7	2.9
Latvia ^o	37.7	24.2	9.5	0.8	1.6	4.4	21.8
Lithuania ^o	24.3	23.0	2.7	1.4	3.2	30.5	14.9
Luxembourg ^o	69.8	13.6	1.8	1.8	2.4	5.3	5.3
Malta ^o	25.8	15.1	2.3	1.7	4.7	35.8	14.6
Netherlands ^o	48.6	13.9	5.4	8.5	1.2	19.1	3.3
Poland ^o	22.9	68.9	0.6	1.0	0.1	1.5	5.0
Portugal ^{o*}	11.5	38.3	3.6	17.9	9.9	12.0	6.8
Romania ^o	50.6	30.1	1.8	0.6	14.9	0.2	1.8
Slovakia ^o	14.2	50.9	0.4	0.9	2.5	23.8	7.3
Slovenia ^o	38.0	4.4	0.1	0.7	43.4	11.2	2.2
Spain ^{o*}	19.4	48.9	0.9	9.1	0.9	16.5	4.3
Sweden ^o	5.8	2.2	0.9	83.4	2.4	2.8	2.5
United Kingdom ^{o*}	8.2	29.1	6.6	24.1	22.5	3.1	6.4
EFTA Member States[§]	35.8	5.9	3.7	2.4	29.8	16.4	6.0
Iceland ^o	32.4	37.8	0.0	0.0	15.3	13.5	1.0
Norway ^o	6.2	2.0	0.6	2.0	56.7	26.9	5.6
Switzerland [*]	61.7	8.2	6.6	2.7	6.7	7.4	6.7
EU Enlargement Area	41.7	12.8	16.8	2.1	2.4	3.7	20.5
Bosnia & Herzegovina ^o	61.6	33.2	0.4	0.0	0.0	4.7	0.1
North Macedonia	42.9	36.6	0.6	0.0	10.3	1.1	8.5
Serbia ^o	65.1	22.2	0.2	1.5	1.4	4.7	4.9
Turkey	24.5	1.1	30.9	2.9	2.6	3.3	34.7
Albania/Kosovo/Montenegro	57.3	31.6	3.5	1.2	1.8	2.3	2.3
ENP countries	7.3	25.9	28.3	1.9	8.7	19.1	8.8
Belarus	6.6	3.2	50.7	2.3	0.5	14.8	21.9
Lebanon	14.0	56.0	12.5	5.8	0.8	0.8	10.1
Israel	7.7	57.5	1.0	0.1	16.2	13.7	3.8
Moldova ^o	4.6	1.6	0.6	0.2	19.3	68.9	4.8
Ukraine	6.9	4.5	63.8	3.6	0.9	9.8	10.5
Other countries							
Russia (included in total)	4.9	2.3	48.7	3.3	1.4	21.6	17.8
Canada (not included in total)	2.9	37.1	5.1	16.8	1.6	33.9	2.6
Philippines (not included in total)	33.7	33.4	1.2	0.1	27.9	0.3	3.4

^o Part of the EU Health Programme, ^{*} includes microstate(s) and/or overseas areas, [§] EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Direct messages via RECON (n=2 458, 1.9% of all) were sent in English, French, Spanish, German and Portuguese to residents in 14 countries – nine that had directly requested RECON advertising (United Kingdom, Germany, Spain, Italy, Belgium, Sweden, Austria, Poland and Finland) and another five (France, Canada, Netherlands, Switzerland and Ireland) where RECON claimed more than 1 600 active members. Messages occurred in two instalments during December and each advert expired after one week. Recruitment via RECON was most productive in the United Kingdom (11% of the entire UK-sample) and France where membership is concentrated, but it recruited about 2% of 'active members' in all of the target countries.

SCRUFF was a popular advertising priority for a wide range of partners. Several national partners had some success with their free banner advertising system (BenevoLads), which recruited 215 participants from the efforts of multiple countries. Sigma subsequently commissioned and paid for short, direct messages to all Scruff users in 34 countries (Austria, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lebanon, Lithuania, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, and United Kingdom) that had more than 1 000 active members in December 2018. While the Scruff app was only available in 14 of the EMIS languages, the direct messages were sent in the primary language of the country where the recipient lived. Ultimately SCRUFF only managed to recruit 2 080 participants from these direct messages (1.6% of the entire sample)

Gaydar was an advertising priority for the national leads for a third of the 50 countries targeted, and had been very important to survey recruitment in English-speaking countries in the past. While it had historically been available in English, Dutch, Spanish, Portuguese, Italian and French, in the midst of a substantial overhaul, the app was only available in English at the time of the survey. Since it still claimed a reasonably large user base in the UK and Ireland and had been important for survey recruitment elsewhere we sent messages to all 'active users' in all 50 countries in English, unless they were residents of the Netherlands, Spain, Portugal, Italy or France in which case they got the message in Dutch, Spanish, Portuguese, Italian or French (the original languages of Gaydar). In the end, discounted Gaydar advertising recruited 1 123 participants from these longer direct messages (0.9% of the entire sample) and a further 48 recruits via banner advertising in English. Only for the UK did Gaydar recruit more than 5% of the country sample (5.6% of UK residents).

Manhunt/Jack'd was an advertising priority for the national leads of a third of the 50 countries targeted, and had been very important to survey recruitment in Portuguese, English and Spanish-speaking countries in the past. The ManHunt app was available in English, German, Spanish, Portuguese, Italian and French at the time of the survey and had a large user base in Portugal, UK and Spain. We sent direct messages to all 'active users' in 11 countries – Portugal, UK, Spain, Canada, France, Germany, Ireland, Italy, Netherlands, Switzerland and Belgium (in order of highest number of active users). The messages were sent in English, unless recipients were resident in the Germany, Spain, Portugal, Italy or France in which case they got the message in German, Spanish, Portuguese, Italian or French. In the end, ManHunt (and Jack'd) only recruited 563 participants from these longer direct messages and associated banners and 102 recruits from Jack'd messages and banners in English (0.5% of the entire sample). ManHunt/Jack'd recruited 13% of the sample resident in Portugal and was also important in Canada and the UK.

Advertising on GROWLr went out in January 2018 for six countries. GROWLr is only available in English but can deliver direct messages to users in other languages. However, it only allows one language per country for messages purchased on a whole country basis. While GROWLr was a priority advertising avenue for nine partners, five of these countries (Austria, Belgium, Slovenia, Switzerland and Turkey) did not receive GROWLr paid advertising as they had less than 1 000 active users at the time of the survey. We also added Canada and Spain to the GROWLr recruitment plan after determining that both countries had 16 000 active users of the site. We sent direct messages to all GROWLr users in Canada, Spain (in Spanish), Ireland and the United Kingdom in early January 2018, and a further round of messages to all registered users in France (in French) and Italy (in Italian) in late January. Ultimately GROWLr paid advertising only recruited 625 participants from their direct messages to all members in six key EMIS countries.

EMIS-2017 promotion also occurred via banner adverts on Bluesystem.com, a Russian-language website considered important in Ukraine, Russia and Belarus. This recruited 214 qualifying respondents (0.2% of all respondents) via website banners in Russian. Survey promotion in Russia was co-funded by national partners and the Arctic University of Norway and University Hospital of North Norway.

2.5.4 Returns from national recruitment

EMIS country leads co-ordinated national advertising, requesting 204 different online buttons and banners in 31 different languages. We provided several country leads with source imagery to produce their own buttons and banners. We did not develop any printed (offline) promotional materials such as posters, but a small number of leads created their own.

The final dataset reveals EMIS-2017 benefitted from at least 282 different recruitment sources, including the 10 paid trans-national sites discussed above. Of the minimum 272 national promotional sources, 156 (57%) were websites; 84 (31%) were Facebook pages or groups; 18 (7%) were Twitter accounts; 9 (3%) were email lists; and 5 (2%) were Instagram accounts. In Table 2.1 we differentiate between national social media recruitment (Facebook, Twitter, Instagram) and more traditional website and email list recruitment. In total, 16% of the sample were recruited from these national sources, including 7% recruited via social media (Facebook, Twitter, Instagram) and 9% recruited via websites and email lists of partner agencies.

The contribution of national recruitment to total recruitment by country varied enormously, from <1% in Italy to 83% in Norway and 88% in Moldova (see Table 2.1). Apart from Moldova and Norway which had exceptionally high rates of national recruitment, partners recruited more than half of their national sample in two other countries (Denmark and Slovenia); more than a third of their entire sample in five more countries (Malta, Croatia, Canada, Ireland and Lithuania); and more than a quarter of their sample in nine other countries (Finland, Israel, Iceland, Philippines, Cyprus, Hungary, Slovakia, Estonia, United Kingdom).

2.5.5 Total returns and non-qualifiers

At the close of fieldwork there were 144 305 individual responses or cases in the consolidated file. We excluded cases by applying inclusion criteria in the following order:

144 305 submissions, of which:

- 46 were online tests carried out by the study team during piloting; and
- 5 086 indicated they had not understood the consent information and/or they were not old enough to legally have sex with men in the country they lived in;

leaving 139 173 cases who gave informed consent, of which:

- 97 gave no country of residence; and
- 817 lived outside the 50 EMIS-2017 target countries;

leaving 138 259 cases who consented and lived in target countries, of which:

- 208 identified as non-binary³⁴;
- 202 identified as women (of which 94 were trans women).

leaving 137 849 men who consented and lived in target countries, of which:

- 380 reported not being sexually attracted to men and never having had sex with a man;

leaving, 137 469 men with homosexual desire and/or experience, who gave informed consent to participate and lived in EMIS-2017 target countries, of which:

- 111 reported an age below the age of sexual consent in the country they lived in;

leaving 137 358 men with homosexual experience and/or desire, who consented, and lived in a target country where they were of the age of sexual majority.

Of all cases submitted, 95% were qualifiers. Table 2.2 illustrates the number of cases submitted by country (Column 1); the number of non-qualifiers (Columns 3-5); and the number of qualifying cases in each country (Column 6).

The following six countries and states did not reach 100 qualifying cases so their cases are included in surrounding or adjoining countries:

- Andorra (18 cases) – included in the country tables at the end of each chapter with Spain.
- Liechtenstein (five cases) – included in the country tables with Switzerland.
- Monaco (8 cases) – included in the country tables with France.
- San Marino (four cases) – included in the country tables with Italy.
- Vatican City (three cases) – included in the country tables with Italy.
- Greenland (one case) – included in the country tables with Denmark.

Three countries did not reach the threshold of 100 valid cases

- Albania (56 cases submitted, 55 valid cases)
- Montenegro (77 cases submitted, 77 valid)
- Kosovo (40 cases submitted, 39 valid)

In the country tables, these three countries are included in a single row and their 171 participants are included in the row total for the EU Enlargement Area.

³⁴ Non-binary is a category for gender identities that are not exclusively masculine or feminine—identities that are outside the gender binary.

Table 2.2. Submitted cases, exclusions and qualifying cases

Number of consenting cases submitted from qualifying countries	Country	Number not men	Number no evidence of homosexual desire or behaviour	Number below age of consent or missing age	Qualifying cases
128 527	Total (used throughout this report)	304	332	99	127 792
113 355	EU Health Programme	235	263	68	112 789
108 479	EU Member States	222	241	66	107 950
2 715	Austria ^o	4	5	1	2 705
3 061	Belgium ^o	6	14	3	3 038
1 188	Bulgaria ^o	8	3	0	1 177
1 020	Croatia ^o	1	4	0	1 015
313	Cyprus ^o	3	3	0	307
1 906	Czech Republic ^o	4	4	1	1 897
1 709	Denmark ^{o*}	4	4	3	1 698
214	Estonia ^o	1	1	0	212
1 427	Finland ^{o*}	11	4	3	1 409
11 012	France ^{o*}	8	7	1	10 996
23 206	Germany ^o	44	50	5	23 107
2 943	Greece ^o	24	8	2	2 909
2 190	Hungary ^o	7	6	0	2 177
2 106	Ireland ^o	2	13	8	2 083
11 061	Italy ^{o*}	20	16	0	11 025
253	Latvia ^o	1	0	0	252
371	Lithuania ^o	1	0	0	370
169	Luxembourg ^o	0	0	0	169
305	Malta ^o	1	4	1	299
3 863	Netherlands ^o	4	6	2	3 851
4 035	Poland ^o	6	3	1	4 025
2 563	Portugal ^{o*}	3	4	1	2 555
2 032	Romania ^o	10	17	3	2 002
1 012	Slovakia ^o	4	5	0	1 003
689	Slovenia ^o	2	2	0	685
10 707	Spain ^{o*}	24	12	19	10 652
4 484	Sweden ^o	10	30	1	4 443
11 923	United Kingdom ^{o*}	9	16	9	11 889
6 493	EFTA Member States⁵	17	21	4	6 451
112	Iceland ^o	1	0	0	111
2 982	Norway ^o	7	16	2	2 957
3 399	Switzerland [*]	9	5	2	3 383
3 539	EU Enlargement Area	29	22	14	3 474
232	Bosnia & Herzegovina ^o	0	0	0	232
177	North Macedonia	1	1	0	175
1 050	Serbia ^o	5	4	0	1 041
1 907	Turkey	22	16	14	1 855
173	Albania/Kosovo/Montenegro	1	1	0	171
3 705	ENP countries	12	19	4	3 670
448	Belarus	3	5	0	440
264	Lebanon	1	4	2	257
1 280	Israel	2	3	1	1 274
500	Moldova ^o	0	2	0	498
1 213	Ukraine	6	5	1	1 201
	Other countries				
6 311	Russia (included in total)	24	29	11	6 247
6 096	Canada (not included in total)	14	13	10	6 059
3 638	Philippines (not included in total)	92	35	4	3 507

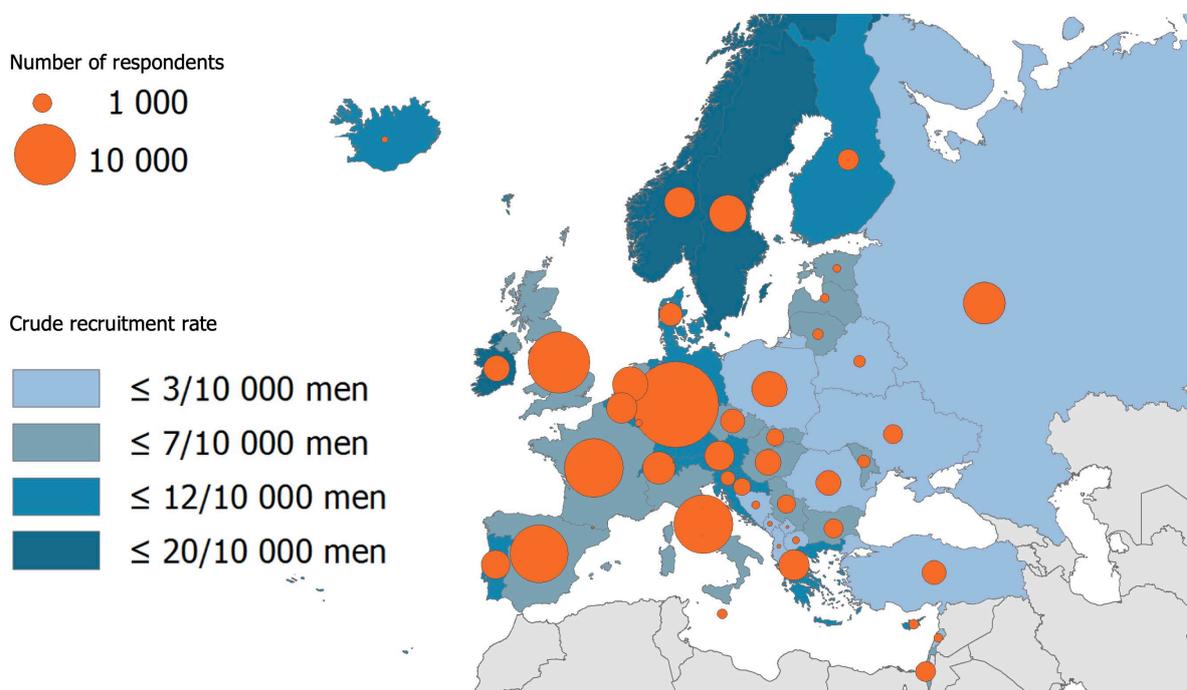
^o Part of the EU Health Programme, ^{*} includes microstate(s) and/or overseas areas, ⁵ EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

2.5.6 Recruitment relative to male populations

Table 2.3 shows the overall population of adult men (aged 16–65) in each country; the proportion of the population that uses the Internet [13]; and the relative response rate for each target country, which we calculated by dividing the number of qualifying cases recruited by the total male population aged 15–65 (without adjusting for Internet usage). The number shown is the number of recruits per 10 000 adult males in the national population. This method of calculating the relative response rate among males rather than among the estimated number of MSM has two advantages: first it does not assume that the proportion of MSM is the same in all countries, secondly, it is not biased by the heterogeneous methodologies applied by different countries to estimate the proportion of homosexually active men in their population.

In EU Health Programme countries response rates varied from 3 per 10 000 to 20 per 10 000, with an average of 6.5 participants per 10 000 adult males. A total of 19 countries had response rates between 4.5 and 8.5 per 10 000, though countries with lower response rates generally had smaller overall populations. Sweden was the only country with over three million men aged 15–65 years to have a high response rate (14 per 10 000). The lowest response rate, 3 per 10 000, was obtained in two medium size countries – Poland and Romania – where local recruitment was very limited. The following figure shows the relative and absolute recruitment number across Europe.

Figure 2.2 Number of respondents and crude recruitment rate per country, EMIS-2017 (N=127 792 for Europe)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

In any multi-national survey it is extremely difficult to balance participation rates across countries, especially when national support varies substantially between countries. While recruitment varied according to the organisational investment in EMIS, it was also affected by app popularity, and how recently other MSM surveys had been carried out in those countries. While some caution is needed when interpreting any comparisons between countries or regions, the primary aim – which was to describe the MSM population in EU Health Programme countries, providing information to policy makers and practitioners to address population needs – was met.

Table 2.3 Qualifying cases, population sizes and relative response rates by country for EMIS-2017

Qualifying cases	Country	Number of men aged 15–65 in population (2017)	% of individuals using the Internet 2017 ³⁵	Relative response per 10 000 men aged 15–65 in population	%completing with smartphone
127 792	Total (used throughout this report)	279 471 000	80.6	4.6	67.0
112 789	EU Health Programme	173 899 000	80.7	6.5	65.9
107 950	All EU Member States	167 478 000	81.0	6.4	66.2
2 705	Austria ^o	2 955 000	87.9	9.2	58.7
3 038	Belgium ^o	3 657 000	87.9	8.3	56.3
1 177	Bulgaria ^o	2 329 000	63.4	5.1	74.4
1 015	Croatia ^o	1 375 000	67.1	7.4	67.2
307	Cyprus ^o	400 000	80.7	7.7	68.4
1 897	Czech Republic ^o	3 512 000	78.7	5.4	71.4
1 698	Denmark ^{o*}	1 866 000	97.1	9.1	50.4
212	Estonia ^o	427 000	88.1	5.0	52.4
1 409	Finland ^{o*}	1 741 000	87.5	8.1	49.2
10 996	France ^{o*}	21 100 000	80.5	5.2	70.5
23 107	Germany ^o	27 052 000	84.4	8.5	56.0
2 909	Greece ^o	3 596 000	69.9	8.1	63.4
2 177	Hungary ^o	3 292 000	76.8	6.6	57.3
2 083	Ireland ^o	1 544 000	84.5	13.5	78.7
11 025	Italy ^{o*}	19 490 000	61.3	5.7	73.7
252	Latvia ^o	636 000	81.3	4.0	61.9
370	Lithuania ^o	935 000	77.6	4.0	61.6
169	Luxembourg ^o	205 000	97.8	8.3	59.2
299	Malta ^o	149 000	80.1	20.1	57.2
3 851	Netherlands ^o	5 606 000	93.2	6.9	61.0
4 025	Poland ^o	13 275 000	76.0	3.0	85.7
2 555	Portugal ^{o*}	3 356 000	73.8	7.6	67.1
2 002	Romania ^o	6 579 000	63.8	3.0	71.3
1 003	Slovakia ^o	1 908 000	81.6	5.3	78.8
685	Slovenia ^o	689 000	78.9	9.9	47.0
10 652	Spain ^{o*}	15 346 000	84.6	6.9	79.0
4 443	Sweden ^o	3 161 000	96.4	14.1	39.1
11 889	United Kingdom ^{o*}	21 300 000	94.6	5.6	75.1
6 451	EFTA Member States[§]	4 673 000	96.5	13.8	59.4
111	Iceland ^o	110 000	98.3	10.1	63.1
2 957	Norway ^o	1 728 000	96.5	17.1	59.4
3 383	Switzerland [*]	2 836 000	93.7	11.9	59.2
3 474	EU Enlargement Area	33 147 000	70.3	1.0	75.4
232	Bosnia & Herzegovina ^o	1 186 000	69.5	2.0	74.6
175	North Macedonia	729 000	76.3	2.4	66.9
1 041	Serbia ^o	2 350 000	70.3	4.4	64.7
1 855	Turkey	27 017 000	64.7	0.7	82.5
171	Albania/Kosovo/Montenegro	1 864 000	71.6 ³⁶	0.9	74.3
3 670	ENP countries	23 682 000	76.1	1.5	77.0
440	Belarus	3 310 000	74.4	1.3	80.7
257	Lebanon	2 063 000	78.2	1.2	94.6
1 274	Israel	2 692 000	81.6	4.7	87.0
498	Moldova ^o	1 046 000	76.1	4.8	39.2
1 201	Ukraine	14 571 000	57.1	0.8	77.1
	Other countries				
6 247	Russia (included in total)	50 490 000	76.0	1.2	78.9
6 059	Canada (not included in total)	11 670 000	92.7	5.2	73.6
3 507	Philippines (not included in total)	31 254 000	60.0	1.1	84.7

^o Part of the EU Health Programme, ^{*} includes microstate(s) and/or overseas areas, [§] EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

³⁵ Data copied from International Telecommunications Union (2019); in this column multi-country percentages in red are medians.

³⁶ Percentage excludes Kosovo as no data was available

2.5.7 Devices used

Table 2.3 also shows the proportion of each country sample that used a smartphone for survey completion. Two thirds (66%) of residents in the EU and in EU Health Programme countries completed the survey using a smartphone, rising to three-quarters of respondents in the EU Enlargement Areas (75%) and European Neighbourhood Policy countries (77%). Only four countries had a rate of completion using smartphones below 50% (Finland, Slovenia, Moldova and Sweden).

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 for this report. National datasets are available for all 43 countries with 100 or more qualifying cases (see Table 2.3). To date we have signed data transfer agreements with organisations in 30 of these countries and supplied them with a full dataset for all the men recruited to EMIS-2017 that are resident in that country.

2.6.1 Corrections and missing data

An answer may not appear in the dataset because a respondent did not supply one. In addition, some questions are missing answers in specific language versions of the survey due to survey design or translation errors.

Dutch language version – Antiretroviral treatment

The wording of the question was identical to that used in 2010, but after discussion with national stakeholders and a sensitivity analysis, we believe that a sub-optimal translation of 'antiretroviral treatment' in the Dutch questionnaire resulted in some classification bias, underestimating ART coverage among Dutch speakers – i.e. affecting the measures for Belgium (48% using the Dutch version) as well as the Netherlands (85% using the Dutch version). Other countries are not affected.

English language version – country of birth

In the EMIS 2010 response list for country currently lived in and country of birth, 'Turkish Republic of Northern Cyprus' appeared at code 184. This entry was deleted from the EMIS-2017 questionnaire but, due to an error, it still appeared in the response set in the English language version. This data has been corrected and men who ticked 'Turkish Republic of Northern Cyprus' are recoded to Turkey with no loss of data.

French language version – diagnosed STIs

The wording for the French translation for STI diagnoses was slightly changed for 2017. After discussion with the multi-national translation team for French, the new wording, while technically correct, may have been misunderstood by some French-speaking respondents in Europe, but not in Canada. Consequently, the questions on diagnosed syphilis, gonorrhoea, and chlamydia (but not HPV or HCV) may have been understood by some men as having undergone a test rather than having a positive test result. This problem affects all three countries with large sub-samples using the French version, notably France, Belgium and Switzerland, in descending order for decreasing proportions of French speakers. The estimates for the three STIs in these three countries must be interpreted with caution. For Luxembourg and Lebanon (the two other EMIS countries with a large French-speaking minority) the proportion of respondents using the French questionnaire was too small to be affected.

Hungarian language version – region of residence

The Hungarian language version had 'Budapest (város)' as response 5 rather than response 14 in the region of residence question for men living in Hungary. All other languages had it as response 14. As it was a transposition (sorting error) this was correctable with no loss of data.

Italian language version – settlement size

The Italian language version erroneously repeated the question as the first response option in the question on the size of the town or city where the respondent lived (settlement size). The error was corrected with no loss of data.

Russian language version – location of meeting most recent non-steady sexual partner/s

Two of the response options in the question on the location where respondents had met their most recent non-steady sexual partner/s were 'mobile phone (or other GPS enabled device)', followed by 'elsewhere on the Internet'. In error, the Russian language version omitted the word 'elsewhere'. This resulted in higher proportions reporting meeting partners 'on the Internet' and lower proportions reporting meeting partners on their 'mobile phone (or other GPS enabled device)' in Russian.

Spanish language version – internalised homonegativity scale

The Spanish language version produced one scale item twice and omitted another one. This was noticed and corrected at 18:21 GMT on 19 January 2018 but responses for the missing item are only available from cases recruited after this time.

2.7 Inconsistent data

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 simply by supplying inconsistent answers to one or more questions. For example, 16 cases gave an age which was less than the number of years they had been living in their country of residence. 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 introduce new ones.

Three discrepancy flags were created to indicate whether a respondent had supplied inconsistent data in the following three areas: age (seven possible inconsistencies), steady male partners (five possible inconsistencies), and non-steady partners (six possible inconsistencies). This allows cases with inconsistent data on key variables to be excluded from specific analyses. Overall, 14 833 cases (11% of all) had discrepant data in one or more of these three areas. National databases contain all cases with discrepant data so that national leads can make exclusions according to their own needs. Given the descriptive nature of this report we have not excluded any cases due to discrepancies.

2.8 Statistical approach

In this report our approach to data presentation is descriptive rather than statistical. Each section in Chapter 3 to 7 describes the questions asked and provides the responses received. EMIS is a non-probability sample, therefore it is inappropriate to calculate confidence intervals (based on standard sampling error) for measures. To increase readability in the narrative of the report, no decimal places are used for percentages, except when the figure is less than 2%.

Chapter 8 cross-tabulates responses to key demographic questions with other indicators. The primary purpose here is to provide the indicators for sub-groups of concern. We have not calculated the probabilities of the differences observed as random since this is a non-probability sample. We have not provided *unadjusted* associations (e.g. odds ratios, risk ratios) between the demographic target groups and the indicators as these can be calculated from the data in the tables. We have not provided *adjusted* associations between the demographic target groups and the indicators (i.e. checking for membership of the other demographics target groups) as we are not asking questions about the causality of these associations but describing the levels of the many indicators in the myriad target groups.

In all tables, where the denominator for a cell is less than 20 (for example, a measure among men with diagnosed HIV in a country with a small overall sample size and lower prevalence of diagnosed HIV), the figure is not supplied, but instead the cell contains the characters 'n<20'.

3. Sample description

The variables reported in this chapter relate to characteristics of the participants and their situation that HIV/STI and health promotion programmes cannot change or are not usually trying to change. In other words, there is no 'preferred' response to the questions although some programmes may have outcome targets related to these characteristics (for example, reducing sex work).

From the perspective of sexual health promotion, the characteristics reported in this chapter sometimes describe a target group for interventions (for example, trans men). The way in which morbidities, risk and precaution behaviour, health promotion needs and experience of interventions vary across these characteristics is reported in Chapter 8. For a description of how these characteristics vary by country of residence see Section 3.11.

3.1 Summary

This chapter describes the demographic characteristics of 127 792 men resident in 48 countries.

- Sex at birth and current gender identity – being male was a requirement of participation. In all, 99% defined themselves as 'male' and 1% considered themselves to be a 'trans man' (either self-defining as a 'trans man' or reported having been 'assigned female at birth').
- Age – the average (median) age was 36 years old (range 14 to 100, mean 37.2, standard deviation 12.8). Average age varied substantially by country of residence.
- Country of residence – 85% were resident in the EU; 5% in EFTA countries; 3% in EU Enlargement Area countries; 3% in EU Neighbourhood Policy countries and 5% in Russia.
- Migration history – 13% were not born in the country where they currently lived. Of these, 62% were born in another European country; 13% in South America; 10% in Asia; and 8% in North America or the Caribbean.
- Education – 97% had some education post 16 (median number of years was six) and 89% had two or more years post-16 education.
- Employment – 72% were in employment, with over half employed full-time. More than one in 20 were unemployed and there was a sizable minority of students (14%).
- Financial coping – 17% reported struggling financially; 34% neither struggling nor comfortable and 49% reported they were financially comfortable.
- Sexual attraction – <1% indicated they were not attracted to anyone, 5% were attracted to non-binary³⁷ people, 16% to women and 99% to men. All those who did not indicate they were attracted to men had previously had sex with men.
- Sexual identity – 77% identified as gay or homosexual and 16% as bisexual. Among the remaining participants, not usually applying a term was more common (5%) than using any other term (1%) or defining as straight or heterosexual (<1%).
- 'Outness' – of those attracted to men, 59% were open about this attraction to the majority of people they knew.
- Current partnerships – 39% had a current steady partner, most commonly one male partner (31% of all participants). Overall, 14% had never had a steady partner and 16% had had a relationship break-up in the last 12 months. A total of 54% were currently single.
- Buying and selling sex – More participants had bought sex than had sold it, both in their lifetime (18% versus 15%) and in the last 12 months (10% versus 5%). The majority who had either sold or bought sex in the last 12 months had done so only once or twice.

3.2 Sex at birth and current gender identity

Identifying as a man was a qualifying condition for taking part in the survey (so there is no missing data for this variable). All respondents were asked 'What is your current gender identity?' and were offered the responses: man; trans man; woman; trans woman; non-binary gender.

Those who indicated woman, trans woman or non-binary gender were told 'This survey is for people who identify as men (cis and trans). You are very welcome to read and complete the rest of the survey however we will be unable to use your data.' Any data provided is not reported here.

Those who indicated 'man' or 'trans man' were asked 'What sex were you assigned at birth?' Of the 127 792 men in the final sample, 0.8% (n=965) identified as a trans man and 0.6% (n=706) indicated the sex they were assigned at birth was female (N=127 441, 'Decline to state' n=127, missing n=224). Table 3.1 below shows the associations between responses to these two questions. Section 3.11 shows country variation in the percentage that were assigned female sex at birth.

³⁷ Non-binary is a category for gender identities that are not exclusively masculine or feminine - identities that are outside the gender binary.

Table 3.1 Current gender identity by sex assigned at birth

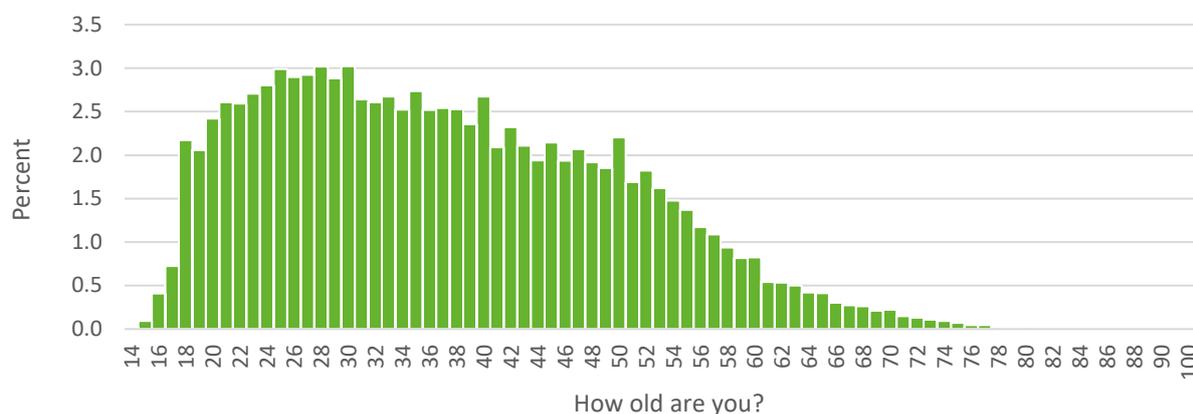
		What sex were you assigned at birth? (missing n=351)	
		% of male (n=126 735)	% of female (n=706)
What is your current gender identity?	Man (n=126 521)	99.7	27.1
	Trans man (n=920)	0.3	72.9
TOTAL		100.0	100.0

Not all respondents who were assigned female at birth currently identified as a trans man (27% indicated 'man'). Similarly, not all respondents who currently identified as a trans man were assigned female at birth (44% indicated 'male').

Chapter 8 compares the trans minority with the cis majority across the whole sample. For this report, we define the trans minority as either self-defining (as a trans man) or as having been assigned a female gender at birth (n=1 111, 0.9%). All others are categorised as cis men, including those who declined to respond to the question regarding the sex assigned at birth.

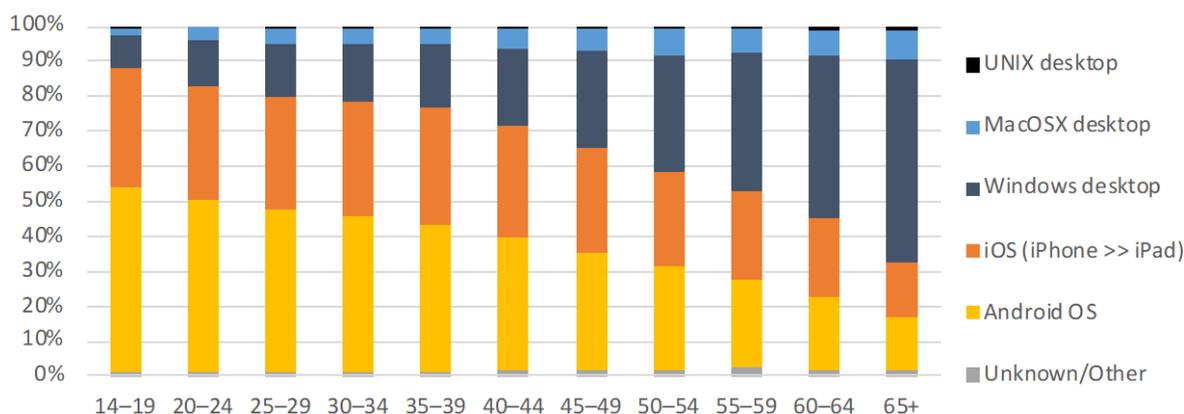
3.3 Age

Providing an age was a qualifying condition for the survey, as was being of or above the age of consent for sex with men in the country of residence. Figure 3.1 shows the distribution of ages across the entire sample.

Figure 3.1 Age in years across the entire sample (N=127 792)

The median age of the whole sample was 36 years (range 14 to 100, mean 37.2, standard deviation 12.8). The age profile showed a sharp increase after 14 years, the youngest age of consent in the qualifying countries, while the right hand tail was much more skewed. The age of the sample varied substantially by country of residence, as demonstrated by the country medians in Section 3.10.

The main difference between EMIS in 2010 and 2017 was the device used to complete the survey. We expected that the mobile phone would be especially important, and it was. In 2010, very few men used a phone to complete the survey. This time, two thirds of the whole sample completed the survey on their phone. As expected, younger men were more likely to use phones, and less likely to use computers than older men. The device data is system-generated rather than self-reported. This cross-tab is entirely intuitive and increases our faith in the validity of the self-reported data.

Figure 3.2 Device used to fill in the survey by age groups (N=127 792)

3.4 Country of residence and settlement size

All men were asked 'What country do you live in?' and offered a list of countries. Respondents who lived in countries other than those for which EMIS was collecting data were told 'Unfortunately this survey is not collecting data from the country you live in. You are very welcome to read and complete the rest of the survey, however we will be unable to use your data.'

Most of the final sample (85%) lived in a country in the European Union, though the narrative element of this report also includes men resident in countries in the European Free Trade Association (5%); men resident in a candidate or potential candidate country in the current EU Enlargement area (3%); men resident in countries in the Eastern and Southern Partnerships of the European Neighbourhood Policy area (3%) and men resident in Russia (5%).

Table 3.2 Area where respondents currently live

Where respondent lives (N=127 792, missing n=0)	Number	%
European Union: including Andorra, Monaco, San Marino and some non-EU overseas territories	107 950	84.5
European Free Trade Association: Norway, Iceland, Liechtenstein (EEA EFTA), and Switzerland (EFTA but not EEA)	6 451	5.0
EU Enlargement area (candidate or potential candidate): Albania, Bosnia & Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia, Turkey	3 474	2.7
European Neighbourhood Policy area: Belarus, Moldova, Ukraine (Eastern Partnership) and Lebanon, Israel (Southern Neighbourhood)	3 670	2.9
Russia	6 247	4.9
TOTAL	127 792	100.0

At the end of this chapter, Chapters 4–7 and 9 the key variables for the chapter are presented by country of residence, with countries presented alphabetically according to the four primary groupings above. In the country tables residents of Canada and the Philippines are also shown below Russia, but only Russian residents are included in the narrative element of the report.

All men were asked 'How would you describe the place you live in?' and were offered the responses in Table 3.3, which also shows the percentage indicating each response.

Table 3.3 Description of the size of settlement where respondents currently live

Description of the place you live in (N=126 314, missing n=1 478)	%
A very big city or town (a million or more people)	29.9
A big city or town (500 000–999 999 people)	15.5
A medium-sized city or town (100 000–499 999 people)	21.8
A small city or town (10 000–99 999 people)	20.4
A village/the countryside (less than 10 000 people)	12.5
TOTAL	100.0

Men across almost all countries live in settlements of all sizes. For a description of what percentage of each country sample lives in settlements of 500 000+ people see Section 3.11.

3.5 Perceived ethnic minority status

All men were asked 'Do you consider yourself a member of an ethnic or racial minority in <Country Living In>?' and were offered responses 'yes' and 'no'. Overall, 13% (N=127 031, missing n=761) indicated 'yes'.

Men who indicated 'yes' were asked 'What minority are you a member of?' and men who indicated 'no' were asked 'What majority are you a member of?' Both groups were given an open box to enter free text.

The analysis of these data is left to national EMIS partners as the data require local/national knowledge to interpret and we strongly recommend recoding perceived ethnic minority status on the basis of the subsequent descriptive write-in field. We do not use ethnic minority status as a comparative variable in this report, but self-defined membership of an ethnic minority by country is described in Section 3.10.

3.6 Migration history

Men were asked 'Were you born in <Country Living In>?' and were offered the responses 'yes' or 'no'. Overall, 13% (N=127 403, missing n=389) indicated that they were not born in the country they currently lived in. For a description of how this characteristic varied by current country of residence, see Section 3.11. These men were asked 'Which country were you born in?' and offered the same list as for the country they lived in. Table 3.4 summarises responses recoded into continents.

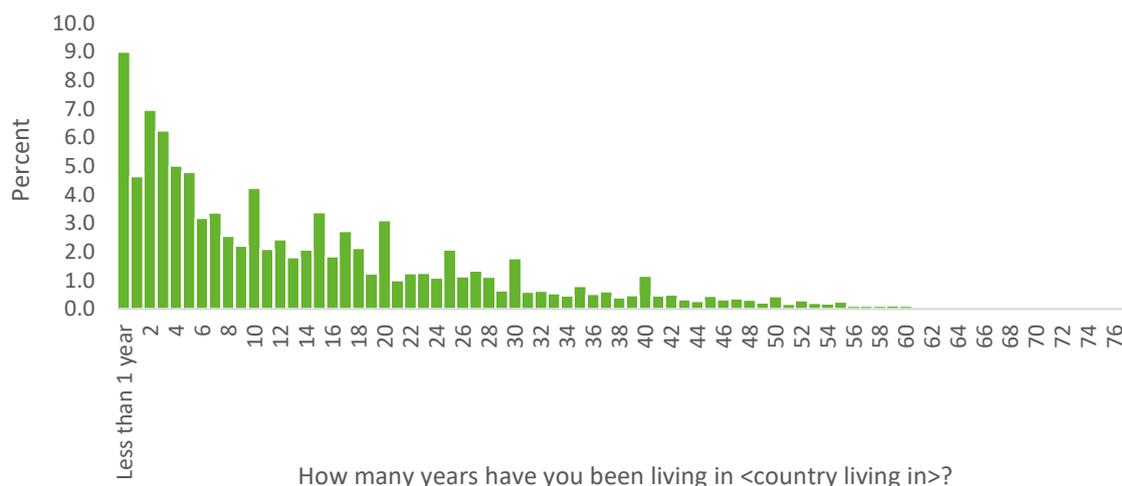
Table 3.4 Country of birth recoded to continents among whole sample, and those not born in their current country of residence

Country of birth recoded into continents	% of all men (N=127 403, missing n=389)	% of men not born in the country they currently live in (N=17 050, missing 226)
Europe (EMIS qualifying countries, including overseas territories, Russia, Turkey and Israel)	94.8	62.2
South America	1.7	12.7
Asia, including Lebanon	1.5	10.2
North America and Caribbean	1.1	8.2
Africa	0.7	5.4
Oceania	0.2	1.4
TOTAL	100.0	100.0

The majority (62%) of men not born in the country they were currently living in were born in another European country. Of the remaining migrants, large proportions had come to Europe from South America (13%), Asia (10%) or North America and the Caribbean (8%).

Men not born in the country they were living in were also asked 'How many years have you been living in <Country Living In>?' Among the 13% of men not born in the country they lived in, 9% had lived in that country for less than one year, 32% for less than five years and 48% for less than ten years. Figure 3.3 illustrates the responses.

Figure 3.3 Years resident in current country among migrants across the entire sample (N=16 914)



Men not born in the country they lived in were asked 'Why did you come to <country living in>?' and were offered the responses in Table 3.5.

Table 3.5 Reasons for migration among men not born in their current country of residence

Reasons for migration among men not born in the country they live in now. (N=17 180, missing n=96). Tick as many as apply	%
To work	43.9
To study	27.1
I was brought as a child	19.7
To live more openly as gay/bisexual/trans	15.7
To be with a partner	13.4
I came as a refugee	2.7
To seek asylum	2.4
I was brought against my will	0.6
Other answer	8.6

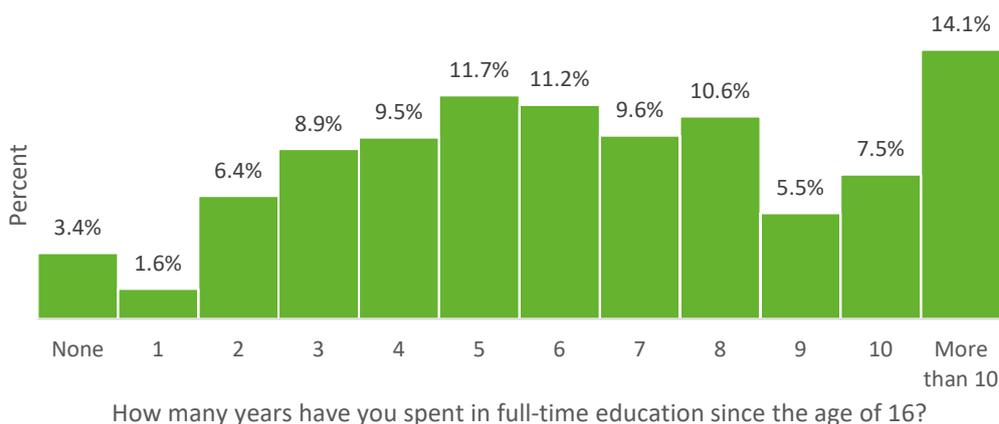
Work was the most commonly cited reason for coming to the country they currently lived in, followed by study. Work and/or study were given as the reasons for migration by 61% of men (some ticked both these reasons) not born in the country they currently lived in.

Of the men not born in the country they lived in, 4% indicated they had come to the country they lived in as a refugee and/or asylum seeker (0.6% of the entire sample). These men (n=749) are compared with the majority in Chapter 8. For an indication of the proportion that had arrived in each current country of residence as a refugee or asylum seeker see Section 3.11.

3.7 Education, employment and financial status

Men were asked 'How many years have you spent in full-time education since the age of 16?' The median number of years was six (N=118 564, missing n=9 228). The vast majority (97%) had some education after the age of 16, and the majority (89%) had more than two years full-time education after the age of 16. For a description of how having less than three years full-time education after the age of 16 varies by country of residence, see Section 3.11. Figure 3.4 shows the distribution of education after the age of 16 years. There is an OECD document that provides guidance on how to convert post-16 education into ISCED-1997 degrees at national level [14].

Figure 3.4 Years spent in full time education beyond the age of 16 across the entire sample (N=118 564)



Men were asked 'Which of the following best describes your current occupation?' and were offered the responses in Table 3.6.

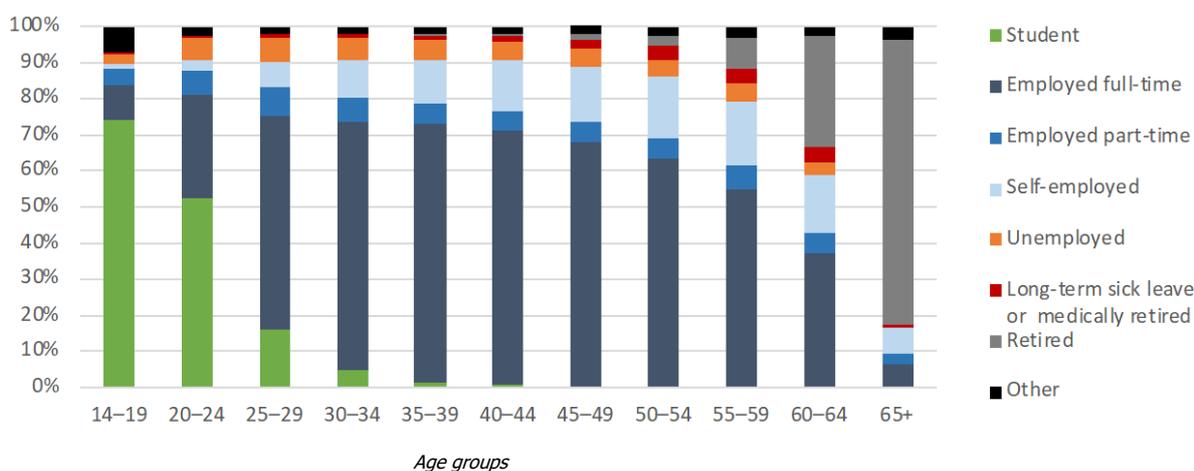
Table 3.6 Current occupation/work status

Current occupation (N=127 269, missing n=523)	% of all
Employed full-time	55.6
Employed part-time	6.2
Self-employed	10.5
Unemployed	5.5
Student	14.3
Retired	3.8
Long-term sick leave/medically retired	1.6
Other answer	2.4
TOTAL	100.0

Overall, 72% were in employment, with over half employed full-time. More than 1 in 20 were unemployed and there was a sizeable minority of students (14% or 1-in-7 of the whole sample). For a description of the variation in current rates of unemployment by country of residence see Section 3.11.

The majority of respondents in all countries were working full time; with others working part time or self-employed. The chart below shows current working practice by age group. Not surprisingly, a much higher percentage of the younger men were in education (in green), and retirement was increasingly common as the age of the sample increased. Again, this cross-tabulation is entirely intuitive and should increase our faith in the validity of the self-reported data.

Figure 3.5 Employment by age groups across the entire sample (N=127 269)



Men were also asked 'Which of these phrases would you say comes closest to your feelings about your income these days?' and were offered the responses in Table 3.7.

Table 3.7 Feelings about current income

Feelings about income (N=127 105, missing n=687)	% of all
Living really comfortably on present income	13.1
Living comfortably on present income	36.1
Neither comfortable nor struggling on present income	33.9
Struggling on present income	12.1
Really struggling on present income	4.8
TOTAL	100.0

Overall, 17% were struggling financially, 34% neither struggling nor comfortable and 49% were comfortable. There was a strong relationship between employment status and financial status, as shown in Table 3.8.

Table 3.8 Self-perceptions of financial status by employment status

	% financially coping by occupation status						
	Employed full-time (N=70 674)	Employed part-time (N=7 926)	Self-employed (N=13 312)	Un-employed (N=7 031)	Student (N=18 049)	Retired (N=4 846)	Sick leave/medically retired (N=2 033)
Really comfortable	15.9	6.4	16.4	2.6	7.6	15.5	4.0
Comfortable	43.4	26.5	35.0	9.5	26.4	39.4	15.9
Neither comfortable nor struggling	31.9	42.2	32.1	31.7	41.4	28.7	32.3
Struggling	7.4	19.3	12.5	28.1	18.1	11.5	26.7
Really struggling	1.4	5.5	3.9	28.1	6.4	4.8	21.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

While overall 17% were struggling financially, 56% of unemployed men were struggling, as were 49% of those medically retired or on long-term sick leave. The financial struggles of these two groups are more acute when considering those really struggling (5% of the total sample but 28% of unemployed men and 21% of those medically retired/long-term sick leave).

3.8 Sexual attraction, sexual identity and 'outness'

Men were asked 'Who are you sexually attracted to?' and were asked to tick as many as apply from: men; women; non-binary people (non-binary is a category for gender identities that are not exclusively masculine or feminine—identities that are outside the gender binary); I'm not attracted to anyone. Table 3.9 contains the percentages giving each combination of answers.

Table 3.9 Sexual attraction

Who are you sexually attracted to? (N=127 627, missing n=165)		% of all	
Monosexual	Men only	82.0	82.8
	Women only	0.5	
	Non-binary people only	0.3	
Bisexual	Men and women only	12.2	13.9
	Men and non-binary people only	1.6	
	Women and non-binary people only	0.1	
Polysexual	Men, women and non-binary people	3.1	3.1
Asexual	No one	0.2	0.2
TOTAL		100.0	100.0

Overall, 0.2% indicated they were not attracted to anyone, 5% were attracted to non-binary people, 16% to women and 99% to men. All of the men who did not indicate they were attracted to men had previously had sex with men.

Men were asked 'Which of the following options best describes how you think of yourself?' and were offered the responses: Gay or homosexual; bisexual; straight or heterosexual; any other term; I don't usually use a term. Table 3.10 shows the percentages giving each response overall, and who men were sexually attracted to.

Table 3.10 Sexual attraction by sexual identity

		How you think of yourself					TOTAL
		Gay or homo-sexual	Bisexual	Straight or hetero-sexual	Any other term	I don't usually use a term	
All respondents (N=127 792, missing n=97)		77.5	15.9	0.7	1.0	5.0	100.0
Who are you sexually attracted to?	Men only (n=104 592)	91.5	4.1	0.1	0.4	3.9	100.0
	Women only (n=624)	18.4	45.7	24.2	1.9	9.8	100.0
	Non-binary only (n=362)	5.2	68.8	4.7	4.4	16.9	100.0
	Men & women (n=15 547)	8.1	79.4	2.6	1.4	8.6	100.0
	Men & non-binary (n=2 009)	75.8	7.7	0.3	5.3	10.9	100.0
	Women & non-binary (n=180)	3.3	54.4	21.7	6.7	13.9	100.0
	Men, women & non-binary (n=4 017)	5.8	67.1	2.7	10.9	13.4	100.0
	No-one (n=227)	13.2	34.4	2.2	16.3	33.9	100.0

Overall, three quarters of the sample (77%) identified as gay or homosexual and 16% as bisexual. Among the remaining men, not usually applying a term was more common (5%) than using any other term (1%) or defining themselves as straight or heterosexual (<1%).

Sexual identity varied by sexual attraction but there was no one-to-one relationship between them. 'Gay' was the most commonly preferred term for men attracted to men only and those attracted to men and non-binary people (but not women).

'Bisexual' was the preferred term for the majority of men who were attracted to both men and women (but not non-binary people); for men attracted to women and non-binary people (but not men); for men attracted to non-binary people only and for men attracted to all three genders.

Men who were sexually attracted to men (99% of all 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?' They were offered the response options in Table 3.11.

Table 3.11 Percentage of people that know respondents are attracted to men and who respondents are attracted to

		'What proportion know that you are attracted to men?'					TOTAL
		All or almost all	More than half	Less than half	Few	None	
All men attracted to men (N=126 161, missing for n=237)		41.1	17.7	10.9	21.0	9.3	100.0
Who are you sexually attracted to?	Men only (n=104 591)	46.3	19.0	11.2	18.2	5.2	100.0
	Men and women (n=15 549)	10.1	9.0	9.1	38.3	33.4	100.0
	Men and non-binary (n=2 008)	55.4	19.8	8.5	12.2	4.1	100.0
	Men, women and non-binary (n=4 013)	18.7	17.7	10.9	21.0	9.3	100.0

Overall, 59% of men were out to the majority of people they knew about their attraction to men. Men who were also attracted to women were less likely to be open about their attraction to men.

The percentage of country samples of men with a gay or bisexual identity and the percentage that are out about their sexual attraction to men to only a few people is reported in Section 3.11. 'Outness' has a major influence on morbidities, behaviour, needs and access to interventions [15]. Chapter 8 explores how morbidities, behaviour, needs and interventions vary to the extent that men are open about their sexual attraction to men.

3.9 Current partnerships

Men were asked 'Do you currently have a 'steady partner', that is a lover or spouse that means you are not 'single'?' and were offered the responses: No, I am single; Yes, I have a steady partner; I'm not sure/it's complicated.

Men who indicated 'No, I am single' were asked 'When did your most recent steady relationship break-up?' and were offered a scale to indicate how recently this had occurred. Men who indicated 'Yes, I have a steady partner' were asked 'Are you currently in a steady relationship with ...?' and offered the responses: one man; more than one man; one non-binary person; more than one non-binary person; one woman; more than one woman. Table 3.12 shows the percentages giving each response.

Table 3.12 Percentages with a current 'steady partner', type of partnership and indicator of how recently the last steady partnership broke up

% with a current 'steady partner' (N=127 627, missing n=165)			
I'm not sure/it's complicated	7.4		7.4
Yes, I have a steady partner	38.6	Are you currently in a steady relationship with ... (N=49 202, missing n=54)	
		One man only	30.9
		More than one man (no women/non-binary)	1.9
		One woman only	4.9
		All other combinations of steady relationships	0.8
No, I am single	54.0	When did your most recent steady relationship break-up? (N=66 918, missing n=2 027)	
		Within 24 hours	0.1
		Within 7 days	0.4
		Within 4 weeks	1.5
		Within 6 months	6.6
		Within 12 months	7.0
		Within 5 years	15.5
		Over 5 years	9.2
Never had a steady relationship	13.6		
TOTAL	100.0		100.0

Fewer than half the men had a current steady partner, most commonly one male partner (31% of all men). Overall, 14% had never had a steady partner and 16% had had a steady relationship break-up within the last 12 months and were currently single.

Country level differences in the percentage of men with a current steady partner are described in Section 3.11 and differences between single men and those with (a) current steady partner/s are described in Chapter 8.

3.10 Buying and selling sex

All men were asked, 'When was the last time you paid a man to have sex with you? By paid we mean you gave him money, gifts or favours in return for sex' and 'When was the last time you were paid by a man to have sex with him? By paid we mean he gave you money, gifts or favours in return for sex' and each question offered a scale to indicate how recently this had occurred [16].

Table 3.13 Cumulative percentage that have paid a man for sex, and been paid by a man for sex

	When was the last time you paid a man to have sex with you? (N=124 120, missing n=3 672)		When was the last time you were paid by a man to have sex with him? (N=124 151, missing n=3 641)	
	% of all	Cumulative %	% of all	Cumulative %
Within 24 hours	0.3	0.3	0.3	0.3
Within 7 days	1.2	1.5	0.6	0.9
Within 4 weeks	1.9	3.4	0.8	1.8
Within 6 months	3.4	6.8	1.6	3.4
Within 12 months	2.7	9.5	1.5	4.9
Within 5 years	4.6	14.1	3.6	8.5
More than 5 years ago	4.3	18.4	6.6	15.0
Never	81.6		85.0	
TOTAL	100.0		100.0	

More men had bought sex than had sold it, both in their lifetime (18% versus 15%) and in the last 12 months (10% versus 5%).

Men who had bought sex in the last 12 months were asked 'In the last 12 months, how often have you paid a man to have sex with you?' and men who had sold sex in the last 12 months were asked 'In the last 12 months how often have you been paid by a man to have sex with him?' For each question they were offered the responses in Table 3.14.

Table 3.14 Frequency of buying and selling sex with a man in the last year, among those that have done so

In the last 12 months, how often have you...	...paid a man to have sex with you? (N=11 713 who paid for sex last 12 months, missing n=47)	...been paid by a man to have sex with him? (N=5 967 who were paid for sex last 12 months, missing n=90)
1–2 times	59.9	52.9
3–10 times	31.5	31.1
11–50 times	7.6	10.5
More than 50 times	1.0	5.5
TOTAL	100.0	100.0

The majority of men who had either sold or bought sex in the last 12 months had done so only once or twice.

For a description of how buying sex from a man and selling sex to men varies by country of residence see Section 3.11. Chapter 8 compares the men who frequently sold sex with those who did not.

3.11 National variation in demographics

Table 3.15 National variation in key demographics

Qualifying cases	Country	% assigned female sex at birth	Age (median in years)	% living in settlement of 500 000+ people	% not born in country of residence	% self-perceived ethnic minority	% refugee or asylum seeker	% <3 years of education after age 16
127 792	Total (used throughout this report)	0.6	36	45.3	13.4	12.7	0.6	11.4
112 789	EU Health Programme	0.6	36	45.3	13.5	12.7	0.6	11.4
107 950	EU Member States	0.6	37	43.8	13.5	11.7	0.5	11.8
2 705	Austria ^o	0.6	36	46.2	21.1	12.3	0.9	10.3
3 038	Belgium ^o	0.3	40	36.4	20.0	11.6	0.4	9.9
1 177	Bulgaria ^o	0.3	30	65.2	5.2	8.8	0.1	10.6
1 015	Croatia ^o	0.3	29	47.5	8.7	10.0	1.5	10.5
307	Cyprus ^o	0.0	35	5.3	21.0	24.1	0.7	9.5
1 897	Czech Republic ^o	0.7	31	51.5	15.4	11.1	0.2	8.9
1 698	Denmark ^{o*}	1.2	41	45.0	14.3	7.6	0.6	8.1
212	Estonia ^o	1.9	34	10.8	14.6	25.9	0	11.6
1 409	Finland ^{o*}	4.9	37	38.8	8.3	12.4	0.6	9.1
10 996	France ^{o*}	0.4	38	40.8	11.1	12.7	0.3	10.7
23 107	Germany ^o	0.5	39	40.9	11.3	10.1	0.6	7.1
2 909	Greece ^o	0.1	35	65.7	8.9	17.7	0.3	9.1
2 177	Hungary ^o	0.3	33	56.0	7.3	8.1	0.3	12.9
2 083	Ireland ^o	0.8	33	47.9	24.8	10.1	0.2	14.2
11 025	Italy ^{o*}	0.1	39	42.6	6.6	11.4	0.2	11.0
252	Latvia ^o	0.4	34	69.2	9.5	23.6	0.4	11.4
370	Lithuania ^o	0.3	30.5	47.3	5.7	16.1	0	18.3
169	Luxembourg ^o	0.0	38	6.5	49.7	17.9	0	5.8
299	Malta ^o	0.7	35	1.4	26.1	16.8	0.3	19.0
3 851	Netherlands ^o	0.2	45	37.2	17.5	13.8	0.9	14.6
4 025	Poland ^o	0.1	30	56.6	3.6	11.7	0.1	6.7
2 555	Portugal ^{o*}	0.2	34	43.4	16.3	9.0	1.1	9.8
2 002	Romania ^o	0.5	31	46.7	2.7	18.0	0.1	13.2
1 003	Slovakia ^o	0.6	30	26.8	3.6	14.0	0	8.5
685	Slovenia ^o	0.0	34	2.5	7.0	8.5	0	5.7
10 652	Spain ^{o*}	0.3	34	49.5	21.5	11.1	0.7	12.3
4 443	Sweden ^o	1.4	46	40.8	14.7	11.7	2.2	15.9
11 889	United Kingdom ^{o*}	1.0	38	42.6	20.8	13.1	0.3	24.8
6 451	EFTA Member States[§]	0.9	38	23.3	21.4	12.7	0.7	7.9
111	Iceland ^o	2.8	34	0	24.3	11.8	0	8.2
2 957	Norway ^o	1.1	33	39.7	14.4	11.3	1.1	8.3
3 383	Switzerland [*]	0.6	41	9.8	27.4	14.0	0.4	7.5
3 474	EU Enlargement Area	0.2	30	65.0	8.6	23.9	1.2	9.7
232	Bosnia & Herzegovina ^o	0.0	29	14.0	12.9	17.7	1.7	5.0
175	North Macedonia	0.0	30	58.9	2.3	11.4	0	7.9
1 041	Serbia ^o	0.4	32	51.5	10.3	16.0	2.7	7.4
1 855	Turkey	0.1	28	82.6	7.2	30.4	0.5	11.6
171	Albania/Kosovo/Montenegro	1.2	30	31.0	14.0	22.8	0	11.5
3 670	ENP countries	0.5	29	57.3	9.6	19.6	0.8	14.7
440	Belarus	1.2	28	62.6	8.7	22.4	0.2	6.1
257	Lebanon	0.4	29	49.4	25.3	34.4	7.4	6.1
1 274	Israel	0.7	31	37.3	11.9	13.7	0.6	16.5
498	Moldova ^o	0.4	26	76.7	3.0	32.0	0	35.7
1 201	Ukraine	0.3	28	70.2	7.0	16.7	0.1	8.7
	Other countries							
6 247	Russia (included in total)	0.5	30	77.3	11.0	19.3	1.0	8.5
6 059	Canada (not included in total)	2.3	36	59.8	21.4	21.8	1.2	13.8
3 507	Philippines (not included in total)	0.2	27	62.2	2.2	20.9	0.0	8.6

^o Part of the EU Health Programme; ^{*} includes microstate(s) and/or overseas areas; [§] EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 3.16 National variation in key demographics

Qualifying cases	Country	% un-employed	% struggling or really struggling on present income	% identifying as gay or homo-sexual	% out to few or none of friends, family and at work	% with current steady partner (of any gender)	% bought sex from a man at least once in last 12 months	% sold sex to a man at least 11 times in last 12 months
127 792	Total (used throughout this report)	5.5	16.9	77.5	30.3	38.6	9.5	4.9
112 789	EU Health Programme	5.9	14.3	73.4	30.3	38.6	9.5	4.9
107 950	EU Member States	5.6	16.7	78.0	27.8	39.0	9.3	4.6
2 705	Austria ^o	3.9	15.8	76.2	27.9	41.0	11.6	3.8
3 038	Belgium ^o	5.8	9.9	82.0	20.0	44.5	13.8	4.9
1 177	Bulgaria ^o	3.9	14.3	68.0	47.1	33.4	10.0	5.7
1 015	Croatia ^o	9.3	12.7	72.8	49.5	32.7	5.3	3.2
307	Cyprus ^o	6.2	22.4	71.6	45.0	30.3	16.3	3.1
1 897	Czech Republic ^o	2.0	9.4	89.6	17.0	45.7	7.3	3.7
1 698	Denmark ^{o*}	4.9	11.7	79.0	20.9	45.2	7.7	4.5
212	Estonia ^o	0.9	13.3	75.0	37.0	39.2	8.5	3.0
1 409	Finland ^{o*}	9.3	19.6	72.5	27.5	41.8	8.1	3.2
10 996	France ^{o*}	7.4	15.3	81.2	23.4	35.6	11.3	6.3
23 107	Germany ^o	3.4	18.6	78.1	24.1	46.3	10.1	4.2
2 909	Greece ^o	12.8	27.0	72.2	45.8	29.8	11.1	3.9
2 177	Hungary ^o	3.7	14.8	72.7	47.6	37.8	9.0	4.1
2 083	Ireland ^o	4.5	17.4	81.4	21.2	35.4	6.0	4.4
11 025	Italy ^{o*}	8.0	18.6	74.1	38.6	31.4	12.6	5.2
252	Latvia ^o	4.0	14.0	77.0	43.0	39.7	9.0	6.6
370	Lithuania ^o	4.3	16.4	73.4	48.6	36.2	7.1	6.3
169	Luxembourg ^o	5.3	8.9	68.6	29.9	45.6	16.2	4.8
299	Malta ^o	1.3	15.7	82.3	19.9	43.3	9.4	4.2
3 851	Netherlands ^o	4.6	8.7	85.3	13.0	48.4	8.1	3.8
4 025	Poland ^o	3.2	12.3	82.8	41.2	35.6	4.9	5.1
2 555	Portugal ^{o*}	7.0	15.7	77.4	35.5	34.9	7.3	4.0
2 002	Romania ^o	4.0	12.6	60.5	64.7	35.1	10.3	6.4
1 003	Slovakia ^o	3.3	15.4	79.3	38.4	41.1	8.4	4.7
685	Slovenia ^o	4.8	12.1	74.3	40.4	46.2	6.7	3.1
10 652	Spain ^{o*}	8.7	17.7	79.9	19.5	30.5	9.0	5.2
4 443	Sweden ^o	4.6	16.7	63.4	33.3	43.6	4.2	3.4
11 889	United Kingdom ^{o*}	4.1	19.0	83.1	18.4	39.9	6.7	4.0
6 451	EFTA Member States[§]	3.2	13.1	80.6	19.3	45.7	12.0	3.4
111	Iceland ^o	2.7	6.3	73.9	17.4	39.6	10.0	3.7
2 957	Norway ^o	2.7	13.8	83.0	15.0	44.6	5.6	2.6
3 383	Switzerland [*]	3.7	12.7	78.7	23.1	46.8	17.7	4.0
3 474	EU Enlargement Area	9.8	25.4	66.3	65.5	22.4	8.6	7.6
232	Bosnia & Herzegovina ^o	15.6	17.7	59.3	80.9	21.6	5.9	4.
175	North Macedonia	10.9	19.4	64.0	67.6	25.7	8.3	3.6
1 041	Serbia ^o	11.5	23.3	64.2	64.7	26.7	8.1	5.5
1 855	Turkey	8.0	28.4	69.7	63.1	20.1	9.5	9.5
171	Albania/Kosovo/Montenegro	9.5	22.9	54.4	73.2	19.4	5.1	7.7
3 670	ENP countries	4.9	25.3	74.2	46.8	31.2	7.7	7.9
440	Belarus	3.9	19.2	69.9	63.8	37.4	8.6	8.9
257	Lebanon	12.3	39.4	70.0	68.9	20.6	15.7	8.9
1 274	Israel	3.4	27.8	77.5	23.2	26.3	6.4	6.3
498	Moldova ^o	6.0	35.7	70.9	52.8	34.1	6.4	11.0
1 201	Ukraine	4.8	17.7	74.7	58.7	35.1	7.5	8.0
	Other countries							
6 247	Russia (included in total)	5.5	16.9	77.5	56.6	38.1	11.4	7.6
6 059	Canada (not included in total)	5.5	19.9	75.0	22.8	38.0	5.9	4.5
3 507	Philippines (not included in total)	6.5	14.9	47.1	33.9	24.9	25.4	9.3

^o Part of the EU Health Programme, ^{*} includes microstate(s) and/or overseas areas, [§] EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

4. Morbidities

Morbidity includes both physical and psychological ill health. For a health programme, reduction in and prevention of morbidities are the ultimate outcomes sought. EMIS-2017 asked about two areas of sexual health morbidity: mental ill-health and sexually transmitted infections.

This chapter describes all the indicators of morbidity used in EMIS-2017 across the whole sample, and by country in the tables at the end of the chapter. Chapter 8 considers how these morbidity indicators vary between specific target groups for sexual health interventions.

4.1 Summary

Mental health problems remain common among MSM:

- Anxiety and depression – using PHQ-4, a short screening tool that measures anxiety and depression, to give an indication of mental health, 18% of the entire sample reported at least moderate anxiety/depression in the last two weeks and 8% reported experiencing severe anxiety and depression in the same time period.
- Suicidal ideation – 21% had thought of harming themselves in the past two weeks and 6% thought of harming themselves on at least half of the days during that time.
- Sexual unhappiness – 22% indicated sexual unhappiness on a self-rating scale.
- Alcohol dependency – using the CAGE4 screening measure of alcohol dependency, 18% met the criteria for potential alcohol dependency.

Sexually transmitted infections also remain common among MSM:

- HIV diagnoses – 10% of the entire sample self-reported having ever been diagnosed with HIV. Excluding participants who were already diagnosed 12 months ago the percentage that received an initial HIV diagnosis in the last 12 months was 1.1%.
- Unsuppressed diagnosed HIV infection – 0.9% overall reported non-suppressed HIV infection.
- Diagnoses of bacterial STIs (syphilis, gonorrhoea and chlamydia) – 4% had been diagnosed with syphilis in the last 12 months, 5% with gonorrhoea and 5% with chlamydia or LGV.
- Diagnosis of anal or genital warts (HPV infection) – 16% had a history of ano-genital warts.
- Hepatitis – 7% had a history of hepatitis A, 6% of hepatitis B, and 2% of hepatitis C. Just over 1% of the overall sample reported HIV/hepatitis co-infection.

4.2 Mental health problems

Poor mental health is a major cause of morbidity and is more common in sexual minorities than in the sexual majority. In addition, the association between poor mental health and HIV transmission risk behaviour (that is, sexual risk behaviour and poor medication adherence) is well established [17,18]. This is one mechanism by which multiple morbidities occur in the same people, a phenomenon also known as syndemics.

4.2.1 Anxiety/depression (PHQ-4)

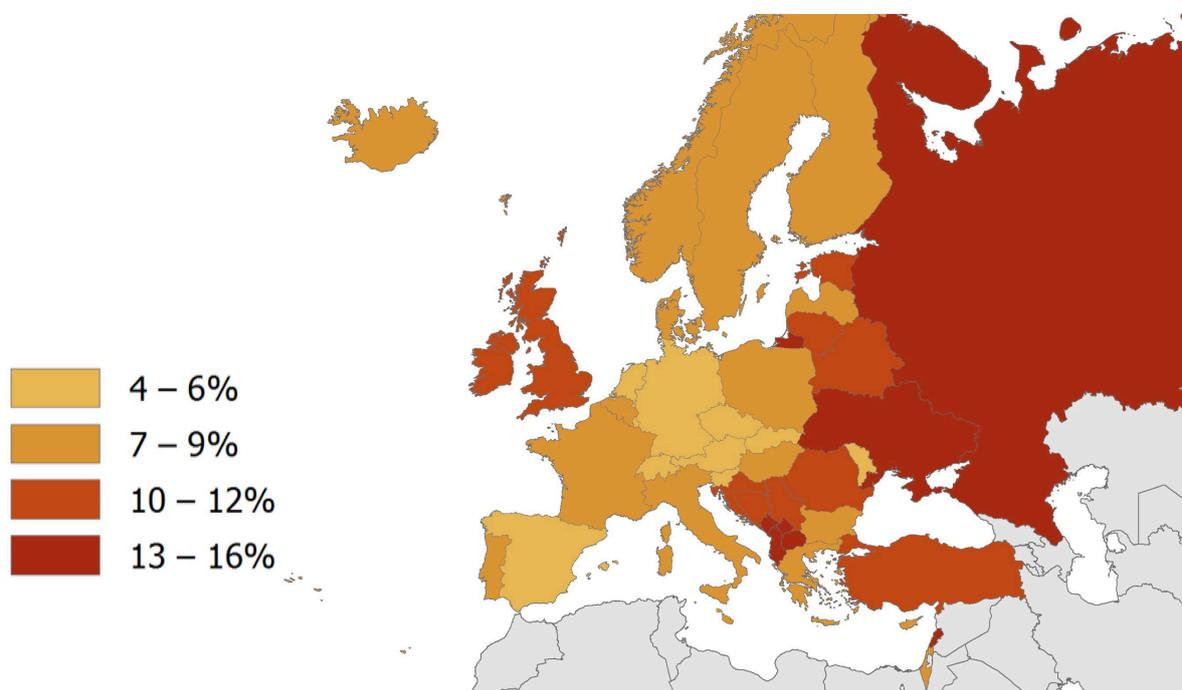
We used the Patient Health Questionnaire-4 [19], a short clinical screening tool that measures combined anxiety and depression, to give an indication of mental well-being. While the tool is not intended to be diagnostic, and may over-estimate the prevalence of problems, it was chosen for its brevity and ease of interpretation. Men were asked 'Over the last 2 weeks, how often have you been bothered by the following problems?' and were offered the following four responses: Feeling nervous, anxious or on edge; Not being able to stop or control worrying; Little interest or pleasure in doing things; Feeling down, depressed, or hopeless. Responses included not at all (0 points); some days (1 point); more than half the days (2 points); nearly every day (3 points). The total points give a score from 0 to 12 which can be grouped into four bands. Table 4.1 gives the percentage of men falling in each band (missing for 4%) and the usual interpretation for this validated scale.

Table 4.1 Anxiety and depression (PHQ-4) score

PHQ-4 score (N=125 856; missing n=1 936)	Interpretation	% of all
0–2	Normal	48.0
3–5	Mild anxiety and depression	33.6
6–8	Moderate anxiety and depression	10.7
9–12	Severe anxiety and depression	7.7
TOTAL		100.0

Overall 18% reported at least moderate anxiety and depression in the last two weeks, with one-in-thirteen (8%) experiencing severe anxiety and depression in the same time period. Section 4.4 shows country-level figures for the percentage experiencing severe anxiety and depression and Chapter 8 considers how the percentage experiencing severe anxiety and depression varies between key target groups.

Figure 4.1 Percentage with severe anxiety or depression in last two weeks (PHQ-4) (N=125 856)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

4.2.2 Suicidal ideation

Men were asked 'Over the last 2 weeks, how often have you been bothered by the following problems?' followed by the statement: 'Thoughts that you would be better off dead, or of hurting yourself in some way'. The table gives the response options and the percentage of men indicating each option.

Table 4.2 Suicidal ideation over the last two weeks

Over the last 2 weeks, how often have you been bothered by thoughts that you would be better off dead, or of hurting yourself in some way? (N=127 044, missing n=478)	%
Not at all	79.1
Some days	15.1
More than half the days	2.9
Nearly every day	3.0
TOTAL	100.0

Overall, 21% had thought of harming themselves in the past two weeks and 6% had thought of harming themselves on at least half of the days during that period.

Section 4.4 shows country-level figures for the percentage having had thoughts of harming themselves in the past two weeks. Chapter 8 considers how the percentage having had thoughts of harming themselves varies across key target groups.

Morbidities are associated with each other

The frequency of suicidal ideation was strongly associated with reported levels of anxiety and depression. The proportion of men who thought every day about harming themselves was 0.1% of those with a normal anxiety and depression score, 0.7% of those with a mild anxiety and depression score, 5% of those with a moderate anxiety and depression score and 28% of those with a severe anxiety and depression score.

4.2.3 Sexual unhappiness

Men were asked 'On a scale of 1 to 10 (where 1 is the most unhappy and 10 is the most happy), how happy are you with your sex life?' and were offered a ten-point scale labelled at the ends (1, most unhappy; 10, most happy).

Figure 4.2 shows the profile of all scores. Overall, 22% gave a score of 4 or below, so just over one-fifth of the whole sample were not happy with their sex life. Section 4.4 shows country-level figures for the percentage reporting a sexual happiness score of 1–4, and Chapter 8 considers how this percentage varies across key target groups.

Figure 4.2 Sexual happiness self-rating on a scale of 1 to 10, where 1 is the most unhappy and 10 is the most happy (N=125 788)



Morbidities are associated with each other

On average, a lower sexual happiness score was given by men with higher levels of anxiety and depression. The mean sexual happiness score for men with a normal anxiety and depression score was 6.8; for those with mild anxiety and depression it was 6.0; for those with moderate anxiety and depression it was 5.3; and for those with severe anxiety and depression it was 4.5. Similarly, the more frequently men thought about suicide or self-harm, the lower was their sexual happiness score.

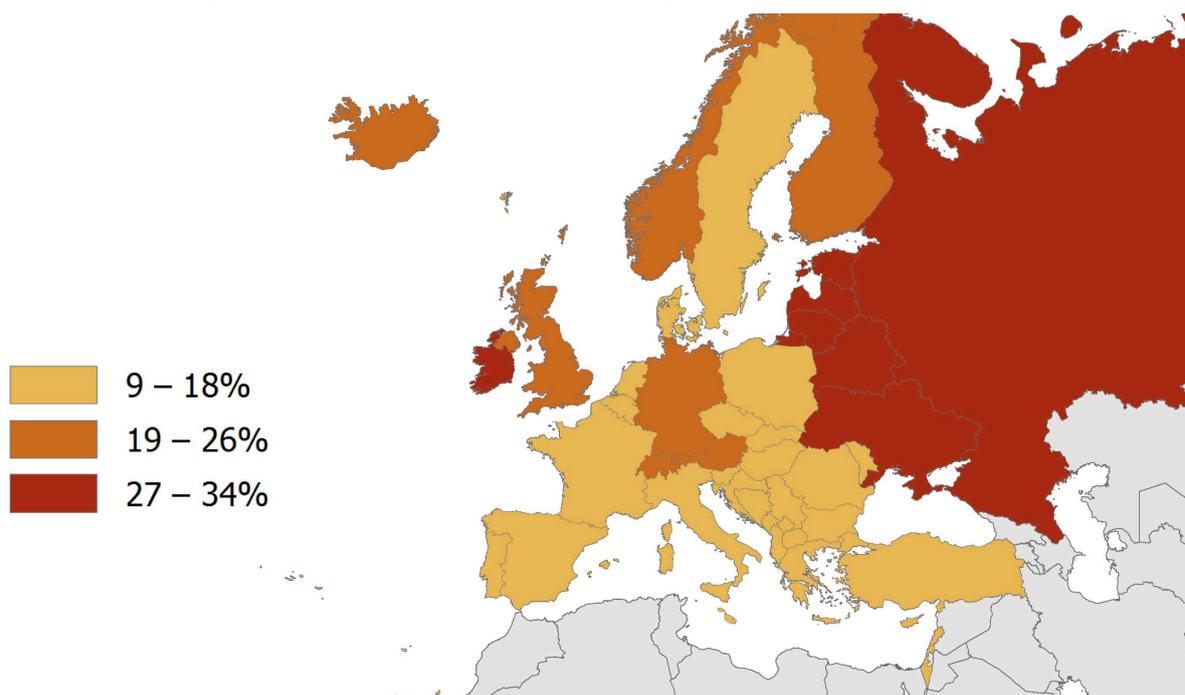
4.2.4 Alcohol dependency (CAGE4)

We used the CAGE4 screening tool for alcohol dependency [20,21]. While the tool is not intended to be diagnostic and may over-estimate the prevalence of problems, it was chosen for its brevity and ease of interpretation.

Men were asked 'Thinking about drinking alcohol in the past 12 months...' followed by four questions to which they could respond 'yes' or 'no':

- Have you tried to cut down on your drinking?
- Have people annoyed you by criticising your drinking?
- Have you felt bad or guilty about your drinking?
- Have you taken a drink first thing in the morning to steady your nerves or get rid of a hangover?

Indicating 'yes' to two or more statements is a positive response, indicating possible alcohol dependency. Overall, 18% (N=126 146, missing n=1 646) met the criteria for potential alcohol dependency. Section 4.4 shows country-level figures for likely alcohol dependence and Chapter 8 considers how this percentage varies between key target groups.

Figure 4.3 Percentage with potential alcohol dependency (CAGE4) (N=126 146)

http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Morbidities are associated with each other

Potential alcohol dependency was more common in men with greater levels of anxiety and depression: 13% in those with a normal anxiety and depression score; 21% in those with a mild score; 25% in those with a moderate score; and 29% in those with a severe anxiety and depression score. Similarly, alcohol dependency was more common in men with more frequent suicidal ideation: 16% among those who had not thought about harming themselves in the last two weeks; 26% among those who thought about it on some days; 27% of those who thought about it on more than half the days; 28% of those who thought about it every day.

4.3 HIV and sexually transmitted infection diagnoses

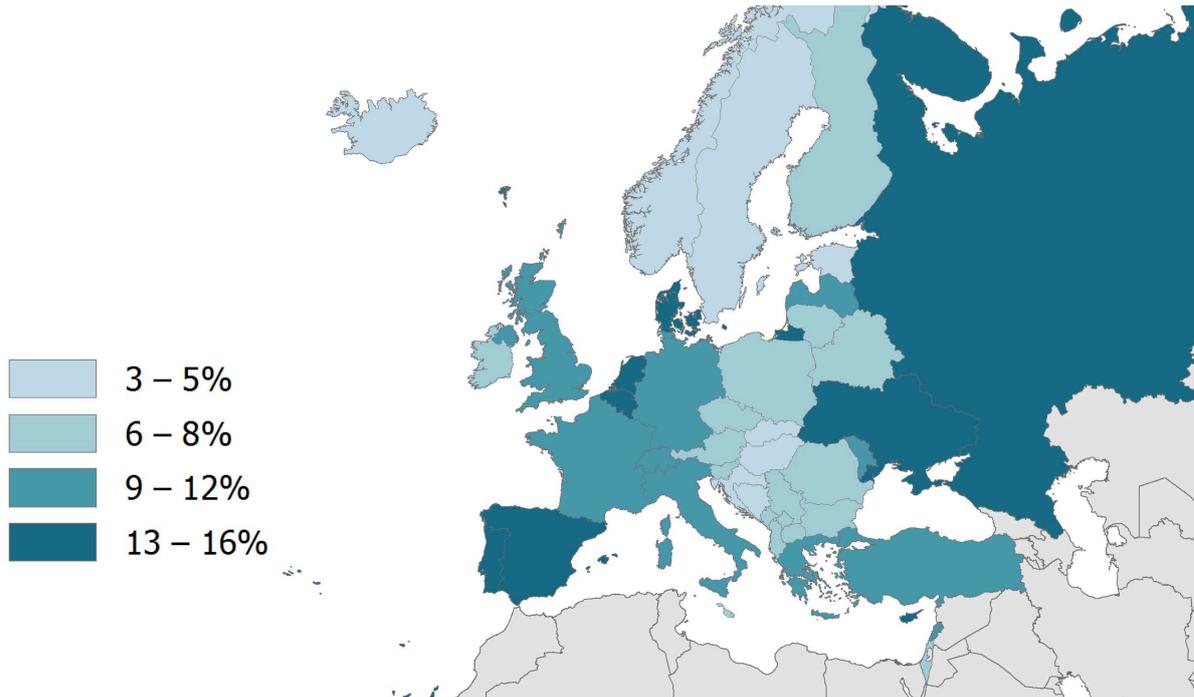
Sexually transmitted infections are a common sexual health morbidity among MSM and a key concern driving EMIS-2017. Since all measures in the survey were self-reported, diagnoses of infections were used as a proxy for their acquisition.

4.3.1 Prevalence and incidence of HIV diagnoses

Men were asked 'Have you ever been diagnosed with HIV?' Just over one-in-ten (10%, N=126 925, missing n=867) of the entire sample indicated 'yes'. Section 4.4 shows country-level figures for self-reporting diagnosed HIV. Chapter 8 compares the minority group of men living with diagnosed HIV against the majority of men without diagnosed HIV.

The figure below and the country tables at the end of this chapter show self-reported HIV diagnosis by country. However, the tables in this chapter and all subsequent chapters do not show country-level figures for management of HIV infection (such as % of men with diagnosed HIV and undetectable viral load) for the eight countries in our sample with less than 20 men with diagnosed HIV (Bosnia & Herzegovina, Estonia, Iceland, Luxembourg, North Macedonia and the Albania, Kosovo and Montenegro country group). We report country-level indicators for countries in our sample with more than 20 men with diagnosed HIV. However, caution is advised when interpreting the figures for the six countries (Belarus; Latvia; Lebanon; Lithuania; Malta; Slovakia) with more than 20, but less than 40 men with diagnosed HIV.

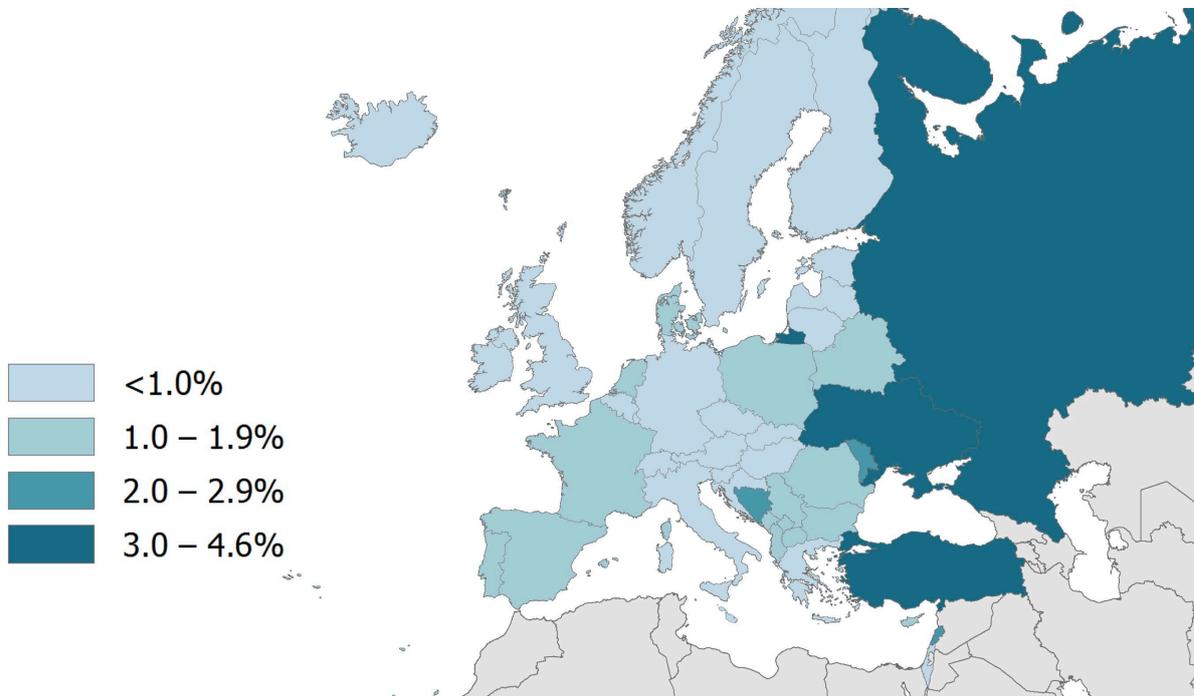
Figure 4.4 Percentage ever diagnosed with HIV (DDM 4.79, GAM 4.20) (N=126 925)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Men with diagnosed HIV were asked whether they were diagnosed with HIV in the past 12 months. Excluding those men who had already been diagnosed 12 months ago (n=9 849), the percentage of all men who received an initial HIV diagnosis in the last 12 months was 1.1% (N=115 002, missing n=2 941). Section 4.4 shows figures for the overall percentage diagnosed with HIV in the last 12 months for all countries.

Figure 4.5 Percentage diagnosed with HIV, last 12 months (N=115 002)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Morbidities are associated with each other

Severe anxiety and depression was more common in men with diagnosed HIV in the last 12 months (14%) than either men with diagnosed HIV for a longer period of time (8%) or those never diagnosed with HIV (8%). Similarly, the proportion who had thoughts of harming themselves in the last two weeks was 21% of men not diagnosed with HIV; 24% of those diagnosed for longer than 12 months; and 33% among those diagnosed with HIV in the last 12 months.

4.3.2 Unsuppressed diagnosed HIV

Men who self-reported that they had ever received an HIV diagnosis (10% of all) were asked: 'What was the result of your viral load test the last time you had your HIV infection monitored?' (This was with the exception of the 1.0% diagnosed with HIV who reported never having had their infection medically monitored). Table 4.3 shows the responses offered and the percentages indicating each response.

Among men with diagnosed HIV, 6% either did not know whether their last viral load test was detectable, or had never been medically monitored, 8% had a detectable viral load and 87% knew they were undetectable.

Of the 95% who knew their last viral load test result ('knowledgeable' responses in column 3 below), 92% were undetectable and 8% were detectable. This translates to 0.9% of the whole sample having diagnosed HIV which was unsuppressed and thus transmissible (including the men who never had their HIV infection monitored, as they are assumed to be untreated). Section 4.4 shows country-level data for men with diagnosed but unsuppressed HIV.

Table 4.3 Last HIV viral load test result among men that had ever had their HIV infection monitored

What was the result of your viral load test the last time you had your HIV infection monitored?	% of men with diagnosed HIV	
	All responses (N=13 135, missing n=37)	Knowledgeable responses (N=12 416, missing n=756)
Undetectable	87.0	92.0
Detectable	7.5	8.0
I was told but I don't remember the result	1.6	excluded
It was measured but I was not told the result	1.4	
It was not measured	0.7	
I don't remember	0.7	
I don't understand the question	0.2	
[Never medically monitored]	0.9	
TOTAL	100.0	100.0

4.3.3 Most recent diagnoses of syphilis, gonorrhoea and chlamydia

All men were asked 'Have you ever been diagnosed with syphilis?' Men who answered yes, were asked 'When were you last diagnosed with syphilis?' and offered a scale to indicate how recently this had been. Identical questions were asked for 'gonorrhoea' and 'chlamydia or LGV'. The table shows how recently the diagnosis had occurred for men who had reported ever having been diagnosed with these three sexually transmitted infections. The wording for the French translation for 'STI diagnoses', while technically correct, may have been misunderstood by some French-speaking respondents in Europe. It seems that the questions on diagnosed syphilis, gonorrhoea, and chlamydia, but not HPV or HCV, may have been understood by some as having had a test rather than a positive test result. All French-language data is included here but see the country tables in Section 4.4 for calculations omitting this data for majority French-speaking countries.

Table 4.4 Recency of diagnosis with syphilis, gonorrhoea, chlamydia or LGV

When were you last diagnosed with...	Syphilis (N=125 751, missing n=2 041)		Gonorrhoea (N=125 132, missing n=2 660)		Chlamydia or LGV (N=123 934, missing n=3 858)	
	% of all	Cumulative %	% of all	Cumulative %	% of all	Cumulative %
Within the last 24 hours	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Within the last 7 days	0.1	0.2	0.1	0.2	0.1	0.2
Within the last 4 weeks	0.4	0.6	0.5	0.7	0.4	0.6
Within the last 6 months	1.7	2.3	2.1	2.8	1.8	2.4
Within the last 12 months	2.0	4.4	2.4	5.2	2.1	4.5
Within the last 5 years	5.5	9.9	6.4	11.6	5.4	9.9
More than five years ago	4.3	14.2	7.6	19.2	4.0	13.9
Never	85.8	100.0	80.8	100.0	86.1	100.0
TOTAL	100.0	–	100.0	–	100.0	–

Gonorrhoea was the bacterial STI most commonly diagnosed in the last 12 months or ever, but all three infections followed a similar pattern. Section 4.4 shows country-level data for self-reporting of the three infections in the last 12 months, and Chapter 8 considers how these three infections vary across key target groups.

Morbidities are associated with each other

Men with diagnosed HIV infection were more likely than men without diagnosed HIV to have been diagnosed with syphilis (15% versus 3%), gonorrhoea (11% versus 5%) or chlamydia (10% versus 4%) in the last 12 months.

4.3.4 First diagnosis of anal or genital warts (HPV infection)

Anal or genital warts are the most common STI but often remain undiagnosed or even unnoticed, especially when they manifest around, or even within the anus. A safe and expensive vaccine is available, but in most European healthcare systems it is only recommended/reimbursed for girls and young women and not for boys and men. As most MSM do not profit from herd immunity (as heterosexual young men do when most of their female sex partners are vaccinated), human papilloma virus (HPV) infections remain a problem for MSM. Unlike syphilis and chlamydia, anal or genital warts are difficult to treat and tend to become chronic. For this reason we asked for the first and not the last diagnosis of warts. All men were asked 'Have you ever been diagnosed with anal or genital warts?' Men who responded positively were asked 'When were you first diagnosed with anal or genital warts?' and offered a scale to indicate how recently they had been diagnosed. The table shows how recently the first diagnoses were made among men that had ever had the infection.

Table 4.5 Recency of first diagnosis with anal or genital warts

When were you first diagnosed with anal or genital warts? (N=124 709, missing n=3 083)	% of all	Cumulative %
Within the last 24 hours	<0.1	<0.1
Within the last 7 days	<0.1	0.1
Within the last 4 weeks	0.2	0.3
Within the last 6 months	0.9	1.1
Within the last 12 months	1.3	2.4
Within the last 5 years	5.1	7.3
More than five years ago	8.4	15.9
Never	84.1	100.0
TOTAL	100.0	–

Almost 16% of all men reported ever having being diagnosed with anal or genital warts. Section 4.4 shows country-level data for self-reporting of having ever been diagnosed with anal or genital warts. Chapter 8 considers how the infection varies across key target groups.

4.3.5 Hepatitis

Men were asked about their vaccination status regarding hepatitis A and B. The answer options included 'No, because I've had hepatitis A (and am now naturally immune)', or 'No, because I've had hepatitis B (and am now naturally immune)', respectively. As hepatitis B can become chronic, an additional answer was offered: 'No, I have chronic hepatitis B infection'.

Of all respondents, 7% reported past hepatitis A (N=127 126; missing n=666), and 6% (N=127 196; missing n=596) reported past hepatitis B infection that had cleared. A total of 0.5% reported chronic hepatitis B.

Men were asked 'Have you ever been diagnosed with hepatitis C?' and were offered the responses: No; Yes; I don't know. Overall, 1.9% indicated 'yes' (and 4% indicated 'don't know'). These men were asked 'When were you first diagnosed with hepatitis C?' and were offered a scale to indicate how recently the diagnosis had been made (see Table 4.6).

Table 4.6 Recency of first diagnosis with hepatitis C

When were you first diagnosed with hepatitis C? (N=122 891, missing n=4 901)	% of all	Cumulative %
Within the last 24 hours	<0.1	<0.1
Within the last 7 days	<0.1	<0.1
Within the last 4 weeks	<0.1	0.1
Within the last 6 months	0.1	0.2
Within the last 12 months	0.2	0.4
Within the last 5 years	0.6	1.0
More than five years ago	0.9	1.9
Never	98.1	100.0
TOTAL	100.0	–

Among the 1.9% who had ever been diagnosed with hepatitis C, 0.4% were first diagnosed in the past 12 months (i.e. 21% of those ever diagnosed were diagnosed in the last 12 months).

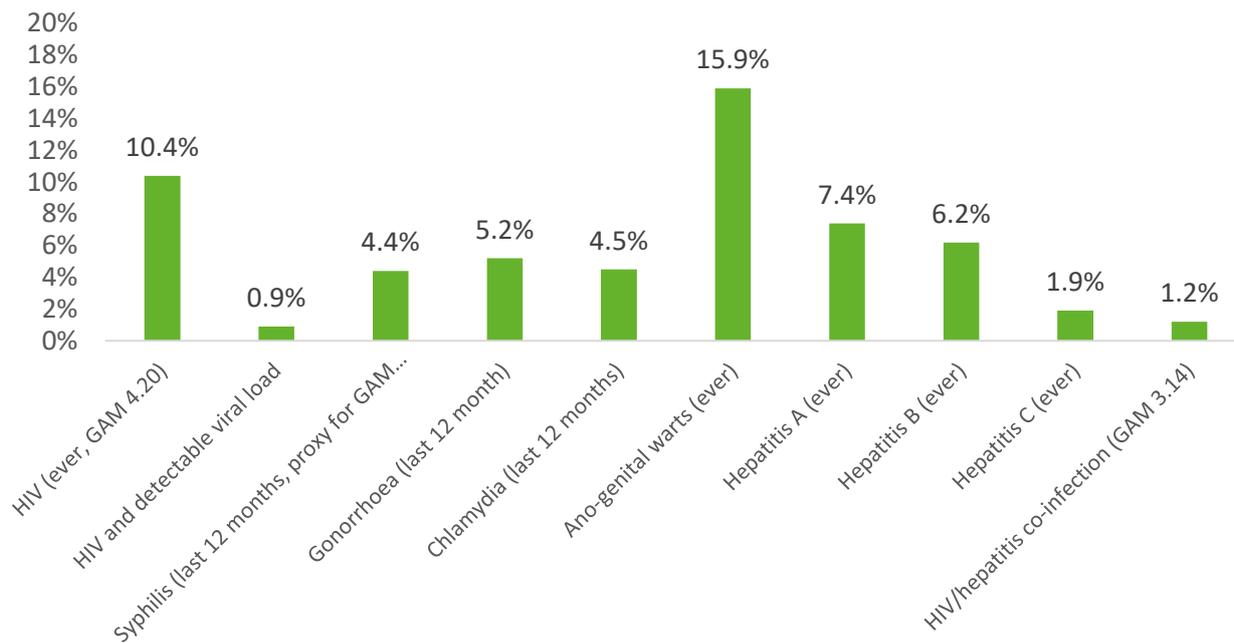
Men who had ever been diagnosed with hepatitis C were asked 'How many times have you picked up hepatitis C infection?' and were offered the options: Once; Twice; Three times or more. Of the men who had been diagnosed with hepatitis C, 89% had had the infection once, 9% had had it twice and 3% had had it more three or more times (N=2 309, missing for n=63). Most men with a history of hepatitis C said that it cleared – either spontaneously without treatment (23%) or with treatment (56%) – treatment uptake for hepatitis C is currently increasing [22]. However, 14% of men who had ever diagnosed with hepatitis C said that they still had it, and 7% did not know.

UNAIDS suggest 'Prevalence of hepatitis and coinfection with HIV among key populations (HBV+HCV)' as an indicator for the Global AIDS Monitoring (GAM 3.14) Given that hepatitis B is difficult to cure once chronic, and that hepatitis C can be acquired again after clearance (see above), we defined HIV/hepatitis co-infection as diagnosed HIV plus chronic hepatitis B, or any history of hepatitis C. A total of 1.2% from the whole sample reported having an HIV/hepatitis co-infection at the time of survey completion.

Morbidities are associated with each other

Ever having been diagnosed with hepatitis C was much more common among men with diagnosed HIV (10%) than among men not diagnosed with HIV (0.9%).

Figure 4.6 Experience of HIV, hepatitis, and selected STIs



4.4 National variation in morbidities

Table 4.7 National variation in key morbidities

Qualifying cases	Country	% with severe anxiety and depression, last 2 weeks (PHQ-4)	% with self-harm thoughts, last 2 weeks	% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	% with potential alcohol dependency (CAGE4)	% diagnosed with HIV, ever (GAM 4.20; DDM 4.79)	% diagnosed with HIV, last 12 months
127 792	Total (used throughout this report)	7.7	20.9	22.5	18.3	10.4	1.1
112 789	EU Health Programme	7.7	20.9	22.1	18.3	10.4	0.9
107 950	EU Member States	7.3	20.4	21.9	17.4	10.4	0.9
2 705	Austria°	3.6	14.2	23.0	21.8	7.5	0.6
3 038	Belgium°	6.5	22.3	17.9	18.0	12.5	0.9
1 177	Bulgaria°	8.5	20.6	23.8	10.2	5.9	1.4
1 015	Croatia°	10.1	22.2	28.7	13.4	5.0	0.8
307	Cyprus°	8.8	24.5	28.6	9.3	12.5	1.8
1 897	Czech Republic°	5.7	17.4	21.2	15.2	7.3	0.7
1 698	Denmark**	7.0	14.8	23.2	14.9	13.5	1.3
212	Estonia°	11.0	24.2	27.8	34.0	4.3	0.5
1 409	Finland**	6.9	23.6	25.7	21.7	6.1	0.4
10 996	France**	6.5	25.2	19.9	16.0	12.3	1.0
23 107	Germany°	5.1	15.6	23.0	22.1	10.7	0.6
2 909	Greece°	9.1	18.5	24.1	10.1	11.1	0.9
2 177	Hungary°	9.0	23.5	30.5	14.4	5.0	0.7
2 083	Ireland°	9.6	22.7	24.5	28.8	6.9	0.6
11 025	Italy**	9.4	19.9	20.4	10.8	10.1	0.9
252	Latvia°	8.2	23.1	27.5	28.9	12.4	0.9
370	Lithuania°	9.6	22.2	18.1	27.9	7.3	0.9
169	Luxembourg°	6.0	18.5	24.8	21.6	9.6	0.7
299	Malta°	8.6	24.2	20.5	11.9	7.7	0.4
3 851	Netherlands°	5.1	15.9	10.7	13.5	15.7	1.1
4 025	Poland°	9.1	24.9	23.8	17.7	8.4	1.5
2 555	Portugal**	6.9	14.9	19.4	14.8	14.3	1.8
2 002	Romania°	11.5	21.3	21.3	14.2	7.0	1.4
1 003	Slovakia°	5.8	26.8	25.2	17.5	3.3	0.4
685	Slovenia°	6.4	15.7	21.6	12.0	6.3	0.5
10 652	Spain**	5.9	21.4	16.1	14.9	13.3	1.3
4 443	Sweden°	7.2	20.1	30.3	15.2	5.4	0.1
11 889	United Kingdom**	10.7	26.4	25.1	21.1	10.5	0.7
6 451	EFTA Member States[§]	6.5	19.1	20.7	19.8	7.8	0.4
111	Iceland°	7.2	22.5	14.5	25.5	2.7	0.0
2 957	Norway°	8.4	22.0	24.1	19.0	4.9	0.2
3 383	Switzerland*	4.9	16.4	18.0	20.3	10.5	0.6
3 474	EU Enlargement Area	11.2	29.5	28.8	13.5	9.2	3.2
232	Bosnia & Herzegovina°	10.9	24.3	28.8	11.0	3.1	2.2
175	North Macedonia	16.1	25.0	37.4	12.1	6.9	1.8
1 041	Serbia°	10.5	22.1	29.9	13.5	7.6	1.7
1 855	Turkey	10.8	34.9	27.0	13.9	11.3	4.6
171	Albania/Kosovo/Montenegro	15.1	28.6	33.7	13.0	7.1	1.3
3 670	ENP countries	9.7	22.0	25.3	21.2	9.4	2.2
440	Belarus	11.5	29.7	26.0	31.9	6.8	1.9
257	Lebanon	13.0	23.5	33.5	15.5	10.2	2.1
1 274	Israel	7.8	18.0	20.0	11.0	5.9	0.3
498	Moldova°	4.1	13.3	31.0	17.8	8.7	2.6
1 201	Ukraine	12.6	26.8	26.5	30.6	14.0	4.3
	Other countries						
6 247	Russia (included in total)	13.9	26.4	29.5	33.9	13.4	3.8
6 059	Canada (not included in total)	10.2	25.9	25.4	20.0	9.1	0.4
3 507	Philippines (included in total)	4.6	29.5	16.4	24.7	8.8	2.8

° Part of the EU Health Programme; * includes microstate(s) and/or overseas areas; § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 4.8 National variation in key morbidities

Qualifying cases	Country	% with diagnosed HIV and detectable viral load ^{§§}	% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	% diagnosed with gonorrhoea, last 12 month	% diagnosed with chlamydia, last 12 months	% diagnosed with anal/genital warts ever	% co-diagnosed HIV/HSV or HIV/HCV (GAM 3.14) ^{§§}
127 792	Total (used throughout report)	0.9	4.4	5.2	4.5	2.4	1.2
112 789	EU Health Programme	0.7	4.4	5.2	4.5	2.4	1.2
107 950	EU Member States	0.7	4.6	5.4	4.8	2.3	1.2
2 705	Austria [°]	0.4	3.0	4.0	3.5	2.0	0.6
3 038	Belgium [°]	0.8	7.4	7.3	6.8	1.9	2.0
1 177	Bulgaria [°]	1.0	3.6	2.6	2.8	2.6	0.2
1 015	Croatia [°]	0.4	1.1	2.0	2.3	1.9	0.2
307	Cyprus [°]	0.7	3.3	3.7	3.1	3.4	0.7
1 897	Czech Republic [°]	0.7	2.6	3.7	1.6	2.0	0.8
1 698	Denmark ^{**}	0.3	3.1	6.9	6.4	2.0	1.8
212	Estonia [°]	n<20	1.9	1.4	3.9	2.4	n<20
1 409	Finland ^{**}	0.4	1.3	3.3	3.0	1.0	0.1
10 996	France ^{**}	0.6	13.0	10.8	11.7	3.9	1.6
23 107	Germany [°]	0.6	3.3	4.3	3.8	2.1	1.6
2 909	Greece [°]	0.7	3.5	2.3	1.0	4.1	0.4
2 177	Hungary [°]	0.3	2.7	2.4	1.2	2.6	0.2
2 083	Ireland [°]	0.1	3.2	9.0	5.5	1.5	0.5
11 025	Italy ^{**}	0.9	3.7	2.3	1.5	2.2	1.1
252	Latvia [°]	1.6	2.8	1.2	2.1	2.1	1.2
370	Lithuania [°]	1.4	1.1	0.3	1.7	3.6	0.5
169	Luxembourg [°]	n<20	1.8	2.5	3.7	3.7	n<20
299	Malta [°]	1.3	3.1	5.9	4.1	2.4	0.7
3 851	Netherlands [°]	0.9	5.3	10.0	11.8	1.6	3.1
4 025	Poland [°]	1.1	4.4	2.6	1.5	2.6	1.0
2 555	Portugal ^{**}	1.0	6.8	6.0	2.7	2.0	0.6
2 002	Romania [°]	1.1	2.6	1.9	1.2	3.1	0.6
1 003	Slovakia [°]	0.3	1.2	1.9	0.6	2.2	0.1
685	Slovenia [°]	0.4	2.5	2.5	1.0	2.1	0.3
10 652	Spain ^{**}	0.9	5.4	6.1	3.7	2.9	1.2
4 443	Sweden [°]	0.4	1.2	3.4	4.0	0.9	0.5
11 889	United Kingdom ^{**}	0.6	3.1	8.0	7.1	1.7	1.4
6 451	EFTA Member States [§]	0.4	3.0	5.6	5.3	1.7	1.0
111	Iceland [°]	n<20	2.7	5.4	8.1	0.9	n<20
2 957	Norway [°]	0.2	1.5	4.4	4.6	1.4	0.5
3 383	Switzerland [*]	0.3	4.4	6.6	5.8	1.9	1.5
3 474	EU Enlargement Area	3.2	2.4	4.2	0.8	4.1	0.3
232	Bosnia & Herzegovina [°]	n<20	0	0.4	1.3	1.8	n<20
175	North Macedonia	n<20	0.6	0.6	0.6	5.3	n<20
1 041	Serbia [°]	1.9	2.3	1.0	0.8	2.9	0.6
1 855	Turkey	1.6	2.9	6.8	0.6	5.3	0.3
171	Albania/Kosovo/Montenegro	n<20	1.8	4.4	1.9	1.3	n<20
3 670	ENP countries	1.7	2.9	3.7	3.2	3.3	0.6
440	Belarus	1.4	1.9	3.5	2.3	3.1	0.0
257	Lebanon	2.0	2.1	5.0	5.8	5.4	0.0
1 274	Israel	0.4	2.9	6.5	5.5	3.5	0.2
498	Moldova [°]	1.4	6.0	1.0	0.2	1.0	0.4
1 201	Ukraine	3.3	2.4	1.9	1.9	3.8	1.4
	Other countries						
6 247	Russia (included in total)	4.2	3.4	2.1	2.1	3.3	1.1
6 059	Canada (not included in total)	0.4	3.5	7.3	6.6	1.3	0.8
3 507	Philippines (not included in total)	2.0	1.6	3.5	0.7	2.4	0.1

[°] Part of the EU Health Programme, ^{*} includes microstate(s) and/or overseas areas, [§] EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

[§] Columns 3 and 8 do not show figures for six rows where <20 men with diagnosed HIV were recruited, though the samples from these countries remain in the totals for EU, EFTA, EU Enlargement, Health Programme, etc.

Highlighted in grey above: Possible translation issue in the French questionnaire. The wording for STI diagnoses, while technically correct, may have been misunderstood by some French-speaking respondents, so questions on diagnosis of syphilis, gonorrhoea, and chlamydia [but not HPV or HCV] may have been understood as the respondent having undergone a test rather than obtained a positive test result. Hence proportions in Belgium, France and Switzerland might be overestimated. Other countries with French-speaking populations (notably Canada, Luxembourg, and Lebanon) are not affected. Excluding respondents who answered the French questionnaire, the respective proportions are as follows for syphilis, gonorrhoea, and chlamydia: Belgium: 6.6%, 6.6%, 6.4%; France: 6.0%, 5.7%, 6.1%; Switzerland: 3.6%, 6.0%, 5.0%.

5. Risk and precaution behaviour

This chapter reports on all activities actually undertaken by the respondents. EMIS-2017 was mainly interested in the behaviour that contributes to or detracts from the morbidities described in Chapter 4 – i.e. sexual health risk and precaution behaviour.

We asked about two types of risk behaviour (having sex, taking drugs and doing them together) and four types of precaution behaviour (taking antiretroviral drugs, sharing HIV status information, using condoms, and being vaccinated).

5.1 Summary

- HIV diagnosis and taking treatment – 10% indicated they had ever been diagnosed with HIV, 94% of whom were currently taking anti-retroviral therapies (ART). This data suggests that the average time between diagnosis and treatment has declined over time. For participants diagnosed between 2001 and 2005, the average time specified between diagnosis and ART was more than 45 months. However, it was 13 months for participants diagnosed between 2011 and 2015, and <5 months for participants diagnosed in 2016 or 2017.
- Post-exposure prophylaxis (PEP) – Among participants not diagnosed with HIV, 7% had ever tried to get PEP, 5% had ever taken PEP and 1% had taken more than one course. A total of 28% of participants without HIV who had tried to obtain PEP had not been able to. Among participants subsequently diagnosed with HIV, 5% had tried to obtain PEP before their HIV diagnosis, 3% had taken PEP before their diagnosis and less than 1% had taken more than one course. In all, 35% had tried to obtain PEP before their diagnosis and not been able to.
- Pre-exposure prophylaxis (PrEP) – Among participants not diagnosed with HIV 3% had ever taken PrEP, and 3% were currently using it, two-thirds of them on a daily basis. PrEP taking varied substantially between countries.
- Hepatitis A and B vaccination – 53% were potentially vulnerable to hepatitis A infection and 49% were potentially vulnerable to hepatitis B infection.
- Sex with men – 97% had previously had sex with a man. The average (median) age of the first sexual intercourse with a man was 18 years and the average age of first anal intercourse was 20 years.
- In all, 95% had ever engaged in intercourse with a man, 85% in the previous year and 12% in the previous 24 hours.
- Condomless intercourse – in the last 12 months 61% had had condomless intercourse with either a steady partner and/or a non-steady partner, including 23% who had had condomless intercourse with both a steady partner and a non-steady partner.
- Steady partners – in the last 12 months 35% had had one or more condomless steady partners; 10% had had a penetrative steady partner/s and always used a condom; 4% had had a steady partner and no intercourse with them; and 51% had had no steady partner.
- Non-steady partners – in the last 12 months 41% had had condomless intercourse with one or more non-steady partners; 27% had had intercourse with one or more non-steady partners and always used a condom; 9% had had non-steady partners and no intercourse with them; and 23% had had no non-steady partners.
- Sero-sorting – participants diagnosed with HIV were much more likely to have had condomless intercourse with a non-steady partner who they knew to be positive (61% vs 12%) or whose status they did not know (73% versus 59%) than participants without diagnosed HIV.
- Undetectable viral load – 68% of participants who had not tested HIV positive and had had condomless intercourse with non-steady partners whom they knew to have HIV indicated that they knew their HIV positive partner(s) had undetectable viral load.
- Sex with women – 47% had ever had sex with a woman, 19% in the last five years and 11% in the last year. Of those reporting sex with a woman in the last 12 months: 9% indicated they had not had intercourse; 57% had had intercourse with one woman only and 34% had had more than one female intercourse partner. Condom use during intercourse with women was polarised, with 43% never using them and 31% always using them in the last 12 months.
- Alcohol and tobacco – alcohol was the most commonly used drug for all time intervals, with almost universal lifetime use (94%). A total of 37% had used it in the last 24 hours and 70% in the previous week. In all, 34% had used tobacco in the last 24 hours and 39% in the previous week.

- Illicit drug use – The most commonly used illicit drug in every time period was cannabis, used by 39% ever and 13% in the last four weeks. Four other drugs had ever been used by between 10% and 20% of the sample: cocaine, ecstasy, amphetamine and GHB/GBL. Of the other drugs we asked about (ketamine, LSD, crystal methamphetamine, mephedrone, synthetic cannabinoids, other synthetic stimulants, heroin and crack cocaine) none had been used by more than 1% in the last week; 2% in the last four weeks; or 4% in the last year.
- Injecting drug use – Slightly more participants had ever injected anabolic steroids (3%) than had injected drugs to get high (2%) but both types of behaviour were rare. Half of those who had ever injected had done so in the last year. A quarter of those who had ever injected had done so with a used needle or syringe (1% of all).
- Combined sex and drug use – 15% had ever had chemsex, two thirds of whom (69%) had done so in the last 12 months. Multi-partner chemsex was common, but the majority of sessions appear to occur between two men.

5.2 Taking HIV treatment among men with HIV

Overall, 10% (N=13 172) indicated they had been diagnosed with HIV (see Section 4.3.1). For people diagnosed with HIV, taking anti-retroviral treatment (ART) can result in undetectable levels of viral load which equates to a non-infectious state. Taking HIV treatment is therefore a type of precautionary behaviour to prevent HIV-transmission for men with HIV.

5.2.1 Prevalence of HIV antiretroviral treatment taking

Men who had ever been diagnosed with HIV were asked 'Have you ever taken antiretroviral treatment (sometimes known as ART or HAART) for your HIV infection?' and men who had ever taken ART were asked 'Are you currently taking antiretroviral treatment?' The percentages giving each response are set out in Table 5.1.

Table 5.1 Taking ART among men with diagnosed HIV

% ever taken ART among men with diagnosed HIV (N=13 136, missing n=36)		% Currently taking ART of men with diagnosed HIV (N=12 623, missing n=549)	
No	5.1	No, never taken	5.3
		No, not taking now	0.7
Yes	91.2	Yes	94.0
Don't know	3.7		
TOTAL	100.0		100.0

Among men with diagnosed HIV, 91% (N=13 136, missing for n=903) knew they had ever taken ART, or 95% excluding those who did not know whether they had taken ART.

Of those who had ever taken ART, 99% were currently taking it. Overall, 90% (11 863/13 172) of men with diagnosed HIV indicated they were currently taking ART, or 94% (11 863/12 623) excluding those who did not know or did not answer.

5.2.2 Time between diagnosis and treatment

Men who had ever used ART were asked 'How much time was there between your HIV diagnosis and you starting treatment?' and were offered boxes labelled 'years' and 'months'.

Of the men who had ever taken ART (N=11 975), 9% did not answer this question and 2% gave a number of years that were more than was possible (i.e. greater than 33 years, which would be the answer for someone diagnosed in 1984 who started treatment in 2017).

Of those for whom there was a valid answer (n=11 241), 23% indicated starting treatment within one month of diagnosis, and 57% within one year of diagnosis.

EMIS-2017 data suggests that the time between diagnosis and treatment initiation has declined over time. For men diagnosed between 2001 and 2005, the average time specified between diagnosis and ART was more than 45 months. However, for men diagnosed between 2011 and 2015 it was 13 months and <5 months for men diagnosed in 2016 or 2017. The data even reflects the interim policy of 'hitting hard and early' between 1996 and 2000.

Table 5.2 Average (mean) time from HIV diagnosis to starting ART by year of diagnosis among men with diagnosed HIV

Year of diagnosis	No.	Average time to starting ART (in months)
1984-1990	456	99.1
1991-1995	483	55.9
1996-2000	686	38.4
2001-2005	1 067	45.1
2006-2010	2 025	29.3
2011-2015	2 972	13.1
2016-2017	1 260	4.4
TOTAL	8 949	28.0

5.3 Seeking and taking HIV chemoprophylaxis (PEP and PrEP)

Men without HIV can reduce their risk of being infected by taking HIV chemoprophylaxis. Taken correctly, PEP (Post-Exposure Prophylaxis) and PrEP (Pre-Exposure Prophylaxis) are very effective means of protection from HIV infection when exposure occurs. Seeking them and taking them are types of precautionary behaviour.

5.3.1 Seeking and taking PEP

Men who had never taken an HIV test and those whose last test was HIV negative were asked 'Have you ever tried to get PEP (even if you did not take it)?' Those who indicated 'yes' were asked 'Have you ever taken PEP?'

Table 5.3 Trying to access PEP and taking PEP, among all men not diagnosed with HIV

Have you ever tried to get PEP? % of men who had never HIV tested or last tested HIV negative (N=113 135, missing n=618)		Have you ever taken PEP? % of men who had never HIV tested or last tested HIV negative (N=113 117, missing n=636)	
No	92.9	No, never tried to get it	92.9
Yes	7.1	No, I could not get it	1.9
		No, I had the opportunity but decided not to take it	0.6
		Yes, I've taken one course of pills	3.4
		Yes, I've taken more than one course of pills	1.1
		I don't know	0.1

Overall, 7% of men (not diagnosed with HIV) had ever tried to obtain PEP, 5% had ever taken PEP and 1.1% had taken more than one course of PEP.

Among those men who had tried to obtain PEP (n=7 896), 28% had not been able to obtain it.

Similarly, men with diagnosed HIV were asked 'Before you were diagnosed with HIV, had you ever tried to get PEP (even if you did not take it)?' Those who indicated 'yes' were asked 'Before you were diagnosed with HIV, had you ever taken PEP?'

Table 5.4 Trying to access PEP and taking PEP, among all men subsequently diagnosed with HIV

Before you were diagnosed with HIV, had you ever tried to get PEP (even if you did not take it)? % of men with diagnosed HIV (N=13 096, missing n=76)		Have you ever taken PEP? % of men with diagnosed HIV (N=13 094, missing n=78)	
No	94.7	No, never tried to get it	94.7
Yes	5.3	No, I could not get it	1.9
		No, I had the opportunity but decided not to take it	0.2
		Yes, I've taken one course of pills	2.4
		Yes, I've taken more than one course of pills	0.6

	I don't know	0.2
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Overall, 5% of men with diagnosed HIV had tried to obtain PEP before their HIV diagnosis, 3% had ever taken PEP and less than 1% had taken more than one course of PEP. Over a third (35%) of men with diagnosed HIV who had tried to obtain PEP before their diagnosis had not been able to get it.

Men who had ever taken PEP were asked 'For how many days did you take PEP? (If you've taken more than one course of pills, think about the most recent course)' and were offered a write-in box. Among men who had taken PEP, 17% had taken it for less than 28 days, 80% had taken it between 28 and 32 days, and 3% had taken it for more than 32 days.

5.3.2 Seeking and taking PrEP

All men were asked 'Have you ever tried to get PrEP?' Overall 6% (N=127 108, missing n=684) indicated they have ever tried to get PrEP. This percentage was 7% among men not diagnosed with HIV and 3% among those diagnosed with HIV.

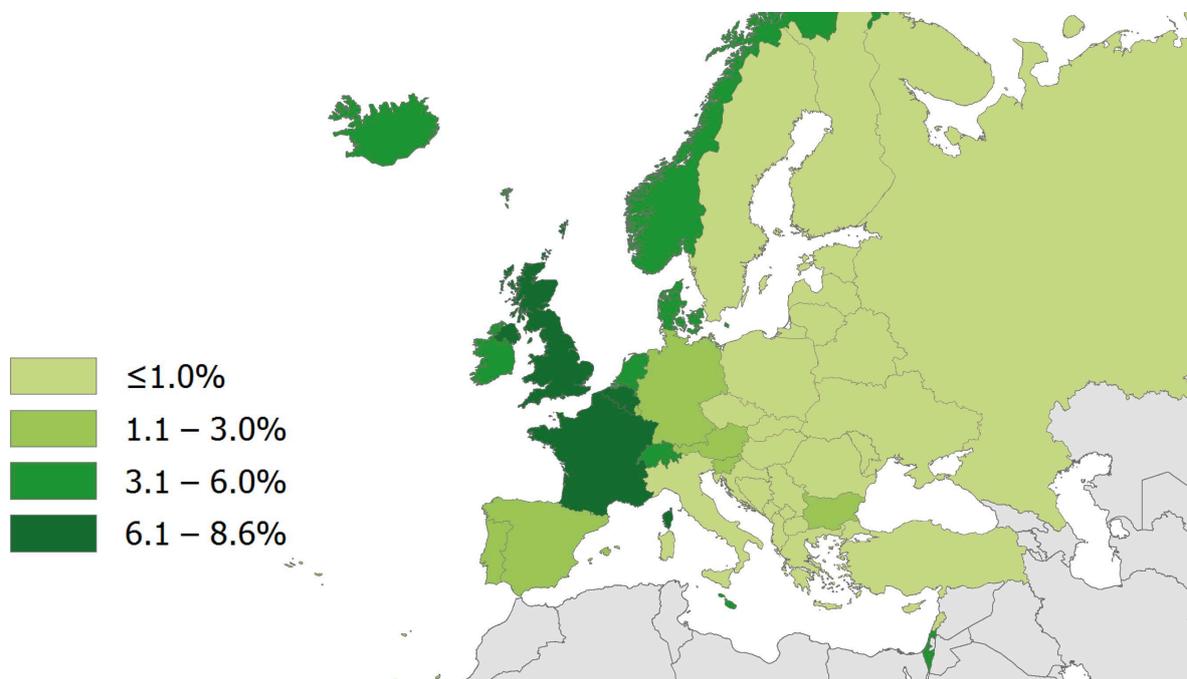
All men were also asked 'Have you ever taken PrEP?' and were offered the responses in Table 5.5.

Table 5.5 Men among the whole sample having ever taken PrEP, by diagnosed HIV status

Have you ever taken PrEP?	% not diagnosed HIV positive (N=112 939, missing for n=814)	% with diagnosed HIV (N=13 108, missing for n=64)
No	96.5	98.6
Yes, on a daily basis and I'm still taking it	1.9	0.8
Yes, on a daily basis but I'm no longer taking it	0.3	0.2
Yes, when I need it but not daily	1.1	0.2
I don't know	0.2	0.3

Among those men without diagnosed HIV, 3.3% indicated ever having taken PrEP, and 3.0% were currently using it, two-thirds of them on a daily basis. Figure 5.1 shows how PrEP use varied across Europe.

Figure 5.1 Percentage currently taking PrEP, excluding HIV-diagnosed men (DDM 3.29) (N=112 939)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Among men with diagnosed HIV, 1.2% indicated they had ever used PrEP and 1.0% indicated they were currently using it. While it is very unlikely that men with diagnosed HIV are taking PrEP daily, it is possible these men understand ART to be a kind of PrEP. These figures also reflect the extent of invalid data in low access-threshold online self-completion surveys.

5.4 Being vaccinated against hepatitis A and B

Effective vaccines exist against both hepatitis A and B. Completing a course of vaccination is a type of precautionary behaviour for sexual health.

All men were asked 'Have you been vaccinated against hepatitis A?' and 'Have you been vaccinated against hepatitis B?' The responses offered and the percentages indicating each are set out in Table 5.6 (the responses to the hepatitis B question included two additional options).

Table 5.6 Hepatitis A and B vaccination status

Hepatitis vaccination status	% vaccinated against hepatitis A (N=127 126, missing n=666)	% vaccinated against hepatitis B (N=127 196, missing n=596)
No, because I've had hepatitis [A/B] (and am now naturally immune)	7.4	5.8
No, and I don't know if I'm immune	26.6	23.3
No, I have chronic hepatitis B infection	–	0.5
Yes, and I completed the course	40.1	44.8
Yes, but I did not complete the course	4.6	3.8
Yes, but I did not respond to the vaccinations	–	1.2
I don't know	21.3	20.6

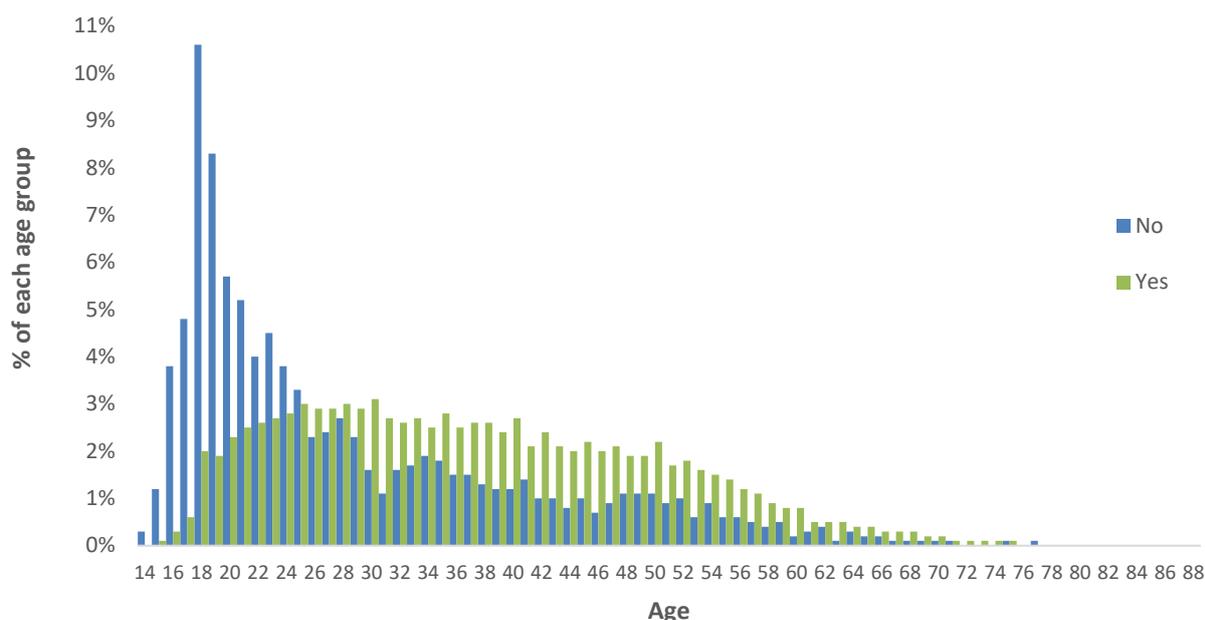
Since this question captures both the precautionary behaviour of being vaccinated and the intervention coverage of vaccination programmes, this question is also reported in Chapter 7.

5.5 Having sex

Men were told 'In this survey, we use 'sex' to mean physical contact to orgasm (or close to orgasm) for one or both partners.' They were then asked 'Have you ever had any kind of sex with a man (please include any sexual contact, not just intercourse)?' Overall, 98% indicated 'yes' (N=127 542, missing n=250).

The chart below shows the age profile of the 2% who had not yet had sex compared with the majority who had. It shows that although men who had not yet had sex with a man were disproportionately younger (with a peak at 18 years), there were men of all ages taking part in EMIS-2017 who were sexually attracted to men but had not yet had sex with a man.

Figure 5.2 Age profiles of men indicating 'no' (n=3 079, blue) or 'yes' (n=124 452, red) to 'Have you ever had sex of any kind with a man?'



A quarter of those who had not yet had sex with a man were aged over 35 years and 10% were aged over 48 years. This implies that services for men who have recently started, or are thinking of having sex with men need to be appropriate to men across the entire age range.

Men were also told 'In this survey we use the term 'intercourse' (*fucking, screwing*) to mean sex where one partner puts their penis into the other partner's anus or vagina, whether or not this occurs to ejaculation. 'Intercourse' does not include oral sex or the use of dildos.'

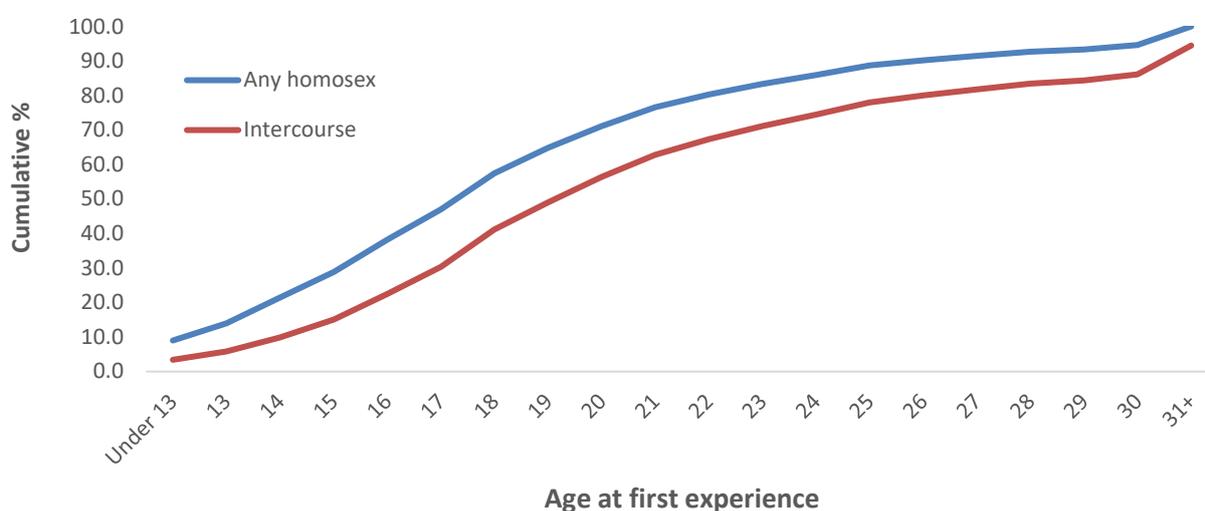
They were asked 'Have you ever had intercourse with a man (either 'passive' or 'active' fucking), either with or without a condom?' Of those who had ever had sex with a man, 95% said 'yes' they had had intercourse with a man (N=124 230, missing n=527), and 85% reported having had intercourse with a man in the last 12 months.

Experience of anal intercourse was very common but not universal among homosexually active men, with only 1-in-20 never having engaged in it.

5.5.1 Age at first sexual experience with a man

Men (who had ever had sex with a man) were asked 'How old were you the **very first** time you had any kind of sex with another male, or another male had any kind of sex with you?' Those who had ever had intercourse with a man were asked 'How old were you the **very first** time you had intercourse with another male?' The chart shows the cumulative percentage of men who had experienced sex with a man, and intercourse, by each age.

Figure 5.3 Percentage of men who had sex with men and intercourse with men by age (n=124 230)

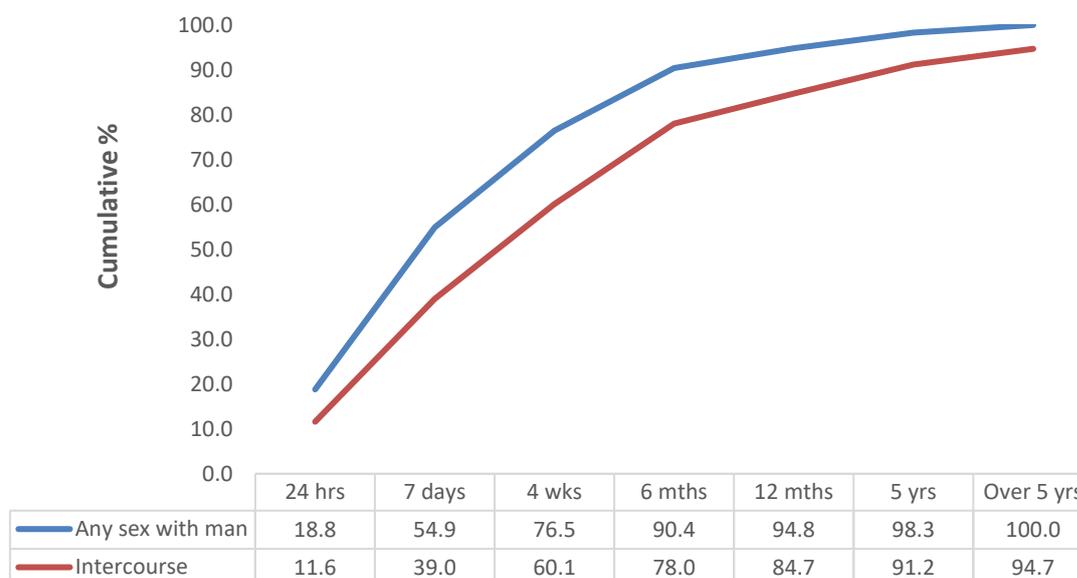


While the median age of first sexual experience was 18 years the median age of first intercourse was 20 years.

5.5.2 Recency of sexual experience with men

Men who had ever had sex with a man were asked 'When did you last have any kind of sex with a man (please include any sexual contact, not just intercourse)?' Those who had ever had intercourse with a man were asked 'When did you last have intercourse with a man (either with or without a condom)?' For each question they were offered a scale to indicate how recently intercourse had occurred. Responses are shown below.

Figure 5.4 Recency of sex and intercourse among men who had ever had sex with a man. Cumulative percentage for those who had had sex within increasing time periods (N=124 462 men who had ever had sex with a man)



While 19% had had sex in the last 24 hours, only 12% had engaged in intercourse during that period, suggesting that approximately two thirds of sexual sessions between men feature intercourse.

5.5.3 Steady and non-steady partners in the last 12 months

EMIS-2017 followed EMIS 2010 in distinguishing between steady and non-steady sexual partners and asking about them separately.

Men (who had ever had sex with a man) 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 partners who are simply sex buddies.' They were then asked about steady partners.

A little later in the survey they were told 'In this survey we use the term **'non-steady partners'** to mean men you have had sex with once only, and men you have sex with more than once but who you don't think of as a steady partner (including one night stands, anonymous and casual partners, regular sex buddies).' They were then asked about non-steady partners.

Men were asked separately for steady and non-steady male partners: 'In the last 12 months have you had any kind of sex with a steady/non-steady male partner?' Men indicating 'yes' were asked:

- How many different steady/non-steady male partners have you had sex with in the last 12 months?
- How many steady/non-steady male partners have you had intercourse with in the last 12 months?
- How many steady/non-steady male partners have you had intercourse with without using a condom in the last 12 months?

The response scales offered differed for steady and non-steady partners (see below).

Among men who had ever had sex with a man, 50% (N=124 068, missing n=394) had had sex with a steady partner in the last 12 months and 77% (N=123 482, missing n=980) had had sex with a non-steady partner. Experience of steady sexual partners was less common in the last 12 months than experience of non-steady partners.

Numbers of steady male partners

Table 5.7 shows the percentage of men having increasing numbers of steady partners whom they had had sex with, steady partners they had had intercourse with and steady partners they had condomless intercourse with.

Table 5.7 Numbers of steady partners in the last 12 months among men who had ever had sex with a man

Numbers of steady male sexual partners in last 12 months (men who had ever had sex with a man)	Steady male partners (N=126 558, missing n=1 234)		Steady male intercourse partners (N=126 482, missing n=1 310)		Steady male condomless intercourse partners (N=123 833, missing n=3 959)	
	%	Cumulative %	%	Cumulative %	%	Cumulative %
None	50.8	50.8	54.8	54.8	64.7	64.7
1	32.4	83.2	30.0	84.8	26.6	91.2
2	6.9	90.1	6.3	91.1	4.3	95.6
3	3.5	93.6	3.0	94.1	1.6	97.2
4	1.6	95.2	1.5	95.6	0.7	97.9
5	1.2	96.4	1.1	96.6	0.5	98.4
6	0.6	97.0	0.5	97.1	0.2	98.7
7	0.3	97.2	0.3	97.4	0.1	98.7
8	0.3	97.5	0.2	97.6	0.1	98.8
9	0.1	97.6	0.1	97.7	0.0	98.9
10 or more	2.4	100.0	2.3	100.0	1.1	100.0
TOTAL	100.0	–	100.0	–	100.0	–

Overall, 51% had no steady partner, 55% had no intercourse with a steady partner and 65% had no steady partner with whom they had condomless intercourse. Conversely, 35% had one or more steady partners with whom they had condomless intercourse, 10% had a penetrative steady partner/s and always used a condom, 4% had a steady partner but no intercourse with them, and 51% had no steady partner. Of the men who had a steady partner, 71% had condomless intercourse with this partner.

Among the 49% of men who had sex with a steady partner in the last year, two thirds (66%) had had sex with one steady partner. Among the men with more than one in the last year, the majority had two or three steady partners and few had more than five, although some clearly maintain steady sexual relationships with multiple men.

Similarly, among men with a steady intercourse partner, 66% had one only, and among men with a steady intercourse partner engaging in condomless sex, 75% had only one partner.

The questions used do not enable us to distinguish between serial and concurrent steady sexual partnerships.

Numbers of non-steady male partners

Table 5.8 shows the percentage of men having increasing numbers of non-steady partners, intercourse partners and condomless intercourse partners. Note that the non-steady partners scale extends further than the steady partners scale (which ended at '10 or more').

Table 5.8 Numbers of non-steady partners in the last 12 months among men who had ever had sex with a man

Numbers of non-steady male sexual partners in last 12 months (men who had ever had sex with a man)	Non-steady male partners (N=122 660, missing n=1 802)		Non-steady male intercourse partners (N=122 301, missing n=2 161)		Non-steady male condomless intercourse partners (N=119 209, missing n=5 253)	
	%	Cumulative %	%	Cumulative %	%	Cumulative %
None	23.3	23.3	32.3	32.3	59.3	59.3
1	8.3	31.6	10.5	42.9	12.9	72.2
2	8.9	40.5	9.6	52.5	7.9	80.1
3	8.0	48.5	7.3	59.8	4.5	84.6
4	5.8	54.3	5.1	64.8	2.5	87.0
5	6.2	60.4	5.3	70.2	2.5	89.6
6	3.9	64.3	3.0	73.2	1.1	90.6
7	2.2	66.5	1.7	75.0	0.6	91.2
8	2.3	68.8	1.8	76.7	0.6	91.8
9	0.7	69.6	0.7	77.4	0.3	92.1
10 or more	5.3	74.8	3.8	81.2	1.6	93.6
11-20	11.9	86.8	9.3	90.5	3.1	96.7
21-30	5.2	92.0	3.9	94.4	1.3	98.0
31-40	2.3	94.3	1.7	96.1	0.5	98.5
41-50	1.4	95.7	1.0	97.1	0.3	98.8
More than 50	4.3	100.0	2.9	100.0	1.2	100.0
TOTAL	100.0	–	100.0	–	100.0	–

Overall, 23% had no non-steady partners, 32% had no penetrative non-steady partners and 59% had no penetrative non-steady partners with whom they had condomless intercourse. Conversely, 41% had condomless intercourse with one or more non-steady partners, 27% had intercourse with one or more non-steady partners and always used a condom, 9% had non-steady partners and had no intercourse with them, and 23% had no non-steady partners. Of the men who had a non-steady partner, 53% had condomless intercourse with a non-steady partner.

Among the 77% of men who had had a non-steady partner in the last year, 11% had one non-steady partner. The median number of non-steady partners (among those who had them) was 6. The range of non-steady partners was very wide, with 4% indicating they had sex with over 50 men in the past year.

Combining steady and non-steady partners

Table 5.9 shows the percentages of men (who had ever had sex with a man) coming within each of 16 possible combinations of steady and non-steady partners in the last 12 months.

Table 5.9 Percentages of men that had each combination of steady and non-steady male partners in the last 12 months

% of total (N=116 123 men who ever had sex with a man, missing n=8 339)		Sex with steady partners in last 12 months			
		No steady partner	No intercourse	Always condom	Condomless intercourse
Sex with non-steady partners in last 12 months	No non-steady partner	9.9	1.3	2.3	10.3
	No intercourse	4.8	1.2	0.8	2.4
	Always condom	13.5	0.8	4.3	7.6
	Condomless intercourse	23.2	0.8	1.4	15.4

According to these questions and responses, overall 61% had had condomless intercourse in the last 12 months (with either a steady partner and/or a non-steady partner) including 15% that had condomless intercourse with steady and non-steady partners.

5.5.4 Condom use during intercourse with non-steady male partners

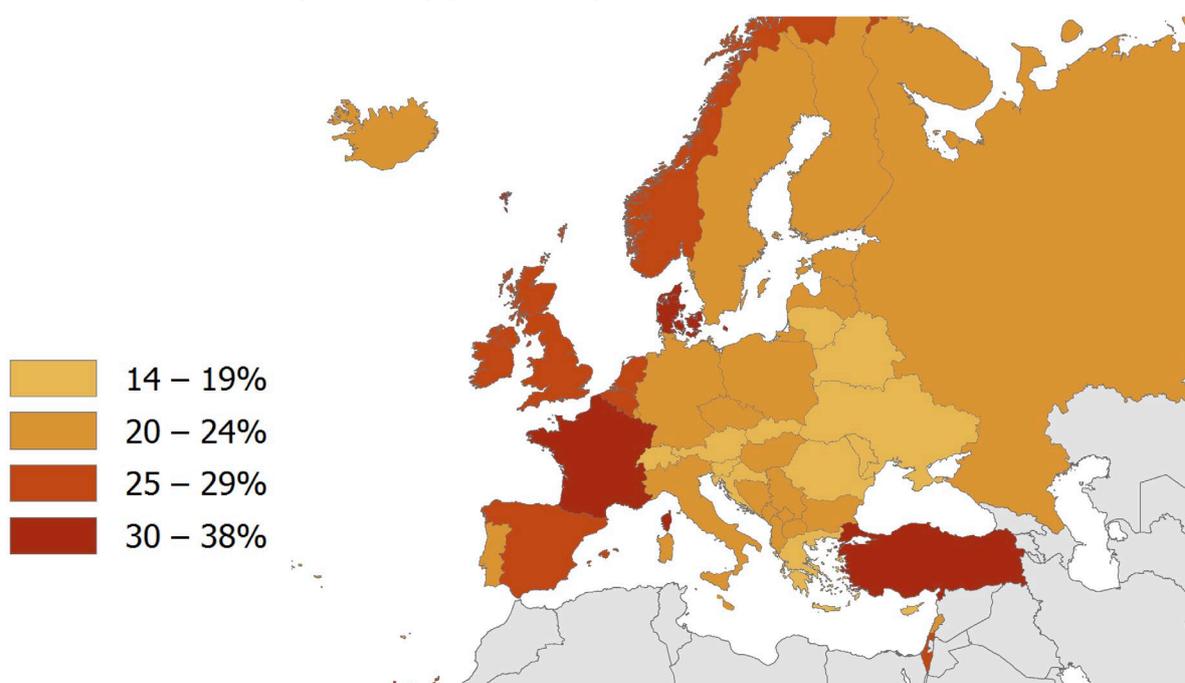
Men who had a non-steady male intercourse partner in the last 12 months (68% of those who had ever had sex) were asked 'In the last 12 months, how often were condoms used when you had intercourse with non-steady male partners?' The responses offered and the percentage of men indicating each is given in Table 5.10.

Table 5.10 Condom use for intercourse with non-steady partners in last 12 months

In the last 12 months, how often were condoms used when you had intercourse with non-steady male partners?	% of men who had a male non-steady intercourse partner in last 12 months (N=82 691, missing n=83)
Never	10.0
Seldom	9.4
Sometimes	11.4
Mostly	28.4
Always	40.8

The vast majority (90%) of men who had intercourse with non-steady partners in the last 12 months had some experience of condom use, suggesting that condoms are still common during intercourse with non-steady partners. However, consistent use is not the norm, with only 41% of men (who had intercourse with non-steady partners) being consistent users, 49% being inconsistent users and 10% never using condoms. The figure below shows how condomless intercourse varied across Europe.

Figure 5.5 Percentage who had condomless anal intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27) (N=126 493)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

5.5.5 Risk mitigation in condomless intercourse with non-steady male partners

Not all condomless intercourse with non-steady partners carries the same risk of HIV transmission. Some risk mitigation tactics used by MSM under these circumstances have been identified. These include sero-sorting (avoiding condomless intercourse except with partners known to have the same HIV status), having condomless intercourse with HIV positive partners only when they are known to have undetectable viral load and having condomless intercourse with HIV negative partners only when they are on PrEP. As some of these risk mitigation tactics are HIV-status specific, we need to take into account differences in HIV testing history.

Overall, 98% had ever had sex with a man. Of these, 68% had had intercourse with a non-steady sex partner in the last 12 months, and of these 60% did not always use a condom. Overall, 40% of all respondents indicated having condomless intercourse with a non-steady male partner in the last 12 months. These percentages were different among men living with and without diagnosed HIV, as shown in Table 5.11.

Table 5.11 Intercourse and condomless intercourse with non-steady partners in the last year for men living with diagnosed HIV

Sexual behaviour measure	% of all men	% of men without diagnosed HIV (N=113 753)	% of men with diagnosed HIV (N=13 172)
Ever sex with a man	97.6 (124 462/127 542, missing n=250)	97.4 (110 598/113 572, missing n=181)	99.4 (13 059/13 144, missing n=28)
Intercourse with a non-steady male partner in last 12 months (of those who had ever had sex)	67.7 (82 774/122 301, missing n=2 161)	66.1 (71 850/108 772 missing n=1 826)	81.3 (10 394/12 779, missing n=280)
Not always condom (of those who had non-steady intercourse in last 12 months)	59.2 48 988/82 691, missing n=83)	55.9 (40 143/71 778 missing n=72)	81.9 (8 510/10 385 missing n=9)
Any condomless intercourse with non-steady male partner in last 12 months (for all respondents, computed from the above)	39.1	36.0	66.2

Compared to other men, those diagnosed with HIV were more likely to have ever had sex and to have had intercourse with a non-steady male partner in the last 12 months, and they were less likely to have always used a condom if they did. When combined, these differences meant that 66% of men living with diagnosed HIV had had condomless intercourse with a non-steady male partner in the last 12 months, compared with 36% of other men.

Sero-sorting

The 40% of all respondents (N=48 510) who had had condomless intercourse with a non-steady male partner in the last 12 months were asked with following three questions with yes/no responses:

- In the last 12 months, have you had intercourse without a condom with a non-steady partner who you knew at the time was HIV positive?
- In the last 12 months, have you had intercourse without a condom with a non-steady partner who you knew at the time was HIV negative?
- In the last 12 months have you had intercourse without a condom with a non-steady partner whose HIV status you did not know or think about at the time?

The percentages indicating 'yes' to each question are given in Table 5.12, separately for men with and without diagnosed HIV (see Section 4.3.1 for HIV testing history). Differences in denominators are due to some men (who had condomless intercourse with a non-steady male partner) not answering one or more of these three questions.

Table 5.12 HIV status of non-steady, condomless intercourse partners in last 12 months, by HIV testing history

Men who had condomless intercourse with a non-steady partner in the last 12 months		% (n/N) of men without diagnosed HIV who had condomless intercourse with a non-steady partner in the last 12 months	% (n/N) of men with diagnosed HIV who had condomless intercourse with a non-steady partner in the last 12 months
In the last 12 months, have you had intercourse without a condom with a non-steady partner...	...who you knew at the time was HIV positive?	12.1 (4 868/40 075)	61.4 (5 207/8 486)
	...who you knew at the time was HIV negative?	60.0 (24 008/40 040)	55.0 (4 667/8 482)
	...whose HIV status you did not know or think about at the time?	58.9 (23 612/40 091)	73.2 (6 222/8 499)

Men without diagnosed HIV (who had condomless intercourse with a non-steady partner) were as likely to have done so with a man whose status they did not know (59%) as with a man they also thought was HIV negative (60%). A much smaller percentage (12%) had condomless intercourse with a man they thought was HIV positive. This suggests that, on the whole, men who believe they are HIV negative avoid condomless intercourse with non-steady partners they think have diagnosed HIV, but not with men whose HIV status they do not know.

Among men with diagnosed HIV (who had condomless intercourse with non-steady partners) the responses were different. Condomless intercourse was most common with men of unknown HIV status (73%), followed by men also thought to be HIV positive (61%) and men thought to be HIV negative (55%).

While some men may be 'serosorting' (i.e. avoiding condomless intercourse except with men they believe have the same HIV status as themselves), the majority were not.

Undetectable viral load and PrEP

Men who had condomless intercourse with a non-steady male partner who they knew at the time was HIV positive were asked 'Did that HIV-positive man/those HIV-positive men have undetectable viral load?' and were offered the responses in Table 5.13.

Men who had condomless intercourse with a male non-steady partner who they knew at the time was HIV negative were asked 'Was that HIV-negative man/were those HIV-negative men taking PrEP?' and were offered the responses in Table 5.13.

Table 5.13 shows the percentages of men giving each response to these two further questions, as percentages of the men who were asked the questions.

Table 5.13 Known viral load and PrEP status of non-steady condomless intercourse partners in the last year, by HIV status

In the last 12 months, have you had intercourse without a condom with a non-steady partner...		Men who had condomless intercourse with a non-steady partner in last 12 months	
		% of men without diagnosed HIV (n/N)	% of men with diagnosed HIV (n/N)
...who you knew at the time was HIV positive?		12.1 (4 868/40 075)	61.4 (5 207/8 486)
Did that HIV-positive man/those HIV-positive men have undetectable viral load?	Yes, I knew he did/they all did	67.7 (3 289/4 856)	57.4 (2 983/5 197)
	Yes, I knew some of them did	13.0 (632/4 856)	17.5 (907/5 197)
	No, he did not/none of them did	4.9 (236/4 856)	1.4 (73/5 197)
	I don't know	13.3 (645/4 856)	23.5 (1 223/5 197)
	I don't understand the question	1.1 (54/4 856)	0.2 (11/5 197)
...who you knew at the time was HIV negative?		60.0 (24 008/40 040)	55.0 (4 667/8 482)
Was that HIV-negative man/were those HIV-negative men taking PrEP?	Yes, I know he was/they all were	7.7 (1 851/23 990)	13.9 (648/4 660)
	Yes, I know some of them were	14.1 (3 387/23 990)	23.6 (1 099/4 660)
	No, he was not/none of them were	33.6 (8 063/23 990)	18.6 (865/4 660)
	I don't know	43.9 (10 543/23 990)	43.8 (2039/4 660)
	I don't understand the question	0.6 (146/23 990)	0.2 (9/4 660)
...whose HIV status you did not know or think about at the time?		58.9 (23 612/40 091)	73.2 (6 222/8 499)

Only very small percentages indicated they did not understand the questions about undetectable viral load and PrEP.

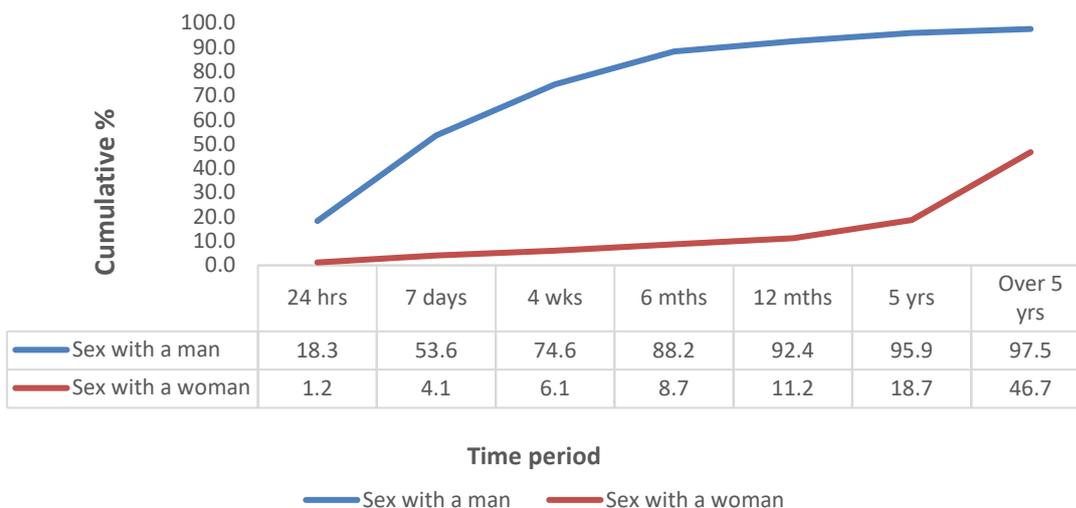
Men not living with diagnosed HIV were more likely than those living with HIV to know the viral load status of HIV-positive condomless intercourse partners. Two thirds (68%) of the men who had not tested HIV-positive, but who had had condomless intercourse with non-steady partners who they knew to have HIV, indicated they knew their HIV-positive partner(s) had undetectable viral load.

5.5.6 Sex with women

Men were reminded that 'In this survey, we use 'sex' to mean physical contact to orgasm (or close to orgasm) for one or both partners.' All men were asked 'When did you last have any kind of sex with a woman?' and offered a scale for indicating how recently this occurred. Responses are shown in the chart below (in red), alongside the line indicating how recently they had had sex with a man (in blue) for all respondents.

Overall, 47% of respondents had ever had sex with a woman; 19% had had sex with a woman in the last five years and 11% had had sex with a woman in the last 12 months. A third (37%) of the men who had had sex with a woman in the last year had had sex with a woman in the last week.

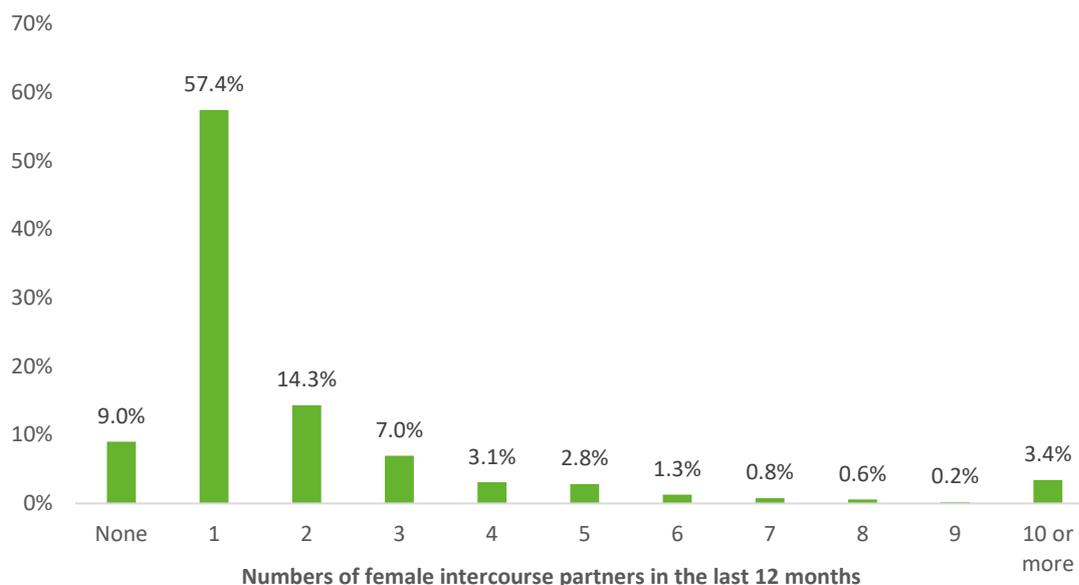
Figure 5.6 Recency of sex with a woman and sex with a man. Cumulative percentage for those who had engaged within increasing time periods (sex with men N=127 388, missing n=404; sex with women N=127 059, missing n=733)



Number of female sex partners

Men who indicated they had had sex with a woman in the last 12 months (N=14 233) were asked 'How many different women have you had intercourse with in the last 12 months?' and were offered responses from none to nine and '10 or more'. Figure 5.7 shows the responses.

Figure 5.7 Numbers of female intercourse partners in the last 12 months, among men that had any female partners (N=14 128, missing n=105)



Among men who indicated they had sex with a woman in the last year, 9% indicated they had not had intercourse with a woman. Over half (57%) had had intercourse with one woman only while for the remainder there was a wide range in the number of female intercourse partners.

Frequency of condom use with female intercourse partners

Men who indicated they had intercourse with a woman in the last 12 months (N=12 852) were asked 'In the last 12 months, how often have you used condoms when you had intercourse with women?' The responses offered and the percentage indicating each is set out in Table 5.14.

Table 5.14 Condom use with women among men that had intercourse with women in the last 12 months

In the last 12 months, how often were condoms used when you had intercourse with women?	% of men who had intercourse with a woman in the last 12 months (N=12 763, missing n=89)
Never	42.7
Seldom	8.0
Sometimes	7.4
Mostly	10.6
Always	31.3

Condom use during intercourse with women was polarised, with 43% never using them and 31% always using them.

5.6 Substance use

The collection of valid data on both licit and illicit drug use is difficult and may be particularly problematic in self-completed, retrospective, large multi-language/national surveys. These problems may result in under-reporting or misreporting of drug use. The problems vary depending on the data being sought and the questions being asked. Asking about drug use was a key priority of the EMIS Network.

5.6.1 Use of legal drugs

All men were asked 'When was the last time you consumed...' followed by five different drugs which are not illegal to possess in most of Europe: alcohol; tobacco products; poppers (nitrite inhalants); Viagra, Cialis, Levitra or other substances that help to get or keep an erection; sedatives or tranquilizers (Valium, Rivotril, Rohypnol, Xanax, Seduxen, Phenazepam). We did not investigate whether erection-enhancing drugs or sedatives were prescribed or not.

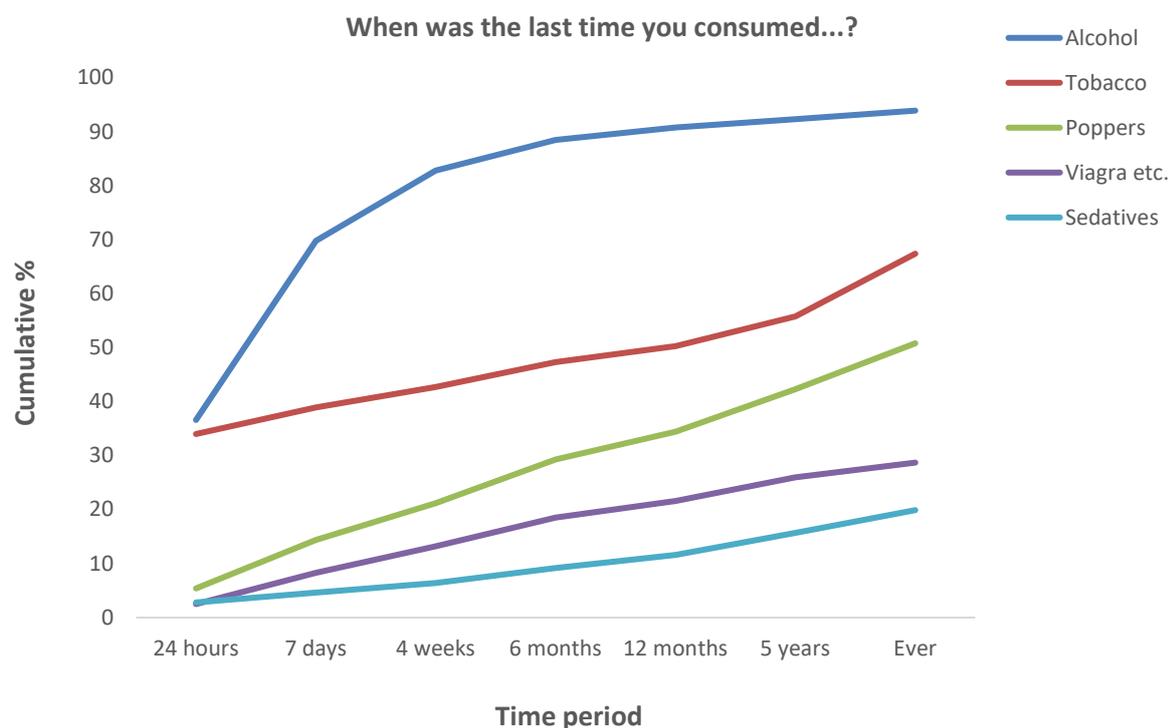
Table 5.15 shows the cumulative percentages for those who had used each drug within extending time periods. The bottom two rows also show the percentage of men having ever taken the drug who had taken it in the last 12 months (an indicator of the proportion of users who had quit the drug), and the percentage of men who had taken it in the last 12 months who had taken it in the last seven days (an indicator of the frequency of drug use in the population of users).

Table 5.15 Recency of specific substance use

Cumulative %	Alcohol (N=127 434, missing n=358)	Tobacco products (N=127 370, missing n=422)	Poppers (N=127 404, missing n=388)	Viagra etc. (N=127 121, missing n=671)	Sedatives etc. (N=127 126, missing n=666)
Within 24 hours	36.6	34.0	5.4	2.5	2.8
Within 7 days	69.8	38.9	14.4	8.3	4.6
Within 4 weeks	82.8	42.7	21.2	13.2	6.4
Within 6 months	88.5	47.3	29.3	18.5	9.2
Within 12 months	90.8	50.3	34.4	21.6	11.6
Within 5 years	92.3	55.8	42.3	26.0	15.7
Ever	93.9	67.4	50.8	28.7	19.9
12 months as a fraction of ever	0.97	0.75	0.68	0.75	0.58
7 days as a fraction of 12 months	0.77	0.77	0.42	0.38	0.40

Figure 5.8 presents these data graphically, showing the cumulative percentages for those having used each of the drugs during their lifetime.

Figure 5.8 Recency of consumption of alcohol, tobacco, poppers, Viagra or equivalent, or sedatives (Alcohol N=127 434, missing n=358; Tobacco N=127 370, missing n=422; Poppers N=127 404, missing n=388; Viagra etc. N=127 121, missing n=671; Sedatives N=127 126, missing n=666)



Alcohol was the most commonly used drug at all time intervals. Lifetime experience of alcohol was almost universal (94%). Over a third (37%) had consumed it in the last 24 hours and the percentage of users rose steeply by seven days (70%).

In contrast to alcohol, a similar percentage had used tobacco in the last 24 hours (34%) and there was a small increase in users by 7 days (up to 39%). The vast majority of men who used tobacco in the last week had used it in the last 24 hours.

The other three drugs, which are not illegal to possess (in most of Europe), were used by far fewer men than alcohol and tobacco.

5.6.2 Use of illicit drugs

After being asked about drugs that are not illegal to possess, all men were then asked 'Have you ever taken any other recreational or illicit drugs?' Overall, 42% answered 'yes'. Those who answered 'yes' were asked 'When was the last time you consumed...' followed by the 14 types of illicit drugs below:

- cannabis (hashish, marijuana)
- synthetic cannabinoids (e.g. Spice, K2, herbal incense)
- ecstasy (E, XTC, MDMA) in the form of a pill
- ecstasy (E, XTC, MDMA) in the form of a crystal or powder
- amphetamine (speed)
- crystal methamphetamine (crystal, meth, Tina, Pervitin)
- heroin or related drugs (poppy straw, kompot, fentanyl)
- mephedrone (4-MMC, meow, methylone, bubbles)
- synthetic stimulants other than mephedrone (e.g. MXE, bath salts, 3-MMC, 4-MEC, 4_FA, XTC-light)
- GHB/GBL (liquid ecstasy)
- ketamine (special K)
- LSD (acid)
- cocaine
- crack cocaine.

For each drug men were offered a scale to indicate how recently they had used it [23]. It should be noted that the questions referred to each drug separately and poly drug use (combining drugs) was not measured. Tables 5.16 and 5.17 show the cumulative percentage of men who had used each drug within each time frame. The bottom

two rows also show the percentage of those ever having a drug who had taken it in the last 12 months (an indicator of the historic nature of drug use), and the percentage having taken a drug in the last 12 months who had taken it in the last seven days (an indicator of the frequency of drug use among users).

Table 5.16 Recency of illicit or recreational drug use, part 1

Cumulative %	Cannabis (N=126 258, missing n=1533)	Synthetic cannabinoids (N=126 086, missing n=1706)	Ecstasy pill (N=126 168, missing n=1624)	Ecstasy powder (N=126 113, missing =1679)	Ampheta- mines (N=126 137, missing n=1655)	Crystal meth (N=126 148, missing n=1644)	Heroin or related (N=126 109, missing n=1683)
Within 24 hours	4.8	0.2	0.3	0.2	0.4	0.3	0.1
Within 7 days	8.4	0.4	1.4	0.9	1.1	0.8	0.2
Within 4 weeks	12.5	0.6	3.2	2.2	2.1	1.4	0.2
Within 6 months	19.3	1.1	6.3	5.1	4.1	2.6	0.4
Within 12 months	23.7	1.6	8.3	7.2	5.7	3.6	0.5
Within 5 years	31.1	3.2	12.0	10.5	8.9	5.2	0.8
Ever	39.3	4.9	17.3	13.2	14.0	6.5	1.9
12 months as a fraction of ever	0.60	0.33	0.48	0.55	0.41	0.55	0.26
7 days as a fraction of 12 months	0.35	0.25	0.17	0.13	0.19	0.22	0.40

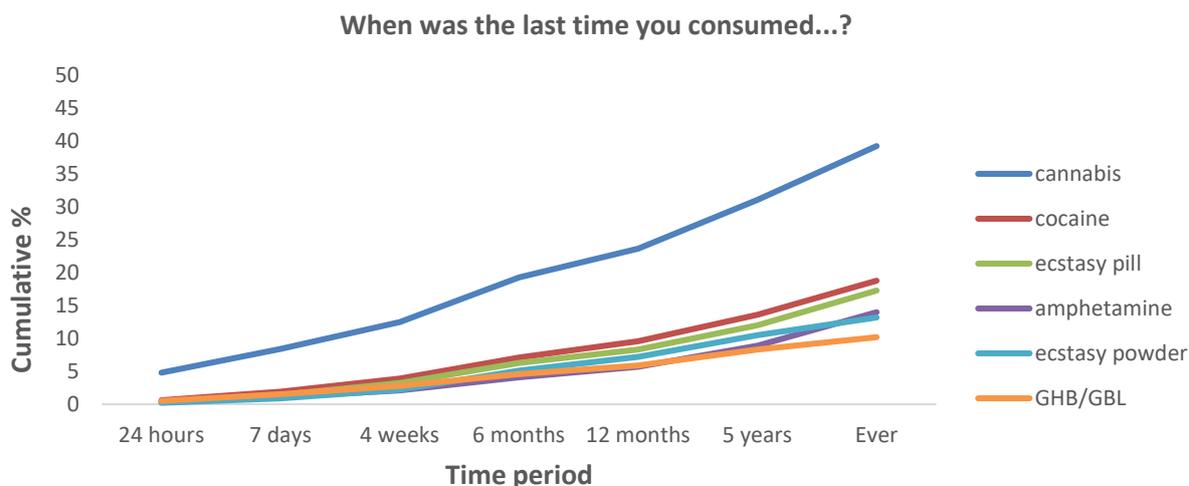
Table 5.17 Recency of illicit or recreational drug use, part 2

Cumulative %	Mephedrone (N=126 051, missing n=1741)	Synthetic stimulants other than mephedrone (N=126 194, missing n=1598)	GHB/GBL (N=113 272, missing n=1619)	Ketamine (N=126 177, missing n=1615)	LSD (N=126 105, missing n=1687)	Cocaine (N=126 153, missing n=1639)	Crack cocaine (N=126 196, missing n=1596)
Within 24 hours	0.2	0.2	0.5	0.2	0.1	0.6	0.1
Within 7 days	0.6	0.5	1.5	0.7	0.2	1.9	0.1
Within 4 weeks	1.2	0.8	2.8	1.5	0.4	3.9	0.2
Within 6 months	2.2	1.4	4.6	2.9	1.0	7.1	0.4
Within 12 months	3.0	1.8	5.9	3.8	1.7	9.6	0.6
Within 5 years	4.5	2.5	8.3	5.9	3.1	13.6	1.0
Ever	5.2	2.9	10.2	8.3	7.2	18.8	1.7
12 months as a fraction of ever	0.58	0.62	0.58	0.46	0.24	0.51	0.35
7 days as a fraction of 12 months	0.20	0.28	0.25	0.18	0.12	0.20	0.17

The most commonly used illicit drug in every time period was cannabis, which had ever been used by 39% and in the last four weeks by 13%. Cannabis was far more popular than all other illicit drugs.

Four other drugs had ever been used by between 10% and 20% of the whole sample: cocaine, ecstasy, amphetamines and GHB/GBL (see Figure 5.9).

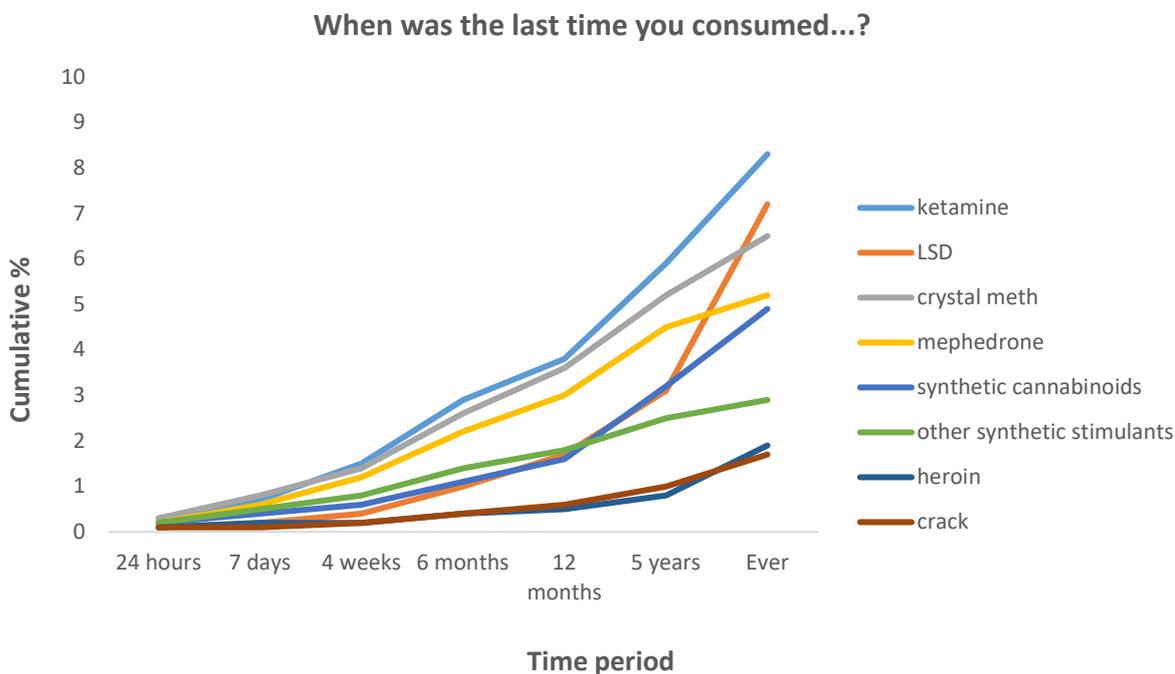
Figure 5.9 Recency of consuming cannabis, cocaine, ecstasy pill, amphetamine, ecstasy powder and GHB/GBL among the whole sample



Amphetamines showed a proportionately larger increase than other drugs between five years and ever, suggesting a decline in popularity.

The remaining eight drugs had ever been used by fewer than 10% of men – these included ketamine, LSD, crystal methamphetamine, mephedrone, synthetic cannabinoids, other synthetic stimulants, heroin and crack cocaine (see Figure 5.10). None of these drugs had been used by more than 1% of the whole sample in the last week; 2% in the last four weeks, or 4% in the last 12 months.

Figure 5.10 Recency of consuming ketamine, LSD, crystal methamphetamine, mephedrone, synthetic cannabinoids, other synthetic stimulants, heroin and crack cocaine among the whole sample



As with amphetamine, LSD showed a much larger proportionate increase than other drugs between five years and ever, suggesting a large proportion of users had stopped taking it. Mephedrone and other synthetic stimulants showed only a small increase between five years and ever, as these drugs have been introduced, and become popular, relatively recently.

5.7 Injecting drugs

Historically, in Europe at least, injecting drugs has been uncommon among MSM taking part in community surveys. This may have changed recently with the increase in chemsex.

5.7.1 Prevalence of injecting drug use

All men were asked 'Have you ever injected anabolic steroids (testosterone), or had someone else inject into you?' and were offered the responses: No, never; Yes, within the last 12 months; Yes, more than 12 months ago. This question captures both prescribed and non-prescribed drugs and it is possible some respondents confused corticosteroids administered by healthcare workers with anabolic steroids.

Men were also asked 'Have you ever injected any drug to get high (other than anabolic steroids or prescribed medicines), or had someone else inject into you?' with the same response set.

Table 5.18 Injecting drug use

Have you ever injected or had someone else inject into you...?	% anabolic steroids (testosterone) (N=126 692, missing n=1 100)	% any drug to get high (other than anabolic steroids or prescribed medicines) % (N=126 865, missing n=927)
No, never	97.3	97.7
Yes, within the last 12 months	1.3	1.2
Yes, more than 12 months ago	1.3	1.1

Slightly more men had ever injected anabolic steroids (3%) than had injected drugs to get high (2%) but both types of behaviour were very rare. Half of the men who had ever done either had done so in the last 12 months.

When considering both types of behaviour together, 5% indicated that they had ever injected steroids and/or injected to get high. Injecting steroids and injecting to get high were positively associated but only partially overlapped: 11% of men who had injected steroids in the last 12 months had also injected drugs to get high and, conversely, 13% of men who had injected to get high had also injected steroids. The majority (89%) of men injecting steroids did not inject to get high and the majority (87%) of men who injected to get high did not inject steroids.

5.7.2 Frequency of injecting

The 1.2% of men who had injected drugs to get high in the last 12 months (n=1 481) were asked 'In the last 12 months how many times have you injected any drug other than anabolic steroids or medicines, or had someone else inject into you?' and were offered the numbers 1 to 9 followed by '10 or more'.

Table 5.19 Frequency of injecting drugs to get high in the last 12 months

Frequency of injecting to get high in last 12 months (N=1 400 men who injected to get high in the last 12 months, missing n=81)	% of men who had injected to get high in the last 12 months	Cumulative % of men who had injected to get high in the last 12 months
1	17.6	17.6
2	14.1	31.6
3	10.4	42.0
4	7.5	49.5
5	5.7	55.2
6	5.5	60.7
7	1.4	62.1
8	2.0	64.1
9	1.6	65.6
10 or more times	34.4	100.0

Half of the men who had injected to get high in the last 12 months had done so four times or less. Two thirds (66%) had done so fewer than 10 times in the last 12 months.

A third of the men who injected to get high in the last 12 months had done so 10 times or more in that period. This is 0.4% of all respondents (n=481).

5.7.3 Drugs being injected

Men who had injected in the last 12 months (1.2% of all men) were asked 'Which drugs have you injected or had injected into you in the last 12 months?' and instructed to tick all that applied from the list of drug types in Table 5.20.

Table 5.20 Drugs injected in the last year among men who have injected to get high

'Which drugs have you injected or had injected into you in the last 12 months?'	% of men who injected to get high in last year (N=1 471, missing n=10)
Crystal methamphetamine (crystal, meth, Tina, Pervitin)	52.2
Mephedrone (4-MMC, meow, methylone, bubbles)	31.4
Synthetic stimulants other than mephedrone (e.g. MXE, bath salts, 3-MMC, 4-MEC, 4_FA, XTC-light)	24.7
Ketamine (special K)	17.1
Cocaine	15.4
Ecstasy (E, XTC, MDMA)	7.9
Amphetamine (speed)	7.8
Heroin or related drugs (poppy straw, kompot, fentanyl)	6.1
Crack cocaine	2.3
I've injected drugs but I don't know which drugs	6.5

The most commonly injected drug was crystal methamphetamine. The next most commonly injected drugs were mephedrone and other synthetic stimulants, followed by ketamine and cocaine. All these drugs are stimulants commonly associated with 'chemsex' (see below).

5.7.4 Sharing injecting equipment

Men who had ever injected anabolic steroids and/or injected to get high in the last 12 months were asked 'When was the last time you injected with a used needle or syringe given, lent, rented or sold to you by someone else?' and were offered a scale to indicate how recently this had occurred.

Table 5.21 Recency of sharing injecting equipment among the whole sample, and among men that had ever injected drugs

When was the last time you injected with a used needle or syringe given, lent, rented or sold to you by someone else?	Cumulative % of all (N=126 194, missing n=1 598)	Cumulative % of men who had ever injected (N=5 314, missing n=403)
Within 24 hours	0.1	1.4
Within 7 days	0.1	2.7
Within 4 weeks	0.2	4.7
Within 6 months	0.3	7.5
Within 12 months	0.4	10.1
Within 5 years	0.6	15.2
Ever	1.0	23.8

Overall, 1% of all men had ever injected with a used needle or syringe. Of the men who had ever injected, under a quarter (24%) had ever injected with used works.

Among men who had injected drugs to get high in the last 12 months, 27% (N=1 470, missing =11) had injected with used works during that time period.

5.8 Combining sex and drugs

'Chemsex' is a major concern that has emerged since EMIS 2010. Defining chemsex and developing an acceptable measure that was appropriate across cultures was a major challenge [24]. We decided not to use the word 'chemsex' in the survey itself and to ask a series of both broader and narrower questions.

5.8.1 Sex under intoxication

Men who had had sex with a man in the last 12 months were asked 'In the last 12 months, how much of the sex you've had with men has been under the influence of alcohol or any other drug?' and were offered the responses in Table 5.22.

Table 5.22 Percentage of all sex with men that was under the influence of alcohol or any other drug in the last 12 months

Percentage of all sex with men that has been under the influence of alcohol or any other drug in the last 12 months (N=115 151, missing n=3 199)	%
None of it	44.4
Almost none of it	25.5
Less than half	12.3
About half	6.5
More than half	4.7
Almost all of it	5.0
All of it	1.6
TOTAL	100.0

Overall, 82% indicated that less than half the sex they had had was under intoxication, including 44% who indicated that none of the sex they had had was under intoxication. Conversely, 7% indicated all or almost all of the sex they had had was under the influence of alcohol or drugs. It is worth noting that this question includes sex that occurs while using drugs and alcohol and drug use that is specifically intended to facilitate, alter or enhance sex.

5.8.2 Recency of sober sex and 'chemsex'

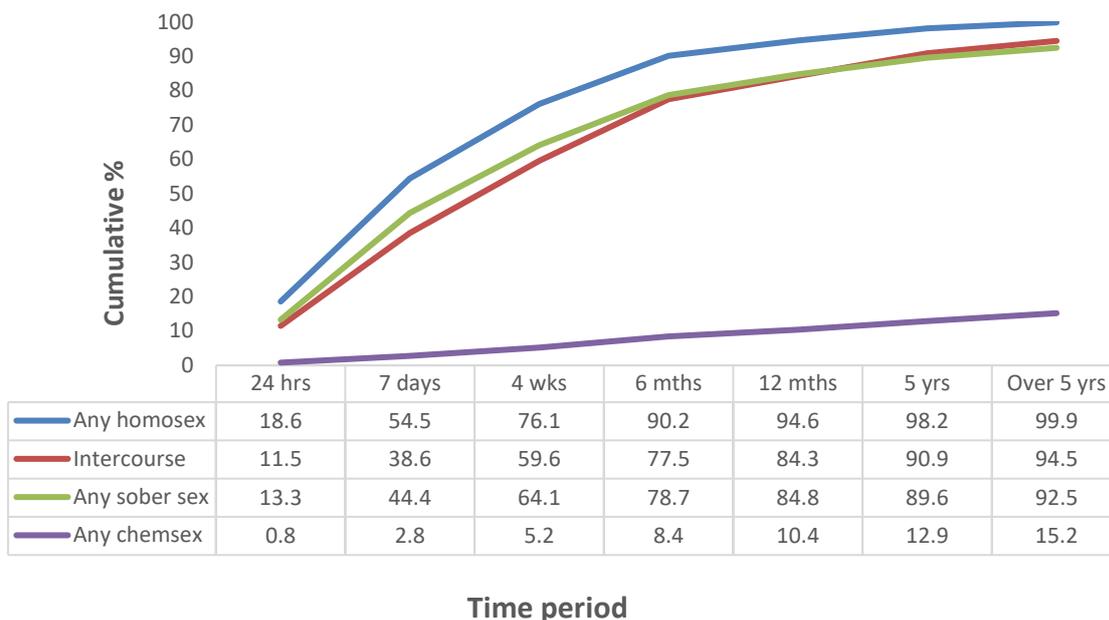
All men were asked 'When was the last time you had sober sex (that is, NOT under the influence of alcohol or any other drug)?' and were offered a scale to indicate how recently this had occurred.

They were also asked 'When was the last time you used stimulant drugs to make sex more intense or last longer? (Note: the stimulant drugs include ecstasy/MDMA, cocaine, amphetamine (speed), crystal methamphetamine (Tina, Pervitin), mephedrone and ketamine)' and were offered a scale to indicate how recently this had occurred. It should be noted that ketamine has hallucinogenic, dissociative and anaesthetic effects and is a stimulant only in small doses [25].

The behaviour defined in this last question will, for ease of reference, hereafter be referred to as 'chemsex'. 'Chemsex' is a recently emerged category of behaviour among MSM for which there is no agreed definition [26]. While all definitions include the combining of sex and substances, not all sex under intoxication is considered chemsex. Other necessary features of a chemsex definition may include sex between men (i.e. only male homosexual can be chemsex); sex between casual partners and/or fuck-buddies (i.e. not between those romantically involved); facilitation by smartphone dating apps; use of specific drugs, typically GHB/GBL, crystal methamphetamine, mephedrone, and/or ketamine); extended duration; a climate of shame, marginalisation and trauma based on the history of the HIV epidemic and internalised homophobia among gay and bisexual men. We choose to focus our measurement on intentional use of stimulant drugs for intensification and extension of sex. We recognise this is not a definitive measurement of 'chemsex' (there can be no such thing) but it has the benefit of precision and clarity.

The figure shows the responses, superimposed on the recency of any sex with men and the recency of intercourse with men.

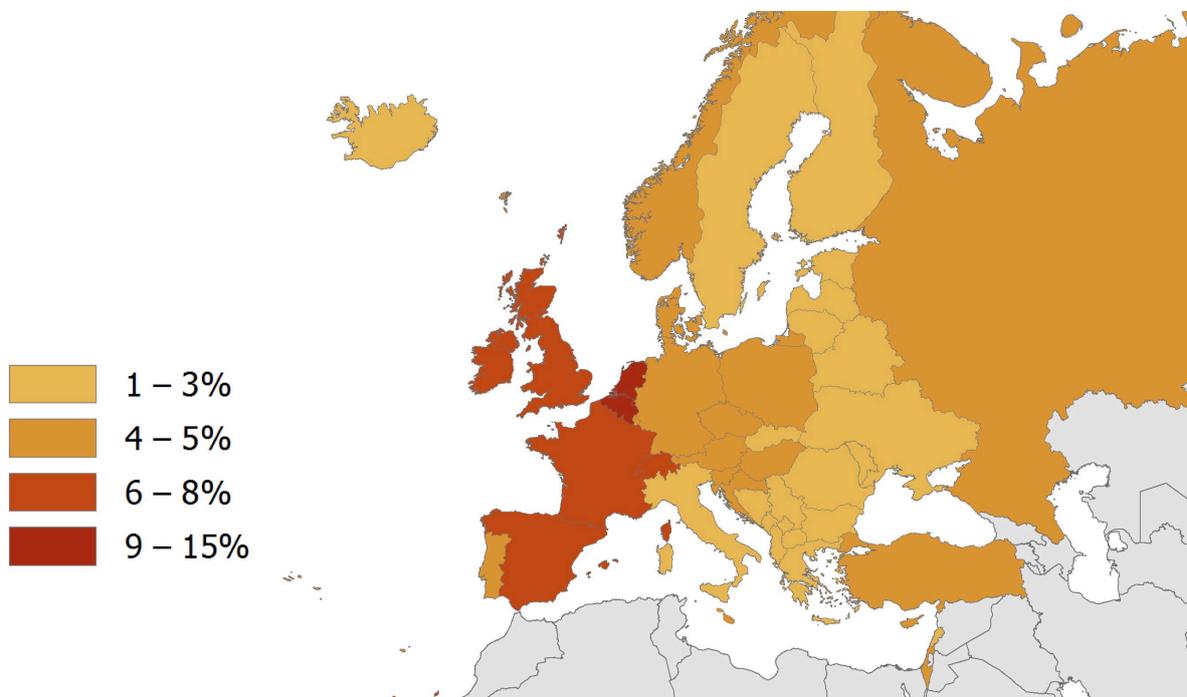
Figure 5.11 Recency of any sex with men, any intercourse with men, any sober sex and sex under the influence of drugs among the whole sample (sober sex N=126 906, missing n=886; chemsex N=126 258, missing n=1 534)



Sober sex was common (13% had had this within the last 24 hours), chemsex was far less common (10% had done this in the last 12 months).

Overall, 15% had ever had chemsex and 68% of those had done so in the last 12 months. In all, 5% reported chemsex in the last four weeks. The figure below shows how this varied across Europe.

Figure 5.12 Percentage who used stimulant drugs to make sex more intense or last longer ('chemsex'), last four weeks (DDM 2.50) (N=126 258)

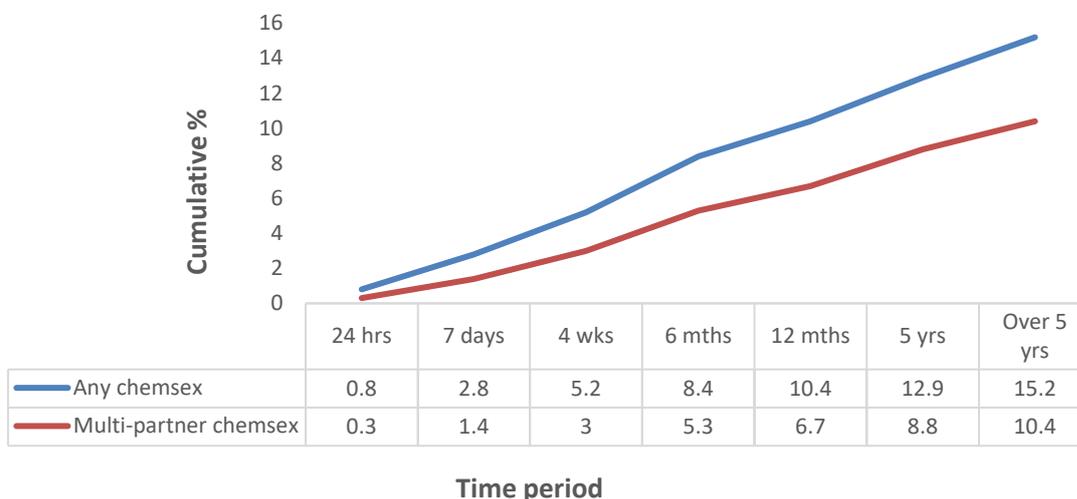


http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

5.8.3 Features of chemsex

Men who had ever had chemsex were asked 'When was the last time you combined stimulant drugs and sex with more than one man at the same time?' and were offered a scale to indicate how recently this had occurred. We refer to this behaviour as 'multi-partner chemsex'. The figure shows the recency for multi-partner chemsex superimposed on the recency for any chemsex.

Figure 5.13 Recency of any sex under the influence of drugs and any multi-partner sex under the influence of drugs among the whole sample (any chemsex N=126 258, missing n=1 534; multi-partner chemsex N=126 246, missing for n=1 546)



About two-thirds of the men who had ever had chemsex had experience of multi-partner chemsex. However, less than half of the men having had chemsex in the last 24 hours had done so with multiple partners. Multi-partner chemsex is common, but the majority of chemsex sessions appear to occur between two men.

Men who had chemsex with multiple partners in the last 12 months were asked 'Where did that most recent sex with stimulants and multiple partners take place?' and given the responses below.

Table 5.23 Location of most recent sex with stimulants and multiple partners among men who had multi-partner chemsex in the last 12 months

Location of most recent sex with stimulants and multiple partners among men who had multi-partner chemsex in the last 12 months (N=8 486, missing = 8)	%
Someone else's home	49.5
Your home	22.9
In a club or backroom of a bar	11.1
A sauna	7.5
A hotel room	5.9
A cruising location (street, roadside service area, park, beach, baths, lavatory)	1.7
A porn cinema	0.6
Other answer	0.9

Private homes are by far the most common setting for multi-partner chemsex: 72% indicated their last multi-partner chemsex was either in their or someone else's home (the latter was more common than the former since in multi-partner sessions more men are visiting than are at home). The next most common location was clubs and backrooms, followed by saunas.

Men who had chemsex with multiple partners in the last 12 months were also asked 'For how many years have you been combining stimulant drugs and multiple sexual partners?'. The number of years that men had been engaging in multi-partner chemsex was variable. Half had engaged for four years or less, while 15% had engaged for more than 10 years. The fact that 20% of men had been engaged in multi-partner chemsex for less than one year suggests a scene on which new arrivals are not uncommon.

5.9 National variation in behaviour

Table 5.24 National variation in key behaviour

Qualifying cases	Country	% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84) ^{§§}	% who took PEP, ever, excluding HIV-diagnosed men	% currently taking PrEP, excluding HIV-diagnosed men	% with 2+ condomless steady sex partners, last 12 months
127 792	Total (used throughout this report)	89.9	4.5	3.0	8.5
112 789	EU Health Programme	89.9	4.5	3.0	8.5
107 950	EU Member States	91.4	4.8	3.2	8.0
2 705	Austria°	92.5	3.1	2.3	5.9
3 038	Belgium°	79.9	7.7	6.8	8.9
1 177	Bulgaria°	81.2	0.5	1.3	10.4
1 015	Croatia°	92.0	0.8	0.3	6.4
307	Cyprus°	94.7	4.2	0.7	6.4
1 897	Czech Republic°	91.2	1.0	0.4	9.0
1 698	Denmark**	93.4	3.5	3.9	10.4
212	Estonia°	n<20	2.0	0.5	8.7
1 409	Finland**	74.1	1.1	0.5	8.6
10 996	France**	95.0	12.0	8.4	10.6
23 107	Germany°	94.9	2.9	2.1	6.1
2 909	Greece°	93.4	5.3	0.7	6.6
2 177	Hungary°	72.2	0.5	0.3	12.7
2 083	Ireland°	93.7	9.5	4.0	6.7
11 025	Italy**	94.2	2.0	0.4	6.9
252	Latvia°	83.9	0.0	0.0	8.7
370	Lithuania°	70.4	0.3	0.9	11.0
169	Luxembourg°	n<20	8.7	2.0	4.8
299	Malta°	91.3	4.8	5.4	9.4
3 851	Netherlands°	71.3	4.6	4.5	12.1
4 025	Poland°	92.0	1.3	0.6	9.9
2 555	Portugal**	90.4	5.0	1.5	14.2
2 002	Romania°	89.1	1.1	0.4	13.3
1 003	Slovakia°	93.9	0.4	1.0	10.4
685	Slovenia°	81.4	3.3	1.2	6.9
10 652	Spain**	93.9	5.0	1.8	5.7
4 443	Sweden°	83.1	0.9	0.8	7.6
11 889	United Kingdom**	93.2	10.0	8.6	7.7
6 451	EFTA Member States[§]	89.6	4.8	4.7	7.8
111	Iceland°	n<20	4.8	4.6	10.4
2 957	Norway°	78.5	2.7	5.4	8.6
3 383	Switzerland*	94.6	6.7	4.0	6.9
3 474	EU Enlargement Area	88.4	0.9	0.7	16.6
232	Bosnia & Herzegovina°	n<20	0	0.4	8.5
175	North Macedonia	n<20	0	0.6	9.8
1 041	Serbia°	89.9	0.4	0.3	8.7
1 855	Turkey	87.6	1.3	1.0	23.4
171	Albania/Kosovo/Montenegro	n<20	1.3	0.6	11.2
3 670	ENP countries	88.0	3.8	1.8	11.4
440	Belarus	76.7	0.2	0.2	11.6
257	Lebanon	69.2	2.7	0.9	12.7
1 274	Israel	96.0	9.2	4.3	12.7
498	Moldova°	93.0	0.2	0.0	9.0
1 201	Ukraine	88.0	0.8	0.7	10.8
	Other countries				
6 247	Russia (included in total)	71.6	0.9	0.9	12.1
6 059	Canada (not included in total)	92.4	5.2	7.8	10.4
3 507	Philippines (not included in total)	81.2	0.6	1.3	8.4

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

§§ Column 3 does not show figures for six rows where <20 men with diagnosed HIV were recruited, though the samples from these countries remain in the totals for EU, EFTA, EU Enlargement, Health Programme etc. **Highlighted in grey above:** possible translation issue in Dutch questionnaire. After discussion with national stakeholders and running a sensitivity analysis, we believe that sub-optimal translation of 'antiretroviral treatment' in the Dutch questionnaire resulted in classification bias, underestimating ART coverage among Dutch speakers – i.e. affecting the measures for Belgium (48% using the Dutch version) and the Netherlands (85% using the Dutch version). Other countries are not affected. When excluding respondents answering in Dutch, the percentages for ART are 95.7% (BE) and 88.4% (NL).

Table 5.25 National variation in key behaviour

Qualifying cases	Country	Number (median) of NON-STEADY sex partners, last 12 months	% with condomless intercourse with NON-STEADY partners of unknown HIV status, last 12 months (DDM 3.27)	% who injected drugs (excluding steroids), last 12 months	% who used stimulant drugs to make sex last longer or more intense, last 4 weeks (DDM 2.50)
127 792	Total (used throughout this report)	4	23.7	1.2	5.2
112 789	EU Health Programme	4	23.7	1.2	5.2
107 950	EU Member States	4	23.8	1.2	5.5
2 705	Austria°	3	17.4	1.6	4.9
3 038	Belgium°	5	25.8	1.9	11.0
1 177	Bulgaria°	3	22.2	0.3	3.0
1 015	Croatia°	1	18.9	0.6	5.1
307	Cyprus°	3	15.0	1.3	5.2
1 897	Czech Republic°	3	19.9	1.5	5.1
1 698	Denmark**	4	29.9	0.6	4.3
212	Estonia°	2	22.3	0.9	2.9
1 409	Finland**	2	21.9	0.9	2.1
10 996	France**	7	29.8	1.6	7.8
23 107	Germany°	3	20.5	1.4	4.7
2 909	Greece°	4	16.1	0.5	2.6
2 177	Hungary°	2	19.5	0.7	4.1
2 083	Ireland°	4	27.3	0.8	5.9
11 025	Italy**	4	23.1	0.7	2.6
252	Latvia°	3	21.1	0.0	2.8
370	Lithuania°	2	18.5	0.3	1.9
169	Luxembourg°	4	20.1	1.2	4.2
299	Malta°	3	20.0	0.0	4.4
3 851	Netherlands°	5	27.9	2.2	15.4
4 025	Poland°	3	23.7	1.4	4.6
2 555	Portugal**	4	23.9	0.4	4.1
2 002	Romania°	2	19.3	0.3	1.9
1 003	Slovakia°	2	18.1	0.3	2.8
685	Slovenia°	2	18.3	0.3	3.3
10 652	Spain**	4	27.9	0.8	7.6
4 443	Sweden°	2	20.8	0.5	1.8
11 889	United Kingdom**	4	27.1	2.3	6.2
6 451	EFTA Member States§	3	21.8	1.0	5.1
111	Iceland°	4	23.4	1.8	0.9
2 957	Norway°	2	24.6	0.5	3.4
3 383	Switzerland*	4	19.3	1.4	6.7
3 474	EU Enlargement Area	3	30.4	0.6	3.4
232	Bosnia & Herzegovina°	2	20.1	0.9	3.0
175	North Macedonia	2	20.2	0.6	1.2
1 041	Serbia°	2	22.2	0.3	2.9
1 855	Turkey	4	38.3	0.8	4.1
171	Albania/Kosovo/Montenegro	2	20.6	0.6	1.8
3 670	ENP countries	4	21.4	0.3	2.4
440	Belarus	2	19.3	0.2	0.7
257	Lebanon	3.5	21.9	0.8	2.8
1 274	Israel	8	27.3	0.1	3.3
498	Moldova°	5	14.1	0.2	0.6
1 201	Ukraine	2	18.7	0.4	2.9
	Other countries				
6 247	Russia (included in total)	3	22.7	1.0	3.5
6 059	Canada (not included in total)	4	24.7	1.6	6.2
3 507	Philippines (not included in total)	2	20.8	1.2	0.8

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

6. Needs

We define sexual health needs as the capabilities, opportunities and motivations to engage in sexual health related behaviour, both precautions and risks. A central research objective of EMIS was to identify sexual health needs that are commonly unmet across the population of gay men and bisexual men and other MSM in order to prioritise those needs for intervention.

EMIS asked about needs related to several types of precautionary behaviour and health outcomes. It also asked about some health needs not related to specific behaviour, including social support and internalised homonegativity.

6.1 Summary

- Social support – using two sub-scales of the SPS, 7% of the whole sample lack reliable alliance and 9% lack social integration.
- Internalised homonegativity – using the short internalised homonegativity scale (SIHS), 12% of the whole sample show evidence of internalised homonegativity
- Unmet need for safer sex
 - 28% do not know that most STIs are easier to transmit than HIV.
 - 26% had condomless sex in last year solely because they lacked access to a condom.
 - 22% are not as sexually safe as they want to be.
 - 17% do not find it easy to say no to unwanted sex.
 - 17% do not know that STIs can be asymptomatic.
 - 14% do not know that HIV can be transmitted from an anus or vagina through a penis during active intercourse.
 - 11% do not know that kissing and saliva exchange does not transmit HIV.
 - 4% worry about their recreational drug use.
- Unmet need for viral hepatitis vaccination
 - 41% do not know that doctors recommend vaccination against hepatitis A and .B for MSM.
 - 28% do not know where to get hepatitis A vaccine (and are not vaccinated against it).
 - 26% do not know where to get hepatitis B vaccine (and are not vaccinated against it).
 - 25% do not know that most hepatitis is caused by viral infections.
 - 24% do not know that hepatitis is an inflammation of the liver.
 - 17% do not know that vaccines exist for hepatitis A and B.
- Unmet need in relation to Post-Exposure Prophylaxis (PEP)
 - 65% do not know that PEP is a one-month course of anti-HIV drugs.
 - 60% are not confident they could access PEP if they needed it.
 - 50% do not know that PEP should be started as soon as possible after exposure.
 - 45% do not know that PEP attempts to stop HIV infection after exposure.
 - 39% have not heard of PEP.
- Unmet need for Pre-Exposure Prophylaxis (PrEP) use
 - 80% do not know that PrEP can be taken intermittently prior to planned risk.
 - 70% do not know that PrEP can be taken as a daily pill protecting against infection as a consequence of condomless intercourse.
 - 49% do not know that PrEP involves someone without HIV taking a pill pre and post sex to prevent HIV infection.
 - 37% have not heard of PrEP.
- Unmet need for HIV testing & treatment
 - 43% do not know that people on effective treatment cannot transmit HIV (or undetectable = uninfected, U=U).
 - 11% do not know that an HIV test may not pick up HIV infection for a few weeks.
 - 9% do not know where to get an HIV test (and have never had one)
 - 9% do not know that there is no cure for HIV infection.
 - 4% are 'unsure' of their HIV status.

6.2 Unmet needs related to all health behaviour

Some health needs are not behaviour-specific but relate to a wide range of behaviour types and outcomes. Two important health provisions for MSM are social support and freedom from internalised homonegativity [27]. In order to reduce data burden on individual respondents (both of these scales required multiple questions) men were randomly given either two sub-scales from the SPS (four items each for Social Integration and Reliable Alliance) or the SIHS [28].

6.2.1 Lack of social support

Half of the respondents were asked these questions at random. We used two sub-scales of the SPS [29] to give a snapshot of social support among MSM. Men were asked 'Do you disagree or agree with the following eight statements?' and were presented with the following eight items in a random order:

- There is no-one who shares my interests and concerns. [R]
- There are people who enjoy the same social activities as I do.
- There is no-one who likes to do the things I do. [R]
- I feel part of a group of people who share my attitudes and beliefs.
- There are people I can count on in an emergency.
- There is no-one I can depend on for aid if I really need it. [R]
- There are people I can depend on to help me if I really need it.
- If something went wrong no-one would help me. [R]

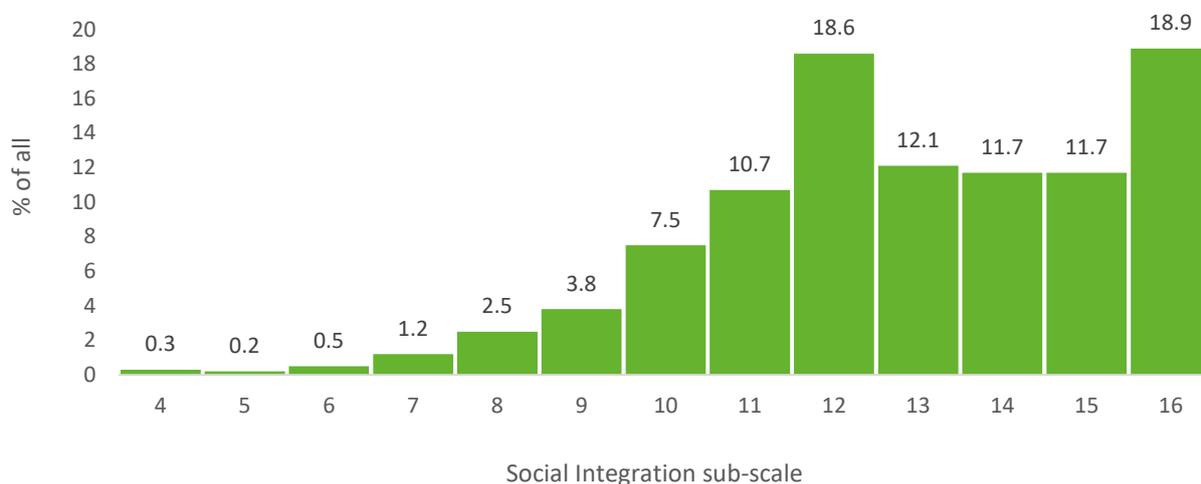
Men were instructed to rate each statement using one of four responses: Strongly disagree; Disagree; Agree; Strongly agree. Each response contributed to an overall score (Strongly disagree=1, Disagree=2, Agree=3 and Strongly agree=4). Items above marked [R] were reverse scored (i.e. Strongly disagree=4, Disagree=3, Agree=2, Strongly agree=1).

The first four items measure social integration and the second four measure reliable alliance. Each subscale can therefore score from 4 to 16.

Social integration

Social integration is the extent to which people feel they belong in a group. The mean score on the social integration sub-scale was 12.9 (median 13) out of 16. The figure below shows how the scores for the entire sample were distributed. Ideally, we would like all men to be on the extreme right.

Figure 6.1 Social integration sub-scale scores for the whole sample (N=62 754, missing n=1 013; not asked of N=64 025)

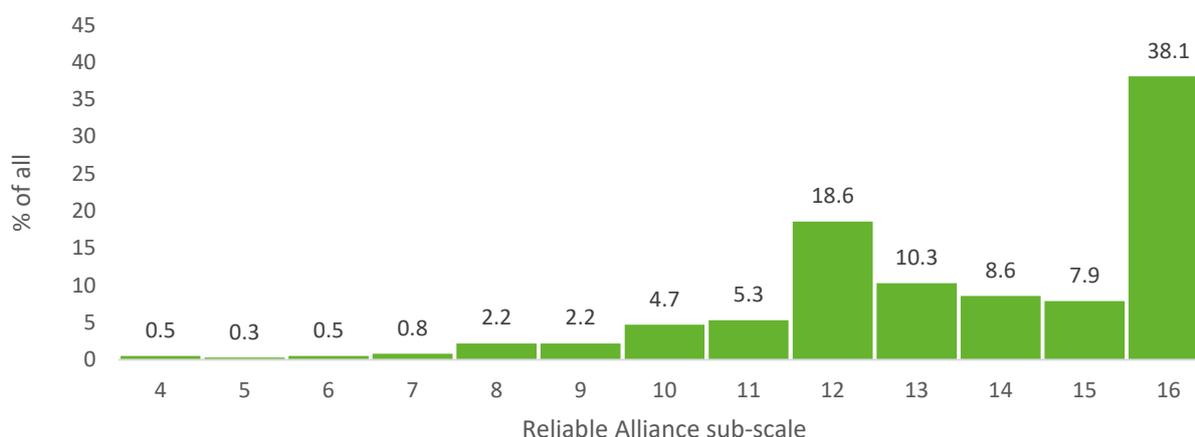


Almost one fifth (19%) of all men scored at the top of the scale for social integration and 9% had a score below 10, an indication of social alienation. The percentage scoring below 10 in each country is given in section 6.9 and for each of the target groups in Chapter 8.

Reliable alliance

Reliable alliance is the extent to which people can call on others when they are in need. The mean reliable alliance score was 13.6 (median 14) out of 16, higher than the score for social integration. Figure 6.2 shows the distribution of reliable alliance scores for the entire sample. Ideally we would like all men to be on the extreme right.

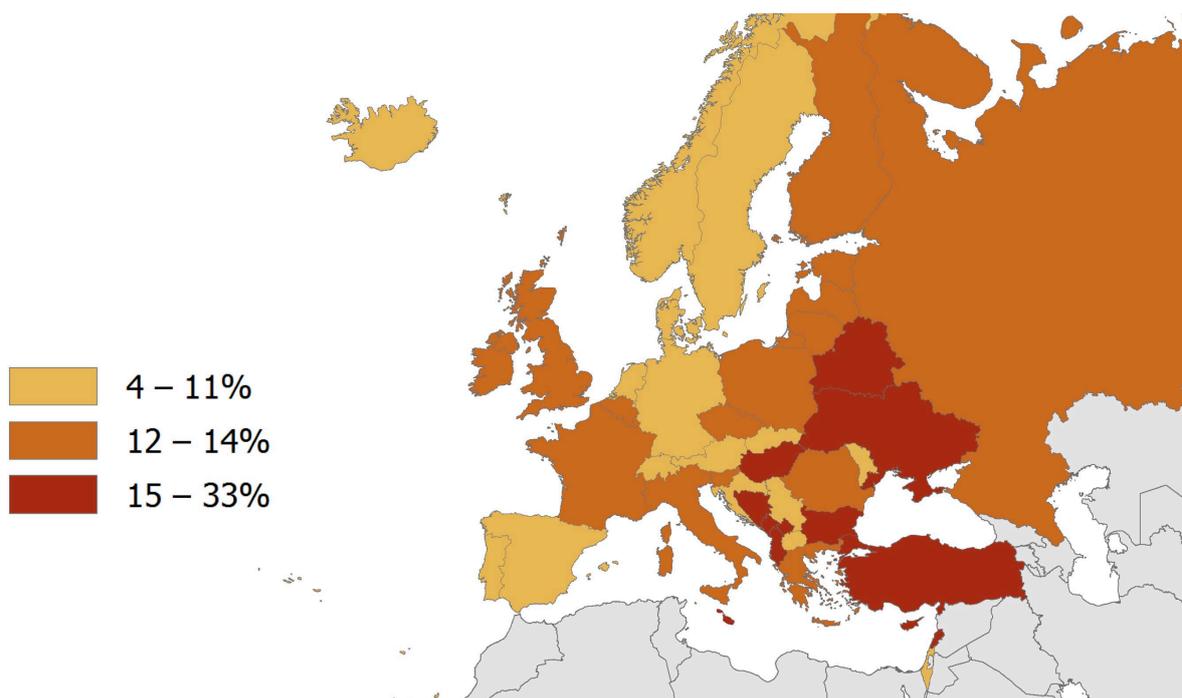
Figure 6.2 Reliable alliance sub-scale scores for the whole sample (N=58 457, missing n=5 310, not asked of N=64 025)



Overall, 38% scored at the top of the reliable alliance sub-scale (compared with only 19% scoring at the top of the social integration sub-scale). Conversely, 7% scored below 10 on the reliable alliance sub-scale (compared with 9% on the social support sub-scale). The percentage scoring below 10 in each country is given in Section 6.9 and for each of the target groups in Chapter 8.

About 1-in-8 (12%) of men scored under 10 on the social support sub-scale and/or the reliable alliance sub-scale. Community development could help these men. The following figure shows how lack of social support varied across Europe.

Figure 6.3 Percentage lacking social support (scoring <10 in either sub-scale SPS) (N=57 853)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

6.2.2 Internalised homonegativity

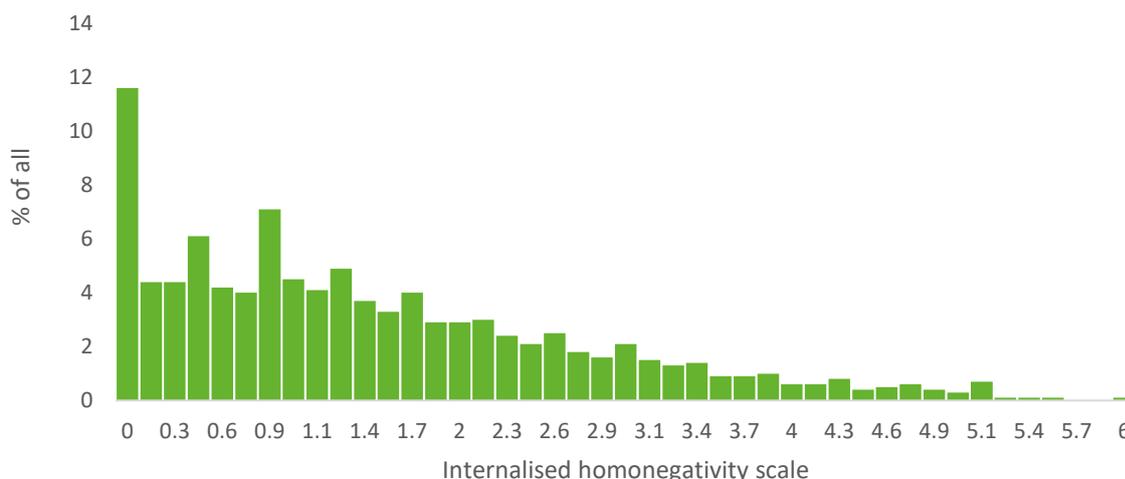
Negative feelings towards one's own homosexuality have been shown to be related to increased sexual risk-taking and less HIV testing, as well as being predictors of anxiety and depression among MSM [28]. We used the short internalised homonegativity scale (SIHS) to estimate the extent of homonegativity in the sample. Men who were not questioned about the social support scales were asked: 'Do you disagree or agree with the following statements on a scale of 1 (Strongly disagree) to 7 (Strongly agree)? Please do not spend too much time thinking about any one statement. (Tick one answer in each row)'

They were presented with the following seven items in a random order:

- 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.

The seven responses add up to a score between 0 and 42 which is then divided by 7 to give a score between 0 and 6 that has 43 points. The distribution of the SIHS for the entire sample across these 43 points is set out below. Ideally we would like all men to be on the extreme left.

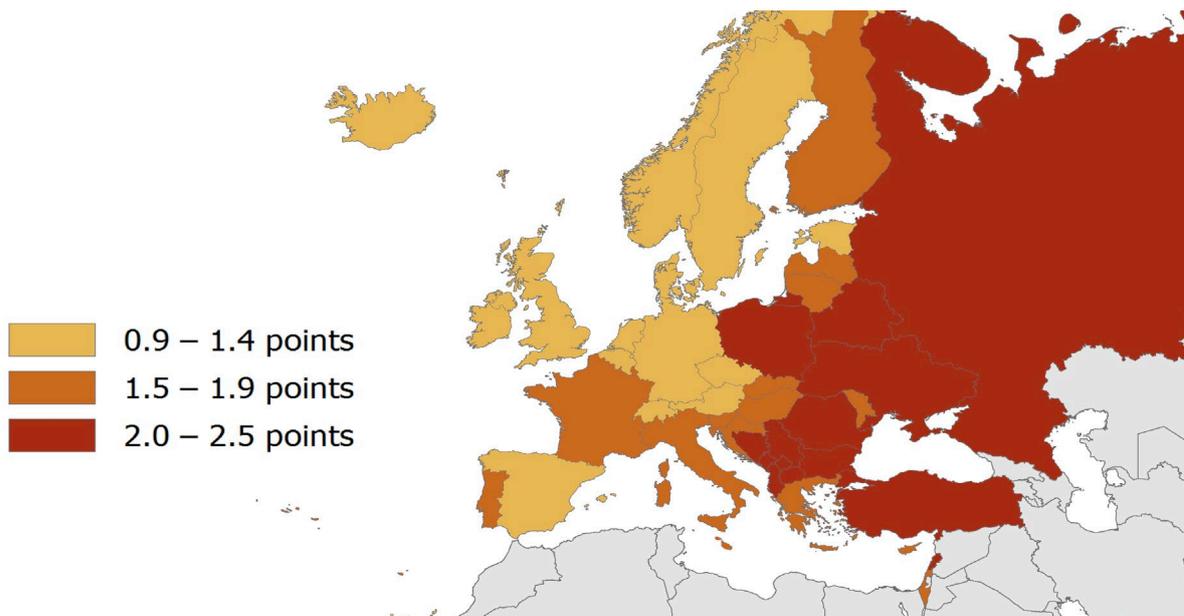
Figure 6.4 Short Internalised Homonegativity Scale scores for the whole sample (N=55 301, missing n=8 729; not asked N=63 762)



The mean score was 1.5. One-in-eight (12%) scored zero, the 'best' possible score and 13% scored above the half way point on the scale (i.e. more 3). The mean SIHS score in each country is given at the end of this chapter and the mean SIHS score for each target group is given in Chapter 8.

Internalised homonegativity in a population could be reduced through improving LGB human rights and reducing homonegative social climates [30]. The following figure shows how internalised homonegativity varied across Europe.

Figure 6.5 Score (mean) for the SIHS (0 to 6) (N=55 301)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

6.3 Unmet needs for safer sex

In order to have safer sex men need opportunities, capabilities and the motivation to do so. We measured knowledge (motivation), condom access (opportunities) and sexual self-efficacy (capabilities) to provide an overview of unmet safer sex needs.

6.3.1 Low self-efficacy: safe as I want to be and easy to say 'no'

Men were asked whether they disagree or agree with the following two statements.

- The sex I have is always as safe as I want it to be
- I find it easy to say 'no' to sex I don't want

Table 6.1 Self-efficacy measures

	The sex I have is always as safe as I want it to be (N=127 438, missing n=354)	I find it easy to say 'no' to sex I don't want (N=127 130, missing n=662)
Strongly agree	38.7	44.5
Agree	39.6	37.6
Neither/not sure	10.5	9.3
Disagree	7.8	6.2
Strongly disagree	3.3	2.4
TOTAL	100.0	100.0

Overall, 22% did not agree the sex they have is always as safe as they want it to be, indicating a need for greater sexual self-efficacy for about 1-in-5 of the respondents. Only slightly fewer, 18%, did not agree that they find it easy to say no to sex they do not want. This suggests a large proportion of men lack the capabilities to negotiate the sex they want. Targeted assertiveness training tailored to the sexual context could address this need.

6.3.2 Poor condom access: recency of condomless intercourse due to lack of condom

Men were asked 'When was the last time you had intercourse without a condom solely because you did not have a condom?' and were offered a scale to indicate how recently this had occurred. The percentages for each time period are shown in Table 6.2.

Table 6.2 Recency of condomless intercourse due to lack of condom

'When was the last time you had intercourse without a condom solely because you did not have a condom?' (N=127 143, missing n=649)	% of all	Cumulative %
24 hours	2.0	2.0
7 days	4.6	6.6
4 weeks	4.9	11.6
6 months	8.2	19.8
12 months	5.9	25.7
5 years	9.8	35.5
Over 5 years	8.4	43.9
Never	56.1	100.0
TOTAL	100.0	–

Over half the men indicated they had never had condomless intercourse solely due to the fact that they did not have a condom. Over a quarter (26%) indicated they had done so in the last year.

Condom access remains an unmet need for a large proportion of MSM. Improved condom distribution schemes could meet this need.

6.3.3. Low HIV and STI transmission knowledge

Men were told 'The following statements are all TRUE. Did you know this already?' They were then offered the statements in Table 6.3, which also shows the percentages selecting each response. The column on the right adds together the men who did not already know the statement was true.

Table 6.3 HIV and STI transmission knowledge

% of all respondents	Already knew	Wasn't sure	Didn't know	Don't understand	Don't believe	Did not already know
HIV cannot be passed during kissing, including deep kissing, because saliva does not transmit HIV. (N=127 148, missing n=644)	88.6	7.9	2.3	0.1	1.2	11.4
You can pick up HIV through your penis while being 'active' in anal or vaginal sex (fucking) without a condom, even if you don't ejaculate. (N=127 062, missing n=730)	86.5	9.3	3.5	0.2	0.6	13.5
You can pick up HIV through your rectum or vagina while being 'passive' during sex (being fucked). (N=126 709, missing n=1 083)	95.7	2.6	1.3	0.1	0.2	4.3
Most sexually transmitted infections can be passed on more easily than HIV. (N=127 098, missing n=694)	71.8	16.4	10.6	0.7	0.5	28.2
Because they sometimes have no symptoms, people can have sexually transmitted infections without knowing it. (N=126 919, missing n=873)	82.9	9.9	6.4	0.5	0.3	17.1
The correct use of condoms throughout intercourse reduces the likelihood of picking up and passing on STIs (including HIV). (N=127 037, missing n=755)	96.5	1.8	1.3	0.2	0.2	3.5

Basic knowledge about HIV/STI transmission was generally high. However, there is still a lack of knowledge on the HIV risk of insertive intercourse, the existence of asymptomatic infections and the differences in transmissibility of other STIs compared with HIV.

Less than 1% of respondents (0.7%) did not already know any of these six facts, 1% did not know five of the six, 2% did not know four, 5% did not know three, 12% did not know two and 21% did not know one of the six. The remaining 58% indicated they already knew all six facts.

Community-based education can address the lack of knowledge in certain areas.

6.4 Unmet needs for safer drug use: drug use concern

Men who indicated that they had taken any illicit drug in the last 12 months were asked whether they disagree or agree with the following statement: 'I worry about my recreational drug use'. While current good practice in drug use measurement recommends avoiding the term 'recreational' (as it is imprecise), we have retained it here as the question is identical to that asked in EMIS 2010.

Table 6.4 Concern about recreational drug use among the whole sample, and among men taking drugs in the last year

I worry about my recreational drug use	% of all men (N=125 602, missing n=2 190)	% of men who used drugs in the last year (N=63 100, missing n=2 190)
Strongly agree	1.4	4.0
Agree	3.0	8.5
Neither/not sure	4.1	11.4
Disagree	8.0	22.4
Strongly disagree	19.1	53.7
I don't take drugs	14.6	–
[Not asked as indicated no drug use last 12 months]	49.8	–
TOTAL	100.0	100.0

Overall, 4% of all respondents agreed that they worry about their recreational drug use, including 1% who agreed strongly.

Of the men who earlier in the survey had indicated that they had used at least one illicit drug in the last 12 months, 29% selected 'I don't take drugs' in response to the question on concern about drug use. This was presumably because they had rarely used drugs during the last year or because they had discontinued their use in the past year. Excluding the men who were not asked the question (because they did not take drugs in the past year) and those who answered 'I do not take drugs', the percentage of men who agreed that they worry about their drug use was 13%.

6.5 Unmet needs for post-exposure prophylaxis

HIV post-exposure prophylaxis (PEP) is an HIV prevention tactic of taking anti-HIV drugs immediately after exposure for a period of time. PEP has been known to prevent HIV infection following sexual exposure for over 20 years. To use it, people need to know they have (probably) been exposed to HIV, to know about PEP and to know how to access it.

6.5.1 Unaware of PEP

Men were asked 'Have you heard of PEP?' Overall, 61% said yes, 9% were unsure and 30% had not heard of it. Therefore at least 39% of men are in need of basic PEP awareness.

6.5.2 Low PEP knowledge

Men were told 'The following statements are all TRUE. Did you know this already?' and were offered the statements in Table 6.5, which also shows the percentages indicating each response. The column on the right adds together the men who did not already know the statement was true.

Table 6.5 Post-exposure prophylaxis (PEP) knowledge

% of all respondents	Already knew	Wasn't sure	Didn't know	Don't understand	Don't believe	Did not already know
Post-exposure prophylaxis (PEP) attempts to stop HIV infection taking place after a person is exposed to the virus (for example by having intercourse without a condom).	55.2	14.1	28.5	1.4	0.8	44.8
PEP is a one-month course of anti-HIV drugs.	35.4	18.1	44.4	1.0	1.1	64.6
PEP should be started as soon as possible after exposure, preferably within hours.	50.2	12.6	35.7	0.8	0.7	49.8

Much larger proportions were in need of basic PEP knowledge than were in need of basic knowledge about safer sex. This need can be addressed with community-based education.

6.5.3 Lack of confidence to access PEP

Men not diagnosed with HIV were asked 'How confident are you that you could get PEP if you thought you needed it?' and offered the following responses.

Table 6.6 Confidence accessing PEP among men not diagnosed with HIV

Confidence obtaining PEP if needed (among men not diagnosed with HIV)	% of men not diagnosed with HIV (N=113 509, missing n=244)
I don't know	22.8
Not at all confident	17.0
A little confident	20.3
Quite confident	23.8
Very confident	16.1
TOTAL	100.0

A large proportion, 60%, did not know, or were not at all confident, or a little confident they could access PEP if they needed it.

Confidence in being able to access preventive tactics is a consequence of service availability as well as community knowledge. Visible and accessible services will increase PEP access efficacy, as well as community education.

6.6 Unmet needs for PrEP use (Pre-Exposure Prophylaxis)

HIV Pre-Exposure Prophylaxis (PrEP) is an HIV prevention tactic of taking anti-HIV drugs before and after exposure to prevent HIV infection. In order to take PrEP, men need the opportunity to use it, the motivation to do so and the capability both to access PrEP and to take it effectively.

6.6.1 Unaware of PrEP

Men were asked 'Have you heard of PrEP?' Overall, 63% indicated 'yes', 5% were 'Not sure' and 32% had not heard of it (N=125 525, missing n=2 267). Therefore, over one third (37%) of all men are in need of basic PrEP awareness.

Unmet needs are associated with each other

More men had heard of PrEP than had heard of PEP (despite PrEP being the more recent development). Being aware of one was a very strong predictor for being aware of the other – 89% of men who had heard of PEP had also heard of PrEP, compared with only 18% of those who had not heard of PEP.

6.6.2 Low PrEP knowledge

Men were told 'The following statements are all TRUE. Did you know this already?' and were offered the statements in Table 6.7 below, which also shows the percentages indicating each response. The column on the right adds together the men who did not already know the statement was true. (Following these items respondents were told 'Please note: taking PrEP just before and after sex has been shown to be protective in anal but not vaginal intercourse.')

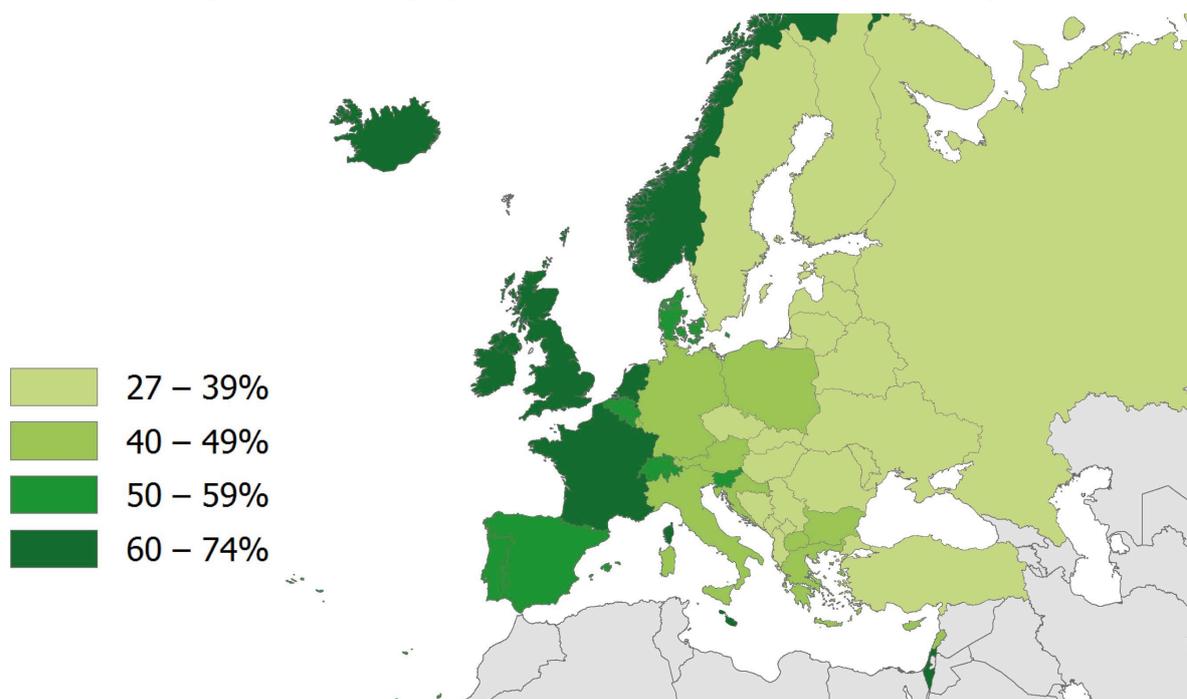
Table 6.7 Pre-Exposure Prophylaxis (PrEP) knowledge

% of all respondents	% already knew	% wasn't sure	% didn't know	% don't understand	% don't believe	% did not already know
Pre-exposure prophylaxis (PrEP) involves someone who does not have HIV taking pills before as well as after sex to prevent them getting HIV. (N=127 051, missing n=741)	50.7	13.1	33.9	0.9	1.5	49.3
PrEP can be taken as a single daily pill if someone does not know in advance when they will have sex. (N=126 926, missing n=866)	41.2	14.2	42.2	0.8	1.6	68.8
If someone knows in advance when they will have sex, PrEP needs to be taken as a double dose approximately 24 hours before sex and then at both 24 and 48 hours after the double dose. (N=126 500, missing n=1 292)	19.8	14.4	62.6	1.2	2.0	80.2

Similar to the unmet need for PEP knowledge, a much larger proportion of respondents were in need of basic PrEP knowledge than were in need of basic knowledge on safer sex.

The very high proportion of men in need of knowledge about PrEP dosing options was particularly significant.

PrEP knowledge varied substantially across Europe. This unmet need can be addressed with community-based education.

Figure 6.6 Percentage PrEP knowledge (first row, first cell in Table 6.7) (N=127 051)

http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

6.6.3 Certainty of intention to use PrEP

Health promotion is not about getting every MSM to take PrEP, or have the intention to use PrEP. The aim of health promotion is to ensure that all men's needs are met with regard to PrEP and for men to be confident of whether PrEP is right for them. Therefore, one indicator of unmet prevention needs is being unsure of whether or not to use PrEP. After men had been told some basic facts about PrEP, they were asked to answer the following question.

Men not diagnosed with HIV were asked 'If PrEP was available and affordable to you, how likely would you be to use it?' and were offered the responses in Table 6.8 below, which also shows the proportions for each response.

Table 6.8 Likelihood of using PrEP if it were available and affordable

If PrEP was available and affordable to you, how likely would you be to use it? (among men not diagnosed with HIV) (N=113 296, missing n=457)	%
Very unlikely	15.2
Quite unlikely	13.1
Not sure	27.3
Quite likely	22.1
Very likely	22.3
TOTAL	100.0

Overall, 28% said they were unlikely to use PrEP and 27% were unsure whether they would use it even if it was available and affordable. However, 44% were likely to use it, including 22% that were very likely to do so. Community education can help to foster firm intentions as to whether to use/not use PrEP.

6.7 Unmet needs for HIV testing and treatment

As effective HIV treatment is now a successful means of primary HIV prevention, and HIV testing is the gateway to treatment for people with HIV, facilitating HIV testing is now a major objective of most HIV prevention programmes. In order to test for HIV, men need an opportunity to test, the motivation to seek or accept an offer of a test, and the capability of doing so.

6.7.1 Low HIV test/treatment knowledge

Men were told 'The following statements are all TRUE. Did you know this already?' and were offered each of the statements in Table 6.9 below, which also shows the percentages selecting each response. The column on the right adds together all those who did not already know the statement was true.

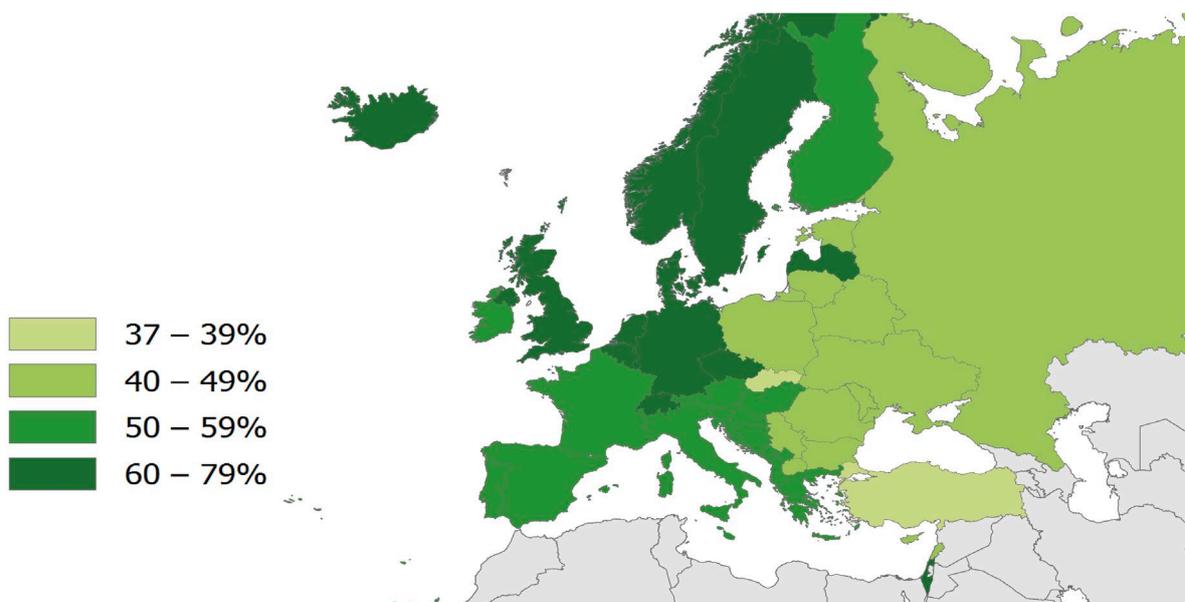
Table 6.9 HIV testing and treatment knowledge

% of all respondents	% already knew	% wasn't sure	% didn't know	% don't understand	% don't believe	% did not already know
AIDS is caused by a virus called HIV. (N=127 646, missing n=146)	97.6	1.4	0.5	0.2	0.4	2.4
You cannot be confident about whether someone has HIV or not from their appearance. (N=127 513, missing n=279)	94.2	2.8	0.9	0.4	1.6	5.8
There is a medical test that can show whether or not you have HIV. (N=127 522, missing n=270)	97.4	1.2	0.8	0.2	0.4	2.6
If someone becomes infected with HIV it may take several weeks before it can be detected in a test. (N=127 617, missing n=175)	88.9	6.2	3.8	0.2	0.9	11.1
There is currently no cure for HIV infection. (N=127 384, missing n=408)	91.4	5.2	1.0	0.3	2.1	8.6
HIV infection can be controlled with medicines so that its impact on health is much less. (N=127 190, missing n=602)	94.3	3.9	1.2	0.1	0.4	5.7
A person with HIV who is on effective treatment (called 'undetectable viral load') cannot pass their virus to someone else during sex. (N=127 425, missing n=367)	57.4	20.3	14.7	1.1	6.5	42.6

Overall, 0.3% knew none of the seven test and treat facts, 0.3% did not know six of them, 0.7% did not know five, 1.7% did not know four, 4% did not know three, 11% did not know two and 31% did not know one of the seven facts. The remaining 51% already knew all seven test and treat facts. The mean number of facts about HIV testing and treatment not already known was 0.77. Variations of this figure according to country of residence are presented at the end of this chapter and across key target groups in Chapter 8.

Knowledge of HIV testing and treatment was generally high, with the exception of the fact that a person with HIV who has undetectable viral load is not infectious (U=U) – 43% did not already know this. The first country to publicly talk about U=U was Switzerland in 2008 (then called the 'Swiss statement') [31]. Although many European countries have introduced U=U campaigns in the last few years, knowledge of this is still scarce.

Figure 6.7 U=U knowledge (last row, first cell in Table 6.9) (N=127 425)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

6.7.2 HIV status uncertainty

Being uncertain of one's HIV status is a key motivation for testing. Men were asked 'What do you think your current HIV status is (whether or not you've ever tested for HIV)?' and were offered the responses in Table 6.10, which also shows the percentage of men giving each response according to their HIV testing history.

Table 6.10 Perceived HIV status by HIV testing history

What do you think your current HIV status is (whether or not you've ever tested for HIV)?	Never tested (n=26 926, missing n=151)	Last test negative (n=86 454, missing n=222)	Diagnosed HIV positive (n=13 123, missing n=49)	TOTAL
Definitely negative (I don't have HIV)	57.7	63.7	1.6	56.0
Probably negative	33.7	33.0	1.1	29.8
Not sure/I don't know	7.9	3.1	1.0	3.9
Probably positive	0.4	0.2	1.5	0.3
Definitely positive (I do have HIV)	0.4	0.1	94.8	10.0
TOTAL	100.0	100.0	100.0	100.0

HIV status uncertainty is relatively common (4% of all men say they are unsure, or do not know their status and 34% were not definite) and therefore it is not an unmet need only for men who have never tested for HIV. While being uncertain about status is most common among those that have never tested (8% unsure and 42% were not definite), there is also uncertainty among men who have previously tested negative (3% unsure and 36% not definite, who presumably have engaged in risk behaviour since their last negative test), and among men who have previously tested positive for HIV (1% unsure and 4% not definite).

Among the men who reported that they had been diagnosed with HIV, 3% felt they were 'definitely negative (I don't have HIV)' or 'probably negative'. This means that 0.3% of the entire sample had been diagnosed with HIV but thought they were negative. A survey is not the ideal setting to establish how or why this is the case, but it is feasible that some men find this question confusing if they are now being told they are undetectable.

Finally, 0.3% of the entire sample think they are (probably or definitely) HIV positive but have not been diagnosed with HIV. This group contains both men that have previously tested negative and men that have never tested, with the latter representing a larger portion. To benefit from HIV treatments these men require an HIV diagnosis.

Uncertainty about HIV status can be addressed through provision of accessible and acceptable HIV testing services.

6.7.3 Not knowing where to get an HIV test

Men who had never tested for HIV (21% of all men, see Section 7.7.1) were asked 'Do you know where you could get an HIV test?' Of those men who had never been tested, 23% did not know where to get an HIV test and another 18% were unsure (N=27 060, missing n=17). The need to know where to test for HIV was unmet for 41% of men who had never tested.

Not knowing where to test for HIV is an issue that can be addressed through community education and service promotion.

6.7.4 Lack of access to ART

Overall, 10% of respondents (N=13 172) indicated they had been diagnosed with HIV (see Section 4.3.1). Of these men, 5% had never taken antiretroviral treatment and of the 91% who had ever taken ART, 0.7% were not currently taking it (see Section 5.2.1 on ART).

The remaining 3.7% of men with diagnosed HIV did not know whether they had ever taken ART, indicating a small but serious gap in treatment knowledge.

Men with diagnosed HIV who had never taken ART (n=673) were asked 'Why have you never taken antiretroviral treatment for your HIV infection?' and those who had taken it and stopped (n=87) were asked 'Why have you stopped taking antiretroviral treatment?' They were asked to tick as many as responses as appropriate (in the survey the responses were rotated on presentation and they are ordered below by commonality). Table 6.11 also shows the percentages of the two groups indicating each response.

Table 6.11 Reasons for not taking ART among men with diagnosed HIV

Reasons for not taking ART. Participants were asked to tick as many answers as applied	% of men with diagnosed HIV who have never taken ART (N=653, missing n=20)	% of men with diagnosed HIV who had stopped taking ART (N=85, missing n=2)
My doctor says I don't need antiretroviral treatment at the moment	40.3	16.5
I was diagnosed very recently	28.2	[Response not offered]
I feel it is not necessary	13.8	24.7
To avoid the side-effects	10.6	24.7
I don't want to be reminded about HIV every day	10.3	15.3
I'm afraid people will notice	6.6	5.9
I don't know where to get the treatment	8.3	[Response not offered]
I [can't/can no longer] afford the treatment	4.7	12.9
I [don't/no longer] have health insurance cover	3.2	10.6

Among men with HIV who had never taken ART, 8% indicated not knowing where to get it and another 8% indicated that they did not have health insurance cover and/or could not afford the treatment (0.3% of all men with diagnosed HIV).

Overall, 20% of men who had stopped taking ART gave the reason that they no longer had insurance cover and/or could no longer afford the treatment (0.1% of all men with diagnosed HIV).

6.8 Unmet needs for viral hepatitis vaccination

Effective vaccines exist for both hepatitis A and B. In order to benefit from them men need an opportunity to be vaccinated, the capability to be vaccinated and the motivation to seek or accept vaccination.

6.8.1 Hepatitis A and B knowledge

Men were told 'The following statements are all TRUE. Did you know this already?' and were offered the statements in Table 6.12, which also shows the percentages giving each response. The column on the right is the sum total of men who did not already know the statement was true.

Table 6.12 Hepatitis knowledge

% of all respondents	Already knew	Wasn't sure	Didn't know	Don't understand	Don't believe	Did not already know
Hepatitis is an inflammation of the liver. (N=127 310, missing n=482)	76.5	12.2	10.6	0.2	0.4	23.5
Most hepatitis is caused by viruses. (N=127 005, missing n=787)	75.8	15.5	8.2	0.2	0.2	24.2
There are several types of hepatitis viruses, named after the letters of the alphabet. (N=126 955, missing n=837)	91.9	3.8	4.0	0.2	0.1	8.1
Vaccines exist for both hepatitis A and hepatitis B. (N=127 104, missing n=688)	83.4	11.3	5.0	0.1	0.2	16.6
Doctors recommend men-who-have-sex-with-men are vaccinated against both hepatitis A and hepatitis B viruses. (N=127 291, missing n=501)	59.0	15.6	24.5	0.3	0.6	41.0

Overall, 3% of men did not know any of the five facts, 5% did not know four, 9% did not know three, 15% did not know two and 23% did not know one of the five. The remaining 45% already knew all five hepatitis facts. The mean number of facts not known about hepatitis was just over 1.

The fact most commonly unknown was that doctors recommend gay men and other MSM should be vaccinated against both hepatitis A and hepatitis B, a need which is unmet in 41% of men.

6.8.2 Not knowing where to get hepatitis A and B vaccination

Men who had not been vaccinated against hepatitis A (and who did not know they were immune to hepatitis A), or who had not completed the course of vaccinations, or who did not know their hepatitis A vaccination status (collectively 52% of all men) were asked 'Do you know where you could get vaccinated against hepatitis A?'

Similarly, men who had not been vaccinated against hepatitis B (and who did not know they were immune to hepatitis B), or who had not completed the course of vaccinations, or who did not respond to the vaccination question, or who did not know their hepatitis B vaccination status (collectively 49% of all men) were asked 'Do you know where you could get vaccinated against hepatitis B?' Table 6.13 shows the responses to these two questions.

Table 6.13 Knowledge of where to get hepatitis A and B vaccinations among men that could benefit from them

	Do you know where you could get vaccinated against hepatitis A?	Do you know where you could get vaccinated against hepatitis B?
	% of men who could benefit from hepatitis A vaccination (N=66 359, missing n=371)	% of men who could benefit from hepatitis B vaccination (N=62 098, missing n=149)
No	36.0	35.9
Not sure	18.1	18.4
Yes	45.9	45.7
TOTAL	100.0	100.0

Overall, 54% of men who could benefit from hepatitis A vaccine and 54% of men who could benefit from hepatitis B vaccine did not know where to access such vaccinations.

6.9 National variation in needs

Table 6.14 National variation in key needs

Qualifying cases	Country	% lacking social support (scoring <10 in either sub-scale SPS)	Score (mean) for the SIHS (0 to 6)	% lacking control of safer sex	% lacking control over unwanted sex
127 792	Total (used throughout this report)	11.7	1.5	11.1	8.6
112 789	EU Health Programme	11.4	1.4	11.1	8.2
107 950	EU Member States	11.5	1.4	10.9	8.5
2 705	Austria°	7.1	1.3	6.9	8.2
3 038	Belgium°	12.7	1.4	12.1	9.0
1 177	Bulgaria°	16.9	2.1	10.3	7.3
1 015	Croatia°	9.5	1.7	3.6	2.8
307	Cyprus°	14.8	1.9	10.2	3.6
1 897	Czech Republic°	11.8	1.4	7.1	6.1
1 698	Denmark**	7.2	1.2	15.5	10.3
212	Estonia°	11.5	1.4	7.5	5.2
1 409	Finland**	12.2	1.5	9.8	6.7
10 996	France**	13.6	1.5	13.6	8.6
23 107	Germany°	8.7	1.2	6.2	7.2
2 909	Greece°	12.7	1.7	8.4	5.0
2 177	Hungary°	14.8	1.7	7.4	8.8
2 083	Ireland°	12.9	1.4	16.0	11.9
11 025	Italy**	14.1	1.7	12.8	9.8
252	Latvia°	12.7	1.9	22.4	10.0
370	Lithuania°	14.1	1.9	8.9	9.3
169	Luxembourg°	11.7	1.6	7.7	7.7
299	Malta°	16.3	1.5	11.0	10.1
3 851	Netherlands°	8.9	1.3	10.3	7.0
4 025	Poland°	14.0	2.1	12.6	9.4
2 555	Portugal**	8.1	1.5	14.1	8.7
2 002	Romania°	12.3	2.1	11.3	5.8
1 003	Slovakia°	10.0	1.7	6.5	4.8
685	Slovenia°	12.1	1.8	2.8	4.1
10 652	Spain**	9.9	1.3	12.6	9.5
4 443	Sweden°	11.4	1.3	12.4	8.0
11 889	United Kingdom**	13.3	1.3	15.0	11.1
6 451	EFTA Member States[§]	7.7	1.2	12.5	8.8
111	Iceland°	4.3	0.9	17.1	11.0
2 957	Norway°	8.1	1.3	17.2	9.7
3 383	Switzerland*	7.5	1.2	8.3	7.9
3 474	EU Enlargement Area	17.1	2.2	12.0	8.0
232	Bosnia & Herzegovina°	19.0	2.2	5.6	1.7
175	North Macedonia	11.1	2.3	8.0	6.9
1 041	Serbia°	10.9	2.0	6.3	2.3
1 855	Turkey	20.7	2.3	16.7	12.3
171	Albania/Kosovo/Montenegro	21.1	2.5	8.2	5.4
3 670	ENP countries	15.0	1.8	17.5	14.2
440	Belarus	19.6	2.1	8.4	6.4
257	Lebanon	32.8	2.5	10.9	8.6
1 274	Israel	10.0	1.6	25.4	23.5
498	Moldova°	10.2	1.5	25.4	18.2
1 201	Ukraine	16.3	2.0	10.6	6.9
	Other countries				
6 247	Russia (included in total)	14.1	2.0	9.3	8.2
6 059	Canada (not included in total)	11.3	1.3	16.1	12.
3 507	Philippines (not included in total)	14.1	2.1	14.8	14.8

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 6.15 National variation in key needs

Qualifying cases	Country	% with condomless intercourse because lacked condoms in the last 12 months	Number (mean) of 6 HIV/STI transmission facts not already known	% concerned about own drug use	% unaware of PEP	% without confidence to access PEP, excluding men with diagnosed HIV
127 792	Total (used throughout this report)	25.7	0.78	12.5	39.0	60.1
112 789	EU Health Programme	25.7	0.78	12.5	39.0	60.1
107 950	EU Member States	25.3	0.75	12.2	36.8	59.3
2 705	Austria°	24.3	1.00	9.2	39.2	57.5
3 038	Belgium°	27.5	0.61	11.5	30.6	46.2
1 177	Bulgaria°	27.6	0.78	16.1	61.1	86.3
1 015	Croatia°	24.8	0.70	9.0	51.4	84.6
307	Cyprus°	22.2	0.96	20.0	47.4	57.0
1 897	Czech Republic°	28.1	0.87	13.4	50.8	61.1
1 698	Denmark**	22.9	0.59	7.1	31.4	57.5
212	Estonia°	19.3	0.91	3.3	64.6	78.7
1 409	Finland**	16.5	0.47	5.6	45.8	57.0
10 996	France**	35.3	0.68	11.6	30.8	37.8
23 107	Germany°	22.4	0.93	8.6	36.1	60.6
2 909	Greece°	18.8	0.79	18.7	44.8	41.5
2 177	Hungary°	23.0	0.95	11.6	66.4	84.3
2 083	Ireland°	26.5	0.71	10.4	17.2	54.8
11 025	Italy**	24.4	0.68	13.4	43.0	56.7
252	Latvia°	19.7	1.09	22.1	62.1	80.9
370	Lithuania°	24.0	0.99	8.6	67.3	80.6
169	Luxembourg°	27.2	0.70	8.5	33.9	53.0
299	Malta°	29.9	0.80	15.7	27.0	62.5
3 851	Netherlands°	21.1	0.41	8.1	16.4	51.6
4 025	Poland°	25.8	0.75	14.3	53.4	78.0
2 555	Portugal**	31.9	0.58	44.7	32.0	66.0
2 002	Romania°	32.0	1.15	18.3	62.1	82.4
1 003	Slovakia°	30.2	1.07	10.5	65.7	90.6
685	Slovenia°	14.1	0.75	6.5	38.8	57.7
10 652	Spain**	29.9	0.72	20.6	36.4	69.3
4 443	Sweden°	19.8	0.83	4.4	57.0	74.3
11 889	United Kingdom**	21.6	0.54	10.3	14.8	49.7
6 451	EFTA Member States§	22.7	0.75	8.1	31.2	44.5
111	Iceland°	33.6	0.61	7.5	33.3	68.2
2 957	Norway°	23.7	0.77	6.9	34.5	51.7
3 383	Switzerland*	21.4	0.74	8.8	28.2	36.9
3 474	EU Enlargement Area	39.9	0.94	12.4	63.1	89.8
232	Bosnia & Herzegovina°	27.2	0.75	11.1	57.3	88.7
175	North Macedonia	28.0	0.70	10.0	52.0	90.1
1 041	Serbia°	26.7	0.70	11.1	54.3	90.1
1 855	Turkey	50.5	1.10	12.9	70.1	90.4
171	Albania/Kosovo/Montenegro	34.5	1.25	19.1	60.1	82.7
3 670	ENP countries	27.2	1.06	18.9	49.7	63.4
440	Belarus	23.4	0.78	15.4	67.1	73.0
257	Lebanon	41.2	1.07	25.4	56.6	76.9
1 274	Israel	22.0	0.94	10.1	26.7	44.1
498	Moldova°	47.1	1.88	13.2	66.2	85.3
1 201	Ukraine	23.1	0.95	33.8	59.2	69.1
	Other countries					
6 247	Russia (included in total)	27.9	1.07	24.2	66.2	71.4
6 059	Canada (not included in total)	22.4	0.61	10.8	26.0	47.1
3 507	Philippines (not included in total)	44.7	0.83	21.3	56.9	72.1

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 6.16 National variation in key needs

Qualifying cases	Country	% unaware of PrEP	% uncertain whether would use PrEP or not	Number (mean) of 6 PEP/PrEP facts not already known	Number (mean) of 7 HIV testing/treatment facts not already known	% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)
127 792	Total (used throughout this report)	37.0	27.3	3.47	0.79	42.6
112 789	EU Health Programme	37.0	27.3	3.47	0.79	42.6
107 950	EU Member States	35.0	28.3	3.38	0.74	41.6
2 705	Austria°	43.4	29.9	3.53	0.74	44.3
3 038	Belgium°	26.8	28.8	3.05	0.66	38.9
1 177	Bulgaria°	52.9	22.8	4.31	1.10	56.0
1 015	Croatia°	44.3	33.9	4.20	0.92	47.0
307	Cyprus°	47.9	26.2	3.66	1.03	53.1
1 897	Czech Republic°	48.5	31.1	4.09	0.63	36.3
1 698	Denmark**	23.6	22.9	3.33	0.54	21.5
212	Estonia°	56.0	22.3	4.48	0.94	54.8
1 409	Finland**	46.9	29.8	4.23	0.70	44.6
10 996	France**	16.6	25.5	2.71	0.73	40.8
23 107	Germany°	39.7	33.9	3.43	0.68	39.9
2 909	Greece°	50.8	30.1	3.59	0.94	49.3
2 177	Hungary°	63.7	22.9	4.75	0.94	47.7
2 083	Ireland°	13.7	26.9	2.63	0.73	40.8
11 025	Italy**	43.9	25.5	3.92	0.79	46.0
252	Latvia°	54.9	26.9	4.47	1.04	36.1
370	Lithuania°	63.7	28.7	4.56	1.41	53.9
169	Luxembourg°	34.5	31.1	3.34	0.70	40.5
299	Malta°	25.3	23.3	3.17	0.91	46.8
3 851	Netherlands°	15.5	25.8	2.53	0.56	33.4
4 025	Poland°	50.9	20.2	4.04	0.84	52.1
2 555	Portugal**	28.2	19.5	3.04	0.68	43.1
2 002	Romania°	60.5	22.8	4.41	1.14	56.1
1 003	Slovakia°	59.0	28.1	4.64	1.08	63.4
685	Slovenia°	43.1	26.7	3.47	0.87	50.1
10 652	Spain**	33.8	29.6	3.40	0.84	45.5
4 443	Sweden°	54.2	31.6	4.29	0.71	35.9
11 889	United Kingdom**	13.0	26.9	2.35	0.53	32.3
6 451	EFTA Member States§	26.2	29.9	3.11	0.67	35.0
111	Iceland°	19.1	29.9	3.18	0.75	35.1
2 957	Norway°	22.2	29.7	3.27	0.75	37.8
3 383	Switzerland*	29.9	30.0	2.97	0.60	32.6
3 474	EU Enlargement Area	60.6	25.1	4.46	1.26	56.8
232	Bosnia & Herzegovina°	57.5	32.1	4.37	0.96	46.1
175	North Macedonia	46.7	16.7	3.99	1.16	54.0
1 041	Serbia°	50.4	36.4	4.23	0.99	51.1
1 855	Turkey	68.1	17.5	4.66	1.48	62.4
171	Albania/Kosovo/Montenegro	58.8	33.5	4.31	1.14	48.5
3 670	ENP countries	45.5	23.9	3.77	1.19	47.9
440	Belarus	60.3	13.5	4.44	1.05	54.3
257	Lebanon	49.4	24.7	3.87	1.35	50.6
1 274	Israel	17.2	26.9	2.69	0.74	35.8
498	Moldova°	65.9	39.1	4.65	2.49	59.3
1 201	Ukraine	60.8	17.6	4.30	1.14	53.0
	Other countries					
6 247	Russia (included in total)	64.8	11.7	4.61	1.25	55.4
6 059	Canada (not included in total)	13.6	28.5	2.83	0.66	38.6
3 507	Philippines (not included in total)	54.2	25.0	4.15	1.11	54.3

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 6.17 National variation in key needs

Qualifying cases	Country	% not sure of own HIV status	% not knowing where to get HIV test among those never tested	Number (mean) of 5 hepatitis facts not already known	% not knowing where to get hepatitis A vaccination, among those vulnerable	% not knowing where to get hepatitis B vaccination, among those vulnerable
127 792	Total (used throughout this report)	3.9	41.5	1.14	54.1	54.3
112 789	EU Health Programme	3.9	41.5	1.14	54.1	54.3
107 950	EU Member States	3.7	41.5	1.10	51.6	51.7
2 705	Austria°	2.1	30.1	0.94	33.7	32.0
3 038	Belgium°	3.4	41.5	1.08	42.5	41.9
1 177	Bulgaria°	4.6	40.1	1.26	67.3	67.3
1 015	Croatia°	3.6	37.5	1.10	55.3	60.3
307	Cyprus°	2.9	43.8	1.52	70.8	69.0
1 897	Czech Republic°	2.9	36.1	1.41	37.3	39.1
1 698	Denmark**	2.4	45.0	1.01	50.5	49.4
212	Estonia°	3.3	30.4	1.46	55.9	55.6
1 409	Finland**	3.1	42.4	1.15	45.9	41.1
10 996	France**	3.3	41.8	1.17	49.0	49.3
23 107	Germany°	2.6	37.5	0.84	36.1	35.8
2 909	Greece°	5.3	41.0	1.25	63.2	63.7
2 177	Hungary°	3.7	49.8	1.11	65.8	67.3
2 083	Ireland°	4.4	45.4	1.48	57.5	54.8
11 025	Italy**	6.0	44.8	1.00	59.1	61.6
252	Latvia°	5.2	49.1	1.46	55.2	54.4
370	Lithuania°	4.6	48.1	1.32	60.6	63.8
169	Luxembourg°	1.8	36.0	1.05	42.6	33.8
299	Malta°	4.7	35.4	1.50	57.5	58.4
3 851	Netherlands°	2.8	29.7	0.74	39.4	38.2
4 025	Poland°	5.0	43.8	1.09	62.9	66.1
2 555	Portugal**	4.5	42.5	1.02	54.5	58.8
2 002	Romania°	5.6	50.7	1.34	66.3	66.9
1 003	Slovakia°	5.5	54.2	1.27	49.9	51.8
685	Slovenia°	3.8	29.0	1.09	35.8	39.8
10 652	Spain**	4.6	51.3	1.35	54.4	56.8
4 443	Sweden°	2.7	37.3	1.39	47.9	48.0
11 889	United Kingdom**	3.0	39.0	1.19	58.0	54.7
6 451	EFTA Member States§	1.8	33.8	1.18	44.0	42.4
111	Iceland°	0.9	16.1	1.52	55.2	63.2
2 957	Norway°	1.6	38.2	1.47	52.1	50.8
3 383	Switzerland*	2.0	27.8	0.92	32.6	30.6
3 474	EU Enlargement Area	9.6	43.0	1.32	63.6	63.3
232	Bosnia & Herzegovina°	7.8	37.0	1.12	64.0	62.7
175	North Macedonia	5.1	35.2	1.35	63.3	62.6
1 041	Serbia°	5.3	31.8	1.11	61.3	60.5
1 855	Turkey	12.7	52.0	1.44	64.6	64.8
171	Albania/Kosovo/Montenegro	7.7	35.2	1.56	68.1	67.5
3 670	ENP countries	5.6	40.3	1.60	74.9	74.0
440	Belarus	3.9	31.1	1.47	76.0	77.2
257	Lebanon	9.8	54.8	1.59	82.0	81.7
1 274	Israel	3.5	39.1	1.84	55.1	55.1
498	Moldova°	11.5	37.9	1.73	79.5	79.6
1 201	Ukraine	5.2	41.3	1.33	85.4	83.7
	Other countries					
6 247	Russia (included in total)	5.3	48.9	1.38	73.9	74.7
6 059	Canada (not included in total)	2.2	40.5	1.08	41.5	40.7
3 507	Philippines (not included in total)	15.1	32.9	1.30	63.2	64.8

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7. Interventions

To intervene is to participate in an activity so as to alter a course of events, usually to make something less or more likely to occur. Within EMIS, relevant interventions are the actions of others that meet or undermine the health promotion needs described in Chapter 6.

Interventions can be positive (meeting needs) or negative (undermining needs and generating unmet need). Positive interventions include education, health and social services, as well as the myriad ways in which community members help each other. Negative interventions include homophobic legislation, exclusion and abuse.

7.1 Summary

- Homophobic abuse: intimidation, insults, and violence – in the last 12 months, 3% of participants had been physically assaulted; 21% had been verbally insulted and 27% had been intimidated because someone had known or presumed they were attracted to men.
- Access to free condoms – one third (32%) of participants reported having received free condoms from civil society organisations, clinics, bars, or saunas in the last 12 months.
- HIV/STI education services – the majority (88%) who answered the question had seen MSM-specific information about HIV or STIs in the last year and more than half (57%) had done so in the last four weeks.
- Substance use services – less than 5% had ever consulted a health professional in relation to their drug use or alcohol use concerns.
- PrEP (Pre-Exposure Prophylaxis) services – among participants without diagnosed HIV, less than 10% said that someone at a health service in their country of residence had talked to them about PrEP. However, 79% of PrEP users received medical counselling before starting PrEP, and just over half of PrEP users had received a medical prescription for it. All others had acquired PrEP informally, mostly by purchasing it online and importing it into Europe.
- HIV testing – 56% had received an HIV test result in the last 12 months, most commonly in clinical settings (almost two thirds). Community-based testing accounted for just over one fifth of tests in the last year. Only 3% had used a HIV self-testing kit.
- HIV cascade of care – EMIS data contributes towards the design of the last four stages of the HIV care cascade: linked to care, retained in care, on ART, undetectable viral load. Among HIV-diagnosed participants, the second and third of UNAIDS' three 90-90-90 goals were reached across the European Union, in EFTA countries and in Israel, but not in other ENP countries, the EU enlargement area, or Russia.
- STI testing services – almost half (46%) had tested for STIs other than HIV in the last 12 months. In total, 92% of STI-testing featured a blood test (for syphilis or HCV), but only 37% included anal swabbing. A physical examination of genitalia or the perianal region was uncommon. A full STI screen, defined as an HIV-test, a blood test for STIs, a urine sample or urethral swabbing, and anal swabbing during the last year was reported by 13% of non-HIV-diagnosed participants.
- Partner notification for syphilis and gonorrhoea diagnoses – the majority of participants diagnosed with either syphilis or gonorrhoea informed at least some of their sexual partners that they needed to seek a test or treatment.
- Viral hepatitis vaccination – despite existing recommendations regarding hepatitis A and B vaccination in most of the countries included, only just over half said they had ever been offered a hepatitis vaccination in a healthcare setting; 43% reported a full course of vaccination against hepatitis A; and 49% reported a full course of hepatitis B.

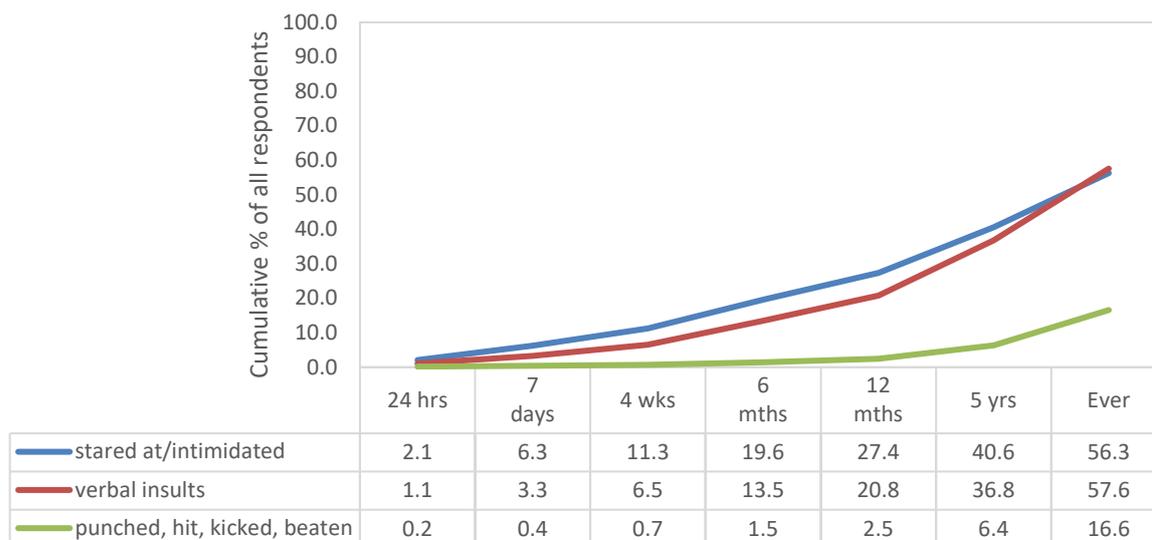
7.2 Homophobic abuse: intimidation, insults and violence

We asked about one negative intervention – homophobic abuse. Homophobic abuse undermines all health-related needs. It causes isolation and anxiety as well as physical harm.

All men were asked 'When was the last time you...' followed by three statements:

- '...were stared at or intimidated because someone knew or presumed you are attracted to men?'
- '...had verbal insults directed at you, because someone knew or presumed you are attracted to men?'
- '...were punched, hit, kicked, or beaten because someone knew or presumed you are attracted to men?'

For each statement, men were offered a scale to indicate how recently this had occurred. The cumulative percentages for having experienced each event within each time period are shown in Figure 7.1.

Figure 7.1 Cumulative recency of homophobic abuse

In the last 12 months, 3% had been physically assaulted (N=127 296, missing n=496), 21% had been verbally insulted (N=127 255, missing n=537) and 27% had been intimidated because someone had known or presumed they were attracted to men (N=127 285, missing n=507).

7.3 Access to condoms

Condom distribution is a key intervention for increasing access to condoms, and condom packs often carry health promotion information on or inside their packaging.

All men were asked 'Where have you got condoms from in the last 12 months?' and were asked to tick as many as responses as were appropriate from the range of sources in the table below. Men who indicated they obtained condoms from any source were also asked 'Where have you most commonly got condoms from in the last 12 months?' and asked to indicate one of these sources.

Table 7.1 Sources of condoms in the last 12 months and most common source

Where have you got condoms from...? Tick as many as apply	% in last 12 months (N=127 206, missing n=586)	% most commonly (N=107 487, missing n=375)
Bought at a physical shop (not online)	52.8	53.3
Free from gay bars or clubs	17.2	8.7
From friends or sex partners	15.2	6.1
Bought online	12.7	11.2
Free from gay or HIV community organisations	11.5	5.9
Free from saunas	10.8	4.6
Free from clinics	9.9	4.8
Bought from a vending machine	5.3	3.0
Other answer	2.6	2.3
I have not got condoms in the last 12 months	15.2	–

The most common source of condoms was buying them from a physical shop, which was the most commonly used source for over half the men. The other half relied on a range of sources, with no single source being the most commonly used by more than 10%, except for the purchase of condoms online (11%).

The Dublin Declaration Monitoring indicator #3.1a aims to monitor MSM condom promotion and distribution coverage. We constructed this indicator by combining free condoms from civil society organisations, clinics, bars, or saunas. Overall, 32% reported receiving condoms from any of these sources in the last year.

7.4 Substance use services

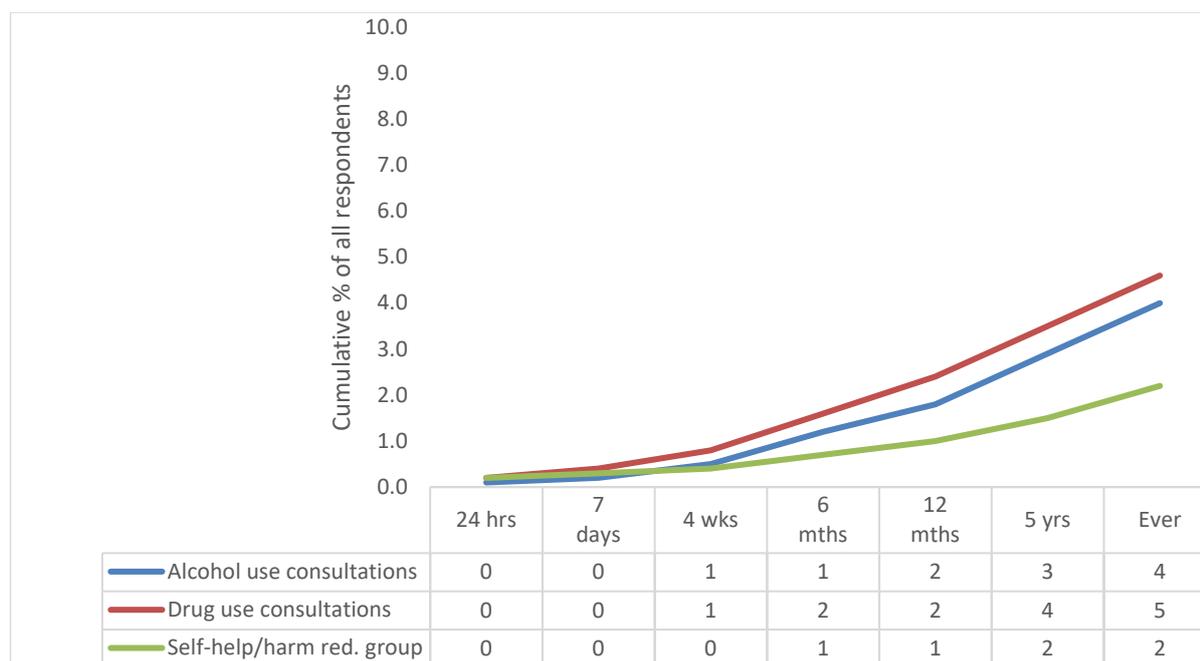
Substance use services such as counselling, one-to-one therapy and group work can help men gain control over their drug use, including moving towards abstinence.

All men, regardless of their reported substance use or alcohol use, were asked three questions on consulting substance use services:

- 'Have you ever consulted a health professional for your alcohol use concerns?'
- 'Have you ever consulted a health professional for your drug use concerns (apart from tobacco use)?'
- 'Have you ever attended a self-help group, harm reduction programme or counsellor about your drug use (apart from tobacco use)?'

For each statement, men were offered a scale to indicate how recently this had occurred. The cumulative percentages for having done these three things within each time period are shown in Figure 7.2 which also shows the percentage for each response.

Figure 7.2 Cumulative recency of consulting health services for drug/alcohol use concerns



Overall in the last 12 months, slightly more men had consulted a health professional over drug use concerns (2.4%) than for alcohol use concerns (1.8%).

7.5 Pre-exposure prophylaxis services

Understanding and accessing PrEP (pre-exposure prophylaxis) requires educational interventions and services that will supply the pills or provide information on where to get them or how to order them online. While in some countries PrEP can be prescribed within national health systems, in other countries this is not possible and private supplies must be sourced. In some countries neither of these options is available.

7.5.1. Speaking to MSM about PrEP

All men were asked 'Has anyone at a health service in <Country of Residence> ever spoken to you personally about PrEP?' Those who answered 'yes' were asked 'Which health service has spoken to you about PrEP?' They were then offered the responses in the table. We focus here on men without diagnosed HIV.

Among men without diagnosed HIV, 9% said 'yes' someone at a health service in the country they live in had spoken to them about PrEP (0.3% did not answer the question).

Table 7.2 Health service having spoken to respondents about PrEP (for all men without diagnosed HIV)

Which health service has spoken to you about PrEP?	% of all men not diagnosed with HIV (N=113 364, missing n=408)	% of men not diagnosed with HIV who had been spoken to about PrEP (N=10 364, missing n=19)
At a community service or drop-in	4.0	44.1
At a hospital or clinic as an out-patient	3.7	40.0
General practitioner/family doctor	1.2	13.0
A doctor in private practice	0.8	8.6
Other answer	0.7	7.7
Any health service	9.2	–

Few men had been spoken to by more than one type of service. The services that most commonly spoke to men about PrEP were community services (not in hospitals or clinics) followed by outpatient services (at hospitals or clinics).

7.5.2 Consulting a healthcare professional before using PrEP

Men who had ever taken PrEP were asked 'Did you speak to a healthcare professional about PrEP before using it?' Overall, 79% of men who had taken PrEP (N=3 956, missing n=19) indicated 'yes', that they had spoken to a health professional before taking PrEP.

7.5.3 Prescribing PrEP

Men who had ever taken PrEP were asked 'Have you ever received a medical prescription in <Country of Residence> for PrEP?' Those who answered yes were asked 'Where have you had a prescription in <Country of Residence> from?' They were then offered the responses in the table.

Overall, just over half (55%, N=3 958, missing n=17) of men who had ever taken PrEP had received a medical prescription for it.

Table 7.3 Source of PrEP prescription among men that had received a prescription in their country of residence

Where have you had a prescription in [country of residence] from?	% of men who had received a medical prescription for PrEP (N=2 051, missing n=2)
At a hospital or clinic as an out-patient	59.6
At a community service or drop-in (not in a hospital or clinic)	16.5
General practitioner/family doctor	14.5
A doctor in private practice	13.2
Other answer	2.5
TOTAL	100.0

Although community services (not in a hospital, clinic or institute) were the most common service to talk to men about PrEP, they were not the most common prescribers. Prescriptions were most likely to be provided by outpatient services.

7.5.4 Where are PrEP pills coming from?

Men who had ever used PrEP were asked 'Where have you got your PrEP pills from?' and were offered the responses in the table.

Table 7.4 Sources of PrEP pills among all men who had ever taken PrEP

Where have you got your PrEP pills from?	% among men who had ever taken PrEP		
	All men who had ever taken PrEP (N=3 760, missing n=40)	Men who had never been prescribed PrEP (n=1 699, missing n=36)	Men who had been prescribed PrEP (n=2 052, missing n=1)
From an online pharmacy	30.4	52.9	11.7
From a physical pharmacy (not online)	26.6	3.5	46.0
At a hospital or clinic	22.0	8.6	33.1
As a participant in a research study	12.8	14.2	11.6
At a community service or drop-in (not in a hospital or clinic)	6.0	4.4	7.4
General practitioner/family doctor	4.8	2.4	6.9
A doctor in private practice	3.5	3.2	3.8
I used someone else's anti-retroviral therapy (ART) pills as PrEP	4.7	8.5	1.7
I used PEP pills as PrEP	2.5	3.0	2.0
Other answer *	7.2	13.6	1.8
Any choice indicating prescription (medical doctor/clinic/physical pharmacy)	50.6	16.5	79.6

*A limited analysis of the 231 'other' answers in 33 languages suggests that they include mostly receiving PrEP from friends/sexual partners, or buying it abroad in a pharmacy (in Thailand, India, etc.)

Where men obtained their PrEP pills varied depending on whether they had ever had a prescription. Those who had not had a prescription were most likely to get their pills from an online pharmacy, as a research study participant, or by taking someone else's ART. Those who had received a prescription were most likely to get their pills from a physical pharmacy or from a hospital or clinic.

7.6 HIV/STI education services

Sexual health information (and health information generally) is more likely to be attended to if it is tailored to the circumstances and preferences of its target group. All men were asked 'When was the last time you saw or heard any information about HIV or STIs specifically for men who have sex with men?' and were offered a scale for indicating how recently this had occurred.

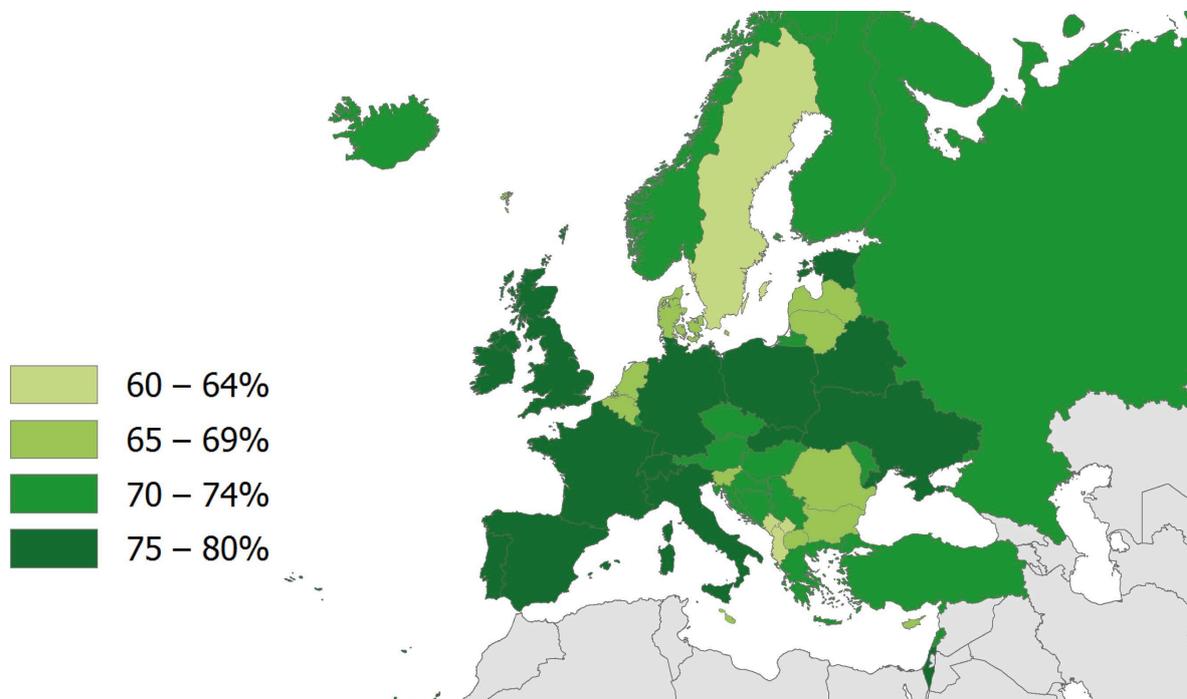
Table 7.5 Recency of seeing/hearing any information about HIV or STIs specifically for men who have sex with men

When was the last time you saw or heard any information about HIV or STIs specifically for men who have sex with men? (N=107 498, missing n=20 294)	%	Cumulative %	Cumulative %, counting missing answers as 'Never'
Within the last 24 hours	12.5	12.5	10.5
Within the last 7 days	23.6	36.1	30.4
Within the last 4 weeks	21.1	57.1	48.1
Within the last 6 months	20.4	77.6	65.2
Within the last 12 months	10.4	88.0	74.0
Within the last 5 years	5.3	93.2	78.5
More than 5 years ago	3.2	96.4	81.1
Never	3.6	100.0	100.0

The majority of men (88%) who answered the question had seen MSM-specific information about HIV or STIs in the last year and more than half (57%) had done so in the last four weeks.

For the construction of the respective Dublin Declaration Monitoring indicator #3.5a, because of the large number of missing answers to this question, we conservatively counted all missing answers as those not reached by targeted HIV/STI education services.

Figure 7.3 Percentage who saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a) (N=107 498)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

7.7 HIV testing and monitoring services

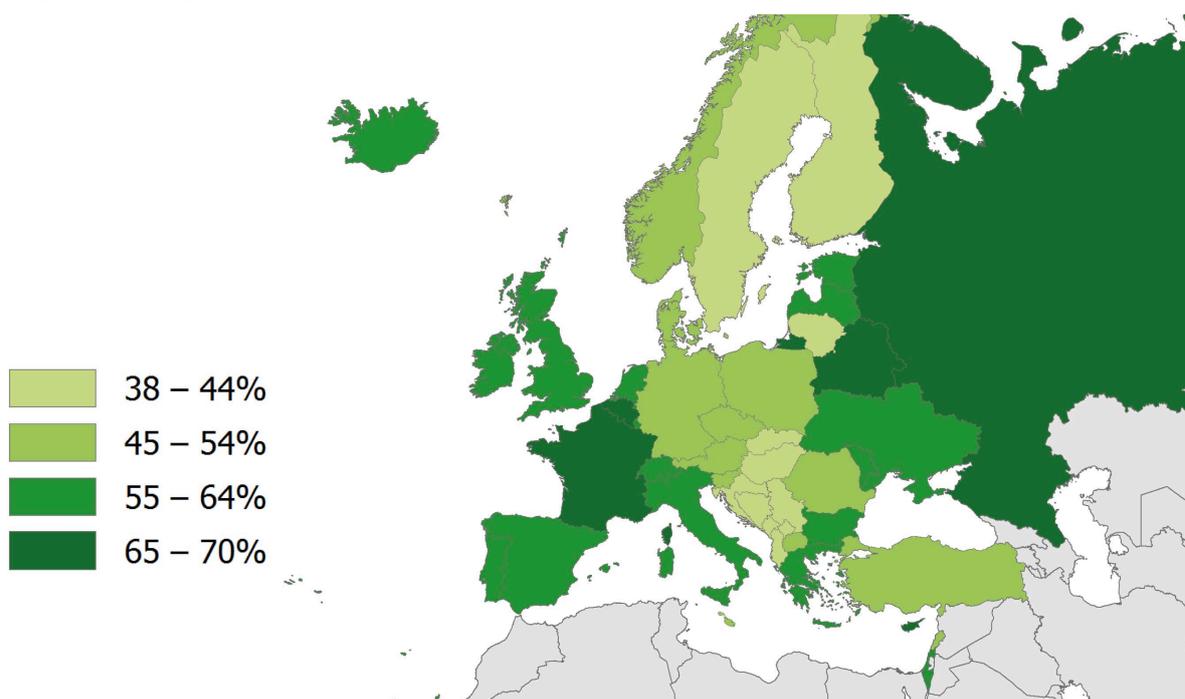
In recent years the regulations regarding HIV testing have been relaxed in many European countries, and HIV tests can be accessed in a variety of settings, including community-based testing (often in the absence of physicians via trained personnel), self-sampling and self-testing. This section considers how far HIV testing is penetrating, which services are providing the tests, whether men are satisfied with them and whether health services are pro-active in offering HIV tests.

7.7.1 HIV testing uptake

Men were asked 'Have you ever received an HIV test result?' Overall, 79% (N=127 487, missing 305) indicated that they had. Over one fifth of the entire sample (21%) answered 'no' indicating they had never received an HIV test result.

Excluding men who had already been diagnosed with HIV more than 12 months ago, 56% (N=115 869) had received an HIV test result in the last 12 months (Dublin Declaration Monitoring indicator #4.53). For comparisons with testing for other STIs see Section 7.9.

Figure 7.4 Percentage tested for HIV, last 12 months, excluding men diagnosed prior to this (DDM 4.53) (N=127 487)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

7.7.2 HIV test offers by health services

Men who had never received an HIV test result were asked 'Have you ever been offered an HIV test by a health service?' Overall, of men who had not tested for HIV, 10% (N=29 598, missing for n=39) had ever been offered an HIV test by a health service, and 88% had not (the remainder said they did not know).

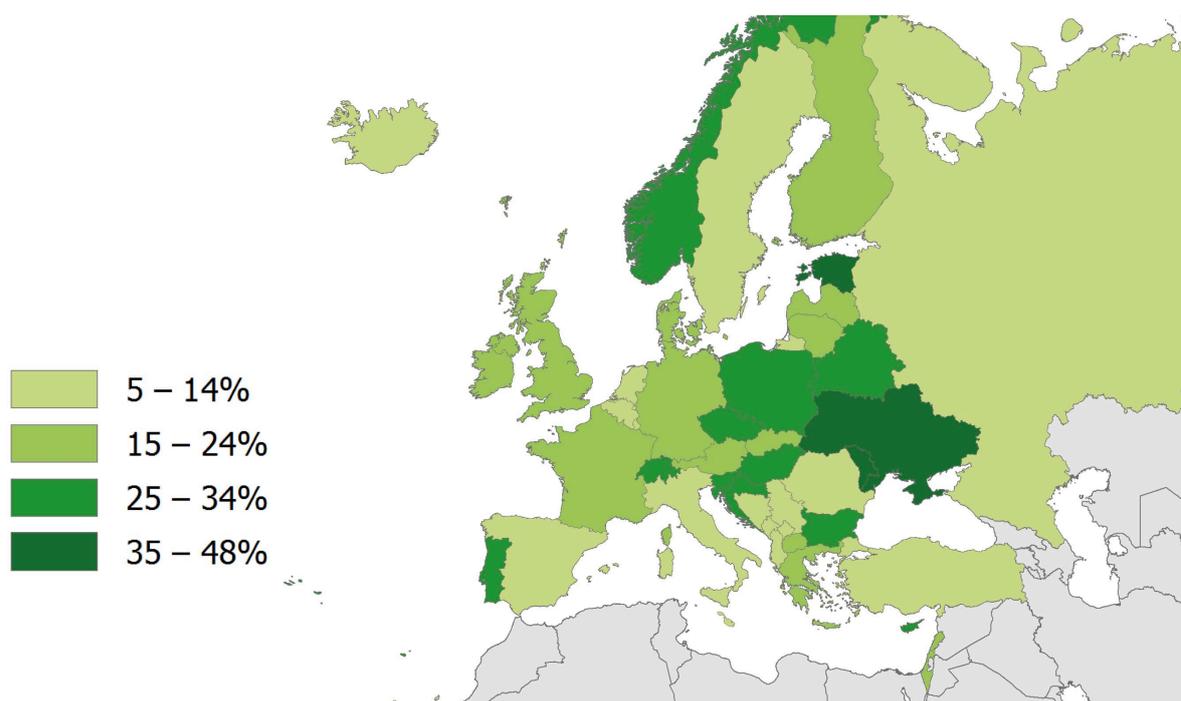
7.7.3 Settings for HIV testing and diagnosis

Men who had been diagnosed with HIV were asked 'Where were you initially diagnosed with HIV?' and men whose last test was negative were asked 'Where did you go for your last HIV test?' Both were offered the responses in the table.

HIV tests had been provided in a range of service settings with no one type of setting dominating. Men had most commonly received an HIV test at a private practice (general practitioner and other doctor in private practice taken together accounted for 33% when the last test was negative, and for 37% among HIV-diagnosed men). This was followed by a hospital or clinic (outpatient and inpatient taken together accounted for 32% when the last test was negative, and 42% among HIV-diagnosed men). The third most common setting for HIV testing was through community health services (DDM indicator #4.13a). Despite existing deferral policies for MSM in most European countries [32], almost 5% had had their HIV test while donating blood.

Table 7.6 Setting of last HIV test for MSM whose last test was negative, and setting of first HIV diagnosis among those who tested positive for HIV

Settings for HIV testing	Where did you go for your last HIV test? (N=86 588 whose last test was negative, missing n=955)	Where were you initially diagnosed with HIV? (N=13 140 with diagnosed HIV, missing n=32)
At a hospital or clinic as an out-patient	28.0	31.4
General practitioner/family doctor	23.7	24.3
At a community health service or drop-in (not in a hospital or clinic)	21.6	13.2
A doctor in private practice	8.9	12.2
At a blood bank, while donating blood	4.6	2.8
At a hospital as an in-patient	3.8	10.9
I used a self-testing kit (I found out the result on the spot)	2.6	0.8
Mobile testing unit	1.7	0.9
I used a self-sampling kit (I took my own sample then sent it away to be analysed)	1.7	0.6
In a bar/pub, club or sauna	0.8	0.3
Elsewhere	2.6	2.7
TOTAL	100.0	100.0

Figure 7.5 Percentage using community HIV-testing at last HIV test (DDM 4.13a) (N=115 869)

http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Thus, clinical settings still dominate HIV-testing in Europe, whether this is an outpatient service at a hospital or in private practice. Which of the two clinical settings is dominant in a specific country depends largely on the healthcare system of that country.

HIV self-sampling (Dublin Declaration Monitoring indicator #4.13b) or HIV self-testing (Dublin Declaration Monitoring indicator #4.13c) had been used by 4% of men whose last test was negative and 1.4% of men who were diagnosed positive. The United Kingdom was the only country where HIV self-sampling had been used by more than 3% of participants.

7.7.4 Acceptability of post-HIV test support

Men who had been diagnosed with HIV were asked 'When you were diagnosed HIV positive, how satisfied were you with the support and information you received?' and men whose last HIV test was negative were asked 'The last time you tested for HIV, how satisfied were you with the support and information you received?' Both were offered the responses in Table 7.7.

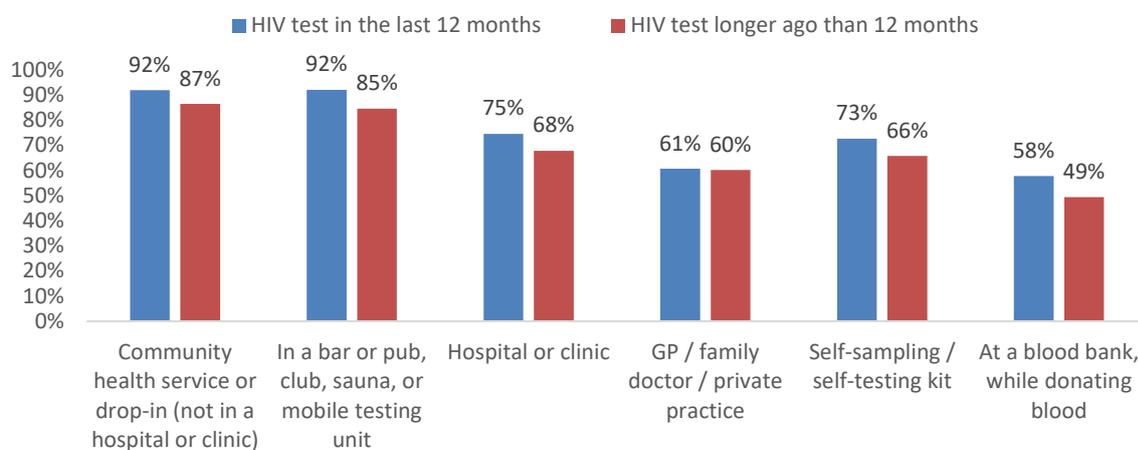
Table 7.7 Satisfaction with support and information received during HIV testing

Satisfaction with support and information received during HIV testing	Last HIV test was negative (N=86 569, missing n=974)	Diagnosed HIV (N=13 148, missing n=24)
Did not receive any support or information	21.6	12.4
Very satisfied	36.8	32.3
Satisfied	30.3	32.3
Dissatisfied	2.7	9.6
Very dissatisfied	1.7	8.2
I don't remember/I did not think about it	6.9	5.2
TOTAL	100.0	100.0

Men were more likely to receive support or information if they were diagnosed with HIV than if they were not. However, 12% of men with diagnosed HIV still received no support or information. Overall, 18% of men who tested positive, compared with 4% of men who tested negative, were dissatisfied with the support or information received.

As Figure 7.6 demonstrates, a slightly higher proportion of men were satisfied or very satisfied with the support and information they received during HIV testing, if they had tested in the last year compared to men that had not tested in the last year. The graph also demonstrates that satisfaction was highest among men reporting that their last HIV test was community-organised, either at a drop-in or during outreach.

Figure 7.6 Percentage satisfied or very satisfied with support and information received at last HIV test (N=99 717)



7.7.5 Monitoring HIV infection

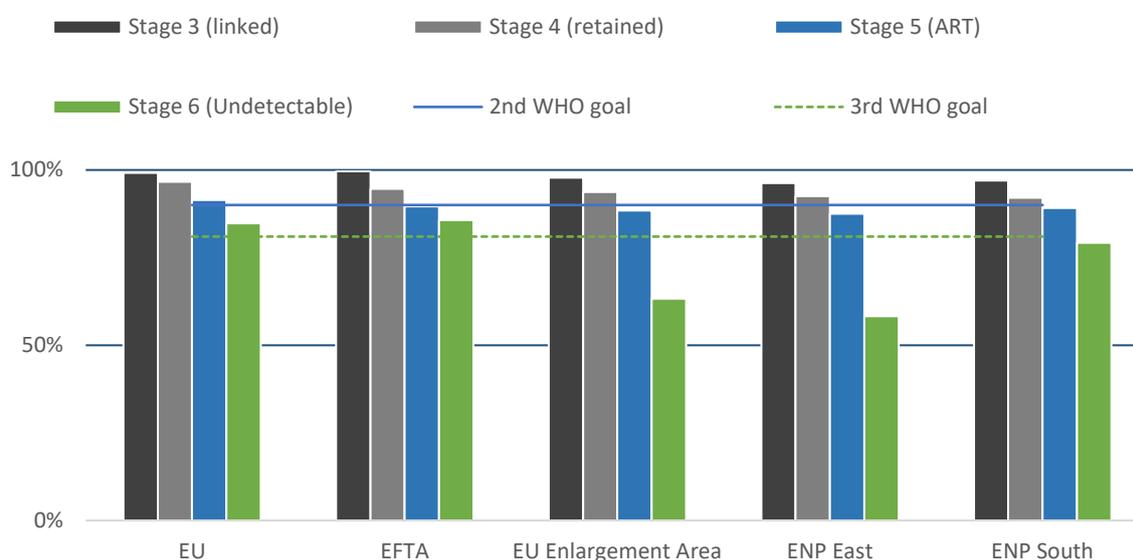
Men with diagnosed HIV (10% of all men, see Chapter 3) were asked 'When did you last see a health professional for monitoring your HIV infection?' and were offered a scale to indicate how recently this had occurred. Table 7.8 shows the responses.

Table 7.8 Recency of seeing a health professional to monitor HIV infection (among men with diagnosed HIV)

How recently did you see a health professional to monitor your HIV infection? (N=13 145 men with diagnosed HIV, missing n=894)	%	Cumulative %
Within the last 24 hours	2.9	2.9
Within the last 7 days	11.0	13.9
Within the last 4 weeks	37.2	51.1
Within the last 6 months	44.5	95.6
Within the last 12 months	2.2	97.9
Within the last 5 years	0.7	98.6
More than 5 years ago	0.4	99.0
Never	1.0	100.0

In Europe, measurement of HIV-RNA is recommended every 3–6 months, with higher frequencies at treatment initiation [33]. Accordingly, the vast majority (96%) were monitored within the last six months. However, 1.0% indicated never having had their infection medically monitored.

For the construction of Dublin Declaration Monitoring indicators related to HIV care, we defined ever having an HIV infection monitored as 'linked to care' (HIV care cascade stage 3, DDM indicator #6.278), and having an HIV infection monitored in the past six months as 'retained in care' (HIV care cascade stage 4, DDM indicator #6.282). The proportion of HIV-diagnosed MSM linked to and retained in care is not easy to measure on the basis of clinical data (e.g. from HIV cohort studies.) According to the above definition, across Europe, 99% were linked to care, and 96% were retained in care. As for the subsequent two stages of the HIV care cascade, 90% of HIV-diagnosed men were receiving ART (HIV care cascade stage 5, DDM indicator #6.84, see Chapter 5), and 82% of HIV-diagnosed men had undetectable viral load (HIV care cascade stage 6, DDM indicator #6.91). The latter corresponds to 91% of men receiving antiretroviral treatment. Among HIV-diagnosed EMIS participants, the second and third of UNAIDS' three 90-90-90 goals were reached in 2017 – at least in the European Union, EFTA countries and Israel, but not in other ENP countries, the EU enlargement area, or Russia.

Figure 7.7 Clinical stages of the HIV care cascade for different country groups

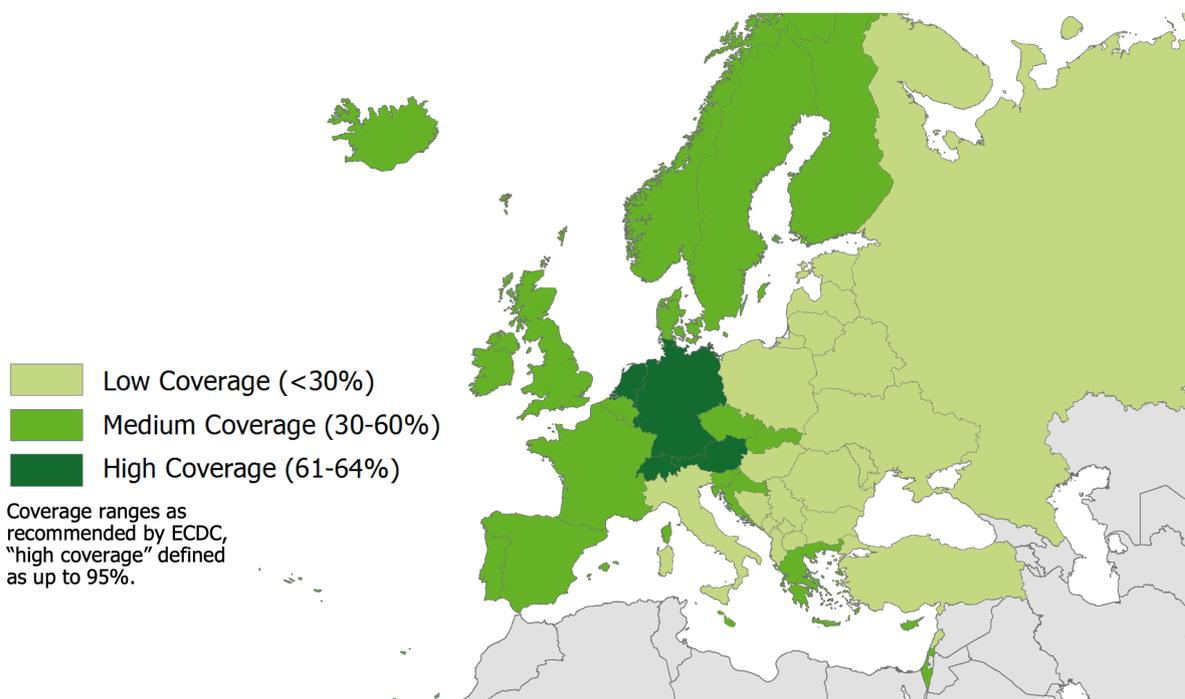
7.8 Offers of hepatitis vaccination

All men were asked 'Have you ever been offered any hepatitis vaccination by a health service?' Overall, 52% answered 'yes', 41% answered 'no' and 7% answered 'I don't know' (N=126 897, missing n=805). Excluding those who did not know, 56% had been offered hepatitis vaccination by a health service.

When excluding men with a history of hepatitis A and/or hepatitis B, 43% reported a full course of vaccination against hepatitis A, and 49% reported a full course of hepatitis B. For the construction of the respective Dublin Declaration Monitoring indicators we counted 'Yes and I completed the course' for hepatitis A (DDM indicator #3.10a), and 'Yes and I completed the course' as well as 'Yes but I did not respond to the vaccine' for hepatitis B (DDM indicator #3.10b). As the number of shots recommended for hepatitis B vaccination varies according to age and product and, as during the 2017 hepatitis A outbreaks among MSM, the recommended number of shots was reduced from two to one due to scarceness of vaccine availability, the questionnaire did not specify the number of shots needed to 'complete the course' of vaccination.

Given the media attention devoted to outbreaks of hepatitis A among MSM across Europe between June 2016 and May 2017 [34], reporting on hepatitis A vaccination seems more reliable than in previous surveys, but it is not clear how sustainable our findings are. Most of the European countries affected by the outbreaks have routinely recommended hepatitis A vaccine for MSM. However even six months after the media attention, less than half of MSM reported having been vaccinated against hepatitis A. When men who did not know whether or not they had received hepatitis A vaccination were excluded, the percentage of MSM reporting having completed the course increased from 43% to 56% (or 63% if one shot only is also counted).

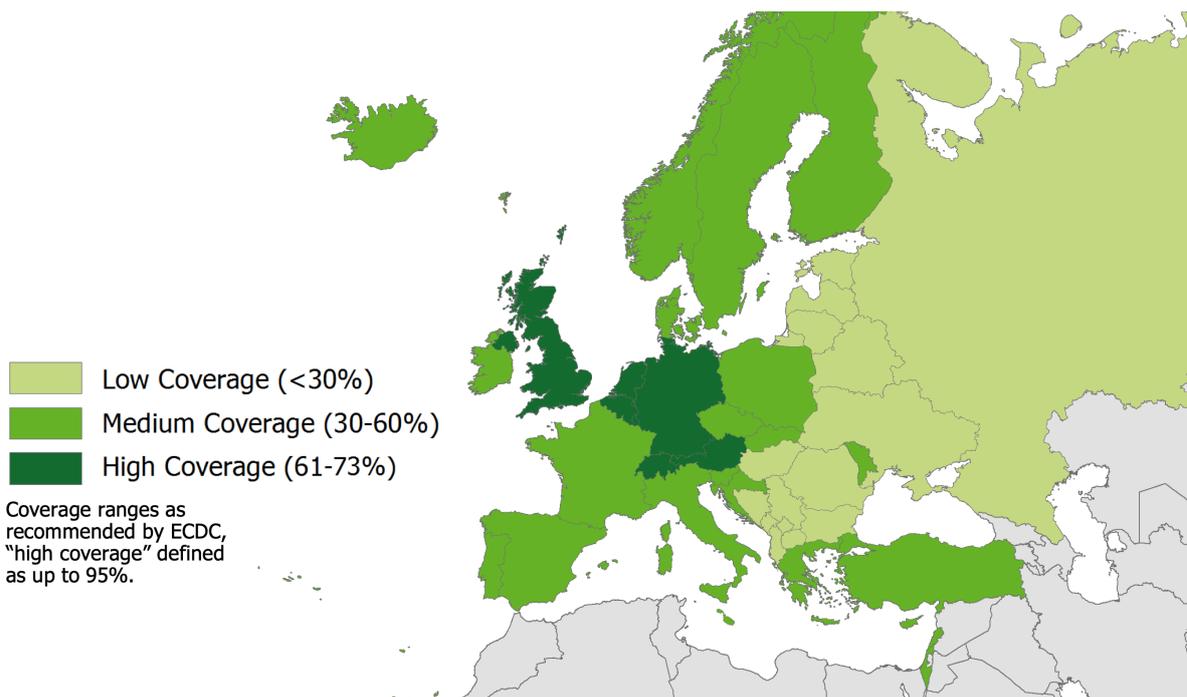
Figure 7.8 Percentage with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a) (N=117 748)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

While hepatitis A vaccination is recommended for adults at increased risk of infection (e.g. MSM), the situation for hepatitis B is different. Almost all countries within the WHO European Region recommend universal childhood vaccination against hepatitis B [35]. Thus younger generations (who received hepatitis B vaccination as a child) might not always be aware of their hepatitis B vaccination status. If men who did not know whether or not they had received hepatitis B vaccination are excluded, the percentage of MSM reporting having completed the course increased from 49% to 63%.

Figure 7.9 Percentage with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b) (N=119 277)



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

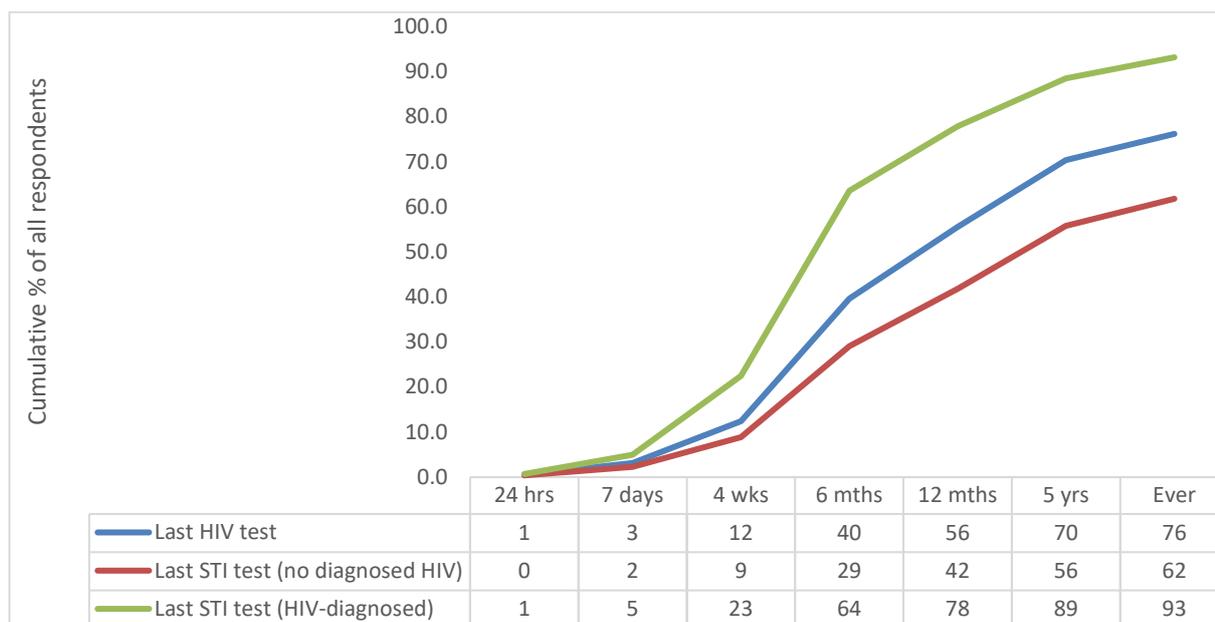
7.9 STI testing services

7.9.1 How far are STI tests penetrating (among asymptomatic men)?

All men were asked 'Have you ever had a test for sexually transmitted infections (STIs) other than HIV?' Overall, 63% answered 'yes', 34% answered 'no' and 2% answered 'I don't know'. When those who did not know were excluded, 65% had ever had a test for STIs other than HIV.

Men who answered 'yes' were asked 'When did you last have a test for STIs other than HIV?' and offered a scale to indicate how recently this had occurred.

Figure 7.10 Cumulative recency of testing for HIV and other STIs



Overall, 46% of men had had an STI test in the last 12 months. These men were asked 'Did you have any symptoms on that occasion?' Overall, 80% answered 'no', 19% answered 'yes' and 1% said 'I don't remember' (N=56 164, missing n=99). Excluding the men who did not know, 81% of men who had had an STI test in the last 12 months were asymptomatic at their last test.

Although bacterial STIs such as syphilis, gonorrhoea, or chlamydia can more easily be transmitted and are less stigmatised than HIV, among non-HIV-diagnosed respondents, STI-testing was much less common than HIV-testing. Most clinical guidelines for HIV-diagnosed MSM recommend routine screening blood tests for syphilis and HCV, which explains the higher testing rates in this group.

7.9.2 Awareness of clients' sexuality among STI test providers

Men who had had an STI test in the last year were asked 'On that occasion [at the last test], did your healthcare provider know you have sex with men?' Table 7.9 shows the possible responses and the proportions indicating each.

Table 7.9 Disclosure of sex with men to healthcare provider during an STI test

Disclosure of sex with men to healthcare provider during an STI test (N=56 210 who had an STI test in the last 12 months, missing n=53)	%
Yes, they definitely knew	68.4
Yes, they probably knew	7.1
No, they did not know I have sex with men	19.3
I don't know whether they knew or not	5.2
TOTAL	100.0

Two thirds (68%) of men who had an STI test in the last year were confident their healthcare provider was definitely aware they had sex with men, but one fifth (19%) reported that their healthcare provider did not know they had sex with men.

7.9.3 Comprehensive STI screenings

Men who had had an STI test in the last 12 months were asked to respond to the following: 'So we can ask appropriate questions about STI tests, and because people's bodies differ, do you have...' with the options: a penis (cock); a vagina (pussy); both of these; neither of these. They were then asked a series of questions (appropriate to their morphology) about what elements of an STI screening they had experienced in the last year. The questions and responses are given in the table.

Table 7.10 Elements of STI screening experienced in the last 12 months

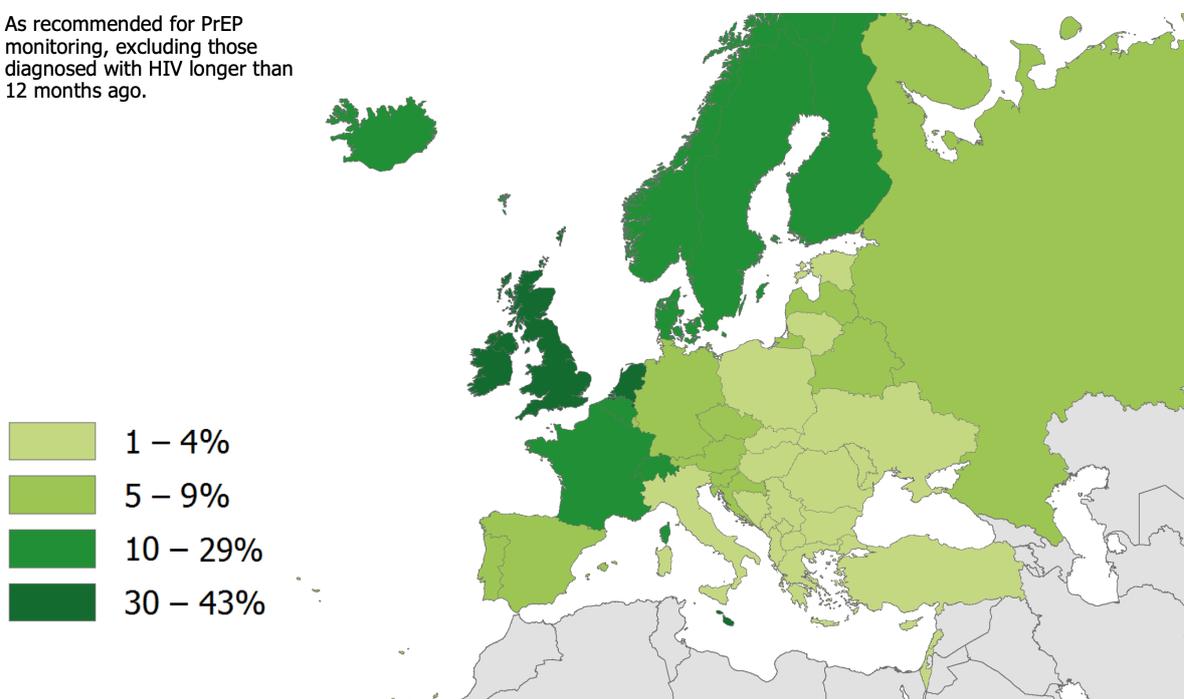
Elements of STI screening experienced in the last 12 months	% Yes	% No	% Don't remember	TOTAL
Have you provided a blood sample as part of any STI test? (N=56 141, missing n=122)	92.2	6.7	1.1	100.0
Any of urine sample, urethral swab, or vaginal swab (N=56 149, missing n=114)	67.9	30.5	1.7	100.0
Have you provided a urine sample as part of any STI test? (N=56 110, missing n=153)	60.9	36.9	2.2	100.0
Was something inserted into your vagina (vaginal swab) as part of any STI test? (N=298, missing n=12)	45.6	52.7	1.7	100.0
Was something inserted into your anus (anal swab) as part of any STI test? (N=56 078, missing for n=185)	37.1	62.1	0.8	100.0
Was something inserted into the opening of your penis (urethral swab) as part of any STI test? (N=55 475, missing n=171)	27.2	71.9	0.9	100.0
Has your penis been examined as part of any STI test? (N=55 478, missing n=168)	34.7	64.1	1.2	100.0
Has your vagina been examined as part of any STI test? (N=295, missing for n=15)	31.9	64.1	4.1	100.0
Has your anus been examined as part of any STI test? (N=56 191, missing for n=72)	24.3	74.6	1.1	100.0

Experience of blood tests was almost universal (92%), whereas anal examination (24%) was far less common. Blood tests are typical for syphilis and HCV testing. Tests to detect bacterial STIs such as gonorrhoea or chlamydia were less common, with 68% reporting a test for respective STI manifestations in genitalia. In MSM, asymptomatic infections are most common in the oropharynx or the rectum/anus [36]. However, anal swabs were reported by a minority of men who tested for STIs (37%). Anal examinations - for detecting anal warts or non-transmissible diseases and fissures - were least common during STI testing, with only 24% of men reporting having their anus examined.

Following our EMIS 2010 publication on the performance of STI screening services for gay and bisexual men across 40 European cities [37], we suggested including an indicator for comprehensive STI testing in the Dublin Declaration Monitoring (DDM indicator #3.3a). A full STI screen was defined as reporting the following tests in the last 12 months: an HIV test, a blood test for other STIs, an anal swab, and a urethral (or vaginal) swab/providing a urine sample. In order for this indicator not to be influenced by the proportion of HIV-diagnosed men in the sample, we excluded men who had had their HIV infection diagnosed more than 12 months ago (as they have regular clinical visits with some routine STI testing). Overall, 13% of men without longstanding HIV diagnosis reported a full STI screen in the last 12 months. When restricting the analysis to men undergoing any STI testing in the past 12 months, one third (31%) had a full screen according to this definition.

Figure 7.11 Percentage with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine), last 12 months (N=115 869)

As recommended for PrEP monitoring, excluding those diagnosed with HIV longer than 12 months ago.



http://sigmaresearch.org.uk/files/EMIS-2017_EuropeanMaps_DDM.pdf

Having received a full STI screen in the past 12 months was associated with disclosure of having sex with men, as well as with PrEP use. Among men undergoing STI testing who were sure the healthcare provider knew they had sex with men, 43% had had a full screen, in contrast to 7% who said their healthcare provider did not know. Clinical guidelines usually recommend a full STI screen (according to our definition) for all PrEP users: 72% of daily PrEP users and 62% of intermittent (on-demand) PrEP users received a full STI screen in the past 12 months.

Figure 7.12 Full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine), last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a) by disclosure of sex with men (basis: all men with an STI screen in the last 12 months)

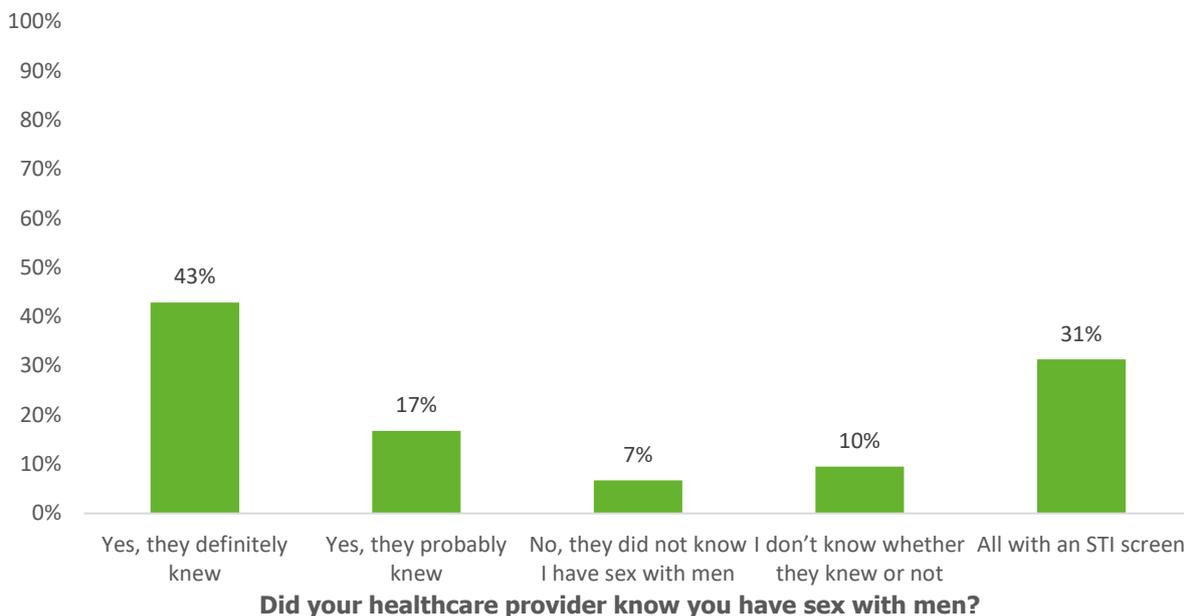
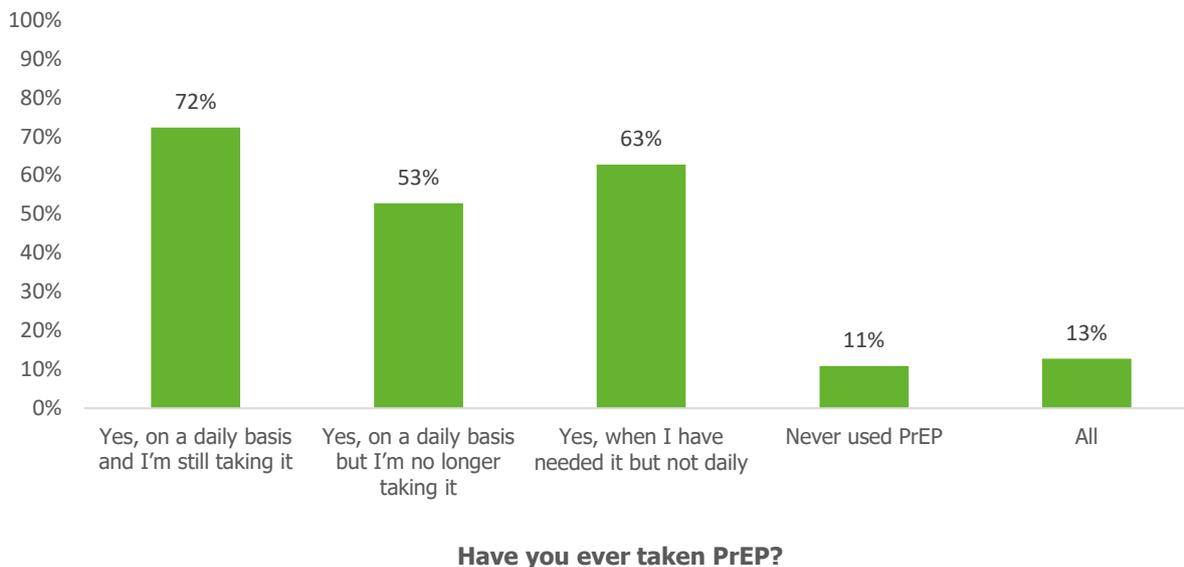


Figure 7.13 Full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine), last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a) by PrEP use (basis: all men without diagnosed HIV)



7.10 Partner notification for syphilis and gonorrhoea diagnoses

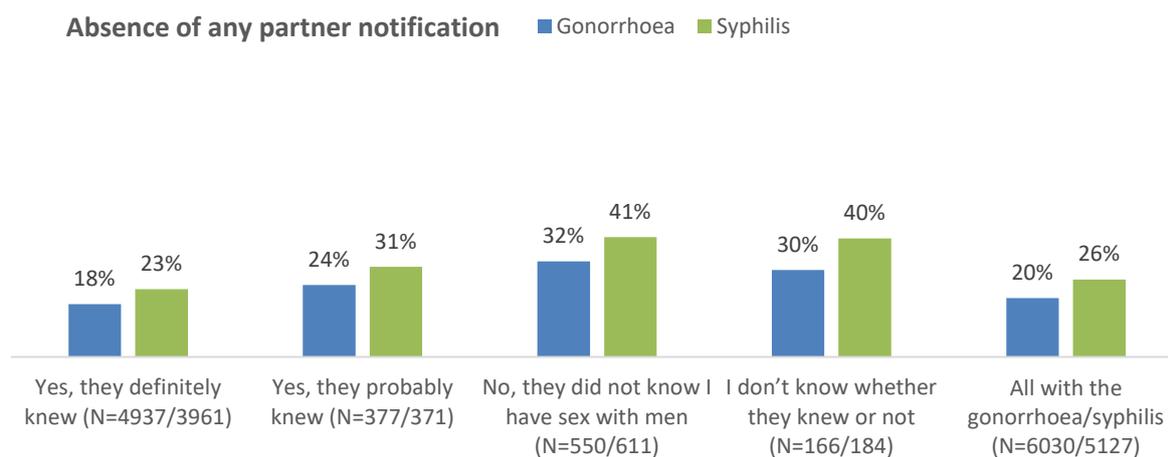
Men who had been diagnosed with syphilis in the 12 months were asked 'The last time you were diagnosed with syphilis, did you (or your healthcare provider) inform your recent sexual partners that they also needed a test/treatment?' An identical question was asked of men diagnosed with gonorrhoea in the last 12 months.

Table 7.11 The last time you were diagnosed with <infection> did you (or your healthcare provider) inform your recent sexual partners that they also needed a test/treatment?

The last time you were diagnosed with <infection> did you (or your healthcare provider) inform your recent sexual partners that they also needed a test/treatment?	% of men diagnosed with syphilis in last 12 months (N=5 478, missing n=6)	% of men diagnosed with gonorrhoea in last 12 months (N=6 482, missing n=18)
No, none of them	26.9	21.0
Yes, some of them	33.2	35.5
Yes, all of them	36.7	40.6
I don't remember	3.2	2.9
TOTAL	100.0	100.0

The majority of men diagnosed with either syphilis or gonorrhoea informed at least some of their sexual partners that they needed to seek a test or treatment. Partner notification was associated with disclosure of having sex with men. Among men undergoing STI testing who were sure the healthcare provider knew they had sex with men, 23% did not notify their sex partners regarding their diagnosis of syphilis, compared to 41% who said their healthcare provider did not know. Figures for gonorrhoea partner notification were similar (18% and 32%). Thus, taking a sexual history might have a direct impact on onward transmission of STIs.

Overall, among all EMIS-2017 participants, 2% of men were diagnosed with either syphilis and/or gonorrhoea in the last 12 months but did not notify any of their sexual partners.

Figure 7.14 Absence of partner notification for gonorrhoea and syphilis as a function of disclosure of sex with men at last STI test

7.11 National variation in interventions

Table 7.12 National variation in key interventions

Qualifying cases	Country	% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	% spoken to about PrEP at a health service among non-HIV-diagnosed	% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	% tested for HIV, last 12 months, excluding men diagnosed further in the past (DDM 4.53)
127 792	Total (used throughout this report)	20.8	32.4	9.2	74.0	55.6
112 789	EU Health Programme	20.4	33.4	9.6	74.0	54.7
107 950	EU Member States	17.4	42.5	9.6	74.1	55.0
2 705	Austria°	21.7	27.6	8.4	73.3	52.9
3 038	Belgium°	21.3	44.3	14.3	68.8	65.9
1 177	Bulgaria°	27.5	21.2	2.9	65.5	54.8
1 015	Croatia°	20.1	23.3	2.9	73.5	43.5
307	Cyprus°	16.4	23.9	11.7	69.4	65.7
1 897	Czech Republic°	28.9	24.4	3.2	72.5	52.7
1 698	Denmark**	21.2	45.0	9.2	69.3	52.3
212	Estonia°	19.9	42.7	2.0	75.0	56.9
1 409	Finland**	18.0	36.3	2.1	70.5	42.0
10 996	France**	19.0	37.7	19.3	76.1	70.0
23 107	Germany°	20.2	27.2	6.7	75.1	45.9
2 909	Greece°	15.0	26.4	11.2	72.9	55.0
2 177	Hungary°	23.9	15.8	1.6	72.1	42.9
2 083	Ireland°	27.5	47.6	18.2	75.1	56.2
11 025	Italy**	13.2	21.3	2.6	75.3	56.7
252	Latvia°	20.7	30.0	1.8	67.5	56.1
370	Lithuania°	29.2	30.7	0.9	67.0	39.6
169	Luxembourg°	17.2	32.5	6.0	70.4	62.3
299	Malta°	23.2	25.2	25.1	68.6	52.7
3 851	Netherlands°	22.2	35.1	13.2	66.8	60.7
4 025	Poland°	28.8	14.7	2.3	77.4	50.6
2 555	Portugal**	20.5	41.7	12.0	77.9	60.6
2 002	Romania°	27.3	11.5	2.0	64.5	49.0
1 003	Slovakia°	23.2	14.0	1.2	75.8	38.0
685	Slovenia°	18.4	32.6	7.2	66.4	49.8
10 652	Spain**	19.4	35.8	7.7	79.8	61.5
4 443	Sweden°	14.5	45.2	2.7	60.9	38.9
11 889	United Kingdom**	24.7	53.3	22.3	76.3	62.6
6 451	EFTA Member States§	17.4	42.5	12.9	74.7	54.7
111	Iceland°	18.0	48.6	6.5	70.3	56.5
2 957	Norway°	17.4	55.2	12.4	70.7	49.6
3 383	Switzerland*	17.3	31.3	13.6	78.2	59.4
3 474	EU Enlargement Area	22.3	13.5	2.5	70.4	46.3
232	Bosnia & Herzegovina°	23.9	17.5	2.3	72.0	39.1
175	North Macedonia	19.5	24.1	11.3	69.1	45.2
1 041	Serbia°	19.4	19.9	3.1	71.7	43.6
1 855	Turkey	24.1	8.2	1.2	70.5	49.4
171	Albania/Kosovo/Montenegro	22.0	15.5	4.5	60.2	41.0
3 670	ENP countries	24.6	40.5	9.3	75.4	61.7
440	Belarus	29.9	50.8	1.7	75.2	65.6
257	Lebanon	26.9	34.8	7.0	71.2	53.4
1 274	Israel	17.1	24.4	9.0	74.6	60.9
498	Moldova°	21.2	54.6	18.2	72.3	62.3
1 201	Ukraine	31.6	49.2	9.2	78.4	62.7
	Other countries					
6 247	Russia (included in total)	26.6	20.4	1.5	72.8	69.0
6 059	Canada (not included in total)	22.3	46.4	21.7	76.1	62.5
3 507	Philippines (not included in total)	30.2	30.1	10.9	76.2	43.6

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 7.13 National variation in key interventions

Qualifying cases	Country	% using community HIV-testing at last HIV test (DDM 4.13a)	% using HIV self-sampling at last HIV test (DDM 4.13b)	% using HIV self-testing at last HIV test (DDM 4.13c)	% with HIV monitoring ever among HIV-diagnosed (care cascade; DDM 6.278)	% Monitored last 6 months among men with diagnosed HIV (DDM #6.282 'retained in care' cascade stage 4)
127 792	Total (used throughout this report)	18.2	1.3	2.0	98.9	95.8
112 789	EU Health Programme	18.3	1.4	1.9	99.2	96.4
107 950	EU Member States	18.0	1.4	1.9	99.2	96.6
2 705	Austria°	23.0	1.0	0.6	98.5	97.0
3 038	Belgium°	5.9	1.5	2.3	99.5	96.6
1 177	Bulgaria°	31.3	0.0	1.2	94.2	82.6
1 015	Croatia°	27.0	0.1	0.5	100.0	98.0
307	Cyprus°	26.6	0.4	0.4	100.0	97.4
1 897	Czech Republic°	24.6	0.6	3.8	99.3	97.1
1 698	Denmark**	14.8	0.1	0.5	100.0	96.5
212	Estonia°	39.7	0.0	0.5	n<20	n<20
1 409	Finland**	22.9	0.1	0.8	98.8	98.8
10 996	France**	15.4	0.4	4.2	99.3	95.3
23 107	Germany°	23.9	0.3	0.9	99.3	97.8
2 909	Greece°	24.1	0.0	0.1	100.0	95.3
2 177	Hungary°	25.0	0.1	0.6	97.2	93.5
2 083	Ireland°	20.3	1.1	0.7	100.0	98.6
11 025	Italy**	8.0	0.3	2.7	99.4	97.2
252	Latvia°	19.3	0.4	0.0	100.0	100.0
370	Lithuania°	19.4	0.6	2.3	96.3	92.6
169	Luxembourg°	12.3	2.6	1.9	n<20	n<20
299	Malta°	5.1	0.4	1.8	95.7	87.0
3 851	Netherlands°	9.5	0.6	1.0	99.5	97.2
4 025	Poland°	28.9	0.2	0.5	99.1	95.9
2 555	Portugal**	25.0	0.1	0.8	98.9	97.0
2 002	Romania°	5.7	0.2	1.0	97.8	89.1
1 003	Slovakia°	20.5	0.1	1.5	100.0	100.0
685	Slovenia°	32.4	0.2	0.2	100.0	100.0
10 652	Spain**	13.6	0.1	0.6	99.3	96.0
4 443	Sweden°	9.9	0.1	0.3	97.5	94.9
11 889	United Kingdom**	18.8	10.4	5.3	99.5	97.2
6 451	EFTA Member States§	24.9	0.4	1.9	99.6	94.6
111	Iceland°	10.2	0.0	0.0	n<20	n<20
2 957	Norway°	25.1	0.4	2.8	98.6	86.8
3 383	Switzerland*	25.2	0.4	1.1	100.0	97.7
3 474	EU Enlargement Area	8.4	0.1	0.3	97.8	93.7
232	Bosnia & Herzegovina°	9.6	0.0	0.0	n<20	n<20
175	North Macedonia	21.1	0.0	0.0	n<20	n<20
1 041	Serbia°	12.6	0.0	0.5	96.2	91.1
1 855	Turkey	4.5	0.1	0.3	98.6	94.7
171	Albania/Kosovo/Montenegro	9.9	0.0	0.0	n<20	n<20
3 670	ENP countries	31.4	0.6	2.5	96.5	92.4
440	Belarus	32.1	0.5	3.1	93.3	90.0
257	Lebanon	23.3	0.4	2.5	92.3	80.8
1 274	Israel	22.9	0.1	0.2	98.7	96.0
498	Moldova°	47.1	0.4	2.1	97.7	97.7
1 201	Ukraine	35.6	1.5	5.0	96.4	91.6
	Other countries					
6 247	Russia (included in total)	11.8	1.0	4.1	95.3	89.3
6 059	Canada (not included in total)	26.7	0.1	0.4	99.3	94.9
3 507	Philippines (not included in total)	21.2	0.2	1.6	92.9	79.2

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

Table 7.14 National variation in key interventions

Qualifying cases	Country	% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	% offered any hepatitis vaccination by health service ever	% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine), last 12 months, excluding men with diagnosed HIV over 12 months ago (DDM 3.3a)
127 792	Total (used throughout this report)	81.8	52.2	43.3	49.1	12.7
112 789	EU Health Programme	81.8	57.4	45.0	51.0	13.5
107 950	EU Member States	84.8	57.6	45.3	51.4	13.3
2 705	Austria°	89.1	61.5	61.0	60.9	6.2
3 038	Belgium°	76.5	62.8	56.5	60.5	11.3
1 177	Bulgaria°	68.1	24.5	15.1	17.7	2.8
1 015	Croatia°	84.0	51.4	34.0	45.6	5.4
307	Cyprus°	81.6	53.6	33.7	39.4	3.6
1 897	Czech Republic°	75.2	47.8	43.3	41.7	8.4
1 698	Denmark**	91.2	51.8	48.9	50.4	21.1
212	Estonia°	n<20	39.5	28.1	28.9	4.4
1 409	Finland**	67.1	46.9	48.3	42.3	13.3
10 996	France**	91.0	57.8	39.1	55.5	16.1
23 107	Germany°	90.3	61.2	60.3	60.4	8.3
2 909	Greece°	71.2	60.3	39.3	45.0	2.7
2 177	Hungary°	68.5	30.1	25.7	29.3	3.7
2 083	Ireland°	90.8	64.6	50.4	57.6	36.1
11 025	Italy**	84.1	38.5	28.0	42.9	3.2
252	Latvia°	80.6	43.0	26.0	26.3	4.9
370	Lithuania°	63.0	24.9	17.9	21.8	2.3
169	Luxembourg°	n<20	67.3	60.3	61.7	4.5
299	Malta°	73.9	64.1	48.4	52.6	31.8
3 851	Netherlands°	67.3	75.5	60.9	72.6	43.0
4 025	Poland°	75.4	35.2	27.4	36.6	1.7
2 555	Portugal**	83.7	46.9	38.1	49.6	7.1
2 002	Romania°	69.6	22.6	18.3	21.3	2.4
1 003	Slovakia°	87.9	42.1	31.9	31.3	2.6
685	Slovenia°	72.1	40.2	32.6	39.9	7.0
10 652	Spain**	87.3	47.4	41.6	45.9	8.3
4 443	Sweden°	77.6	44.6	42.4	42.5	19.0
11 889	United Kingdom**	88.1	70.0	51.7	60.3	36.5
6 451	EFTA Member States§	85.7	66.1	55.2	58.9	19.8
111	Iceland°	n<20	53.2	46.3	46.2	26.9
2 957	Norway°	75.0	55.9	46.2	51.1	24.0
3 383	Switzerland*	90.4	67.4	63.5	66.4	15.6
3 474	EU Enlargement Area	63.3	35.4	23.2	31.8	1.7
232	Bosnia & Herzegovina°	n<20	32.8	25.8	28.1	2.2
175	North Macedonia	n<20	20.8	8.7	17.0	2.4
1 041	Serbia°	57.0	29.5	17.3	25.1	1.5
1 855	Turkey	63.2	34.7	27.6	38.2	1.4
171	Albania/Kosovo/Montenegro	n<20	32.9	24.2	25.2	3.7
3 670	ENP countries	64.5	34.2	24.1	27.1	3.6
440	Belarus	60.0	26.9	12.0	12.7	7.7
257	Lebanon	57.7	34.9	27.0	35.7	3.8
1 274	Israel	86.7	41.2	41.5	41.4	2.7
498	Moldova°	58.1	40.1	28.5	35.1	1.1
1 201	Ukraine	58.1	16.6	7.5	11.2	4.0
	Other countries					
6 247	Russia (included in total)	53.6	38.3	16.5	20.9	6.9
6 059	Canada (not included in total)	89.1	75.9	61.4	64.3	24.6
3 507	Philippines (not included in total)	39.0	44.7	27.9	32.5	1.8

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland, § Column 3 does not show figures for six rows where <20 men with diagnosed HIV were recruited, though the samples from these countries remain in the totals for EU, EFTA, EU Enlargement, Health Programme, etc.

Highlighted in grey above: possible translation issue in the Dutch questionnaire. After discussion with national stakeholders and running a sensitivity analysis, we believe that sub-optimal translation of 'antiretroviral treatment' in the Dutch questionnaire resulted in classification bias, underestimating ART coverage among Dutch speakers, and subsequently undetectability – i.e. affecting the measures for Belgium (48% using the Dutch version) as well as the Netherlands (85% using the Dutch version). Other countries are not affected. When excluding respondents answering in Dutch, the percentages for undetectable are 92.5% (BE) and 83.2% (NL).

8. Health inequalities

This chapter asks 'What are the levels of (1) sexual morbidities, (2) risk and precaution behaviour, (3) unmet prevention needs and (4) use of interventions, across the varied groups of MSM in the population that are targets for sexual health promotion?' To do this we consider how the binary indicators described in Chapters 4 to 7 vary across key target groups for sexual health promotion identified in Chapter 3.

We take this descriptive approach in order to facilitate access to data that can address the many specific questions EMIS data users may have. Our partners and stakeholders have many different health concerns about a wide-range of sub-populations of MSM. This chapter provides data more tailored to their concerns. For example, the chapter shows the percentage of men with diagnosed HIV experiencing anxiety/depression, or the percent of men under 25 years who do not have access to condoms.

We look at the indicators across four key demographics: age; 'outness'; relationship status; and HIV diagnosis. We also consider four minority MSM groups (trans MSM; MSM injecting drugs; asylum seeking and refugee MSM; and MSM selling sex) using the same set of indicators.

We provide data on total of 54 binary health indicators: 12 morbidity indicators; eight behaviour indicators; 19 needs indicators; and 15 intervention indicators. We provide these binary indicators for a total of 24 groups: four age groups; three 'outness' groups; three relationship groups; two HIV diagnosis groups; four sex/gender identity groups; two injecting groups; four migrant groups; and two selling sex groups. In total, this chapter supplies 1 296 measures.

The chapter also considers the question 'Which subgroups of men have multiple prevention needs that are poorly met and should be priority target groups?' In all of the subsequent tables shading indicates the sub-group in which the indicator is most extreme. This highlights the sub-group with most morbidity, most risk behaviour or least precaution behaviour, greatest unmet health promotion needs, least experience of interventions to improve health and most experience of health-diminishing interventions. Columns with many highlighted cells indicate sub-groups with consistently greater morbidities, higher risks, lower precautions, greater unmet needs and less experience of interventions relative to other sub-groups. This allows for identification of priority groups in terms of those characteristics.

Our approach to data presentation is descriptive rather than statistical. We have not calculated the probabilities of these observed differences being random as this is a non-probability sample. We have not provided unadjusted associations (e.g. odds ratios, risk ratios) between the demographic target groups and the indicators as these can be calculated from the data in the tables. We have not provided adjusted associations between the demographic target groups and the indicators (i.e. controlling for membership of the other demographic target groups) as we are not asking questions about the causality of these associations but describing the levels of the many indicators in the myriad target groups.

In the tables below, where the denominator for a cell is fewer than 20, we have not supplied the figure and instead the cell contains the characters 'n<20'.

8.1 Summary

Age

- Morbidities: participants under 25 years were more likely to report poor mental health (anxiety/depression and suicidal thoughts) and sexual unhappiness, and if they had diagnosed HIV they were most likely to have detectable viral load. Alcohol dependency and acquisition of STIs was most common in 25–39-year-olds.
- Behaviour: sexual risk behaviour was most common in 40–64-year-olds, who were also most likely to engage in precautionary behaviour (taking ART and PrEP). While the under-25s were less likely to engage in risk behaviour they were also least likely to be taking ART if they had HIV or PrEP if they did not.
- Needs: participants under 25 years had higher levels of unmet need for most indicators.
- Interventions: the oldest and the youngest participants were least likely to access interventions. Under-25s diagnosed with HIV were least likely to have ever had their infection monitored; to have had it monitored in the last six months; and to have an undetectable viral load. Under-25s were also least likely to have ever received a hepatitis A or a hepatitis B vaccination; or to have undertaken a full STI screen in the last 12 months.

Sex at birth and gender identity

- Morbidities: cis men were more likely to report diagnosed HIV and other STI infections. Trans men and non-trans identified men who were female at birth were most likely to report severe anxiety and depression, suicidal thoughts and alcohol dependency.

- Behaviour: non-steady sexual partner risks were less common in trans than cis men, as was using PrEP. While injecting drugs was as common in trans men as cis men, cis men were much more likely to engage in sexualised drug use.
- Needs: trans groups had greatest needs for almost all indicators.
- Interventions: access to interventions was lower in trans groups and trans men (female at birth) were most likely to experience homophobic insult or abuse.

'Outness'

- Morbidities: alcohol dependency and infections were higher in participants with high levels of 'outness', while sexual unhappiness and poor mental health were more common in participants who were out to few or none of the people they knew.
- Behaviour: sexual risk behaviour and precautions were more common in participants with high levels of 'outness'. Participants who were not out were less likely to use ART if they had HIV, or PrEP if they did not.
- Needs: on almost all indicators unmet need was more common in participants who were out to fewer people. Participants who were out to few or no people knew less, had less confidence, less access, less support and more concerns.
- Interventions: despite being most likely to be in need, participants who were not out were less likely to access interventions (but also less likely to encounter homophobic abuse).

Partnership status

- Morbidities: single participants were more likely to be sexually unhappy but most other morbidities were more common among participants in partnerships, especially complicated ones. Participants in steady partnerships had lower levels of anxiety/depression and sexual unhappiness.
- Behaviour: single participants and those in 'complicated' or multiple relationships had similarly high average numbers of non-steady partners and were almost as likely as each other to report condomless intercourse with them.
- Needs: unmet need was most common in single men.
- Interventions: single participants and those that reported their relationship status was 'complicated' have less access to most interventions compared to participants with a steady partner. While HIV prevalence is highest in participants in a steady relationship, single and 'it's complicated' participants with diagnosed HIV were less likely to have ever had that HIV monitored; to have had it monitored in the last 6 months; and to have undetectable viral load.

Migrancy

- Morbidities: refugees and asylum seekers were more likely to report poor mental health, alcohol dependency and/or to have been recently diagnosed with HIV and to have detectable viral load. Non-migrants were less likely to report any mental health morbidities and less likely to report HIV infection in the last 12 months, or any of the other STIs.
- Behaviour: sexual risk with non-steady partners, injecting and combining drugs and sex were most common among participants who had migrated to live sexually liberated lives. Refugees and asylum seekers were more likely than average to be injecting drugs but were less likely to be using ART or PrEP. Non-migrants are substantially less likely to report all risk behaviour, including having less non-steady partners in the last year.
- Needs: for most indicators it was refugees and asylum seekers who were most likely to be in need.
- Interventions: refugees and asylum seekers experienced a high level of homophobic abuse and were less likely to encounter information about safer sex or access vaccinations.

HIV diagnosis

- Morbidities: all other infections were more common among participants with diagnosed HIV, as was poor mental health.
- Behaviour: sexual risk behaviour, injecting drugs and combining stimulants and sex were notably more common in participants diagnosed with HIV.
- Needs: neither HIV diagnosis group showed a particularly greater need than the other.
- Interventions: participants not diagnosed with HIV were less likely to access all interventions.

Drug injecting

- Morbidities: all morbidities were more common among injectors, than non-injectors, except sexual unhappiness. The group of injectors included many more participants with diagnosed HIV and were much more likely to have been diagnosed with HIV in the last 12 months.
- Behaviour: participants who injected had far higher numbers of sexual partners and were much more likely to engage in sexual risk behaviour but were also more likely to be using PrEP.

- Needs: participants who injected were more likely to report needs associated with control over the sex they had but they were more knowledgeable about HIV (including U=U), STIs, PEP, PrEP and hepatitis, compared to non-injectors.
- Interventions: participants who injected to get high in the last 12 months accessed most interventions to a similar or greater extent than participants who did not inject. In the last 12 months they were more likely to have tested for HIV, and those with diagnosed HIV were more likely to have an undetectable viral load. Injectors were more likely to have been offered a hepatitis vaccination, to have received a vaccination and/or to have been screened for STIs.

Sex work

- Morbidities: participants who sold sex were more likely to encounter all morbidities except sexual unhappiness, suggesting MSM who sell sex should be a priority target group for mental and sexual health promotion interventions.
- Behaviour: participants who sold sex were more likely to engage in sexual and drug risk behaviour. Among those without HIV, taking PrEP was more common for those selling sex. However, among those with HIV, taking ART was less common.
- Needs: participants who sold sex were more likely to be in need for the majority of indicators. They were more likely to be concerned about their drug use, and more likely to lack control over unwanted sex as well as safer sex. They were also more likely to report a lack of social support.
- Interventions: participants who sold sex were more likely to experience homophobic abuse. Although they were more likely to have had a sexual health screen, they were less likely to have hepatitis vaccination and, if they had HIV, to be in care.

8.2 Age inequalities

The age profile of the sample is described in Section 3.2. The tables below present the indicators for four age groups, the under-25s (19%), those 25–39 years (44%), those 40–64 years (35%) and those aged 65 and above (2%).

As a group, seniors (65+) were most likely to have had only one year in full-time education after the age of 16, or none. Only 20% of the under-25s reported a current steady partner, compared with 39% among the 25–39-year-olds and 47% in those aged 40–64 years or 65+. Men under 25 were also least likely to be out to everyone who knew them. More of the under-25s reported being trans and/or female at birth (1.7% versus 0.8% of the 25–39 year-olds, 0.5% of the 40–64-year-olds and 0.9% of those 65+). While a small proportion of men overall (2%) had sold sex three or more times in the last 12 months this was higher among men under 25 years (5%). Those aged 25–39 were less likely to have been born in their country of residence compared to other groups.

8.2.1 Age and morbidities

The levels of morbidities varied for different age groups. Younger men (under 25 years) were more likely to report mental health morbidities (anxiety/depression and suicidal thoughts) and sexual unhappiness. Alcohol dependency was most common in the 25–39-year-olds, as was acquisition of several STIs. Having HIV was most common in the 40–64-year-olds but having detectable HIV was more common in those aged 25–39 years.

Table 8.1 Key morbidities by age group

Age groups and morbidities (N=127 792, missing n=0)	<25 (n=23 786)	25–39 (n=55 650)	40–64 (n=45 246)	65+ (n=3 110)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	12.7	8.0	5.1	2.0	7.7
% with self-harm thoughts, last two weeks	30.1	20.6	17.1	12.0	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	25.9	22.2	21.3	18.8	22.5
% with potential alcohol dependency (CAGE4)	18.4	20.2	16.3	13.1	18.3
% diagnosed with HIV ever (GAM 4.20)	2.2	9.2	16.0	12.3	10.4
% diagnosed with HIV, last 12 months	0.8	1.4	0.8	0.2	1.1
% with diagnosed HIV and detectable viral load	0.5	1.1	0.8	0.5	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	2.5	4.6	5.2	2.6	4.4
% diagnosed with gonorrhoea, last 12 month	4.2	6.5	4.3	2.0	5.2
% diagnosed with chlamydia, last 12 months	3.0	5.1	4.7	3.2	4.5
% diagnosed with anal/genital warts ever	6.1	16.6	20.2	15.6	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	0.1	0.7	2.3	1.8	1.2

Sexual health programmes for younger MSM should include mental well-being, while mental well-being programmes for MSM should prioritise younger men.

8.2.2 Age and behaviour

Risk behaviour was not most common in the youngest group, but typically in the 40–64-year-olds. The senior men (65+) were most likely to engage in sexual risk behaviour with multiple steady partners. Precautionary behaviour (taking ART and PrEP) were most common in the age group with most risk behaviour.

Table 8.2 Key behaviour by age groups

Age groups and behaviour (N=127 792, missing n=0)	<25 (n=23 786)	25–39 (n=55 650)	40–64 (n=45 246)	65+ (n=3 110)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	73.0	87.9	92.7	87.2	89.9
% who took PEP ever, excluding HIV-diagnosed men	2.0	5.3	5.1	1.7	4.5
% currently taking PrEP, excluding HIV-diagnosed men	1.1	3.4	3.8	1.5	3.0
% with 2+ condomless steady sex partners, last 12 months	7.5	8.3	9.3	10.2	8.5
Number (median) of non-steady sex partners, last 12 months	2	4	4	3	4
% having condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	21.2	23.4	25.8	19.3	23.7
% who injected drugs (excluding steroids), last 12 months	0.6	1.1	1.6	1.3	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	2.5	5.6	6.4	3.3	5.2

While the under-25s were less likely to engage in risk behaviour than middle-aged men, they were also least likely to be taking ART if they had HIV, or PrEP if they did not.

8.2.3 Age and unmet prevention needs

Men under 25 years had higher levels of unmet prevention needs for most indicators. The exceptions were PrEP knowledge and decision-making, where need was greater among the seniors, and concerns about sexual and drug safety where need was greatest in those aged 25–39 years.

Table 8.3 Key needs by age groups

Age groups and needs (N=127 792, missing n=0)	<25 (n=23 786)	25–39 (n=55 650)	40–64 (n=45 246)	65+ (n=3 110)	All
% lacking social support (scoring <10 in either sub-scale SPS)	13.6	11.1	11.5	12.1	11.7
Score (mean) for the SIHS (0 to 6)	1.7	1.5	1.3	1.4	1.5
% lacking control over safer sex	10.9	11.6	10.8	8.3	11.1
% lacking control over unwanted sex	11.4	8.5	7.3	7.7	8.6
% having condomless intercourse due to lack of condoms, last 12 months	30.9	24.8	24.3	22.2	25.7
Number (mean) of six HIV/STI transmission facts not already known	1.1	0.7	0.7	0.9	0.8
% concerned about own drug use	11.5	14.1	11.2	7.3	12.5
% unaware of PEP	54.8	36.4	33.4	46.5	39.0
% without confidence to access PEP, excluding men with diagnosed HIV	66.4	61.2	55.3	52.5	60.1
% unaware of PrEP	46.8	33.0	35.9	52.0	37.0
% not sure whether would use PrEP	27.4	26.8	27.9	29.1	27.3
Number (mean) of six PEP/PrEP facts not already known	4.1	3.3	3.3	4.0	3.5
Number (mean) of seven HIV test/treatment facts not already known	1.1	0.7	0.7	0.9	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	50.2	40.6	40.7	47.1	42.6
% not sure of own HIV status	5.1	3.9	3.4	2.4	3.9
% not knowing where to get HIV test, among those never tested	52.1	38.4	29.0	25.5	41.5
Number (mean) of five hepatitis facts not already known	1.7	1.2	0.8	0.9	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	59.2	54.4	49.9	49.6	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	59.9	55.1	49.2	47.1	54.3

These data demonstrate specific and actionable needs among the youngest segment of the MSM population across Europe. While the behavioural data suggest they may, as yet, not be engaging in sexual risk behaviour to the same extent as older men, they show levels of need that can only expose them to significant risk of future sexual ill health. Just under half of those under 25 do not know what PrEP is (47%) and more than half (55%) do not know what PEP is. Half (50%) do not know that a person with undetectable viral load cannot pass on HIV (U=U) and a similar number (52%) have never tested for HIV and do not know where to test. Finally, 59% did not know where to get hepatitis A vaccination and 60% did not know where to get hepatitis B vaccination. Failure to meet these relatively simple needs related to information and the provision of services, along with failure to promote them appropriately, can only exacerbate future sexual health morbidities.

8.2.4 Age and interventions

The youngest and oldest age groups were least likely to report encountering or accessing interventions. While HIV prevalence increases with age, and new diagnoses are most common among the 25–39 age group, those under-25s with diagnosed HIV were least likely to have ever had their HIV infection monitored (DDM indicator #6.278, 'Linked to care' cascade stage 3); to have had it monitored in the last six months (DDM indicator #6.282 'retained in care' cascade stage 4); and to have an undetectable viral load (DDM indicator #6.91, cascade stage 6). The under-25s were also least likely to report hepatitis A or a hepatitis B vaccination; or having had a full STI screen in the last 12 months.

Table 8.4 Key interventions by age group

Age groups and interventions (N=127 792, missing n=0)	<25 (n=23 786)	25–39 (n=55 650)	40–64 (n=45 246)	65+ (n=3 110)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	36.5	21.3	12.9	6.6	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	27.9	31.8	35.3	36.6	32.4
% spoken to about PrEP at a health service - among non-HIV-diagnosed	7.1	10.1	9.4	5.1	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	72.4	77.3	71.9	56.3	74.0
% tested for HIV, last 12 months, excluding men diagnosed prior to that (DDM 4.53)	46.6	61.1	54.9	40.3	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	15.4	21.1	16.4	13.4	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.4	1.3	1.2	1.6	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	1.5	2.3	1.9	1.0	2.0
% having had HIV monitoring ever among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	95.4	98.5	99.5	98.1	98.9
% having had HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	90.5	94.7	97.1	95.5	95.8
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	52.5	77.0	87.2	84.0	81.8
% offered any hepatitis vaccination by health service, ever	49.1	57.8	58.0	47.6	56.1
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	30.4	43.5	50.3	45.1	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	34.6	50.9	55.2	46.6	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	9.4	14.3	12.9	10.1	12.7

8.3 Gender identity and sex at birth (cis and trans) inequalities

Section 3.1 describes how combinations of sex at birth and current gender identity were distributed across the sample. It provides the indicators for four groups: 'men' and 'male at birth' (99%); 'trans man' and 'male at birth' (0.3%); 'trans man' and 'female at birth' (0.4%) and 'men' and 'female at birth' (0.1%).

Overall, 1.0% of respondents indicated their current gender identity as trans man and/or having been assigned female at birth. Comparing this 'trans' group with the 'cis' majority, trans men were much more likely to be under 25 compared to cis men (36% versus 18%) and were significantly younger (mean age 32.6 years, SD=13.6, median=28) than cis men (mean age 37.3 years, SD=12.8, median 36). Trans men lived in every country taking part in the survey. Trans men were slightly more likely to have low educational attainment compared to cis men (8% versus 5%). Trans men were more likely to have sold sex compared to cis men (6% versus 2%), particularly among trans men who said they were male at birth. While overall 'outness' did not vary for a trans or cis man,

trans men who were male at birth were much less likely to be out to (almost) all friends, family and work colleagues (24%) compared to trans men who were female at birth (49%), men who were female at birth (40%) and cis men (41%). Relationship status and living in country of birth varied little by trans or cis status and there was no variation in injecting drug use.

8.3.1 Sex/gender and morbidities

Poor mental health and substance dependency were higher in trans groups, while infections were more common in the cis group. Anxiety/depression and suicidal ideation were significantly high among trans men (those female at birth).

Table 8.5 Key morbidities by sex and gender group

Gender identity and sex at birth - groups and morbidities (N=127 441, missing n=351)	Men, male at birth (n=126 330)	Trans men, male at birth (n=405)	Trans men, female at birth (n=515)	Men, female at birth (n=191)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	7.7	6.5	22.9	15.9	7.7
% with self-harm thoughts, last two weeks	20.8	27.2	50.0	32.5	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	22.4	29.2	35.9	26.3	22.5
% with potential alcohol dependency (CAGE4)	18.3	20.3	26.8	22.1	18.3
% diagnosed with HIV ever (GAM 4.20)	10.4	6.6	1.0	3.2	10.4
% diagnosed with HIV, last 12 months	1.1	0.0	0.2	0.0	1.1
% with diagnosed HIV and detectable viral load	0.9	1.0	0.6	0.5	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	4.4	4.1	0.6	2.1	4.4
% diagnosed with gonorrhoea, last 12 month	5.2	1.8	3.1	1.6	5.2
% diagnosed with chlamydia, last 12 months	4.5	2.1	2.6	2.1	4.5
% diagnosed with anal/genital warts ever	16.0	13.0	6.9	6.4	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	1.2	0.5	0.0	0.5	1.2

Cis men are substantially less likely to report generic morbidities – mental health, suicidal thoughts, alcohol dependence and sexual unhappiness – but more likely to report diagnosed HIV infection – including infection in the last 12 months – and are more likely to report diagnosis with all the other STIs. Trans men who were female at birth and non-trans identified men who were female at birth were most likely to report severe anxiety and depression, suicidal thoughts and alcohol dependence.

8.3.2 Sex/gender and behaviour

Non-steady sexual partner risks were less common in trans than cis men, as was using PrEP. However, the trans men (male at birth) were most likely to engage in steady partner sexual risk. While injecting drugs was as common in trans men as cis men, cis men were much more likely to engage in sexualised drug use.

Table 8.6 Key behaviour by sex and gender group

Gender identity and sex at birth - groups and behaviour (N=127 441, missing n=351)	Men, male at birth (n=126 330)	Trans men, male at birth (n=405)	Trans men, female at birth (n=515)	Men, female at birth (n=191)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	90.0	73.1	n<20	n<20	90.0
% who took PEP ever, excluding HIV-diagnosed men	4.5	3.0	1.4	2.8	4.5
% currently taking PrEP, excluding HIV-diagnosed men	3.1	2.4	1.0	1.6	3.0
% with 2+ condomless steady sex partners, last 12 months	8.5	13.8	3.7	7.0	8.5
Number (median) of non-steady sex partners, last 12 months	4	2	0	0	4
% having condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	23.8	19.8	13.5	10.5	23.8
% who injected drugs (excluding steroids), last 12 months	1.1	3.3	1.6	2.6	1.1
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	5.2	3.3	2.5	2.6	5.2

8.3.3 Sex/gender and needs

For almost every indicator of need, trans groups showed the greatest level of unmet needs.

Table 8.7 Key needs by sex and gender group

Gender identity and sex at birth - groups and needs (N=127 441, missing n=351)	Men, male at birth (n=126 330)	Trans men, male at birth (n=405)	Trans men, female at birth (n=515)	Men, female at birth (n=191)	All
% lacking social support (scoring <10 in either sub-scale SPS)	11.7	18.9	16.5	17.1	11.7
Score (mean) for the SIHS (0 to 6)	1.5	1.8	0.9	1.5	1.5
% lacking control over safer sex	11.1	10.5	14.2	14.2	11.1
% lacking control over unwanted sex	8.5	12.5	22.3	14.7	8.6
% having condomless intercourse due to lack of condoms, last 12 months	25.7	31.7	15.6	25.9	25.7
Number (mean) of six HIV/STI transmission facts not already known	1.9	2.5	1.7	2.1	1.9
% concerned about own drug use	12.5	14.8	10.2	11.7	12.5
% unaware of PEP	38.9	69.5	40.9	47.1	39.0
% without confidence to access PEP, excluding men with diagnosed HIV	60.0	68.0	67.7	65.6	60.1
% unaware of PrEP	36.8	71.4	41.6	49.5	37.0
% not sure whether would use PrEP	27.3	24.8	36.7	25.7	27.3
Number (mean) of six PEP/PrEP facts not already known	3.5	4.6	3.9	3.9	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	1.5	1.0	1.2	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	42.5	61.6	44.3	45.5	42.6
% not sure of own HIV status	3.9	8.8	2.3	6.8	3.9
% not knowing where to get HIV test, among those never tested	41.4	48.5	47.6	49.3	41.5
Number (mean) of five hepatitis facts not already known	1.1	1.4	1.8	1.8	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	54.0	62.3	61.1	59.7	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	54.3	58.8	59.8	56.2	54.3

8.3.4 Sex/gender and interventions

Trans men (female at birth) were most likely to experience the negative intervention of homophobic insult or abuse. Access to all the positive interventions was generally lower in the trans groups than the cis group.

Table 8.8 Key interventions by sex and gender group

Gender identity and sex at birth - groups and interventions (N=127 441, missing n=351)	Men, male at birth (n=126 330)	Trans men, male at birth (n=405)	Trans men, female at birth (n=515)	Men, female at birth (n=191)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	20.7	26.8	36.4	29.8	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	32.4	20.8	40.7	29.5	32.4
% spoken to about PrEP at a health service - among non-HIV-diagnosed	9.2	5.4	5.9	10.0	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	74.1	56.3	75.3	70.7	74.0
% tested for HIV, last 12 months, excluding men diagnosed prior to this (DDM 4.53)	55.8	42.0	36.8	41.1	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	18.2	12.1	17.0	14.1	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	1.1	2.5	0.5	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	1.1	1.4	0.0	2.0
% having ever had HIV monitoring, among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	98.9	100.0	n<20	n<20	98.9
% having had HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	95.9	92.3	n<20	n<20	95.9
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	81.9	65.4	n<20	n<20	81.8
% offered any hepatitis vaccination by health service, ever	56.3	42.8	42.2	49.7	56.
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	43.4	32.4	25.7	29.1	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	49.3	36.6	31.0	34.8	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	12.8	7.9	7.8	8.1	12.7

8.4 'Outness' inequalities

The extent to which men were open about their attraction to men is reported in Section 3.7. Below we compare indicators across three 'outness' groups based on the proportion of respondents' family, friends and work colleagues who knew of their attraction to men: none or few (30%); some (29%) and all or almost all (41%).

Men who were out to almost all or all were on average older (mean age 38.6 years, SD=12.6, median=38) than those who were out to no-one or just a few people (mean age 36.9 years, SD=13.5, median=35). Men who were out to more family, friends and colleagues were more likely to have a steady partner and less likely to say that their relationship was complicated. A higher proportion of those who were out to some people had high educational attainment (62%) than others (57% each). There was little variation depending on whether men were born in their country of residence,

whether they engaged in injecting drug use or selling sex, or in terms of their gender and sex at birth or trans status. All indicators varied in terms of 'outness' but not all in the same way.

8.4.1 'Outness' and morbidities

Sexual unhappiness and poor mental health were more common in men with few or no acquaintances aware of their attraction to men. Conversely, the men who were out were more likely to experience alcohol dependency and a range of infections.

Table 8.9 Key morbidities by 'outness' group

'Outness' groups and morbidities (N=126 161, missing n=1 631)	None or few know (n=38 280)	Some know (n=35 994)	Almost all/all know (n=51 887)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	8.3	8.1	7.0	7.7
% with self-harm thoughts, last two weeks	21.9	21.9	19.5	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	29.8	12.7	20.5	22.5
% with potential alcohol dependency (CAGE4)	15.3	18.8	20.1	18.3
% diagnosed with HIV ever (GAM 4.20)	5.9	9.9	14.2	10.4
% diagnosed with HIV, last 12 months	1.1	1.2	1.0	1.1
% with diagnosed HIV and detectable viral load	0.9	0.9	0.8	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	2.9	4.4	5.5	4.4
% diagnosed with gonorrhoea, last 12 month	5.4	4.8	5.7	5.2
% diagnosed with chlamydia, last 12 months	2.4	4.4	6.2	4.5
% diagnosed with anal/genital warts ever	11.0	15.8	19.7	16.0
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	0.4	1.0	1.9	1.2

8.4.2 'Outness' and behaviour

Sexual risk behaviour and sexual precautions were more common in the men who were out than those who were not out. Men who were not out were less likely to use ART if they had HIV, or PrEP if they did not.

Table 8.10 Key behaviour by 'outness' group

'Outness' group and behaviour (N=126 161, missing n=1 631)	None or few know (n=38 280)	Some know (n=35 994)	Almost all/all know (n=51 887)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	83.9	91.3	91.2	90.0
% who ever took PEP, excluding HIV-diagnosed men	1.8	4.7	6.6	4.5
% currently taking PrEP, excluding HIV-diagnosed men	1.0	3.0	4.8	3.1
% with 2+ condomless steady sex partners, last 12 months	7.6	8.1	9.6	8.6
Number (median) of non-steady sex partners, last 12 months	3	4	5	4
% having condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	19.6	24.1	26.8	23.8
% who injected drugs (excluding steroids), last 12 months	0.7	1.0	1.6	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	2.4	4.6	7.8	5.2

Men who were 'out' reported more non-steady partners and were more likely to have multiple risky steady partners. Men who were out were also more likely to inject drugs and combine stimulants with sex.

8.4.3 'Outness' and needs

In contrast to risk behaviour, for almost all indicators, unmet need was more common in men who were out to fewer people. Men who were out to few people or no-one knew less, had less confidence, less access, less support and more concerns.

Table 8.11 Key needs by 'outness' group

'Outness' group and needs (N=126 161, missing n=1 631)	None or few know (n=38 280)	Some know (n=35 994)	Almost all/all know (n=51 887)	All
% lacking social support (scoring <10 in either sub-scale SPS)	17.5	10.9	7.7	11.6
Score (mean) for the SIHS (0 to 6)	2.4	1.5	0.9	1.5
% lacking control over safer sex	10.3	11.9	11.2	11.1
% lacking control over unwanted sex	8.5	8.9	8.4	8.6
% having condomless intercourse due to lack of condoms, last 12 months	26.7	25.0	25.4	25.7
Number (mean) of six HIV/STI transmission facts not already known	1.1	0.8	0.6	0.8
% concerned about own drug use	13.7	13.1	11.7	12.5
% unaware of PEP	58.6	36.7	25.5	38.7
% without confidence to access PEP, excluding men with diagnosed HIV	69.3	61.8	51.1	60.0
% unaware of PrEP	58.0	33.2	23.4	36.6
% not sure whether would use PrEP	27.5	27.6	27.0	27.3
Number (mean) of six PEP/PrEP facts not already known	4.4	3.4	2.8	3.5
Number (mean) of seven HIV test/treatment facts not already known	1.1	0.8	0.5	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	56.3	42.8	31.8	42.4
% not sure of own HIV status	5.2	3.9	2.8	3.8
% not knowing where to get HIV test, among those never tested	46.3	40.3	31.7	41.3
Number (mean) of five hepatitis facts not already known	1.4	1.2	0.9	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	61.0	55.0	45.5	54.0
% not knowing where to get hepatitis B vaccination, among those vulnerable	61.1	55.7	45.1	54.2

These data demonstrate specific and actionable needs among the least out segment of the MSM population across Europe. More than half do not know what PrEP is (58%) or what PEP is (59%). Half (56%) do not know that a person with undetectable viral load cannot pass on HIV (U=U) and a similar number (46%) have never tested for HIV and do not know where to test. Failure to meet these relatively simple needs related to information and the provision of services, and failure to promote them appropriately, can only exacerbate future sexual health morbidities.

8.4.4 'Outness' and interventions

Despite being most likely to be in need, men who were not out were least likely to encounter or access interventions. They were however, less likely to encounter homophobic abuse.

Table 8.12 Key interventions by 'outness' group

'Outness' group and interventions (N=126 161, missing n=1 631)	None or few know (n=38 280)	Some know (n=35 994)	Almost all/all know (n=51 887)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	15.8	22.8	23.3	20.9
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	20.2	34.5	40.3	32.6
% spoken to about PrEP at a health service - among non-HIV-diagnosed	3.8	9.3	13.5	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	69.1	76.1	76.7	74.2
% tested for HIV, last 12 months, excluding men diagnosed prior to this (DDM 4.53)	44.4	59.2	62.6	55.8
% using community HIV-testing at last HIV test (DDM 4.13a)	12.7	21.3	20.7	18.3
% using HIV self-sampling at last HIV test (DDM 4.13b)	0.8	1.4	1.6	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	1.8	2.2	2.0	2.0
% having had HIV monitoring ever among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	97.6	98.8	99.3	98.9
% having had HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	92.8	96.1	96.7	95.9
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	69.8	81.6	85.7	81.9
% offered any hepatitis vaccination by health service ever	43.8	56.2	65.2	56.3
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	31.1	41.3	53.9	43.4
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	36.1	48.6	59.5	49.3
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	5.6	12.5	19.0	12.8

8.5 Partnership status inequalities

Section 3.8 reports on the extent of steady partnerships in the sample. Below we compare indicators for men who are single, have a steady partner (note that partners may be male, female, or non-binary, and may be multiple) and those who indicated 'I'm not sure/it's complicated'.

Men with a steady partner were older (mean age 40.1, SD=12.3, median=39) than single men (mean age 34.9, SD=12.8, median=32) and those who reported that their relationships were uncertain or complex (mean age 37.2, SD=12.8, median=35). A much smaller proportion of men with a steady partner reported that they were under 25 (10%) compared to those who were uncertain or had a complex relationship (22%) and single men (25%). Those with a steady partner were also less likely to report that they were a member of an ethnic or racial minority (11%) than single men (15%) and those with uncertain or complex relationships (16%). In addition, they were much more likely to be out to (almost) all their family, friends and colleagues (50%) compared to single men (37%) and those with uncertain or complex relationships (31%). There was little difference across relationship status in terms of sex/gender, education, migrant status, selling sex or injecting drug use.

Almost all indicators varied by relationship status but not all in the same way. In most cases single men and those that reported their relationship status as 'complicated' were more similar than either of these groups were to men who reported they were in a steady relationship.

8.5.1 Partnership status and morbidities

Single men were a great deal more likely to be sexually unhappy, but most other morbidities were more common among men in partnerships, especially men who said their relationship was unclear or complicated.

Table 8.13 Key morbidities by relationship status group

Relationship status groups and morbidities (N=127 627, missing n=165)	Single (n=68 945)	Steady partner (n=49 256)	Not sure/It's complicated (n=9 426)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	9.5	4.8	9.8	7.7
% with self-harm thoughts, last two weeks	25.0	14.4	25.4	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	29.6	12.7	20.3	22.5
% with potential alcohol dependency (CAGE4)	18.3	17.7	21.5	18.3
% diagnosed with HIV ever (GAM 4.20)	9.7	11.3	10.3	10.4
% diagnosed with HIV, last 12 months	1.2	0.9	1.3	1.1
% with diagnosed HIV and detectable viral load	0.9	0.8	1.1	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	4.5	4.1	4.8	4.4
% diagnosed with gonorrhoea, last 12 month	5.4	4.8	5.7	5.2
% diagnosed with chlamydia, last 12 months	4.5	4.5	4.7	4.5
% diagnosed with anal/genital warts ever	15.0	17.1	16.0	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	1.1	1.3	1.3	1.2

Men in relationships they described as 'complicated' had as much anxiety/depression and sexual unhappiness as single men.

8.5.2 Partnership status and behaviour

With respect to behaviour, men in a steady relationship were less likely to report sexual risk behaviour than the other two groups.

Table 8.14 Key behaviour by relationship status group

Relationship status group and behaviour (N=127 627, missing n=165)	Single (n=68 945)	Steady partner (n=49 256)	Not sure/It's complicated (n=9 426)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	89.0	91.4	87.7	89.9
% who took PEP ever, excluding HIV-diagnosed men	4.5	4.4	4.5	4.5
% currently taking PrEP, excluding HIV-diagnosed men	3.0	3.1	3.1	3.0
% with 2+ condomless steady sex partners, last 12 months	5.5	11.6	15.5	8.5
Number (median) of non-steady sex partners, last 12 months	4	3	4	4
% having had condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	26.5	19.3	27.3	23.7
% who injected drugs (excluding steroids), last 12 months	1.2	1.0	1.5	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	5.0	5.5	5.8	5.2

Men in the 'it's complicated' group were more likely to report having had condomless intercourse with 2+ steady partners in the last year and higher average numbers of non-steady partners (than men in a steady relationship). They were also more likely to report having had condomless intercourse with non-steady partners. Similarly, they were most likely to report having injected drugs or used stimulant drugs to make sex last longer in the last four weeks. They were also least likely to report taking ART if they had been diagnosed with HIV. Single men were far less likely than men in the category 'it's complicated' to report 2+ steady partners with whom they had had

condomless intercourse in the last year although they had similarly high average numbers of non-steady partners and were almost as likely to report having had condomless intercourse with non-steady partners.

8.5.3 Partnership status and needs

Unmet need was most common in the group of men who were single or those who were unsure if they were in a relationship or not. Low social support was notably more common in the single men.

Table 8.15 Key needs by relationship status group

Relationship status group and needs (N=127 627, missing n=165)	Single (n=68 945)	Steady partner (n=49 256)	Not sure/It's complicated (n=9 426)	All
% lacking social support (scoring <10 in either sub-scale SPS)	15.4	6.4	13.4	11.7
Score (mean) for the SIHS (0 to 6)	1.6	1.2	1.7	1.5
% lacking control over safer sex	12.2	9.4	12.0	11.1
% lacking control over unwanted sex	9.3	7.4	10.4	8.6
% having had condomless intercourse due to a lack of condoms, last 12 months	26.7	23.4	30.4	25.7
Number (mean) of six HIV/STI transmission facts not already known	0.9	0.7	0.9	0.8
% concerned about own drug use	13.8	10.1	15.5	12.5
% unaware of PEP	40.9	35.4	44.3	39.0
% without confidence to access PEP, excluding men with diagnosed HIV	61.7	57.1	64.0	60.1
% unaware of PrEP	37.5	35.4	42.2	37.0
% not sure whether would use PrEP	27.4	27.4	26.5	27.3
Number (mean) of six PEP/PrEP facts not already known	3.6	3.3	3.7	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	0.7	0.9	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	43.9	40.1	45.7	42.6
% not sure of own HIV status	4.6	2.6	5.3	3.9
% not knowing where to get HIV test, among those never tested	45.0	33.2	45.0	41.5
Number (mean) of five hepatitis facts not already known	1.3	0.9	1.2	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	56.0	49.7	60.0	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	56.2	49.9	60.0	54.3

The same pattern was seen for needs measures associated with specific precautionary behaviour and for the educational/information-based needs.

8.5.4 Partnership status and interventions

Data on access to sexual health interventions similarly show that single men and those reporting their relationship status as 'complicated' have less access to most interventions than men with a steady partner, although the pattern is not quite so clear cut as with needs. While HIV prevalence is highest in men in a steady relationship, single and 'it's complicated', men with diagnosed HIV were less likely to have ever had that HIV monitored (DDM indicator #6.278, 'Linked to care' cascade stage 3); to have had it monitored in the last six months (DDM indicator #6.282, 'retained in care' cascade stage 4) or to have an undetectable viral load (DDM indicator #6.91, cascade stage 6). Compared to men in a steady relationship, they were also less likely to have been offered any hepatitis vaccination or to have ever received a hepatitis A or hepatitis B vaccination.

Table 8.16 Key interventions by relationship status group

Relationship status groups and interventions (N=127 627, missing n=165)	Single (n=68 945)	Steady partner (n=49 256)	Not sure/It's complicated (n=9 426)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	22.7	17.7	23.1	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	32.7	32.0	32.6	32.4
% spoken to about PrEP at a health service, among non-HIV-diagnosed	9.4	8.7	9.3	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	71.9	76.6	75.8	74.0
% tested for HIV, last 12 months, excluding men diagnosed prior to this (DDM 4.53)	56.5	53.7	58.3	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	17.3	19.5	18.3	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	1.2	1.5	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	2.0	2.1	2.0
% having ever had HIV, among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	98.6	99.2	99.5	98.9
% having had HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	95.3	96.6	95.2	95.8
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	79.8	84.9	77.0	81.8
% ever offered any hepatitis vaccination by health service	53.8	59.8	53.0	56.1
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	39.7	49.3	38.1	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	46.1	54.2	44.0	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	12.9	12.4	12.8	12.7

8.6 Migrancy inequalities

Section 3.5 reports on whether respondents are migrants, where they have migrated from and why. Below we provide the indicators for three migrancy groups and we compare these to men currently living in the country they were born in (86%, who are not migrants). The migrancy groups are those who came to their current country of residence as a refugee or asylum seeker (<1%); those who came to their current country to live more openly as a gay or bisexual man (2%) and those who came to their current country for other reasons (other migrants, 11%). Men who reported seeking refuge or asylum and desiring to live more openly as gay or bisexual, or any other reason were assigned to the asylum and refugee category first. Men who reported desiring to live more openly as gay or bisexual and another reason were assigned to the category 'live more openly as a gay or bisexual'. We might assume that all the other migrants came to their current country of residence for work, or to study but we did not ask this.

On average, men who migrated to live more openly as gay were younger (mean age 35.4, SD=10.6, median=34) than refugees and asylum seekers (mean age 36.0, SD=12.9, median=33) and those born in their country of residence (mean age 37.0, SD=12.9, median=35) and other migrants (mean age 37.6, SD=12.4, median=36). All

migrants were better educated than men who were resident in their country of birth. Refugees and asylum seekers were much less likely to be out to 'almost all' of friends, family and work colleagues (25%) than those born in their country of residence (41%), those who migrated to be out as gay or bisexual (41%) and other migrants (44%). They were also more likely to report being a member of an ethnic or racial minority (49%) than those migrating to be more out (39%) than other migrants (30%) and those born in their country of residence (10%). Refugees and asylum seekers were also less likely to have a steady partner (28%) than other migrants (39%). There was little variation in migrant status for gender identity and sex at birth, trans status, injecting drug use or for the selling of sex.

8.6.1 Migrancy and morbidities

Refugees and asylum seekers were more likely to have poor mental health and substance dependency. They were also most likely to be recently diagnosed with HIV and overall to have detectable HIV. In contrast, all other infections appear to be more commonly experienced by men who migrate to live as gay or bisexual men.

Table 8.17 Key morbidities by migrancy status group

Migrancy status groups and morbidities (N=127 629, missing n=163)	Born in country of residence (not migrants) (n=110 346)	Refugees and asylum seekers (n=756)	Migrated to live as gay or bisexual (n=2 507)	Other migrants (n=14 020)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	7.7	11.5	9.6	7.1	7.7
% with self-harm thoughts, last two weeks	20.9	27.4	23.8	20.4	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	22.8	30.5	19.6	20.4	22.5
% with potential alcohol dependency (CAGE4)	18.2	20.6	20.5	18.9	18.3
% ever diagnosed with HIV (GAM 4.20)	9.9	13.2	14.8	13.1	10.4
% diagnosed with HIV, last 12 months	1.0	2.4	2.0	1.3	1.1
% with diagnosed HIV and detectable viral load	0.8	2.3	1.1	1.0	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	4.2	5.7	6.8	5.2	4.4
% diagnosed with gonorrhoea, last 12 month	4.8	5.8	11.6	7.1	5.2
% diagnosed with chlamydia, last 12 months	4.3	5.5	8.3	5.8	4.5
% ever diagnosed with anal/genital warts	15.5	14.3	19.8	18.3	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	1.1	0.9	2.0	1.6	1.2

Non-migrant MSM are significantly less likely to report all mental health morbidities – anxiety/depression, suicidal thoughts, alcohol dependence, sexual unhappiness – and less likely to report infections – including infection in the last 12 months, or any of the other STIs.

8.6.2 Migrancy and behaviour

Sexual risk with non-steady partners, injecting and combining drugs and sex were most common among men who had migrated to live sexually-liberated lives. They were also above average users of precautions (ART and PrEP). Refugees and asylum seekers were also more likely than average to be injecting drugs but were less likely to be using ART or PrEP. The level of ART among MSM with diagnosed HIV who are refugees or asylum seekers is noticeably lower.

Table 8.18 Key behaviour by migrancy status group

Migrancy status groups and behaviour (N=127 629, missing n=163)	Born in country of residence (n=110 346)	Refugees and asylum seekers (n=756)	Migrated to live as gay or bisexual (n=2 507)	Other migrants (n=14 020)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	89.9	71.7	90.2	91.0	89.9
% who ever took PEP, excluding HIV-diagnosed men	4.0	4.3	8.6	7.5	4.5
% currently taking PrEP, excluding HIV- diagnosed men	2.7	2.6	6.5	4.8	3.0
% with 2+ condomless steady sex partners, last 12 months	8.5	12.0	10.7	8.6	8.5
Number (median) of non-steady sex partners, last 12 months	3	3	5	5	4
% having had condomless intercourse with non- steady partners of unknown HIV status, last 12 months (DDM 3.27)	23.4	26.8	27.7	25.7	23.7
% who injected drugs (excluding steroids), last 12 months	1.1	2.0	2.0	1.6	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	4.9	7.3	8.7	7.2	5.2

Similarly, non-migrant MSM are substantially less likely to report all risk behaviour, including having had less non-steady partners in the last year. Among the migrants, refugees and asylum seekers are most likely to report the most sexual risk behaviour but there is more variety in the behavioural measures and less consistency in the pattern for the three migrant groups.

8.6.3 Migrancy and needs

For the majority of indicators, refugees and asylum seekers were most likely to be in need, including those associated with specific precautionary behaviour (hepatitis vaccination; access to HIV testing; access to condoms etc.) and for educational/information-based needs. The proportion lacking social support was notably high, as was internalised homonegativity.

Table 8.19 Key needs by migrancy status group

Migrancy status groups and needs (N=127 629, missing n=163)	Born in country of residence (n=110 346)	Refugees and asylum seekers (n=756)	Migrated to live as gay or bisexual (n=2 507)	Other migrants (n=14 020)	All
% lacking social support (scoring <10 in either sub-scale SPS)	11.6	24.1	14.7	11.7	11.7
Score (mean) for the SIHS (0 to 6)	1.5	2.0	1.4	1.4	1.5
% lacking control over safer sex	10.9	11.0	12.9	12.2	11.1
% lacking control over unwanted sex	8.5	10.2	10.4	9.2	8.6
% having had condomless intercourse due to lack of condoms, last 12 months	25.6	37.2	26.4	26.2	25.7
Number (mean) of six HIV/STI transmission facts not already known	0.8	1.3	0.7	0.7	0.8
% concerned about own drug use	12.0	21.0	17.5	14.8	12.5
% unaware of PEP	40.1	55.9	31.1	30.9	39.0
% without confidence to access PEP, excluding men with diagnosed HIV	60.7	69.5	54.8	55.6	60.1
% unaware of PrEP	38.3	52.9	27.1	28.0	37.0
% not sure whether would use PrEP	27.6	23.8	23.5	25.9	27.3
Number (mean) of six PEP/PrEP facts not already known	3.5	4.0	3.0	3.0	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	1.3	0.7	0.7	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	43.1	51.2	36.8	39.2	42.6
% not sure of own HIV status	3.8	9.7	3.9	3.9	3.9
% not knowing where to get HIV test, among those never tested	41.2	51.1	43.2	43.4	41.5
Number (mean) of five hepatitis facts not already known	1.1	1.4	1.0	1.0	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	53.5	73.2	62.4	57.0	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	53.7	74.5	62.8	57.2	54.3

The non-migrant MSM were most likely to be unsure of whether they would use PrEP.

8.6.4 Migrancy and interventions

As a group, refugees and asylum seekers experienced a high level of homophobic abuse and were less likely than average to encounter information about safer sex or access to hepatitis vaccinations. Those with HIV were less likely to have their infection monitored and managed and were more likely to be detectable.

Table 8.20 Key interventions by migrancy status group

Migrancy status groups and interventions (N=127 629, missing n=163)	Born in country of residence (n=110 346)	Refugees and asylum seekers (n=756)	Migrated to live as gay or bisexual (n=2 507)	Other migrants (n=14 020)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	20.8	32.8	24.1	19.3	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	31.2	38.5	46.2	39.2	32.4
% spoken to about PrEP at a health service, among non-HIV-diagnosed	8.4	8.7	20.3	13.2	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	73.7	67.7	79.7	75.9	74.0
% tested for HIV, last 12 months, excluding men diagnosed prior to this (DDM 4.53)	54.3	56.0	69.9	63.2	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	17.8	16.5	23.4	20.6	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	0.4	2.1	1.4	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	1.2	2.0	2.1	2.0
% with HIV monitoring ever, among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	99.0	90.9	98.6	98.9	98.9
% with HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	96.1	82.8	94.6	95.2	95.8
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	81.6	63.6	82.6	83.8	81.8
% ever offered any hepatitis vaccination by health service	55.1	49.1	63.5	63.0	56.1
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	42.5	34.0	47.0	49.5	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	48.3	38.8	53.4	54.9	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12 months, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	11.6	13.5	26.4	19.2	12.7

8.7 HIV diagnosis inequalities

The prevalence of respondents diagnosed with HIV in the sample is reported in Section 4.3.1. Below we provide the indicators separately for men with and without diagnosed HIV.

Overall, 10% of men were living with diagnosed HIV. HIV-diagnosed men were older and slightly more likely to have fewer years of education. A slightly higher proportion reported having a steady partner (42% versus 38%), and they were substantially more likely to be out about being attracted to men.

8.7.1 HIV diagnosis and morbidities

Other infections were notably more common among men with diagnosed HIV than those without. Poor mental health also appears more common in men with HIV but sexual unhappiness and alcohol dependency are not.

Table 8.21 Key morbidities by HIV status group

HIV diagnosis groups and morbidities (N=126 925, missing n=867)	Not HIV diagnosed (n=113 753)	Diagnosed with HIV (n=13 172)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	7.7	8.0	7.7
% with self-harm thoughts, last two weeks	20.5	24.5	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	22.9	19.3	22.5
% with potential alcohol dependency (CAGE4)	18.3	17.9	18.3
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	3.1	15.3	4.3
% diagnosed with gonorrhoea, last 12 month	4.5	11.1	5.2
% diagnosed with chlamydia, last 12 months	3.9	10.2	4.5
% ever diagnosed with anal/genital warts	13.6	35.8	15.9
% ever diagnosed with HBV or HCV	5.9	22.4	7.6

HIV-diagnosed men reported more diagnoses of syphilis, gonorrhoea, and chlamydia or LGV in the last 12 months, and were more likely to ever have been diagnosed with anal or genital warts or hepatitis B or C. Although older than the comparison group, HIV-diagnosed men had poorer mental health, as they more commonly reported severe anxiety and depression and having had thoughts of self-harming in the last two weeks. However, they also reported slightly less sexual unhappiness and were less likely to be alcohol dependent.

8.7.2 HIV diagnosis and behaviour

Since ART and PrEP are each limited to one of the two groups, these data are not shown. Sexual risk behaviour, injecting drugs and combining stimulants and sex were notably more common in men with HIV.

Table 8.22 Key behaviour by HIV status group

HIV diagnosis groups and behaviour (N=126 925, missing n=867)	Not HIV diagnosed (n=113 753)	Diagnosed with HIV (n=13 172)	All
% with 2+ condomless steady sex partners, last 12 months	7.9	14.3	8.5
Number (median) of non-steady sex partners, last 12 months	3	10	4
% having had condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	20.9	47.9	23.7
% who injected drugs (excluding steroids), last 12 months	0.6	5.9	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	3.8	17.1	5.2

Men with diagnosed HIV reported higher numbers of non-steady sex partners and higher rates of condomless intercourse. The most striking differences with respect to behaviour were in use of stimulant drugs and injecting drug use.

8.7.3 HIV diagnosis and needs

In contrast to behaviour, neither HIV diagnosis group showed a significantly greater need than the other. Men with diagnosed HIV were significantly more likely not to be as safe sexually as they wanted to be, to lack access to condoms and to be concerned about drug use. Conversely, men without diagnosed HIV were significantly more likely to be ignorant about PrEP, U=U and hepatitis.

Table 8.23 Key needs by HIV status group

HIV diagnosis groups and needs (N=126 925, missing n=867)	Not HIV diagnosed (n=113 753)	Diagnosed with HIV (n=13 172)	All
% lacking social support (scoring <10 in either sub-scale SPS)	11.7	12.2	11.7
Score (mean) for the SIHS (0 to 6)	1.5	1.2	1.5
% lacking control over safer sex	10.3	18.0	11.1
% lacking control over unwanted sex	8.4	10.5	8.6
% with condomless intercourse due to lack of condoms, last 12 months	24.7	34.4	25.7
Number (mean) of six HIV/STI transmission facts not already known	0.8	0.5	0.8
% concerned about own drug use	11.6	17.4	12.5
% unaware of PrEP	39.4	16.1	37.0
Number (mean) of six PEP/PrEP facts not already known	3.6	2.0	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	0.4	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	45.7	15.4	42.6
% not sure of own HIV status	4.2	1.0	3.9
Number (mean) of five hepatitis facts not already known	1.2	0.6	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	54.5	47.4	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	54.8	46.3	54.3

Men with HIV were more knowledgeable about sexual health but did not appear to be in greater control because of this.

8.7.4 HIV diagnosis and interventions

Men not diagnosed with HIV were less likely to encounter or access all interventions asked about.

Table 8.24 Key interventions by HIV status group

HIV diagnosis groups and interventions (N=126 925, missing n=867)	NOT HIV diagnosed (n=113 753)	Diagnosed with HIV (n=13 172)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	21.0	18.7	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	31.1	44.0	32.4
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	73.7	77.7	74.1
% using community HIV-testing at last HIV test (DDM 4.13a)	18.3	20.5	18.3
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	1.5	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	2.3	2.0
% ever offered any hepatitis vaccination by a health service	53.8	75.3	56.1
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	40.9	65.4	43.2
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	46.6	72.5	49.1
% Full STI screen last 12 months (STI blood test, rectal swab, urethral swab or urine, but excluding the HIV test to make sense for people diagnosed with HIV, adapted DDM 3.3a)	12.7	29.1	14.4

Given their frequent contact with the healthcare system, all indicators for clinical interventions were more commonly reported by HIV-diagnosed men than for other men. However, 71% had not received a comprehensive STI screening in the past 12 months, and 25% had never been offered any hepatitis vaccination.

8.8 Drug injecting inequalities

Section 5.6 reports on the extent of injecting in the sample. Below we provide the indicators for the group of men who injected to get high in the last 12 months (1.2%) and for those who did not.

Compared to men who did not inject drugs to get high in the last 12 months, those who did were more likely to be aged between 40 and 64 years (49% versus 35%) and less likely to have injected if they are younger. There was little variation in relation to education. Men who had injected drugs were slightly less likely to have a steady partner (34% versus 39%) or to have been born in their country of residence (87% versus 81%). However, they were considerably more likely to be out to (almost) all family, friends and work colleagues (57% versus 41%) and more likely to have sold sex in the previous 12 months (11% vs 2%).

All indicators varied depending on whether men injected to get high in the last 12 months, and the pattern was very consistent. For the reported morbidities, the observed pattern was very predictable: those who do not inject are substantially less likely to report all morbidities except sexual unhappiness. A similar pattern emerges in behaviour, with those who inject being more likely to report all sexual risk behaviour including: the proportion reporting having had condomless intercourse with 2+ steady partners in the last 12 months; a higher average number of non-steady partners in the last 12 months; a higher proportion reporting condomless intercourse with non-steady partners in the last 12 months; and a substantially higher proportion reporting that they had used stimulant drugs to make sex more intense or last longer during the last four weeks. Injectors were also substantially more likely to report currently being on PrEP if they were negative for HIV infection, and no more likely to report being on ART if they had diagnosed HIV.

8.8.1 Drug injecting and morbidities

While men who injected were less likely to be sexually unhappy than those who did not, all other morbidities were more common among injectors. The group of injectors included many more men with HIV and they were much more likely to have been diagnosed with HIV in the last 12 months.

Table 8.25 Key morbidities by groups - injecting to get high

Injecting drugs other than steroids in the last 12 months and morbidities (N=126 865, missing n=927)	Not injected drugs to get high last 12 months (n=125 384)	Injected drugs other than steroids last 12 months (n=1 481)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	7.7	9.6	7.7
% with self-harm thoughts, last two weeks	20.8	30.5	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	22.6	16.7	22.5
% with potential alcohol dependency (CAGE4)	18.3	22.2	18.3
% diagnosed with HIV, ever (GAM 4.20)	9.9	52.7	10.4
% diagnosed with HIV, last 12 months	1.0	6.5	1.1
% with diagnosed HIV and detectable viral load	0.8	3.9	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	4.2	21.9	4.4
% diagnosed with gonorrhoea, last 12 month	5.0	22.2	5.2
% diagnosed with chlamydia, last 12 months	4.3	19.3	4.5
% ever diagnosed with anal/genital warts	15.7	31.2	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	1.0	21.3	1.2

8.8.2 Drug injecting and behaviour

Men who injected drugs had far higher numbers of sexual partners and were much more likely to engage in other types of sexual risk behaviour. They were also much more likely to be using PrEP.

Table 8.26 Key behaviour by groups - injecting to get high

Injecting drugs other than steroids in the last 12 months and behaviour (N=126 865, missing n=927)	Not injected drugs to get high last 12 months (n=125 384)	Injected drugs other than steroids last 12 months (n=1 481)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	90.0	89.5	90.0
% who ever took PEP, excluding HIV-diagnosed men	4.4	17.8	4.5
% currently taking PrEP, excluding HIV-diagnosed men	2.9	25.8	2.9
% with 2+ condomless steady sex partners, last 12 months	8.4	21.8	8.4
Number (median) of non-steady sex partners, last 12 months	3	11-20	3
% having had condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	23.4	58.0	23.4
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	4.6	63.8	4.6

Men who inject drugs appear to be a very important group to focus on when developing sexual health programmes.

8.8.3 Drug injecting and needs

Men who injected drugs were more likely to have needs associated with control over the sex they had and the lack of access to condoms. They were more much more likely to report concern about their drug use. However, injectors are more knowledgeable about HIV (including U=U), STIs, PEP, PrEP and hepatitis, than non-injectors.

Table 8.27 Key needs by groups - injecting to get high

Injecting drugs other than steroids in the last 12 months and needs (N=126 865, missing n=927)	Not injected drugs to get high last 12 months (n=125 384)	Injected drugs other than steroids last 12 months (n=1 481)	All
% lacking social support (scoring <10 in either sub-scale SPS)	11.7	12.0	11.7
Score (mean) for the SIHS (0 to 6)	1.5	1.2	1.5
% lacking control over safer sex	11.0	22.3	11.1
% lacking control over unwanted sex	8.5	13.8	8.6
% having had condomless intercourse due to lack of condoms, last 12 months	25.5	41.4	25.7
Number (mean) of six HIV/STI transmission facts not already known	0.8	0.5	0.8
% concerned about own drug use	11.9	31.6	12.5
% unaware of PEP	39.2	16.9	38.9
% without confidence to access PEP, excluding men with diagnosed HIV	60.2	42.7	60.1
% unaware of PrEP	37.2	14.8	36.9
% not sure whether would use PrEP	27.4	15.5	27.3
Number (mean) of six PEP/PrEP facts not already known	3.5	1.8	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	0.4	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	42.9	15.8	42.5
% not sure of own HIV status	3.9	4.6	3.9
% not knowing where to get HIV test, among those never tested	41.4	44.0	41.4
Number (mean) of five hepatitis facts not already known	1.1	0.6	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	54.1	49.5	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	54.4	43.1	54.3

Programmes targeting MSM who inject drugs should not only be concerned with knowledge. They should also place substantial emphasis on maintaining sexual safety and control.

8.8.4 Drug injecting and interventions

Men who injected to get high in the last 12 months encountered or accessed most interventions to a similar or greater extent than men who did not inject. Injectors who do not have HIV are more likely to have been tested in the last 12 months, and those diagnosed with HIV are more likely to have an undetectable viral load (DDM #6.91, cascade stage 6). Injectors are more likely to have been offered hepatitis vaccination, to have received a hepatitis A or a hepatitis B vaccination and to have had a full STI screen in the last 12 months.

Table 8.28 Key interventions by groups - injecting to get high

Injecting drugs other than steroids in the last 12 months and interventions (N=126 865, missing n=927)	Not injected drugs to get high last 12 months (n=125 384)	Injected drugs other than steroids last 12 months (n=1 481)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	20.7	28.5	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	32.3	44.3	32.4
% spoken to about PrEP at a health service, among non-HIV-diagnosed	9.0	32.6	9.2
% saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	74.0	77.0	74.1
% tested for HIV, last 12 months, excluding men diagnosed prior to that (DDM 4.53)	55.5	78.0	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	18.2	19.8	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	1.7	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	3.3	2.0
% having ever had HIV monitoring among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	98.9	98.6	98.9
% having had HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	95.9	95.9	95.9
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	81.7	84.2	81.9
% ever offered any hepatitis vaccination by health service	56.0	74.2	56.2
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	43.1	66.6	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	48.9	72.5	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12m, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	12.6	38.2	12.8

8.9 Sex work inequalities

Section 3.9 describes the frequency of buying and selling sex in the sample. Below we provide the indicators separately for the group of men who had sold sex three or more times in the last 12 months (2.2% of men) and those who had not.

Men who sold sex were substantially younger, with 38% of them under 25 years (versus 18% in the comparison group), and only a small proportion aged 65 years or older (1% versus 3%). They were more likely to have had fewer years of education, with 9% (versus 5%) having one or less years of education post-16-years, and 45% versus 58% reporting six or more years of post-16 education. Men selling sex were less likely to report being in a steady partnership (25% versus 39%). With respect to 'outness', men selling sex not differ from other men.

8.9.1 Sex work and morbidities

Men who sold sex were more likely to encounter all morbidities, except sexual unhappiness.

Table 8.29 Key morbidities by groups - selling sex

Selling sex (three times or more) in the last year and morbidities (N=127 702 missing n=90)	Not sold sex more than twice last 12 months (n=124 891)	Sold sex more than twice last 12 months (n=2 811)	All
% with severe anxiety and depression, last two weeks (PHQ-4)	7.6	11.7	7.7
% with self-harm thoughts, last two weeks	20.7	32.7	20.9
% sexually unhappy (scoring less than 5 on the 1 to 10 scale)	22.7	14.6	22.5
% with potential alcohol dependency (CAGE4)	18.2	22.2	18.3
% ever diagnosed with HIV (GAM 4.20)	10.2	16.5	10.4
% diagnosed with HIV, last 12 months	1.1	2.5	1.1
% with diagnosed HIV and detectable viral load	0.8	2.4	0.9
% diagnosed with syphilis, last 12 months (proxy for GAM 3.12)	4.2	10.1	4.4
% diagnosed with gonorrhoea, last 12 month	5.1	11.5	5.2
% diagnosed with chlamydia, last 12 months	4.4	10.5	4.5
% ever diagnosed with anal/genital warts	15.8	21.4	15.9
% co-diagnosed HIV/HBV or HIV/HCV (GAM 3.14)	1.2	2.4	1.2

MSM who sell sex should be a priority target group for mental and sexual health promotion interventions.

8.9.2 Sex work and behaviour

Men who sold sex were more likely to engage in sexual and drug risk behaviour. Among those without HIV, taking PrEP was more common in those selling sex. However, among those with HIV, taking ART was less common in those selling sex.

Table 8.30 Key behaviour by groups - selling sex

Selling sex (three times or more) in the last year and behaviour (N=127 702 missing n=90)	Not sold sex more than twice last 12 months (n=124 891)	Sold sex more than twice last 12 months (n=2 811)	All
% taking ART, among men with diagnosed HIV (HIV care cascade stage 5; DDM 6.84)	90.2	82.6	89.9
% who ever took PEP, excluding HIV-diagnosed men	4.4	7.1	4.5
% currently taking PrEP, excluding HIV-diagnosed men	3.0	6.5	3.0
% with 2+ condomless steady sex partners, last 12 months	8.3	20.1	8.5
Number (median) of non-steady sex partners, last 12 months	3	11-20	4
% having had condomless intercourse with non-steady partners of unknown HIV status, last 12 months (DDM 3.27)	23.2	48.2	23.7
% who injected drugs (excluding steroids), last 12 months	1.1	5.6	1.2
% who used stimulant drugs to make sex more intense or last longer, last four weeks (DDM 2.50)	5.0	15.2	5.2

8.9.3 Sex work and needs

For the majority of indicators, men who sold sex were more likely to be in need.

Table 8.31 Key needs by groups - selling sex

Selling sex (three times or more) in the last year and needs (N=127 702 missing n=90)	Not sold sex more than twice last 12 months (n=124 891)	Sold sex more than twice last 12 months (n=2 811)	All
% lacking social support (scoring <10 in either sub-scale SPS)	11.6	17.2	11.7
Score (mean) for the SIHS (0 to 6)	1.5	1.5	1.5
% lacking control over safer sex	11.0	17.6	11.1
% lacking control over unwanted sex	8.4	16.8	8.6
% with condomless intercourse due to lack of condoms, last 12 months	25.3	45.2	25.7
Number (mean) of six HIV/STI transmission facts not already known	0.8	0.9	78.0
% concerned about own drug use	12.4	15.7	12.5
% unaware of PEP	39.0	41.2	39.0
% without confidence to access PEP, excluding men with diagnosed HIV	60.1	59.8	60.1
% unaware of PrEP	37.0	37.3	37.0
% not sure whether would use PrEP	27.5	22.0	27.3
Number (mean) of six PEP/PrEP facts not already known	3.5	3.3	3.5
Number (mean) of seven HIV test/treat facts not already known	0.8	1.0	0.8
% not knowing U=U (that a person with undetectable viral load cannot pass on HIV)	42.7	37.5	42.6
% not sure of own HIV status	3.8	8.1	3.9
% not knowing where to get HIV test, among those never tested	41.3	49.6	41.5
Number (mean) of five hepatitis facts not already known	1.1	1.3	1.1
% not knowing where to get hepatitis A vaccination, among those vulnerable	53.9	62.7	54.1
% not knowing where to get hepatitis B vaccination, among those vulnerable	54.2	60.8	54.3

Men selling sex were more likely to be concerned about their drug use, and more likely to lack control over unwanted as well as safer sex. Men selling sex were also more likely to report a lack of social support, both on the social integration sub-scale and on the reliable alliance sub-scale.

8.9.4 Sex work and interventions

Men who sold sex were more likely to experience the negative intervention of homophobic abuse. Although they were more likely to have had a sexual health screening, they were less likely to have had a hepatitis vaccination and, if they had HIV, to be in care.

Table 8.32 Key interventions by groups - selling sex

Selling sex (three times or more) in the last year and interventions (N=127 702 missing n=90)	Not sold sex more than twice last 12 months (n=124 891)	Sold sex more than twice last 12 months (n=2 811)	All
% experiencing verbal insults, because someone knew/presumed attraction to men, last 12 months	20.4	37.9	20.8
% with free condoms from civil society organisations, clinics, bars or saunas, last 12 months (DDM 3.1a)	32.2	40.6	32.4
% spoken to about PrEP at a health service, among non-HIV-diagnosed	9.0	15.0	9.2
% who saw or heard information about HIV or STIs for MSM, last 12 months (DDM 3.5a)	74.0	72.6	74.0
% tested for HIV, last 12 months, excluding men diagnosed prior to that (DDM 4.53)	55.3	66.0	55.6
% using community HIV-testing at last HIV test (DDM 4.13a)	18.2	19.2	18.2
% using HIV self-sampling at last HIV test (DDM 4.13b)	1.3	1.4	1.3
% using HIV self-testing at last HIV test (DDM 4.13c)	2.0	2.7	2.0
% with HIV monitoring ever, among HIV-diagnosed (HIV care cascade stage 3; DDM 6.278)	99.0	96.3	98.9
% with HIV monitoring, last six months, among HIV-diagnosed (HIV care cascade stage 4; DDM 6.282)	96.0	92.2	95.8
% with undetectable viral load, among HIV-diagnosed (HIV care cascade stage 6; DDM 6.91)	82.1	71.7	81.8
% ever offered any hepatitis vaccination by health service	56.2	53.2	56.1
% with full course of hepatitis A vaccination, excluding men with a history of hepatitis A (DDM 3.10a)	43.3	42.5	43.3
% with full course of hepatitis B vaccination, excluding men with a history of hepatitis B (DDM 3.10b)	49.1	47.5	49.1
% with full STI screen (HIV, STI blood test, rectal swab, urethral swab or urine) last 12m, excluding men with diagnosed HIV more than 12 months ago (DDM 3.3a)	12.6	18.8	12.7

9. Last sex session with a non-steady sex partner

Three quarters (75%) of all respondents reported having had sex with a non-steady male partner in the last 12 months. This chapter presents information on the last sexual encounter with one or more non-steady male sex partners provided by the 94 643 men who reported having had sex with a non-steady male partner in the last year. For this chapter these men are the denominator. Men who responded 'no' to the question 'In the last 12 months, have you had any kind of sex with a non-steady male partner?' (31 663) were excluded from this chapter.

9.1 Summary

- The number of partners involved – 78% of the most recent sexual encounters with a non-steady sex partner involved two people, the respondent and one other man. Reporting multi-partner (group) sex was more common with increasing age, among participants with diagnosed HIV, and between non-steady partners who had had sex with each other before.
- Where they initially met partner(s) – most non-steady sex partners had initially been met online (68%), at gay sex venues (17%) or gay social venues (15%). The way in which non-steady sex partners were met was very similar across most demographics but varied according to age and HIV status: For those who met their partners online, smartphone apps were the most popular method (58%), especially in western European countries. Online platforms other than apps were more popular in most eastern and south-eastern European countries.
- Where the sex took place – approximately 80% of sexual encounters with male non-steady partners occurred in private homes or a hotel room, with the remainder mainly reporting sex in a public space such as a sauna, backroom or cruising site. Sexual risk-taking was more common among participants meeting in gay sex venues than those meeting online.
- Sex acts during the sexual session – the standard sexual repertoire in these encounters featured masturbation, oral sex and anal intercourse. In all, 74% reported anal intercourse: 34% receptive only, 28% insertive only, and 12% both in the same session.
- Condom use – among participants without diagnosed HIV, about 60% of those having had their most recent anal intercourse with a non-steady partner had protected themselves with a condom and/or anti-retrovirals (PrEP). Participants diagnosed with HIV mostly relied on effective treatment and/or condom use when anal intercourse occurred.
- HIV status communication and assumptions – sero-status disclosure was most common among participants whose most recent HIV test result was negative, but the majority of encounters with a male non-steady partner did not involve discussions about HIV status.
- Substance use before or during the session – just under half of the sexual encounters with non-steady sex partners involved the use of at least one substance, most commonly alcohol, nitrite inhalers, erectile dysfunction medication or cannabis. Sexualised drug use and injecting drug use were strongly associated with multi-partner sex, and more commonly reported by participants with diagnosed HIV.
- Satisfaction with the specific sexual encounter – on a scale from 1 (worst) to 10 (best) the average sexual satisfaction score for the last encounter with a male non-steady partner was 6.7.

9.2 Number of partners and having had sex with these partners previously

9.2.1 Number of partners involved

Among respondents who had had a non-steady sex partner in the last year, a large majority (78%; country ranges 64–89%) reported that the last sexual encounter with a non-steady sexual partner had been a twosome between the respondent and this man. The encounter had been between the respondent, his steady partner and one non-steady sex partner (threesome) in 7% of cases; between the respondent and two non-steady sex partners (threesome) in 8%; and between the respondent and three or more other partners (group sex) in 7% of cases.

Table 9.1 Number of partners involved in last non-steady encounter

Number of partners involved in last non-steady encounter (N=94 643, missing=0)	%
It was just me and him	78.1
It was me, my steady partner and a non-steady partner (a threesome)	7.0
It was me and two non-steady partners (a threesome)	7.8
It was me and three or more other people	7.1
TOTAL	100.0

The percentage of respondents who reported multi-partner sex (>2 persons involved) during the last sex session with a non-steady sex partner is displayed in Table 9.1 and by country in Section 9.8.

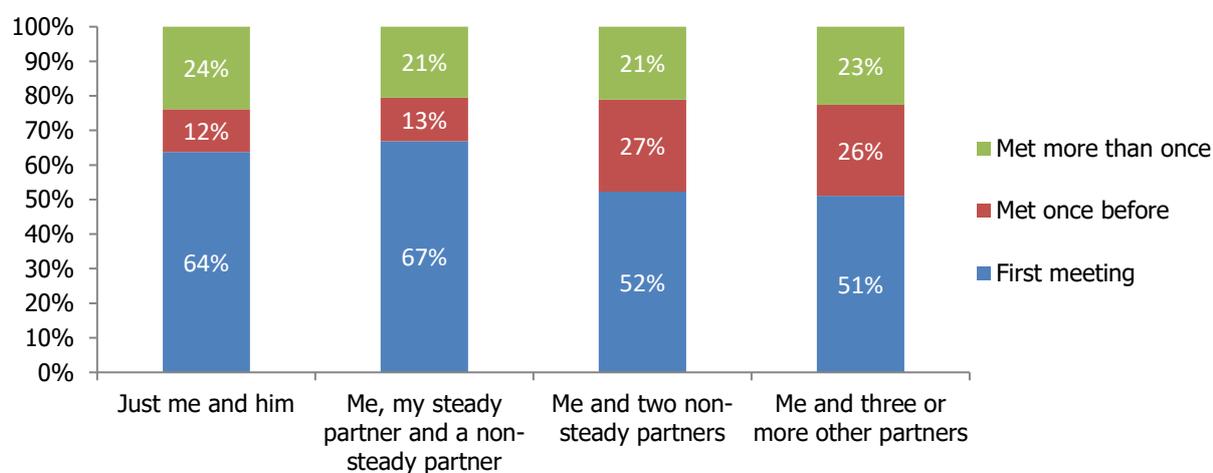
Multiple partner sex was more common (>25%) in the Netherlands, Malta, Poland, the Czech Republic, Belgium, Slovakia, Russia, and Ukraine.

The distribution of partner numbers by age group shows that multi-partner sex increases with age and reaches a maximum of around 25% in the age groups 40 through 59 years.

Multi-partner sex sessions – particularly group sex – were also more common among men who reported a previous HIV diagnosis (35% multi-partner sex among men with diagnosed HIV versus 15% among men whose most recent HIV test was negative.)

9.2.2 Had there been sex with this partner/these partners before?

Most sex with non-steady partners was with men that the respondents had not met before; almost two thirds (62%) of all encounters were reported to be with a partner they had not sex with before. Of all encounters with non-steady sex partners, 15% reported that the sex was with a partner they had met once before and 23% with partners they had met more than once before. Group sex and threesomes with two non-steady sex partners were more common with partners who had been met before.

Figure 9.1 Prior encounters with sex partners by type of non-steady sexual partnership (N=94 450)

Men with a previous HIV diagnosis were more likely to report sex sessions with partners they already had sex with in the past than men whose most recent HIV test was negative (43% versus 38%).

The percentage of most recent non-steady partner sex sessions that involved only non-steady partners who had been met for the first time is displayed by country in Table 9.14.

9.3 How and where non-steady partners were met

9.3.1 Where did the partners meet first?

The most common place for the men to meet their most recent non-steady sex partner(s) for the first time was via a mobile phone app (40%), followed by elsewhere on the Internet (28%). This question was answered by 94 550 respondents, but since some of the encounters were with multiple partners, men could indicate the first meeting place for all the partners involved in that session, which produced 100 387 responses.

It is worth noting that all of the following analyses of associations between first meeting place and other factors are biased by our sampling frame. Since the survey participants were mostly recruited online, men who never or only rarely use smartphone apps or the Internet to find partners are underrepresented in our sample.

Table 9.2 Where last non-steady partner(s) were first met

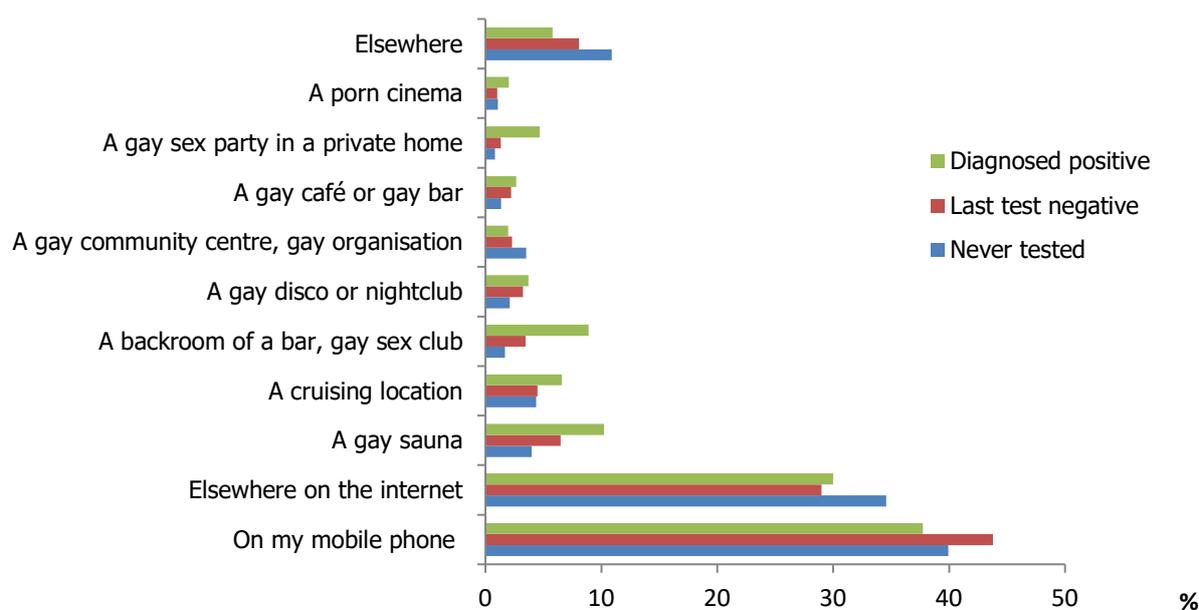
Where last non-steady partner(s) were first met (N=94 550; missing=93). Tick as many as apply	%
On my mobile phone	42.3
Elsewhere on the Internet	30.2
A gay sauna	6.5
A cruising location	4.7
A backroom of a bar, gay sex club	3.8
A gay disco or nightclub	3.1
A gay community centre, gay organisation	2.5
A gay café or gay bar	2.1
A gay sex party in a private home	1.6
A porn cinema	1.2
Elsewhere	8.3

The percentage of non-steady sex partners who first met online (either via a mobile phone app or elsewhere on the Internet) and those who met on a mobile phone app are displayed by country in Table 9.14. The percentages who met their last non-steady sex partner online ranged from between 50% for Moldova to 87% for Belarus. For most countries, the percentage of partners first met on a phone app was between 30% and 60%. Outliers with much lower percentages in Eastern Europe may be explained by a translation issue affecting the Russian language version which blurred the distinction between apps and elsewhere on the Internet.

Using the Internet to establish sexual contacts did not differ across age groups but using a mobile phone app versus the Internet was age-dependent. Gay community organisations, gay community centres and gay nightclubs were more common among younger gay men (<30 years), while bars, sex clubs, saunas, porn cinemas and cruising locations were more common among older age groups (40+ years).

Places where partners were met varied according to HIV testing history. Men with diagnosed HIV had more often met their last non-steady sex partners for the first time in a gay sex venue (sauna, backroom), a cruising location, or at a private gay sex party.

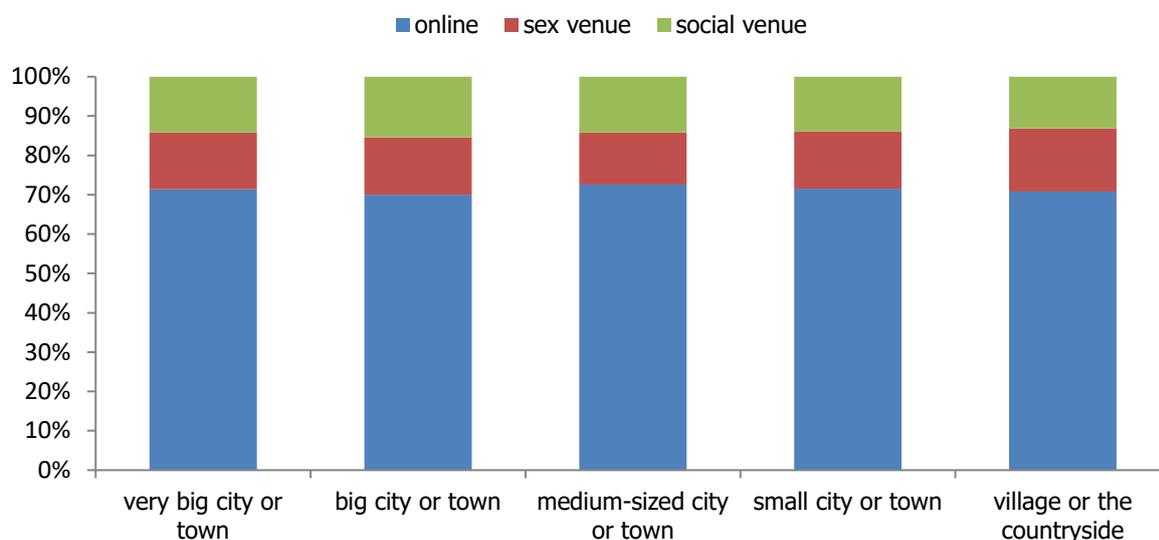
Figure 9.2 Places where partners were first met according to HIV testing history (N=99 758)



Settlement size had little impact on how men met: categorised into three groups – any online; gay sex venues (including saunas, backrooms, sex clubs, porn cinemas, cruising locations and private gay sex parties) and social venues (including gay community centres, gay cafés, bars, gay nightclubs and 'elsewhere') – there was very little

variation in meeting patterns for settlement size (see Figure 9.3). In general, most men met online (73%), while social (14%) and sex (13%) venues were of lesser importance. Similarly, there were only marginal differences in educational attainment and perceived financial situation for the same three categories in relation to initial contact.

Figure 9.3 Places where partners were first met by settlement size (N=93 544)



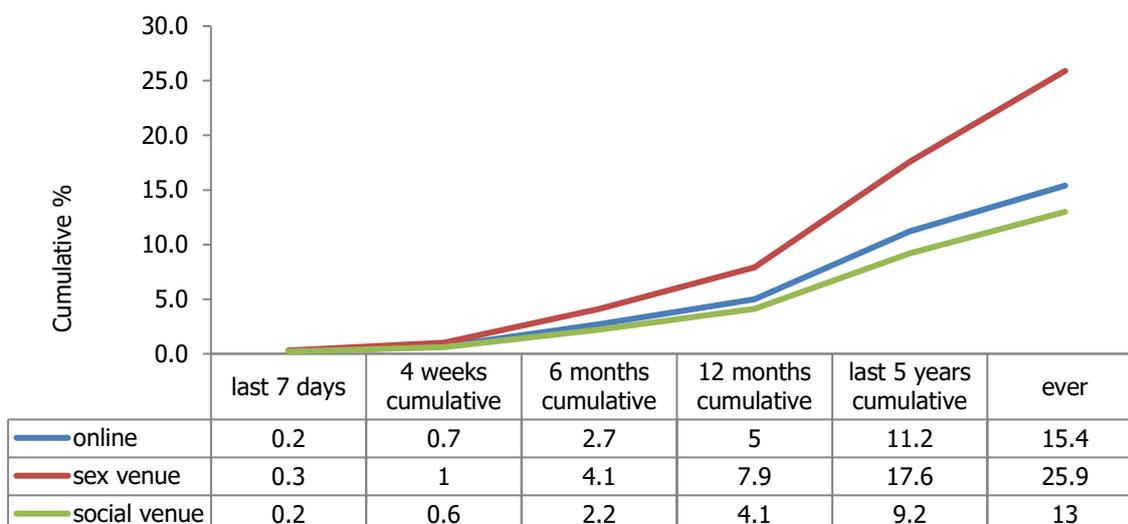
Legend: Very big city or town: ≥ 1 000 000 inhabitants; big city: 500 000 – 999 999 inhabitants; medium-sized city or town: 100 000–499 999 inhabitants; small city or town: 10 000–99 999 inhabitants; village or the countryside: <10 000 inhabitants.

9.3.2 Impact of meeting modalities on indicators for sexual risk

Some policymakers have argued that an increasing incidence of STIs among MSM is being driven by the use of smartphone dating apps. We looked for associations between the places where the last non-steady sex partner was first met and indicators for sexual risk, such as diagnoses of bacterial STIs (syphilis, gonorrhoea, chlamydia) within the last 12 months and number of sex partners or number of sex partners with whom respondents had had condomless anal sex.

For all three bacterial STIs the percentage of men diagnosed with respective infections was highest for men who had met their last non-steady sex partner at a sex venue. The percentages for men meeting their partners online or in a social venue were quite similar.

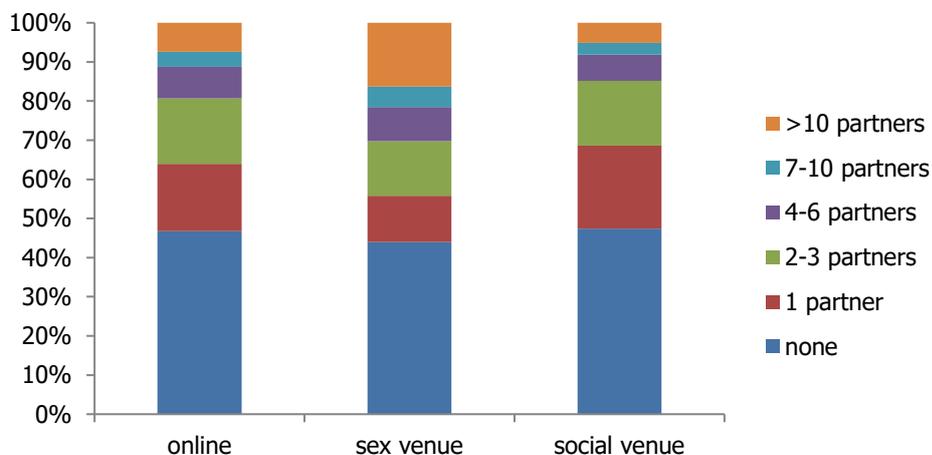
Figure 9.4 Recency of syphilis diagnosis by place where the last non-steady partner was first met (N=30 856)



Similarly, men who had met their last non-steady sex partner at a gay sex venue reported higher partner numbers in general, as well as higher numbers of partners with whom they had had condomless anal sex in the last twelve

months. With regard to the number of partners with whom they had had condomless anal sex, once again, the numbers were similar whether men had met their last partner online or at a social venue. If the analysis was restricted to men not diagnosed with HIV, the differences became smaller, but the pattern remained the same.

Figure 9.5 Number of partners for condomless anal sex within the previous 12 months by place where the last non-steady partner was first met (N=90 325)



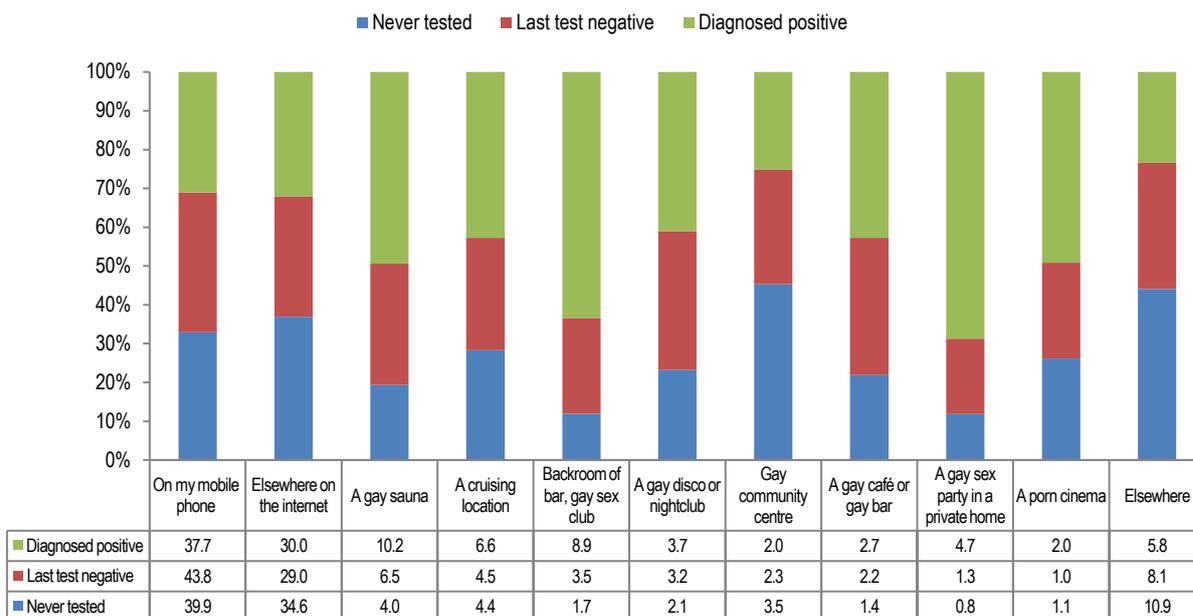
To conclude, our data provide no evidence for higher risk-taking among men who find their sex partners online compared to men who find their sex partners in physical spaces. However, we cannot rule out that online partner seeking contributes to increased STI incidence by providing new opportunities for men who previously had less opportunities to use gay sex venues or social gay venues to find sex partners.

9.3.3 Where did they have sex?

The most common place for sex with a non-steady sex partner is in the privacy of a home (74%). This was followed by a hotel room (7%), a sauna (6%), a cruising location (6%), a club or backroom of a bar (4%), and a porn cinema (1%). Three percent indicated that it was another location, which could be entered as a text answer. A quick screening of the answers in 33 languages suggests that one of the most frequent other locations was in a car.

A cross-tabulation of the place where the partner was first met and where the sex took place shows that – except for the explicit gay sex venues – most sex happened in the privacy of a home or hotel room, irrespective of where the partner was first met. In contrast, if the men met at a gay sex venue, the sex usually took place there; if they met at a gay sauna close to 80% of the subsequent sex sessions took place in the sauna; if they met in a backroom or gay sex club, slightly less than 80% of the sex sessions took place there; if they met in a porn cinema or cruising location, close to 70% of the following sex sessions took place there, as shown in Figure 9.6.

Figure 9.6 Location of sexual encounter, by place where partners first met (from left to right) (N=100 312)

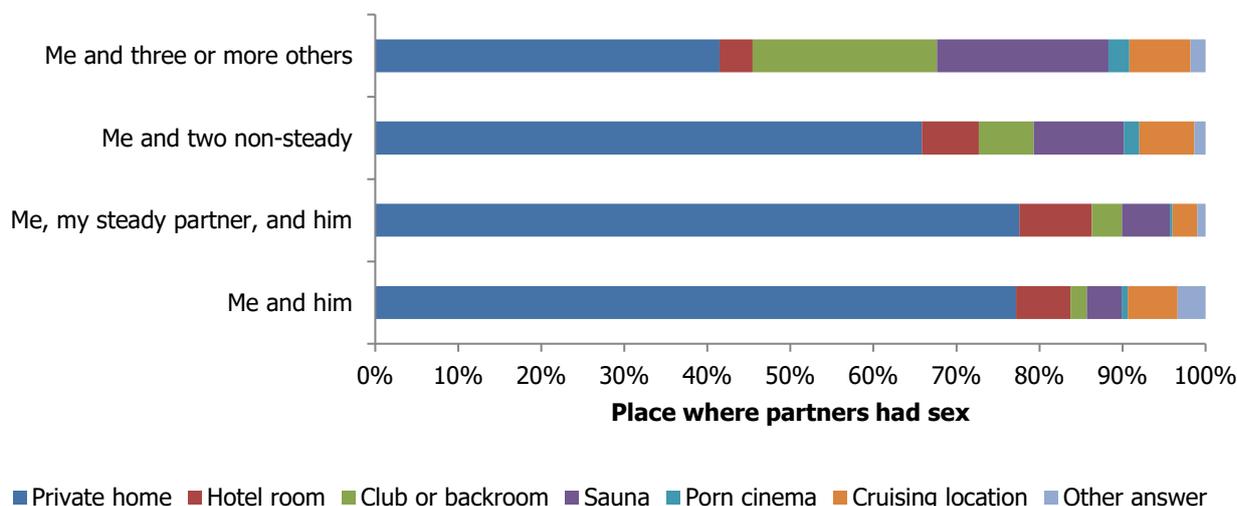


Example: Among men who met their last partner on their mobile phone (first bar), 8% had sex in a hotel room.

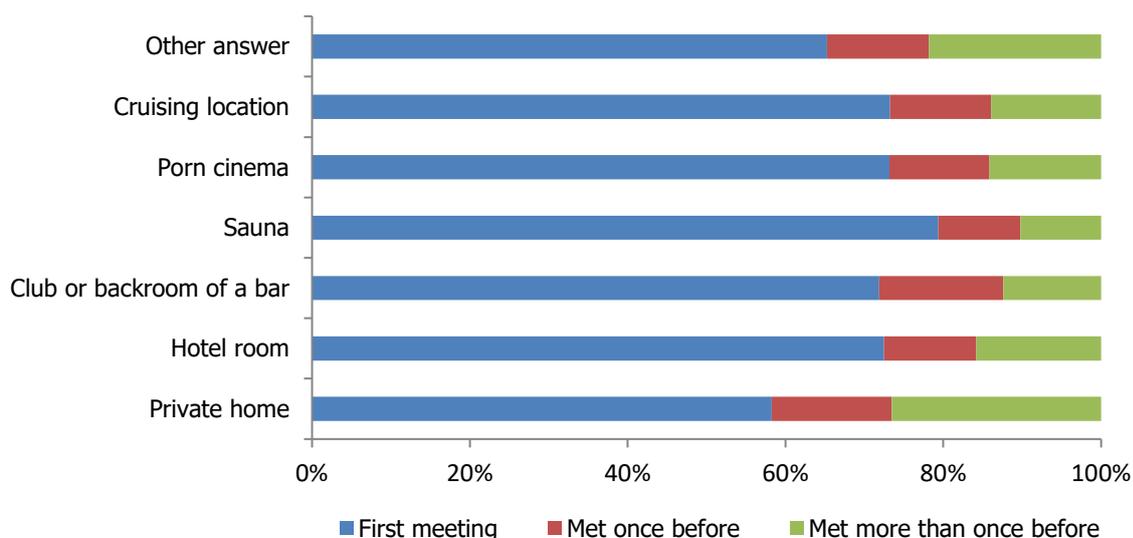
The highest percentages of sexual encounters in private homes were reported from Belarus, Serbia, and Turkey (>80%), the lowest from Malta, Luxemburg, and Switzerland (<70%).

Unsurprisingly, multiple partners and group sex more often occurred in settings where men gather to have sex, such as gay saunas, sex clubs and backrooms of bars.

Figure 9.7 Location of sexual encounter and type of partner(s) involved (N=94 549)



Apart from meetings in private homes, where more than 40% of the non-steady sex partners had had sex at least once before, the percentages of partners that had previously met were quite similar in other settings. The largest percentage of first-time partners met in saunas.

Figure 9.8 Prior knowledge of partners by location of sexual encounter (N=94 377)

There was little age variation in terms of meeting locations, except for saunas and sex clubs or backrooms, whose popularity increased with respondent's age.

9.4 Sexual acts occurring in the last sexual encounter

9.4.1 Sex acts practised with the last non-steady sex partner

For most respondents, receptive and insertive oral sex, mutual masturbation, and anal intercourse (either receptive or insertive or both) were part of the standard repertoire of sexual acts practised with the last non-steady sex partner. Approximately one third of respondents reported oral-anal sex practices (rimming) which carry an additional risk for (sexual) transmission of enteral pathogens [1]. Other sexual practices were reported by less than 10% of all respondents (see Table 9.3).

Table 9.3 Sex acts practised in last encounter with male non-steady partner(s)

Sex acts practised with the last non-steady sex partner (N=93 735; missing=908) Tick as many as apply	%
Receptive oral sex	80.6
Insertive oral sex	76.4
Mutual masturbation	71.4
Receptive anal intercourse	45.6
Insertive anal intercourse	39.4
Own anus getting licked (receptive oro-anal sex)	35.7
Licking partners' anus (insertive oro-anal sex)	31.7
Using sex toys for penetration	8.1
Insertive fisting	7.6
Receptive fisting	6.9
Sharing sex toys for penetration	2.2
Other sex acts	8.5

Reported sex acts varied little by meeting location, with anal intercourse, rimming and fisting being somewhat less common in more public places such as porn cinemas and cruising locations.

9.4.2 Anal intercourse with the last non-steady sex partner

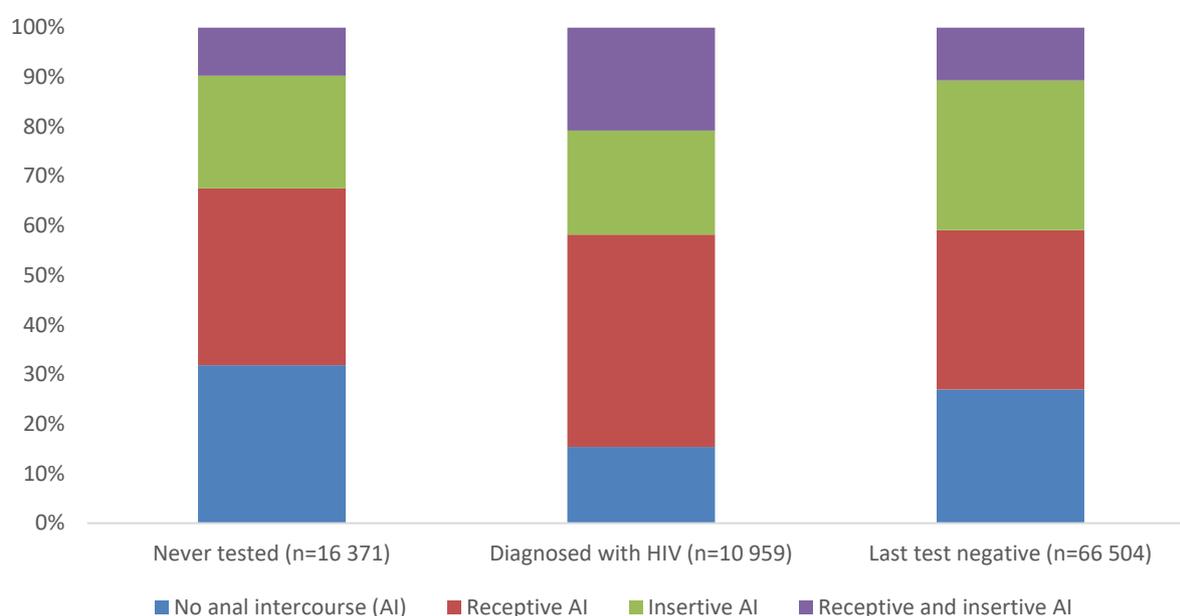
Slightly more than one quarter of the men who reported sex with a non-steady sex partner within the previous 12 months reported no anal intercourse with this partner during the last sexual encounter. One third (34%) reported receptive anal intercourse only, 28% reported insertive anal intercourse only, and 12% reported both.

Table 9.4 Anal intercourse during the last sexual encounter with non-steady sex partner(s)

Anal intercourse during the last sexual encounter with a non-steady sex partner (N=94 434, missing=209)	%
I did not have anal intercourse on that occasion	26.5
Yes, he/someone fucked me (I was passive)	34.0
Yes, I fucked him/someone (I was active)	27.8
Yes, I fucked and was fucked (I was both active and passive)	11.7
TOTAL	100.0

The percentage of men reporting any anal intercourse with their last non-steady sex partner is displayed by country in Section 9.8. This ranged from 61% in Malta up to 87% in Turkey.

Figure 9.9 shows the differences in terms of anal intercourse when grouped by HIV testing history. Men who had never tested for HIV represented the largest proportion of men who had not practised anal intercourse, and men who had been diagnosed with HIV represented the largest proportion of men practising both receptive and insertive anal intercourse with their partners.

Figure 9.9 Role in anal intercourse by HIV testing history (N=93 834)

9.4.3 Anal intercourse and use of protective measures

Of the 69 428 men who reported anal intercourse with their last non-steady sex partner, 69 376 also reported on condom use: No condom was used by 37%, consistent condom use was reported by 54%, and inconsistent condom use by 9%. The consistency of condom use was queried by asking whether they or their partners had used a condom 'all the time' or 'not all the time' when practising anal intercourse (Table 9.5).

Table 9.5 Use of condoms during receptive and/or insertive anal intercourse by sexual role with last non-steady partner(s)

Condom use during receptive and insertive anal intercourse (N=69 376, missing=52)	% receptive only (n=32 083)	% insertive only (n=26 235)	% receptive and insertive (n=11 058)	% all (N=69 376)
No condom use	35.9	34.9	45.7	37.1
Consistent condom use	56.5	57.2	39.2	54.0
Inconsistent condom use	7.6	7.9	15.1	8.9
TOTAL	100.0	100.0	100.0	100.0

The percentage of men reporting anal intercourse without using condoms or using condoms inconsistently during their last encounter with a non-steady sex partner is displayed by country in Section 9.8. This ranged from 30% in Greece up to 57% in Denmark.

Reported condom use for anal intercourse was very similar for exclusively receptive and insertive anal intercourse (57% consistent and 8% inconsistent use), but substantially lower if both insertive and receptive anal intercourse were part of the same sex session (39% consistent and 15% inconsistent use).

Condom use for anal intercourse showed an identical age pattern for both receptive and insertive anal intercourse: the highest percentage of condom use was reported by men in their 20s. Condom use declined with increasing age for both receptive and insertive anal intercourse; for receptive anal intercourse it levelled off after the age of 50. It was also lower in the group of men under 20 years of age.

Figure 9.10 Condom use during receptive anal intercourse by age group (N=42 713)

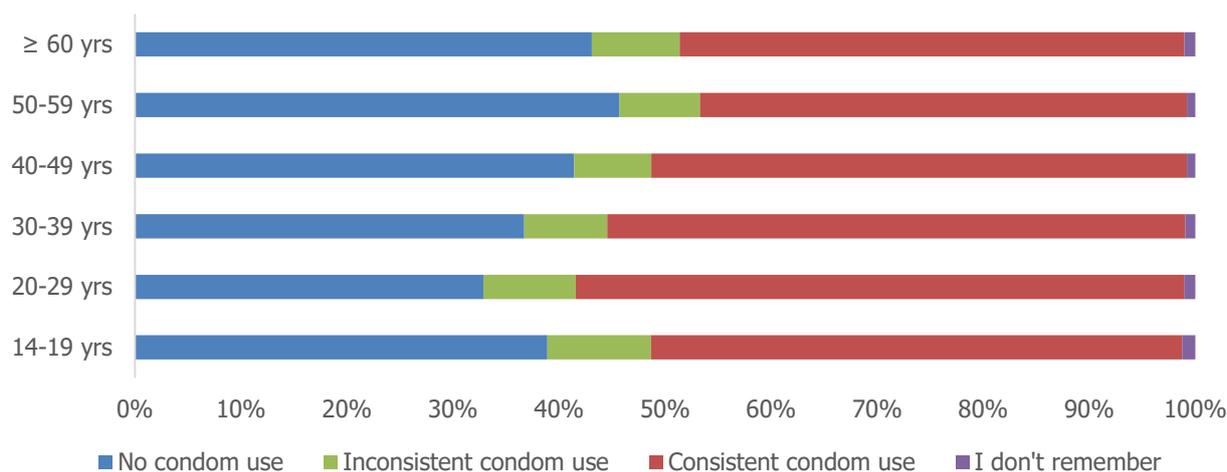
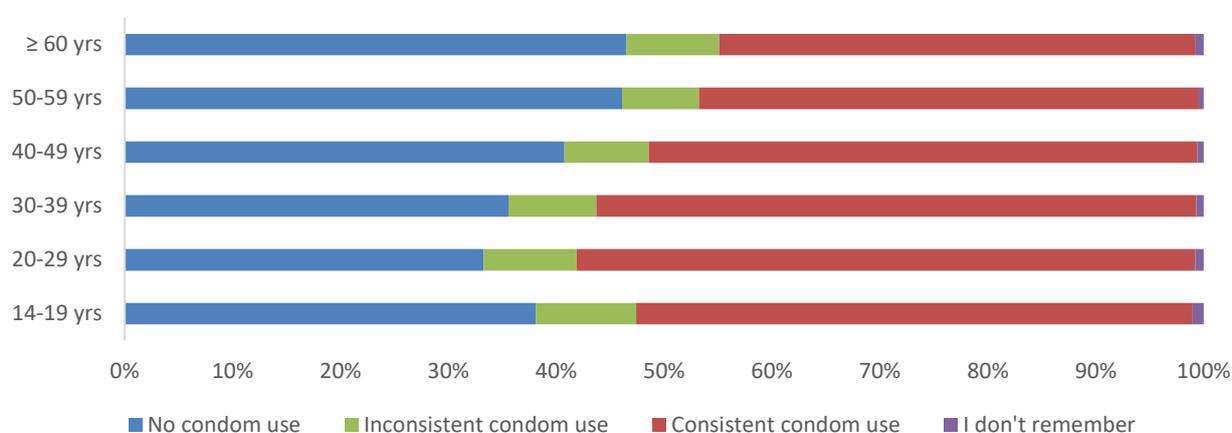


Figure 9.11 Condom use during insertive anal intercourse by age group (N=37 029)



Differences between HIV testing history groups can be observed in terms of condom use and ejaculation into the partner's rectum, but not between insertive and receptive anal intercourse. Men with diagnosed HIV reported the lowest percentage of condom use and the highest percentage of ejaculation into the rectum for receptive and insertive anal intercourse.

Figure 9.12 Condom use and ejaculation during receptive anal intercourse by HIV testing history (N=42 434)

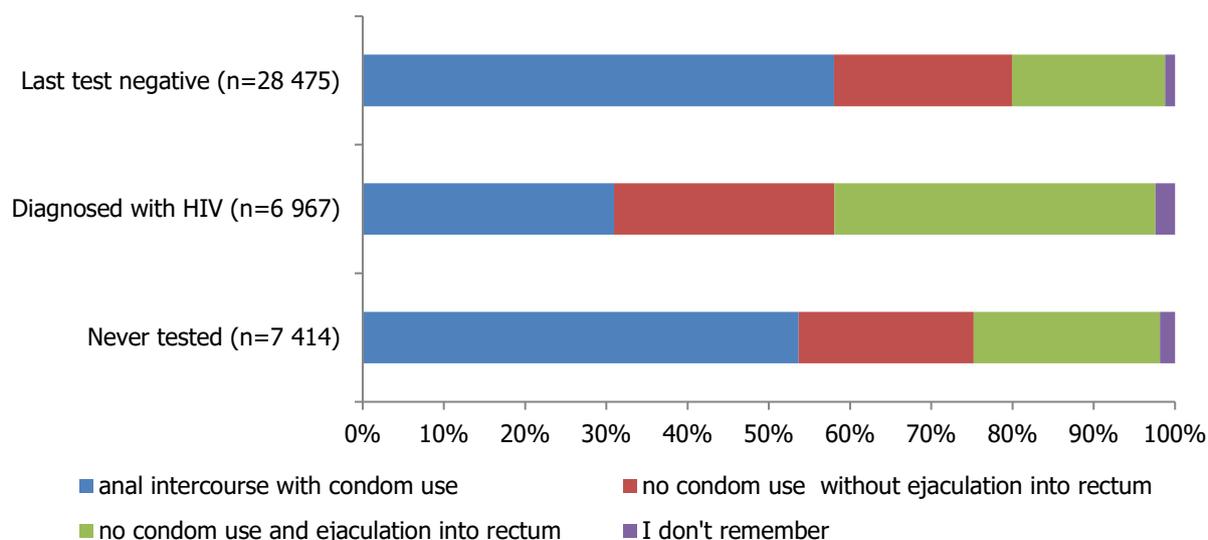
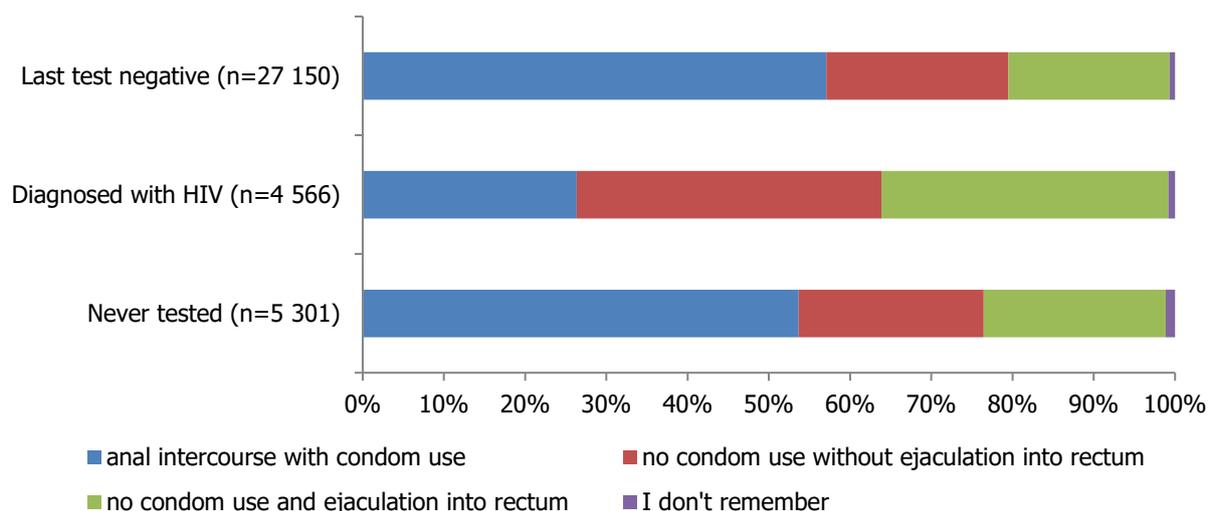


Figure 9.13 Condom use and ejaculation during insertive anal intercourse by HIV testing history (N=36 740)



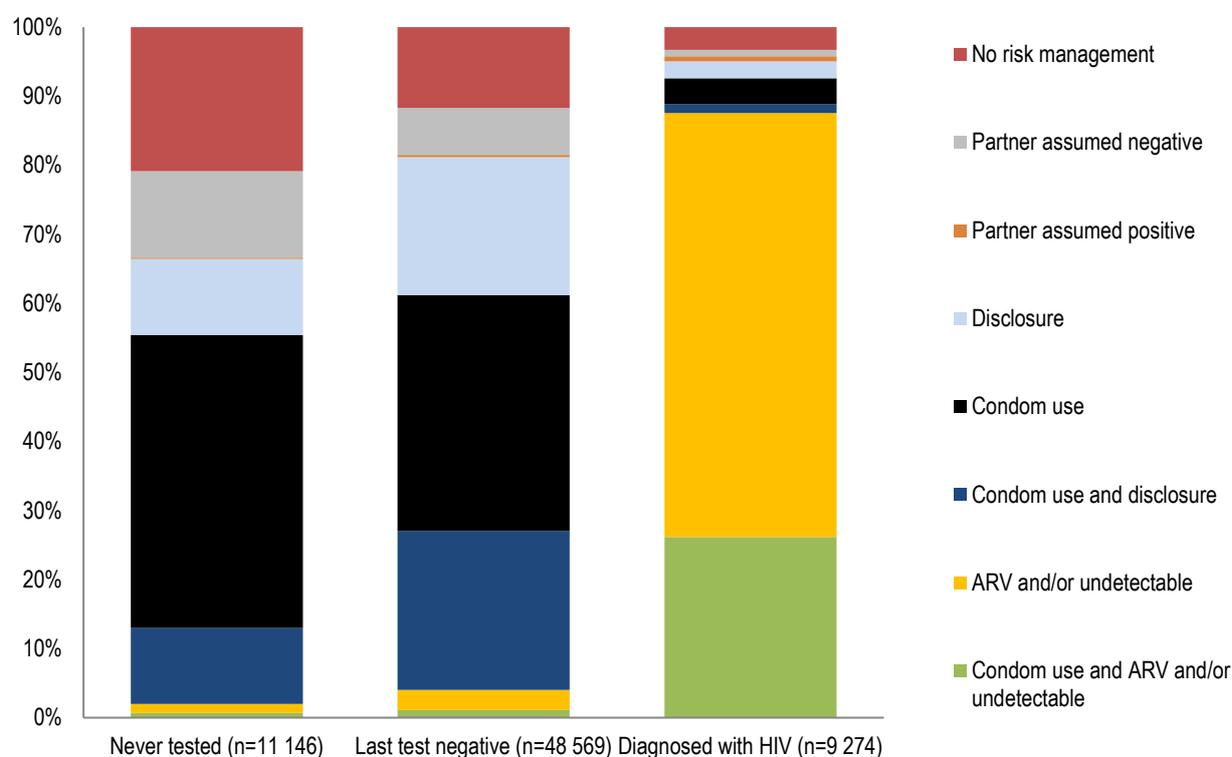
Condoms were the most commonly used protective measure by men whose most recent HIV test was negative and by men who had never been tested. Most men with diagnosed HIV reported an undetectable viral load. It should be noted that two approaches were applied for this analysis: we used the information on ART and last viral load, and combined this information with the last non-steady partner risk management strategy. Everybody who reported a last viral load measurement with undetectable viral load was categorised as ARV/undetectable in this analysis, regardless of what other measures might have been taken or communicated with their partners. Only those who did not report an undetectable viral load were categorised by what they did or communicated. The percentage of participants who used (antiretroviral) treatment as prevention (U=U) or antiretroviral medication as prophylaxis (PrEP) is indicated by country in Section 9.8.

Next we looked only at what men communicated to their partners. The comparison between Figure 9.14 and Figure 9.15 demonstrates that most HIV-diagnosed men did not communicate their undetectable viral load to their non-steady sex partners.

No substantial differences were observed between receptive and insertive anal intercourse in the precautionary behaviour reported. Other protective measures consisted of sero-status disclosure [38], sero-sorting (condom use decision based on HIV sero-status concordance or discordance) and sero-guessing (condom use decision based on assumptions about the HIV status of the partner). These are of varying reliability, depending on how recently the

HIV test result was obtained and how recently the transmission risk occurred. They are generally less reliable if the respondent has never been tested for HIV.

Figure 9.14 Precautionary behaviour during anal intercourse with the last non-steady partner by HIV testing history, considering the result of the last viral load measurement for men with diagnosed HIV (N=68 989)



9.5 Communication and risk management before and during the sexual encounter

Men who had reported that they had sex with a non-steady sex partner within the previous 12 months were asked a series of questions about what, if anything, they had done during this encounter to reduce HIV transmission risks. These questions included whether they had had anal intercourse, what they knew about their partner's HIV status, what they had disclosed about their HIV status, whether they had communicated about taking PrEP, whether they had talked about their last viral load measurement (thus implicitly disclosing their HIV status), and whether condoms had been used for anal sex.

A secondary categorical variable on risk management and communication was constructed which contained this information in a hierarchical order. The categories are from 1 (least risk) to 8 (highest risk):

1. Men who have not had anal intercourse (these men had not been asked further questions about risk management): 'no anal intercourse'
2. Men who communicated antiretroviral drug use themselves or by their sex partner(s) (i.e. at least one of the partners involved communicated having an undetectable viral load or using PrEP) and who used condoms: 'condom use and antiretroviral protection (ARV)'
3. Men who had communicated taking PrEP or having an undetectable viral load were combined in the category 'antiretroviral protection' (both types of communication imply HIV sero-status disclosure): 'ARV only'
4. Men reporting disclosure and condom use: 'condom use and disclosure'
5. Men who reported condom use without own sero-status disclosure: 'condom use only'
6. Men who disclosed their own HIV sero-status (including men who made assumptions about the partner's HIV status and disclosed their own status): 'disclosure only'
7. Men who only made assumptions about partner HIV status: 'partner assumed positive'
Men who only made assumptions about partner HIV status: 'partner assumed negative'
8. Men who reported none of the above types of precautionary behaviour: 'no risk management'

9.5.1 Reported HIV-related risk management during the last sexual encounter

The overall distribution by risk management category is displayed in Table 9.6. Unlike the previous section, the 'antiretroviral protection (ARV)' risk management category describes the respective communication with the last non-steady sex partner, and therefore the actual use of this risk management strategy is underestimated, because only some men living with HIV and having an undetectable viral load communicate this to a non-steady sex partner. Similarly, not all men who take PrEP communicate this to their partners. Unlike the previous section, communicating about an undetectable viral load (and PrEP use) now includes not only the use of antiretroviral drugs by the respondent but also what his partner(s) communicated.

The percentage of participants reporting either having used condoms or communicated with the last non-steady anal intercourse partner on the use of antiretroviral medication for the prevention of HIV transmission, as well as the percentage of participants that used HIV sero-status disclosure, knowledge or assumptions about their partners' HIV status to manage HIV transmission risks are displayed by country in Section 9.8. The effectiveness of this approach will depend on the accuracy of the HIV status information - i.e. the testing frequency and the HIV transmission risks experienced in the interim.

Table 9.6 HIV-related risk management and communication with the last non-steady sex partner(s)

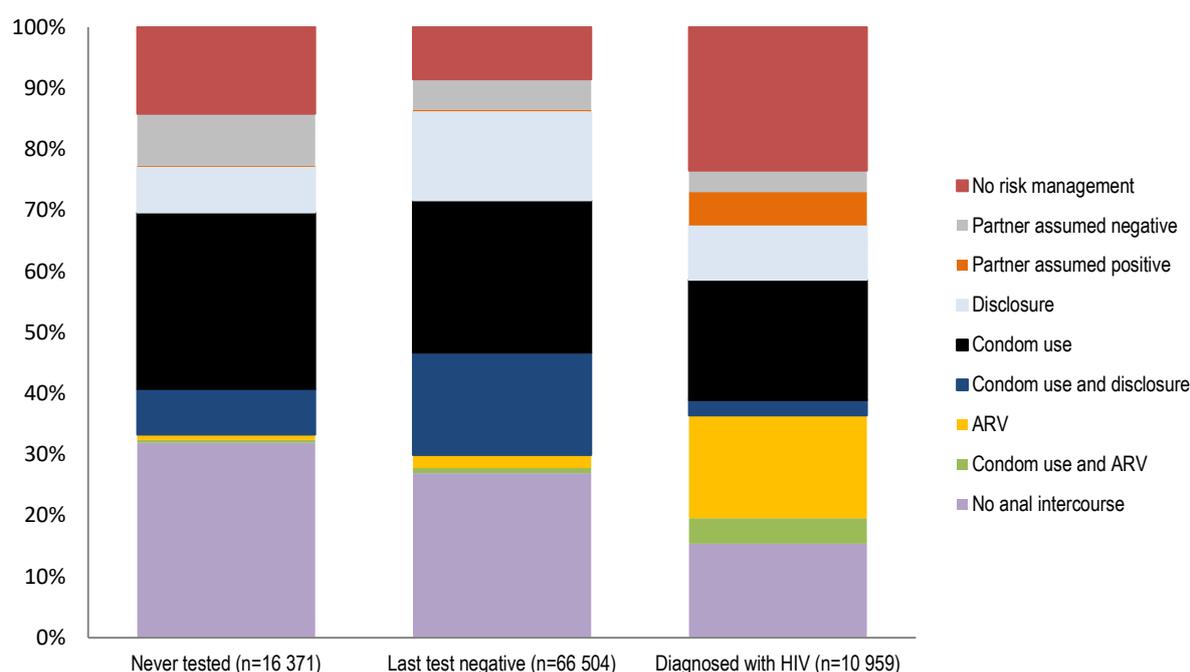
HIV-related risk management and communication with the last non-steady sex partner(s) (N=94 549, missing=94)	% never tested	cumulative % never tested	% last test negative	cumulative % last test negative	% with diagnosed HIV	cumulative % with diagnosed HIV	% overall	cumulative %
1 No anal intercourse	31.9	31.9	27.0	27.0	15.4	15.4	26.5	26.5
2 Condom use and ARV (incl. PrEP)	0.5	32.4	0.8	27.8	4.2	19.6	1.2	27.7
3 ARV only (incl. PrEP)	0.9	33.3	2.1	29.9	16.8	36.4	3.6	31.3
4 Condom use and disclosure	7.5	40.8	16.8	46.7	2.5	38.9	13.5	44.8
5 Condom use only	28.9	69.7	25.0	71.7	19.7	58.6	25.0	69.8
6 Disclosure only	7.5	77.2	14.6	86.3	8.9	67.5	12.7	82.4
7a Partner assumed positive only	0.1	77.3	0.2	86.5	5.5	73.0	0.8	83.3
7b Partner assumed negative only	8.5	85.8	5.0	91.5	3.5	76.5	5.4	87.7
8 No risk management	14.2	100.0	8.5	100.0	23.5	100.0	11.3	100.0
TOTAL	100.0		100.0		100.0		100.0	

Figure 9.15 displays the proportional distribution of the reported risk management according to the HIV testing history of the respondent.

Men whose last HIV test was negative mainly used condoms (43%) and relied on disclosure or assumptions about the partner's HIV status. Less than 3% of men told their partner that they used PrEP.

Men who had been diagnosed with HIV used condoms less frequently (26%), but often said that they had an undetectable viral load (21%). The percentage of men not reporting any discernible risk management is large; however, it must be emphasised that most of these men have an undetectable viral load (see also previous Figure 9.14) and therefore they might not find it necessary to communicate this to their partners.

Men who have never been tested constitute the largest proportion of men who do not report anal intercourse during their last encounter with a non-steady sex partner. The percentage of condom users is 37%. Other risk management approaches based on HIV sero-status disclosure and assumptions are less reliable in this group, because they have never had an HIV test.

Figure 9.15 Risk management and communication with the last non-steady partner by HIV testing history (N=93 834)

9.5.2 Anal intercourse, sero-status disclosure and condom use by HIV testing history

Several of the questions about risk management during the last sexual encounter with a non-steady sex partner were identical in EMIS 2010 and EMIS-2017, and will thus enable a comparison of respective behaviour changes over this period. However, this comparison needs to take into consideration the fact that changes in the sample composition and recruitment can also contribute to differences between the two points in time. A proper analysis of changes in risk management is therefore beyond the scope of this report and is best suited to national EMIS reports or specific analyses of behaviour change over time.

Table 9.7 shows the distribution of receptive and/or insertive anal intercourse stratified by HIV testing history. Men who have been diagnosed with HIV represent the lowest percentage of men reporting no anal intercourse during the last non-steady partner sex session and the highest percentage of men reporting both, insertive and receptive anal intercourse.

Table 9.7 Reported anal intercourse with the last non-steady partner(s) by HIV testing history

Reported anal intercourse with the last non-steady sex partner by respondents' HIV testing history (N=93 834, missing=809)	% never tested (n=16 371)	% last test negative (n=66 504)	% tested positive (n=10 959)	% of all (n=93 834)
No anal intercourse	31.9	26.9	15.4	26.5
Receptive anal intercourse only	35.7	32.2	42.9	34.0
Both insertive and receptive anal intercourse	9.7	10.7	20.8	11.7
Insertive anal intercourse only	22.8	30.2	21.0	27.8
TOTAL	100.0	100.0	100.0	100.0

Table 9.8 shows differences in condom use between the three HIV testing history groups. Condom use for receptive and insertive anal intercourse was substantially less common for men with diagnosed HIV. While this relatively low level of condom use is likely to be irrelevant for HIV transmission among those with undetectable viral load, it is one of the factors that contributes to an increased risk for other STIs among HIV-diagnosed men.

Table 9.8 Condom use with the last non-steady sex partners by HIV testing history

Condom use during receptive anal intercourse with the last non-steady sex partner by respondents' HIV testing history (N=42 856, missing=269)	% never tested (n=7 414)	% last test negative (n=28 475)	% tested positive (n=6 967)	% of all (n=42 856)
He did not use a condom	45.1	41.1	68.0	46.2
He used a condom	53.7	58.0	30.9	52.9
I don't remember	1.2	0.9	1.1	0.9
TOTAL	100.0	100.0	100.0	100.0

Condom use during insertive anal intercourse with the last non-steady sex partner by respondents' HIV testing history (N=37 017, missing=263)	% never tested (n=5 301)	% last test negative (n=27 150)	% tested positive (n=4 566)	% of all (n=37 017)
I did not use a condom	45.3	42.3	72.6	46.5
I did use a condom	53.7	57.1	26.4	52.8
I don't remember	1.0	0.6	1.0	0.7
TOTAL	100.0	100.0	100.0	100.0

The predominant behaviour was to say nothing about one's sero-status to the last non-steady sex partner. Men whose most recent test result was negative most frequently shared this information with their partner (42%), followed by men with diagnosed HIV of whom almost one third (33%) disclosed their sero-status to their last non-steady sex partner. One fifth (20%) of men who had never tested for HIV told their non-steady sex partner that they were HIV negative (Table 9.9).

Table 9.9 HIV sero-status communication with the last non-steady sex partner(s) by HIV testing history

HIV sero-status communication with the last non-steady sex partner by HIV testing history (N=93 795, missing=848)	% never tested (n=16 358)	% last test negative (n=66 485)	% tested positive (n=10 952)	% of all (n=93 765)
I told him I didn't know my status	9.7	2.2	1.8	3.5
I told him I was negative	20.1	42.0	2.4	33.5
I told him I was positive	0.3	0.1	32.3	3.9
I said nothing about my status	61.8	51.2	59.4	54.0
I don't remember	8.1	4.5	4.1	5.1
TOTAL	100.0	100.0	100.0	100.0

Almost 60% of men whose most recent HIV was negative reported knowledge or assumptions about the partners' HIV status. The respective percentages for men who have never tested were 47% and for men with diagnosed HIV 46% (Table 9.10).

Table 9.10 Assumptions about partners' HIV sero-status with the last non-steady sex partner(s) by HIV testing history

Assumptions about partners' HIV sero-status by respondents HIV testing history (N=93 768, missing=875)	% never tested (n=16 352)	% last test negative (n=66 458)	% tested positive (n=10 958)	% of all (n=93 768)
I knew or thought he was HIV negative	45.2	54.3	19.5	48.6
I knew or thought he was HIV positive	1.1	2.3	22.5	4.5
I knew or thought they had a different HIV status	0.5	1.2	4.4	1.4
I don't remember	8.1	6.1	6.9	6.5
I didn't have any thoughts about his HIV status	45.1	36.1	46.8	38.9
TOTAL	100.0	100.0	100.0	100.0

9.5.3 Potential information inconsistencies

Since information about HIV testing history, antiretroviral treatment and PrEP use are collected in the questionnaire independently from the answers provided about the most recent sex, it is possible to compare this with the self-reported communication to the last non-steady sex partner. There may be various reasons for discrepancies which do not necessarily imply deceptive intentions (e.g. since the timing of the last non-steady partner sex is unknown – except that it should have been within the last 12 months, the information communicated may have been true at that time and may have changed since).

The most common discrepancy is the communication of a negative HIV status by people who have never been tested for HIV. This is reported by 4% of men in the last non-steady sexual encounter, representing 9% of those who communicated about HIV sero-status with their non-steady partners, 10% who communicated a negative HIV status and 20% of men who never tested. (Table 9.11).

Table 9.11 HIV testing history and HIV status communication with the last non-steady partner(s)

HIV testing history and HIV status communication with the last non-steady sex partner (N=93 795, missing = 848)	% never tested (n=16 358)	% last test negative (n=66 485)	% tested positive (n=10 952)	% of all (n=93 795)
I told him/them I did not know my status	9.7	2.2	1.8	3.5
I told him/them I was negative	20.1	41.9	2.4	33.5
I told him/them I was positive	0.3	0.2	32.3	3.9
I told nothing about my status	61.8	51.2	59.4	54.0
I don't remember	8.1	4.5	4.1	5.1
TOTAL	100.0	100.0	100.0	100.0

Similarly, PrEP use has been communicated to the last non-steady sex partner by men who elsewhere in the questionnaire said that they never used PrEP. Of 1 621 men who said they were on PrEP, 11% said elsewhere in the questionnaire that they never took it (Table 9.12).

Table 9.12 Current PrEP use and PrEP use communication with the last non-steady partner(s)

PrEP use and PrEP disclosure	% never taken PrEP	% formerly taken PrEP on a daily basis	% taking PrEP when needed	% taking PrEP on a daily basis	% I don't know	TOTAL
I told him I was on PrEP (n=1 621)	10.5	3.9	23.3	62.3	<0.1	100.0

Compared to the previous discrepant information, a communicated undetectable viral load appears to be the most reliable information. Only 1.7% of those who told their last non-steady sex partner that they had an undetectable viral load said elsewhere in the questionnaire that their last viral load was not undetectable (Table 9.13).

Table 9.13 Reported last viral load measurement and viral load communication with the last non-steady partner(s)

Last viral load measurement and viral load communication	% undetectable viral load	% not undetectable	TOTAL
I told him/them I was undetectable (n=3 052)	98.3	1.7	100.0

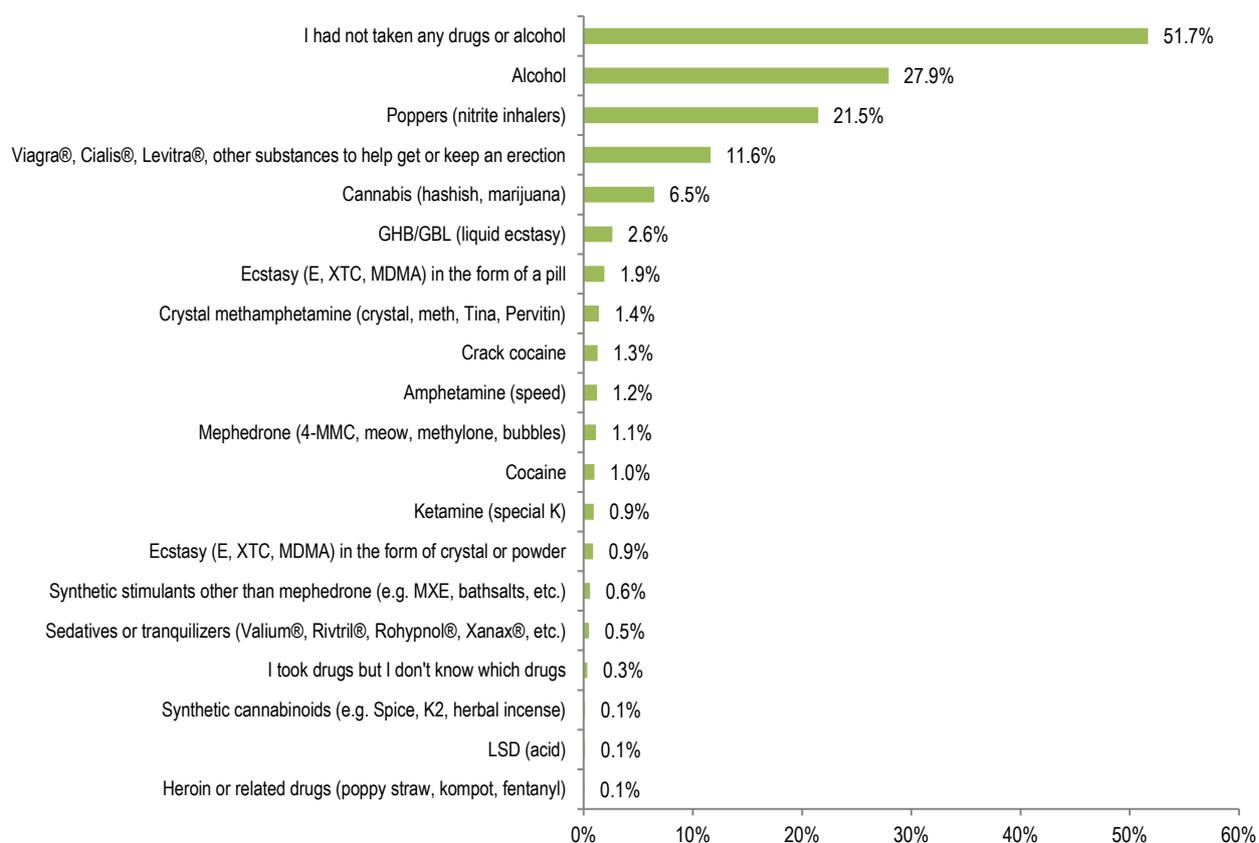
9.6 Substance use before and during the last sexual encounter

9.6.1 Substances used

Of the 94 643 men who answered the questions about the last sexual encounter with a non-steady sex partner, 43 686 men (46%) reported substance use before and during this encounter.

The most common substances used before and during the last sexual encounter with a non-steady sex partner were alcohol (reported by 28% of respondents), poppers (22%), erectile dysfunction medications (12%), cannabis (7%), and GHB/GBL (3%). Less than 2% of respondents used any of the other substances.

Figure 9.16 Substance use during last sex session with a non-steady partner (multiple responses possible) (N=90 423)



9.6.2 Substance use and location of the sexual encounter

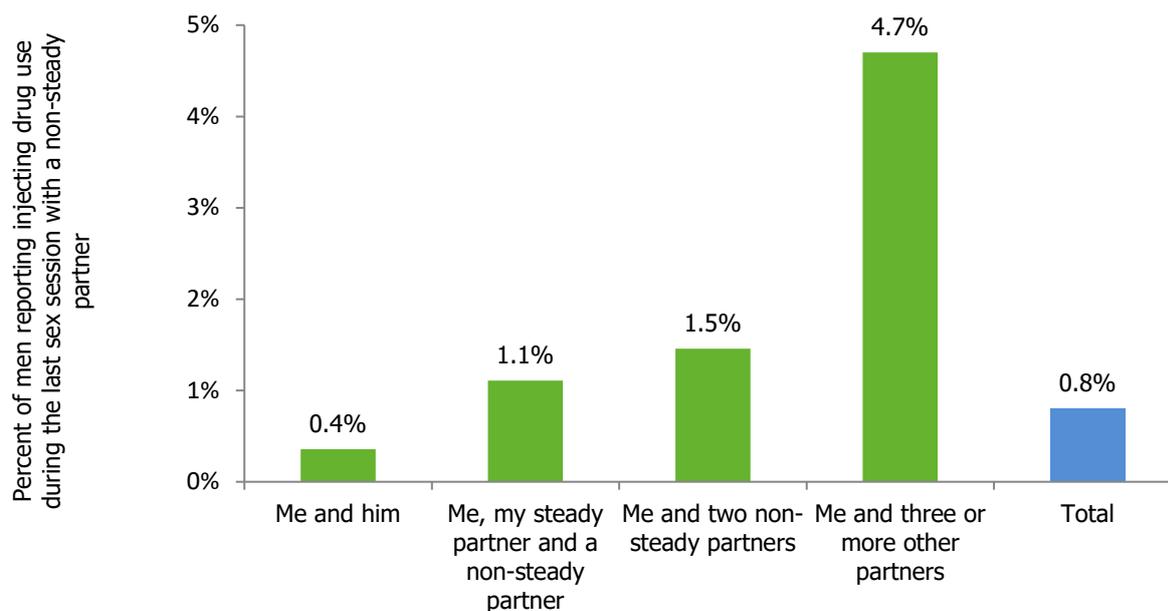
Among the various locations for sex encounters, cruising areas were the most substance-free locations followed by private homes. The least substance-free locations were clubs or backrooms of bars.

Alcohol and/or cannabis were the most frequently used substances (61%) among men who had sex with non-steady sex partners in clubs or the backrooms of bars. Alcohol and/or cannabis consumption ranged from 18% to 35% in other locations.

Nitrite inhalants and/or erectile dysfunction medications were used by 39% to 54% of men whose last sexual encounter with a non-steady sex partner occurred in clubs/backrooms, saunas or porn cinemas, and by 25% of men whose last sexual encounter with a non-steady partner occurred in a private home or hotel room.

Use of any chemsex substances (crystal methamphetamine, mephedrone, other synthetic stimulants, GHB/GBL, ketamine) was most common in clubs/backrooms (8%), followed by private homes (4%), saunas (4%), and hotel rooms (3%).

Injecting drug use was rare in our sample (0.8%). Injecting drugs were mainly a feature of group sex sessions. This implies the need to emphasise safe injection practices as a harm reduction measure, especially in the context of sexualised drug use in multi-partner settings.

Figure 9.17 Injecting substance use and numbers of partners in the last sexual session (N=64 643)

9.7 Satisfaction with last sexual encounter with a non-steady sex partner

All respondents were asked to rate this specific sexual encounter on a scale of 1 (worst) to 10 (best). The mean sexual satisfaction score was 6.7.

Several of the substances taken before and during sex are used explicitly to improve sexual performance (for example, nitrite inhalants, erectile dysfunction medication) or to enhance the sexual experience. When comparing the satisfaction of men who consumed alcohol or cannabis to that for men who did not use any substances, we found only marginal differences (6.7 no drugs versus 6.8 with alcohol and/or cannabis use). Moderately higher satisfaction was reported by users of nitrite inhalants and erectile dysfunction drugs (7.1). Higher satisfaction was reported if the respondents reported use of any of the substances usually related to sexualised drug use – i.e. crystal methamphetamine, mephedrone, other synthetic stimulants, GHB/GBL, or ketamine (7.5).

9.8 National variation in key indicators from last sex with a non-steady partner

Table 9.14 National variation in key indicators from last sex with male non-steady sex partner(s)

Qualifying cases	Country	% reporting sex involving 3 or more people	% of sex sessions involving only new partners	% who met their non-steady partner online	% using a mobile phone app for partner acquisition	% who had sex in a gay sex venue or cruising location
94 643	Total (used throughout chapter 9)	21.8	62.2	71.3	41.1	16.7
83 532	EU Health Programme	21.8	61.9	70.6	42.8	17.2
80 316	EU Member States	22.0	62.0	70.6	43.0	17.5
1 958	Austria°	19.4	61.1	71.6	42.8	15.3
2 424	Belgium°	28.3	62.4	67.0	29.8	22.9
817	Bulgaria°	19.0	68.3	78.3	31.5	9.2
617	Croatia°	22.2	61.0	76.6	41.7	13.0
213	Cyprus°	20.2	63.8	75.6	43.2	9.9
1 322	Czech Republic°	29.3	62.8	71.1	48.4	14.9
1 274	Denmark**	20.4	61.7	64.3	30.4	20.9
150	Estonia°	18.0	61.7	67.8	30.2	14.7
951	Finland**	17.8	55.5	67.2	39.3	16.2
9 267	France**	20.6	65.4	72.3	45.0	17.0
16 760	Germany°	21.8	61.0	69.4	38.2	20.7
2 147	Greece°	17.6	60.2	77.3	41.3	11.9
1 454	Hungary°	20.4	63.4	65.3	21.8	17.4
1 513	Ireland°	18.4	61.7	69.3	59.6	14.0
8 659	Italy**	17.7	62.5	72.1	42.9	17.3
176	Latvia°	19.3	72.7	71.4	34.8	14.2
235	Lithuania°	24.3	75.7	67.2	34.9	10.2
125	Luxembourg°	20.8	65.6	74.4	38.4	22.4
200	Malta°	29.5	65.3	70.0	43.0	19.0
3 089	Netherlands°	32.6	57.3	67.9	31.8	20.7
2 913	Poland°	29.6	68.3	74.8	55.3	15.8
1 925	Portugal**	23.0	71.7	59.9	41.0	19.4
1 366	Romania°	19.1	68.7	68.5	36.8	8.2
622	Slovakia°	27.7	67.8	78.0	50.6	17.0
409	Slovenia°	24.4	68.3	71.9	41.6	16.1
8 100	Spain**	22.9	63.0	73.3	51.1	15.3
2 875	Sweden°	19.3	52.0	67.6	34.9	18.3
8 755	United Kingdom**	22.0	57.5	69.6	54.1	16.5
4 595	EFTA Member States[§]	18.4	60.8	70.3	43.9	16.9
85	Iceland°	10.6	70.6	69.4	50.6	8.2
1 918	Norway°	16.6	59.4	71.7	45.7	11.4
2 592	Switzerland*	20.0	61.4	69.2	42.4	21.2
2 562	EU Enlargement Area	15.9	60.8	75.9	33.6	9.4
149	Bosnia & Herzegovina°	16.8	66.2	81.8	31.1	11.6
122	Macedonia	23.0	67.2	74.6	39.3	11.5
726	Serbia°	17.9	60.2	76.0	28.8	10.9
1 417	Turkey	14.0	60.3	74.7	35.9	7.8
112	Albania/Kosovo/Montenegro	17.0	57.1	83.9	33.9	13.4
2 706	ENP countries	21.1	61.9	74.6	29.1	11.1
308	Belarus	21.8	69.2	86.7	8.1	7.1
188	Lebanon	18.6	71.8	72.2	47.6	11.7
1 054	Israel	18.2	56.9	76.0	38.3	10.9
338	Moldova°	20.4	60.5	50.3	5.3	14.9
818	Ukraine	25.4	63.8	78.8	30.8	11.1
	Other countries					
4 500	Russia (included in total)	26.8	68.0	81.6	17.5	11.1
4 515	Canada (not included in total)	20.0	57.1	74.3	53.9	13.7
2 121	Philippines (not included in total)	25.9	57.6	64.7	37.9	8.2

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland. **Highlighted in grey above:** possible translation issue in the Russian questionnaire. Two of the answers in the question on meeting location for most recent non-steady sexual partner/s were 'mobile phone (or other GPS enabled device)', and 'elsewhere on the Internet'. In error, the Russian version omitted 'elsewhere'. This resulted in higher proportions reporting 'on the Internet' and lower proportions reporting on their 'mobile phone (or other GPS enabled device)', when answering in Russian.

Table 9.15 National variation in key indicators from last sex with male non-steady sex partner(s)

Qualifying cases (men with non-steady male partners)	Country	% having anal intercourse (AI), last encounter	% with inconsistent condom use for anal intercourse, last encounter, excluding men without AI	% using condoms and/or communicating ARV use, last encounter, excluding men without AI	% reporting HIV status disclosure or HIV status assumptions about partners, last encounter, excluding men without AI	% using U=U or PrEP for prevention of HIV transmission, last encounter, excluding men without AI
94 643	Total (used throughout Chapter 9)	73.5	46.0	58.6	26.1	14.8
83 532	EU Health Programme	72.8	47.6	58.6	26.1	15.3
80 316	EU Member States	72.8	46.4	58.8	26.1	15.5
1 958	Austria°	73.1	43.0	60.8	28.0	10.9
2 424	Belgium°	71.3	45.9	61.6	23.5	20.8
817	Bulgaria°	84.0	39.4	61.2	25.0	6.3
617	Croatia°	78.0	49.0	52.9	32.9	8.3
213	Cyprus°	72.3	38.3	64.9	19.5	13.0
1 322	Czech Republic°	72.5	44.5	58.5	28.5	9.3
1 274	Denmark**	69.8	57.4	48.1	29.3	19.0
150	Estonia°	79.3	41.2	61.3	25.2	6.7
951	Finland**	66.7	47.7	53.7	26.6	8.9
9 267	France**	75.3	44.1	63.4	23.3	20.0
16 760	Germany°	71.4	49.8	56.6	29.0	16.6
2 147	Greece°	76.5	30.0	71.9	17.8	11.5
1 454	Hungary°	72.7	47.1	55.3	30.6	7.7
1 513	Ireland°	72.7	48.1	57.7	25.3	12.8
8 659	Italy**	73.3	38.2	63.8	21.0	12.2
176	Latvia°	78.9	36.2	65.2	13.8	15.2
235	Lithuania°	84.3	54.5	47.0	25.8	6.6
125	Luxembourg°	66.9	40.2	61.4	28.9	15.7
200	Malta°	61.0	48.4	55.7	29.5	14.8
3 089	Netherlands°	70.5	53.2	55.9	27.6	22.0
2 913	Poland°	74.4	42.7	59.9	26.7	9.9
1 925	Portugal**	76.9	38.4	64.6	18.3	17.4
1 366	Romania°	70.5	44.1	58.4	27.6	8.6
622	Slovakia°	68.9	45.6	57.2	29.9	5.6
409	Slovenia°	79.2	36.8	65.0	22.6	8.4
8 100	Spain**	73.9	43.4	59.6	23.2	16.6
2 875	Sweden°	64.6	54.5	48.4	32.3	8.0
8 755	United Kingdom**	72.8	57.0	52.5	31.1	20.0
4 595	EFTA Member States§	70.2	48.1	58.8	27.1	15.9
85	Iceland°	74.1	47.6	54.0	23.8	1.6
1 918	Norway°	69.0	56.2	51.4	32.0	14.3
2 592	Switzerland*	71.0	42.3	64.3	23.9	17.5
2 562	EU Enlargement Area	84.3	48.9	52.4	20.9	8.4
149	Bosnia & Herzegovina°	84.5	41.6	58.4	24.8	1.6
122	Macedonia	84.4	42.7	58.3	26.2	11.7
726	Serbia°	78.3	39.4	62.4	22.2	7.6
1 417	Turkey	87.0	55.4	45.6	19.7	9.3
112	AlbaniaKosovoMontenegro	87.5	36.7	65.3	18.4	8.2
2 706	ENP countries	76.3	40.0	62.8	21.4	8.8
308	Belarus	83.4	31.6	69.5	19.5	5.9
188	Lebanon	77.1	49.7	52.4	31.0	10.3
1 054	Israel	71.3	43.4	61.9	25.4	10.9
338	Moldova°	80.5	43.8	56.6	6.6	4.0
818	Ukraine	80.1	35.7	65.9	21.7	9.2
	Other countries					
4 500	Russia (included in total)	81.8	39.5	62.4	24.5	10.2
4 515	Canada (not included in total)	68.5	61.0	50.2	38.5	18.8
2 121	Philippines (not included in total)	69.9	50.6	51.5	29.4	5.7

° Part of the EU Health Programme, * includes microstate(s) and/or overseas areas, § EEA EFTA: Norway, Iceland, Liechtenstein; EFTA (not EEA): Switzerland.

10. Policy and practice recommendations

EMIS-2017 was based on the fundamental principles of EU law. Its design and execution upheld the founding principles of the Union, namely respect for human dignity, democracy, equality, solidarity, the rule of law and human rights. We expect that all the subsequent uses of the data should do the same.

In this chapter, we consider the possible implications of the findings of EMIS-2017 for policies and practices in relation to sexual health promotion among MSM in Europe. The importance of matching research questions to research methods cannot be overstated. It is vital that we only ask questions of the data that our method (a large-scale, self-complete, cross-sectional survey) can address. We therefore begin by outlining some of the limitations.

10.1 Limitations of EMIS-2017

Anonymous, low-access threshold, self-completion, online, cross-sectional surveys have a number of research limitations. We therefore expressly asked research questions that this method is better at addressing, especially for a marginalised population such as MSM. Nevertheless, the limitations of the method for these questions must be acknowledged.

There are limitations in the demographic data we were able to collect. We have approximated migration background, income, socio-economic status, ethnic minority status and education. Some of the reasons that these data were difficult to collect include the length of the survey, the diversity of collaborators and, most importantly, difficulties related to collecting data across a large number of different countries and societies. There are also the limitations inherent in self-reported data (recall bias, social desirability bias), and these also apply to EMIS.

Like most studies among MSM, the large sample is a convenience sample, and is therefore very unlikely to be representative of all MSM in Europe. The sample was mainly recruited through gay dating sites on the internet. It will largely exclude men who do not have access to the internet and/or do not use gay dating sites. A comparison of UK-based men in EMIS 2010 with a nationally representative sample of MSM in the UK indicated that convenience samples over-represent gay identified MSM and those who are more sexually active [9].

10.2 Strengths of EMIS-2017

EMIS-2017 brought together a wide range of stakeholders to map out and prioritise an agenda for a large data gathering exercise. This process facilitated joint working and cooperation across Europe and beyond. The strength of the data generated is dependent on the involvement of data users at all stages of development.

We generated substantial MSM sexual health needs assessment data sets for 43 countries, many of which do not have the resources to implement a comparable national survey. These data can facilitate sexual health promotion planning processes at international, national, regional and organisational levels, providing evidence of need and information to direct resources where they can have most impact. The data may also assist in the development of national health policies, as well as the integration of MSM health concerns, including HIV, viral hepatitis, other STIs, and possibly drug and mental health issues, in the wider policy environment pertaining to Europe.

In many countries EMIS offers the largest available national MSM samples. Analysing regional (sub-national) distributions of respondents can help with the calculation of estimates of local MSM populations, with implications for prevention planning and the commissioning of health services [39].

These data sets are comparable. Comparing national MSM surveys carried out by different teams has been challenging due to different recruitment procedures and different measures. EMIS-2017 provides an international data set which can be analysed to reveal knowledge that one country alone could not provide. As an example, in summer 2018, all EU Member States, all non-EU EEA countries and Switzerland have been provided with a set of EMIS-derived indicators for the Dublin Declaration Monitoring (DDM) process.

Additionally, in collaboration with UNAIDS and the editorial board of the Latin American MSM Internet Survey (LAMIS), a section on the UNAIDS key population website³⁸ has been created which displays selected key indicators, by country, for EMIS and LAMIS countries.

³⁸ <http://www.aidsinfoonline.org/kpatlas/#/home>

10.3 Policy context - recommendations for sexual health promotion in Europe

Although HIV response remains the prerogative of national public health policies, as HIV and STIs are not contained by borders, a number of recent international initiatives have produced high-level declarations with the goal of ending HIV epidemics and combatting viral hepatitis as public health threats by 2030. All EU Member States have subscribed to the objectives outlined by UNAIDS [40] and the United Nations General Assembly, both in terms of the Sustainable Development Goals [41] and the UN General Assembly meeting on AIDS [42]. In addition, EU Member States have subscribed to the objectives of the WHO Global Health Sector Strategies (2016-2021) on HIV [43], viral hepatitis [44], and sexually transmitted infections [45]; and the WHO Europe Action Plans on HIV [46] and viral hepatitis [47].

The political commitment at EU level to act on HIV/AIDS was reaffirmed with the 2016 Communication on Sustainable European Future [48]. It states that the Commission will help Member States in their national efforts to reach the Sustainable Development Goals' Health targets, and mentions explicitly ending HIV and tuberculosis, and reducing hepatitis. These diseases are also subject to epidemiological surveillance within the scope of Decision 1082/2013/EU [49] on serious cross-border threats to health.

The Commission's 2018 staff working document on 'combatting HIV/AIDS, viral hepatitis and tuberculosis' builds on the 2016 Commission Communication on Next Steps for a Sustainable European Future and provides decision makers, stakeholders, and citizens with an overview of effective policies in the prevention, control and treatment of HIV/AIDS, viral hepatitis and tuberculosis in the Union and its immediate neighbourhood [50]. While EMIS-2017 was commissioned prior to the release of this document, it clearly provides the context within which its findings will be utilised.

In most of these policy documents [46,47,50], MSM are recognised as one of the key populations with regard to HIV, STIs and viral hepatitis, usually alongside people who use drugs, migrants including refugees and asylum seekers, people living with HIV, prisoners, transgender people and people engaged in sex work. These key populations are the groups most likely to be exposed to, or to transmit these infections, and whose engagement is considered critical to a successful response. They also note that in many parts of the world MSM face human rights violations, stigma and discrimination that impedes access to health services to prevent and treat hepatitis. For other health issues such as drug use [15] and mental health and well-being [19] policy documents do not explicitly mention gay and bisexual men, or MSM, but those populations might be implicitly included among the vulnerable groups. The WHO Regional Office for Europe Action Plan [47] identifies two targeted specific actions to benefit MSM including 'to develop and implement targeted awareness campaigns for specific populations at risk of STIs including viral hepatitis (particularly MSM, transgender people and sex workers).' The Commission's current staff working document [50] recognises the importance of hepatitis B vaccination and hepatitis C diagnosis and effective treatment as key elements in prevention.

A major emerging challenge is responding to the combining of sex and stimulant drugs (that is, 'chemsex') among MSM. The response of the EU to drug use is set forth in the EU Drugs Strategy from 2012 [51] which outlines the political framework and priorities for EU drugs policy. Its objectives are to reduce demand for, dependence on, harm from and availability of drugs through multi-level communication and coordination, and the generation and use of evidence. Potential actions based on the Strategy are described in the EU Action Plan on Drugs 2017–2020 [52]. This document identifies 55 actions being taken by the EU within the current programme. Even if neither the Drugs Strategy [51] nor the Action Plan [52] refer to LGBT communities in general or MSM in particular, EMIS-2017 provides evidence that MSM should be targeted in this area.

The consultation process initiated after the adoption of the Green Paper 'Improving the mental health of the population' [53] paved the way towards recognising the need for a decisive political step to make mental health and well-being a key priority for all citizens and groups, including all age groups, genders, ethnic origins and socio-economic groups. It suggests mental health and well-being needs to be promoted based on targeted interventions that are sensitive to the diversity of the European population. This approach is currently supported by the European Framework for Mental Health and Wellbeing [54] which, although not mentioning gay and bisexual men, or MSM, implicitly includes those populations among the vulnerable groups.

In this context, EMIS-2017 is uniquely able to provide large-scale, comparable data across all EU Member States, and describe both MSM behaviour and needs, alongside resulting morbidities, and the likely utility of services provided to address these. Crucially, EMIS data contribute to an improved assessment of progress towards the internationally agreed goals. For example, the data contribute to the approximation of progress towards the UNAIDS 90-90-90 HIV treatment targets [40], also known as the HIV continuum of care. EMIS-2017 can also provide a unique means for monitoring access to STI and HIV testing services and other prevention interventions and describing the adverse effects of stigmatisation and discrimination, by country. EMIS-2017 results provide knowledge to help understand the impact of prevention and treatment programmes, including the influence of emerging and changing behavioural trends and how these factors influence risk behaviour among MSM.

10.4 Priority unmet needs

EMIS-2017 assessed a wide range of needs pertinent to a variety of risk and precaution behaviour among MSM. Here we highlight needs which were commonly unmet across a wide range of sub-groups of MSM. These are needs for which substantial health gain can be achieved and which are congruent with the priorities identified in the WHO Europe Action Plans on HIV [46] and viral hepatitis [47] and the Commission's current staff working document on combatting HIV and viral hepatitis [50]. The data in EMIS-2017 suggests that, if programmes are concerned with making the greatest impact for the largest number of MSM, meeting these needs should be the targets of community-wide interventions.

10.4.1 Motivation and opportunity to use chemoprophylaxis (PEP and PrEP) and ART

EMIS data demonstrate an overall favourable situation in most EU countries regarding access to and success of antiretroviral treatment for MSM diagnosed with HIV. With few exceptions, most EU countries meet the 90-90 goals [40] (taking antiretroviral treatment and achieving suppression of viral replication) that can be measured by EMIS, and we can also demonstrate that time between HIV diagnosis and start of treatment has shortened considerably in recent years.

The most commonly unmet needs (out of those measured in the survey) concerned PEP, PrEP and so-called 'treatment as prevention'. These needs were commonly unmet among a wide range of subpopulations of MSM, for example:

- 37% had never heard of PEP (55% among those aged under 25 years)
- 39% had never heard of PrEP (53% among refugees and asylum seekers)
- 43% did not know that U=U (56% among men who were out to few or no-one)
- 60% were not confident they could access PEP if they needed it.

In terms of the ratio of unmet prevention need to potential benefit, EMIS-2017 suggests that PrEP knowledge and U=U knowledge have the greatest potential for epidemic impact from even a modest educational and service effort.

- Support and promotion of service options for access to HIV chemoprophylaxis to MSM, and early access to HIV treatment will increase the impact of programmes on HIV incidence.

This priority is in accordance with the WHO Europe Action Plan on HIV [46] which suggests that 'To optimise prevention, Member States should prioritise evidence-based comprehensive HIV combination prevention with a particular focus on transmission in key populations, with the inclusion of novel approaches such as pre-exposure prophylaxis (PrEP) for populations at substantial risk of HIV acquisition'.

10.4.2 Motivation and opportunity to receive hepatitis vaccinations

Safe and effective vaccines against hepatitis A and B exist and MSM are priority groups for vaccination in most of the countries in the survey. More than half of the MSM taking part in EMIS-2017 were vulnerable to hepatitis A and/or hepatitis B, and more than half of those who were vulnerable did not know where to get vaccinated. EMIS data demonstrate large variations between countries regarding the uptake among MSM of both hepatitis A and hepatitis B vaccination (see Figures 7.8 and 7.9).

The WHO Action Plan on Viral Hepatitis [44] suggests universal childhood vaccination against hepatitis B should be a priority action for Member States. In the absence of this service and as an additional measure to protect adolescents and adults against vaccine-preventable hepatitis, Member States can prioritise defining country-specific risk groups according to local context and develop a national policy on vaccination of high-risk individuals. In response to various hepatitis A outbreaks among MSM across Europe from 2016 to 2018, ECDC also highlighted the importance of 'hepatitis A vaccination of MSM and their close contacts according to national recommendations' [55].

The revitalisation of national hepatitis programmes is needed to meet the requirements of MSM and thereby increase the sexual health impact of programmes.

10.4.3 Motivation, opportunity and capability to take an HIV test

A third of respondents were unsure of their HIV status, indicating a potential to benefit from HIV testing. However, among the 21% who had never tested for HIV, 42% did not know where to get a test (52% among those aged under 25 years). This simple need can be addressed with service promotion and community education and by expansion of community-based testing [56], and the use of HIV self-tests and HIV and STI self-sampling-schemes. EMIS data show that at the time of the survey, uptake of community testing was high but very few countries appeared to provide access to HIV self-tests and HIV self-sampling schemes (see Figure 7.5, and Table 7.13).

To increase their impact on HIV incidence, programmes should continue to provide and promote HIV testing.

10.4.4 Motivation and opportunity for full STI screening

Many European countries have expressed concerns about rising numbers of diagnosed sexually transmitted infections, particularly syphilis and gonorrhoea. Among men in EMIS-2017, some basic facts that can motivate STI screening were commonly not known:

- 28% were ignorant that most STIs are easier to transmit than HIV.
- 17% were ignorant that STIs can be asymptomatic.

Given the broad sexual repertoire in MSM and that condoms only offer partial protection against most STIs, and that chemoprophylaxis for STIs with antibiotic drugs can lead to development of resistance, it is crucial to improve STI-testing and treatment in MSM with multiple sexual partners.

Testing for other STIs was less common than HIV testing and only 13% across Europe had had an STI test in the last 12 months that was adequate for the sexual repertoire of MSM ('full STI screen'). Large variation in access to and uptake of full STI screens between countries was revealed by EMIS (see Figure 7.11).

Programmes should continue to provide and promote comprehensive STI testing, tailored to the sexual repertoire of MSM. In many countries costs for STI testing are not reimbursed by national insurance schemes and have to be paid for by the recipient. Reducing the stigma associated with (homo)sexual practices, comprehensive testing policies and affordable costs are essential to adequate STI screening.

10.4.5 Mental health interventions

There is evidence that sexual minorities are at higher risk of poor mental health than the heterosexual majority [57,58], that mental health problems are particularly common among MSM that are younger, less well educated and on lower incomes and that depression is associated with being part of an ethnic minority or also being attracted to women [59]. EMIS used several validated scales to assess mental health in the surveyed population. We found considerable levels of anxiety and depression, suicidal ideation, and alcohol dependency.

Comparisons at a national level with general population data are required to confirm that specific mental health discrepancies exist compared with the general population. Our data thus far can only demonstrate higher levels of anxiety and depression, and suicidal ideation especially among MSM with diagnosed HIV, younger MSM and among trans MSM. While we do not make a concrete recommendation, we suggest that interventions arising from the European Framework for Mental Health and Wellbeing [54] should be targeted at MSM and tailored to their specific needs.

10.5 Priority target groups

While the Commission's 2018 staff working document on 'combatting HIV/AIDS, viral hepatitis and tuberculosis' [50] and the WHO Europe Action Plan on HIV [46] clearly identify MSM as one of the key priority groups, neither document refers to specific subgroups of MSM with particular vulnerabilities. Here we considered morbidities, behaviour, needs and intervention use across a range of potentially vulnerable sub-groups of MSM: men who are refugees or asylum seekers (<1% of all); trans men and those female at birth (1% of all); men who injected drugs (1% of all); men who sold sex (2% of all) and men living with diagnosed HIV (10% of all). Here we identify two sub-groups that stand out from our data as being particularly vulnerable.

10.5.1 Trans MSM

Among all the specific target groups considered, severe anxiety and depression were most common (23% compared with 8% overall) in the small subgroup of trans men female at birth, as were thoughts of self-harm (50% compared with 21% overall), being sexually unhappy (36% compared with 23% overall) and potential alcohol dependency (27% compared with 18% overall). However, as trans men were a small proportion of all men, the majority of men with poor mental health, thoughts of self-harm, sexual unhappiness and potential alcohol dependency were not trans.

- Health promotion programmes that are concerned with equity of health should ensure that trans MSM are a priority in mental health programmes for MSM and also for alcohol services for MSM.

10.5.2 MSM who inject drugs

Among all the specific sub-groups considered, HIV diagnosis in the last 12 months was most common (6% compared with 1% overall) in the small subgroup of men who had injected drugs to get high in the last 12 months, as was being diagnosed in the last 12 months with syphilis (22% compared with 4% overall), gonorrhoea (22% compared with 5% overall) or chlamydia (19% compared with 5% overall). Although injecting drugs to get high in the past 12 months was most common in men living with diagnosed HIV, it was still relatively rare (6% compared with 1% overall).

Health promotion programmes that are concerned with equity of health should ensure that the needs of MSM who inject drugs are a priority for STI, HIV and hepatitis prevention programmes and mental health programmes for MSM. These needs could be addressed within a framework of harm reduction services for MSM with sexualised drug use.

Both MSM and people who inject drugs are identified as priority groups in the EU Action Plan on HIV/AIDS [60]. The focus on MSM who inject drugs is in accordance with the plan.

10.6 Further outputs from EMIS-2017

This report provides the basic findings from a long survey with a large number of respondents across many countries. More detailed analyses will follow in the form of national reports and journal articles based on single-country and multi-country analyses. By early May 2019, we had transferred national datasets to partners in 37 of 43 countries with a viable national sample. The majority of these data transfers were to support national EMIS reports – and potentially journal articles based on national analyses – for those countries. We are also seeking applications for multi-country datasets to undertake specific analyses for academic journal articles. For further information on EMIS-2017 publications see www.emis2017.eu.

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