Report on the determinants of HIV test-seeking behaviour among MSM in Europe

Euro HIV EDAT project

Work package 5 final report

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About this report

An early draft of this report was developed by Nicolas Lorente (CEEISCAT) and revised by all members of the working group of WP5 (Table—1). The final version of the draft was validated on 31st January 2018.

Table—1 Composition of the working group of WP5 (Euro HIV EDAT project)

Participating CBVCT services			
AIDES	Aides	France	Daniela Rojas Castro Stéphane Morel
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LILA Milano ONLUS	Fondazione LILA Milano ONLUS	Italy	Lella Cosmaro Sabrina Penon
GAT	GAT / CheckpointLX	Portugal	Ricardo Fuertes Miguel Rocha
LEGEBITRA	Drustvo informacijski center Legebitra	Slovenia	Mitja Ćosić Blaž Vukelić
CHECKPOINT	Positive Voice / Ath and Thess Checkpoints	Greece	Sophocles Chanos George Polkas
Work Package Leader			
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Finally, the authors also acknowledge Anna Conway (CEEISCAT) for proofreading this report, and Paulo Oliveira (Universidade do Porto) for his help in changing the computer-assisted questionnaires of CheckpointLX.

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Abbreviations

AHI	Acute HIV infection
AI/ CAI	Anal intercourse / Condomless anal intercourse
CBVCT	Community-based voluntary counselling and testing
CHAFEA	Consumers, Health, Agriculture and Food Executive Agency
CHW	Community health worker
COBATEST (network)	Community-based testing network
CT	Chlamydia trachomatis
DK	Denmark
ECDC	European Centre for Disease Prevention and Control
EMIS	European Men who have sex with men Internet Survey
FR	France
GR	Greece
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
HPV	Human papilloma virus
ICU	Inconsistent condom use
IT	Italy
MSM	Men who have sex with men
NG	Neisseria gonorrhoea
NHS	National Health service
POC	Point-of-care
PT	Portugal
PV/Ath-Thess Checkpoints	Positive Voice / Athens and Thessaloniki Checkpoints
PWID	People who inject drugs
SI	Slovenia
STI	Sexually transmitted infection
SW	Sex worker
UPI	Unique participant identifier
WHO	World health organisation
WP	Work package

Executive Summary

This report presents the main results of the COBA-Cohort study (COmmunity-BAsed cohort), implemented in the framework of the Euro HIV EDAT project; a project co-funded by the Consumers, Health and Food Executive Agency, under the European Union Public Health Programme for the period April 2014-September 2017 (No. 2013 1101). This project aimed to generate operational knowledge to better understand the role and impact of CBVCT services on early diagnosis and treatment of HIV.

COBA-Cohort is an open cohort of HIV-negative MSM recruited and followed-up in community-based voluntary counselling and testing (CBVCT) services in 6 European countries: AIDES (France), AIDS-Fondet (Denmark), Fondazione LILA Milano (Italy), GAT/CheckpointLX (Portugal), Legebitra (Slovenia) and Positive Voice/Athens-Thessaloniki Checkpoints (Greece). Study partners (participating NGOs) actively took part in the preparation of the protocol in order to best fit the reality of CBVCT services and to interfere with the functioning of the CBVCT services as little as possible.

From early 2015, and for a period of time varying from 15 to 24 months depending on the study site, all male CBVCT services attendees tested negative for HIV, aged 18 or older and who reported sex with men in the previous 12 months were offered the possibility to enter COBA-Cohort. COBA-Cohort participants were not asked to return specifically for the study but for a test, according to the usual recommendations and practices of the participating CBVCT services.

The research objectives of this study were as follows: (1) to describe the patterns of CBVCT use in MSM, (2) to identify determinants of HIV/STI-test seeking behaviour in MSM, (3) to assess the HIV infection incidence rate in MSM, (4) to identify potential risk factors for seroconversion in MSM, and (5) to describe determinants for sexual risk behaviour in MSM.

For this report, a data censorship (the 4th one in the framework of Euro HIV EDAT) was applied on 31st March 2017 for almost all study partners, and until 30th June 2017 for the two that started COBA-Cohort in 2016 (Positive Voice/Ath-Thess Checkpoints and F. LILA Milano).

Overall, 3,976 participants were included in COBA-Cohort by the time of the 4th data censorship. Compared to those who refused to participate, COBA-Cohort participants were less likely to be transgender, to be born abroad and to define themselves as bisexual or other, as is usually the case in similar studies in the MSM population.

COBA-Cohort participants were generally at high risk of infection, which was expected given that people generally seek access to an HIV test if they are at risk of infection. However, routine testing was the most common reason given for having the present test, for HIV/STI testing in general and for HIV testing intentions in the future. Routine HIV testing has been normalised among MSM recruited in COBA-Cohort, in particular for those previously tested in the same CBVCT service since they were more likely to return during the short COBA-Cohort follow-up time.

Some of the participants remained out of routine testing or did not get tested as regularly as they should and were more exposed to HIV risk infection. More efforts should be made in order to better characterise this group and identify the barriers that prevent them from increasing their testing uptake.

The HIV incidence estimates performed with COBA-Cohort's data were weak because of the short time of follow-up (maximum 25 months). However, the estimations of HIV incidence obtained here (3.43/1000 person-years overall, ranging from 3.24/1000 person-years to 4.84/1000 person-years in the sites with at least one seroconversion) suggested that it may have decreased in MSM since the previous estimations that were done in BCN Checkpoint and GAT/CheckpointLX (2.4/100 person-years and 2.80/100 person-years, respectively). Although limitations regarding these COBA-Cohort estimates should be taken into account, increased access to testing has changed testing patterns and increased frequency of HIV testing in MSM, which in turn may have reduced the number of seroconversions compared to the overall number of testers and repeat testers. More follow-up data is needed to confirm that trend.

Behavioural data from COBA-Cohort showed that many at-risk participants perceived themselves as such, were more likely to know the HIV status of their partners, were sometimes HIV positive, and were also more willing to use PrEP in the future if available. This suggests that at-risk MSM were aware of the benefits of treatment as prevention, and would also like to access PrEP in order to reduce their risk of infection. More support regarding ChemSex is needed for MSM, as well as broader access to PrEP for men at higher risk of infection.

COBA-Cohort demonstrated the feasibility of the implementation of a multicentre community-based cohort among MSM. The next challenge is to make it durable, involving more CBVCT services, and having longer follow-up and more data in general to better understand the dynamic of the HIV epidemic in MSM in cities where the study cohort is implemented, as well as the role and impact of the participating CBVCT services. Monitoring and evaluating CBVCT services is crucial to improve their effectivity and contribution to the 90-90-90 targets.

1 Background

1.1 Epidemiological context

In the European Union and European Economic Area, the number of HIV diagnoses has remained relatively stable but high since 2006, with approximately 30,000 new cases reported each year (ECDC, 2017). Overall, 40% of these new infections were attributed to sex between men in 2016, 53% when considering data with known route of transmission (ECDC & WHO, 2017). This rate has steadily increased since 2006 while decreasing in all other transmission groups in the same period.

Improving access to and frequency of HIV testing became one of the main issues regarding HIV prevention in men who have sex with men (MSM) and has been recommended for more than ten years (WHO & UNAIDS, 2007; Workowski, Berman, & CDC, 2006). Many countries were already recommending at least one test per year for sexually active MSM in 2010 (ECDC, 2010a), and by 2015 ECDC had formally adopted this recommendation (ECDC, 2015). However, the European MSM Internet Survey (EMIS) showed that a significant proportion of MSM had not been tested within the past 12 months (The EMIS Network, 2013), and more recent studies suggest that many of those never-tested MSM may have had high-risk practices (Daas, Doppen, Schmidt, & Coul, 2016; Nelson, Pantalone, Gamarel, Carey, & Simoni, 2017).

There is still need and room for improving testing uptake in MSM, and better targeting of this population in order to be more cost-effective(Zulliger et al., 2017). Barriers to HIV testing uptake are numerous and may exist at individual, health provider and institutional level(ECDC, 2010b). MSM may also face specific barriers such as homophobia and internalized homonegativity (Deblonde et al., 2010; Holtzman et al., 2016; Ross et al., 2013; The EMIS Network, 2013), that community-based voluntary counselling and testing (CBVCT) services can help overcome (Leitinger et al., 2017).

In Europe, CBVCT services have already demonstrated that they are particularly appropriate in making access to HIV testing easier among MSM. They manage to reach less tested MSM who are at higher risk of HIV infection (Bailey et al., 2009; Champenois et al., 2012; Lorente et al., 2013), facilitate linkage to care easier (Meulbroek et al., 2013; Qvist, Cowan, Graugaard, & Helleberg, 2014) and can detect HIV and other asymptomatic STIs in MSM earlier (Coll et al., 2017). In addition, the benefits of CBVCT services are obtained at an acceptable cost (Perelman et al., 2016).

There is a need to better understand the testing patterns of MSM getting tested in those CBVCT services in order to help the CBVCT providers to tailor their services to increase the testing frequency of their attendees. Longitudinal studies are important to monitor possible changes in testing patterns over time and to study the determinants of repeat testing. Unfortunately, longitudinal data in HIV-negative MSM are still scarce in Europe: one clinic-based cohort in Amsterdam (Jansen et al., 2011), and two community-based cohorts in Barcelona and Lisbon(Ferrer et al., 2016; Meireles, Lucas, Martins, et al., 2015).

1.2 Study context

The study presented in this report is part of the Euro HIV EDAT (**European HIV Early Diagnosis and Access to Treatment**) project, co-funded by the Consumers, Health and Food Executive Agency (CHAFEA) under the European Union Public Health Programme for the period April 2014-September 2017 (No. 2013 1101). This project aimed to generate operational knowledge to better understand the role and impact of CBVCT services. It also aimed to explore the use of innovative strategies based on new technologies and to increase early HIV/STI diagnosis and treatment in Europe among the most affected groups. The Euro HIV EDAT ensured continuity in the conduct of previous European projects on community-based HIV testing (e.g. the COBATEST Project, http://www.cobatest.org) and strengthened existing knowledge about vulnerable populations in Europe, such as MSM and migrant populations originating from high endemic regions.

The present report focuses on one of the work packages of the Euro HIV EDAT project (WP5). This WP proposed the implementation of open cohort of HIV-negative MSM getting tested in CBVCT services in 6 European countries, based on the experiences of the Barcelona and Lisbon HIV-negative MSM cohorts mentioned earlier.

The cohort implemented in the WP5, namely “COBA-Cohort” (COmmunity-BAsed Cohort), is a unique opportunity to collect harmonised and longitudinal data about testing and sexual behaviour in 6 European countries simultaneously, using similar methodology. This will increase knowledge regarding patterns of use of CBVCT services, test seeking and sexual risk behaviours, but also contribute to second generation surveillance for HIV/AIDS by monitoring not only HIV, but also STIs and trends in risk behaviour over time to explain changes in levels of infection.

1.3 Objectives

The main research objectives of the WP5 according to the grant agreement accepted by CHAFEA were as follows:

1. To describe the patterns of CBVCT use in MSM,
2. To identify determinants of HIV/STI test seeking behaviour in MSM,
3. To assess the HIV infection incidence rate in MSM,
4. To identify potential risk factors for seroconversion in MSM,
5. To describe determinants for sexual risk behaviour in MSM.

2 Methods

2.1 Participating sites

Six NGOs from six European countries took part in the COBA-Cohort, representing a total of 17 CBVCT services where HIV-negative MSM were recruited and followed up (Figure 2.1—1).

Countries	NGOs	No. of sites	CBVCT services (●)
Denmark	AIDS-Fondet	2	Copenhagen, Aarhus
France	AIDES	10	Paris (4 sites), Lyon, Nice, Montpellier, Marseille (2 sites), Lille
Greece	Positive Voice	2	Ath Checkpoint (Athens), Thess Checkpoint (Thessaloniki)
Italy	LILA Milano	1	Milan
Portugal	GAT	1	CheckpointLX (Lisbon)
Slovenia	Legebitra	1	Ljubljana

Figure 2.1—1 Participating sites of COBA-Cohort

Table 2.1—1 explains the characteristics of each COBA-Cohort partner. Although many tasks and procedures are common to all of the study partners, there are also marked differences, for example regarding the number of HIV tests performed per year. In 2016, less than 1,000 HIV tests were performed in Legebitra and LILA Milano, while more than 2,000 were performed in the other sites and up to 15,300 for Positive Voice / Ath-Thess Checkpoints. The annual number of tests for AIDES (13,006) is notable because AIDES contributes to COBA-Cohort with 10 CBVCT sites (vs. only 1 or 2 for the other study partners), but the number of annual test per site is more similar to the smallest sites

of other study partners (ranging from 535 in Montpellier to 1,483 in Lyon). In addition, more than 70% of AIDES tests were performed during outreach activities in 2016 (from 52.8% in Paris-II to 94.8% in Marseille-N), whereas this proportion varied from 2.5% to 41.9% among the other study partners.

There are three types of testing session organisation among COBA-Cohort study partners: attending users in their CBVCT premises almost every day during long time slots (GAT/CheckpointLX and Ath/Thess Checkpoints); attending users in CBVCT premises but fewer times per week or per month during reduced time slots (AIDS-Fondet, Legebitra and LILA Milano); and attending more than half of users in outreach activities (AIDES).

Staff composition also differs across the participating CBVCT services. All services comprise community health workers (CHW) who were trained to perform testing and/or counselling, but have not usually had medical or nursing education. In Legebitra and LILA Milano, the presence of a doctor or a medical technician is mandatory. In the former because someone qualified has to do the blood extraction for the conventional blood tests, in the latter because the use of HIV tests is not allowed by non-doctors in Italy. In the other sites, all staff members can perform both testing and counselling.

Pre- and post-test counselling are always offered to CBVCT service attendees. All participating sites also use the pre-test counselling to assess the risk profile of the attendees regarding other STIs/Hepatitis and to offer those tests when available. In Legebitra, all available tests are systematically proposed to all attendees, except for HIV, syphilis and hepatitis C (HCV) and B (HBV) viruses if previously diagnosed.

In the case of a reactive result, only GAT/CheckpointLX can perform the confirmation test (since November 2016). In other participating CBVCT services, the attendees with a reactive result are referred to a local lab, clinic or hospital for confirmation. All participating sites also offer to escort attendees to the confirmation test and/or first medical visit, and some of them can directly make the appointment with the lab/clinic/hospital.

Table 2.1—1 Main characteristics of CBVCT services participating in COBA-Cohort

	AIDES (France)	AIDS-Fondet (Denmark)	Fondazione LILA Milano (Italy)	GAT/CheckpointLX (Portugal)	Legebitra (Slovenia)	Positive Voice / Ath-Thess Checkpoints (Greece)
No. of CBVCT services participating	10	2	1	1	1	2
Target population(s)	MSM, Migrants, SW, Trans, PWID	MSM and migrants	MSM, PWID, youth, general population	MSM, trans men who have sex with men	MSM, trans people	MSM, PWID, SW, Trans people, general population and refugees / migrants
No. HIV tests in 2016	13,006	2,345 (1,750 in MSM)	903 (394 in MSM)	4,150 (3,644 in MSM)	789 (789 in MSM)	15,300 (7,128 in MSM)
No. reactive HIV tests (2016)	109	17 (16 in MSM)	4 (3 in MSM)	102 (100 in MSM)	9 (9 in MSM)	175 (127 in MSM)
Testing sessions	Every day, without appointment	Twice a week (4-7 pm) in Copenhagen, once a week (4-6pm) in Aarhus. Appointment only in few special occasions	On average, twice a month. Appointment only in few special occasions	Monday to Saturday, from 12:00am to 8:00pm, without appointment.	8-12 sessions per month, without appointment	Every working day from 12 to 8pm, appointment required but drop-ins are also accommodated
HIV tests performed during outreach sessions	71.4%	13.1%	41.9%	2.5%	31 %	20-25%
Staff/roles	Testing and counselling performed by trained CHWs	Testing and counselling performed by doctors, nurses and trained CHWs	Tests performed by doctors. Pre-/post-test counselling provided by trained CHWs	Testing and counselling performed by trained CHWs (peers)	Blood extraction done by medical technician. Counselling by trained CHWs	Testing and counselling performed by trained CHWs (some of them are nurses, psychologists, but no doctor)
Pre- / post-test counselling	Both always offered	Both always offered	Both always offered	Both always offered	Both always offered	Both always offered
Type of HIV test	**Rapid tests** (fingerprick)**:** - INSTI® HIV 1/2 digital	**Rapid tests:** - For all MSM: INSTI® Multiplex (if no previous syphilis) or INSTI® HIV 1/2) - If HIV exposure <8 weeks: Alere HIV Combo Ag/Ab	**Rapid tests:** - In LILA premises: INSTI® Biolytical kits for HIV / for HIV + Syphilis (fingerprick) - Outreach or if preferred: Oraquick® HIV 1-2 kits (saliva)	**Rapid tests** (fingerprick): - For all MSM: AlereDetermine™ HIV-1/2 - For MSM with possible recent exposition to HIV: Alere Combo Ag/Ab	**Conventional blood test:** - Anti-HIV 1/2/0, HIV-1 p24 Ag (HIV Combi PT ElecsysCobas)	**Rapid test** (fingerprick) INSTI® HIV1/2 by BioLytical Labs
Other STIs/Hepatitis tests	**HCV** rapid test (fingerprick), according to risk profile	- **Syphilis** rapid INSTI® Multiplex - or Alere Combo HIV Ag/Ab /Alere Syphilis rapid test (fingerprick), offered to all MSM without previous diagnosis - **HCV** Rapid test OraQuick (fingerprick), if blood-to-blood exposure.	- **Syphilis** test (combined with HIV, cf. type of HIV test), proposed to all MSM - **HCV** rapid test Meridian Oraquick® HCV kits (saliva), according to the risk profile	- **Syphilis** rapid test Alere Determine™ (fingerprick), proposed to all MSM without a previous diagnosis of syphilis - **HCV** Rapid Test Türklab Info® (fingerprick), if reported risk practices for HCV transmission	- **Syphilis**, **HCV** and **HBV** conventional blood tests, - **Gonorrhoea** oral and anal swabs. All tests are proposed to everybody, except syphilis, HCV and HBV if previous diagnosis	- HBV/ HBsAg: Rapid fingerprint test, Rapidan Tester by TurkLab. - HCV: Rapid fingerprint test, Rapidan Tester by TurkLab. -Syphilis: INSTI® Multiplex test, All tests offered according to the risk profile
Confirmation test	At HIV hospital units or STIs Clinics (Cegidd)	In a hospital (HIV/HCV), in an STI clinic or GP (syphilis)	At hospital	Since Nov 2016: at CheckpointLX (RNA-HIV confirmation with AlerePOC molecular test)	At the Clinic of Infectious Diseases and Febrile Illnesses (Ljubljana)	At the HIV clinic of a public hospital
Linkage to care	Systematic proposal of accompaniment to the confirmation test appointment	Appointment made by the CBVCT service staff. Some of the staff are also working at hospital, so attendees can see them while visiting at the hospital	Appointment made by the CBVCT staff, and contact kept with hospital to gather data about confirmation and CD4 cell count	CHWs offer to escort the attendees to their first medical appointment. CHWs call 1 month later for follow-up on linkage to care	Appointment made by the CBVCT staff and also offer to escort the attendees	CHWs offer to escort attendees to both confirmation test and test result (92% accept)

MSM: men who have sex with men; PWID: people who inject drugs; SW: sex workers; CHW: community health worker; AHI: acute HIV infection; STI: sexually transmitted infection; HCV: Hepatitis C virus; HBV: Hepatitis B virus; POC: point-of-care.

Each study partner is also involved in activities other than testing, as briefly described in Table 2.1—2.

Table 2.1—2 Other activities of the CBVCT services participating in COBA-Cohort

AIDES (France)	· Condom, lube distribution, · Needle exchange programs, · Harm reduction for drug use (small materials distribution), · Psychosocial support, · Social support for access to health for migrants, · Partnership with care services for referral.
AIDS-Fondet (Denmark)	· ChemSex counselling, · Transgender counselling, · Psychosocial support for HIV-positive people · MSM prevention campaigns · Condom/lube distribution in the MSM arena.
Fondazione LILA Milano (Italy)	· Prevention campaigns · Psychosocial support · Condom/lube distribution · Partnership with care services for referral.
GAT/CheckpointLX (portugal)	· Condoms and lube distribution, · Screening programs of: HIV, syphilis, HCV, NG, CT, HPV and anal cancer (performed by nurses or physicians, by appointment only) · Anonymous partner notification tool, · Antibiotics treatments dispensation for NG, CT, syphilis, · Vaccines to prevent HBA, HBV and HPV.
Legebitra (Slovenia)	· Prevention campaigns, · Psychosocial support, · Counselling for LGBT+ people, · Buddy program for people living with HIV, · Condom and lube distribution
Positive Voice / Ath-Thess Checkpoints (Greece)	· Prevention campaigns, · Peer-to-peer support and empowerment, · Referral for professional psychological support, · Condom/lube distribution · Partnership with almost all HIV clinics for linking and followingpeople tested positive

CT: chlamydia trachomatis; NG: neisseria gonorrhoea; HPV: human papilloma virus; HBV: hepatitis B virus.

2.2 Study design

The protocol of COBA-Cohort was developed, discussed and agreed by the working group of WP5 of Euro HIV EDAT (see composition of the study group in Table—1, page i).

In the first seven months of Euro HIV EDAT (May-December 2014), the study group developed the protocol and the data collection tools for COBA-Cohort, based on the experiences of two ongoing HIV-negative MSM cohorts, at BCN Checkpoint in Barcelona (Ferrer et al., 2016) and GAT/CheckpointLX in Lisbon (Meireles, Lucas, Martins, et al., 2015). Both Checkpoints were initially

involved in the development of COBA-Cohort protocol. GAT/CheckpointLX remained as a study partner, but BCN Checkpoint finally left the project because of incompatibility with the activities they had at that time.

The main challenge regarding the development of the protocol of the COBA-cohort study was to harmonize methodological procedures and tools in order to obtain comparable data, while interfering as little as possible with the functioning of the participating CBVCT services as the project funds did not allow for staff recruitment to implement the study.

COBA-cohort is an observational and service-based cohort of HIV-negative MSM attending one of the 17 participating CBVCT services in Denmark, France, Greece, Italy, Portugal and Slovenia (Figure 2.1—1). COBA-Cohort is non-interventional and did not aim to change any of the usual procedures of the participating CBVCT sites, like HIV testing recommendations or counselling and testing methods.

2.2.1 Recruitment and baseline data

The aim was to make the convenience sample as large as possible and as representative as possible of each site, so all eligible men attending the participating CBVCT services during the recruitment period were invited to enter in the COBA-Cohort. Several adjustments had to be made locally in order to make study implementation easier. For example in Positive Voice (PV) / Ath-Thess Checkpoints (who joined the project later on), it was decided to recruit only every other day because of their high number of tests per year (Table 2.1—1).

Eligibility criteria for participating in COBA-Cohort were as follows: being 18 or older, reporting any kind of sex at least once with another man during the last 12 months, being resident of the area of the CBVCT services or being a frequent visitor of the area of the CBVCT service, having a negative HIV test result when invited to participate and signing of the informed consent (mandatory for participation).

No specific promotion or communication campaign was initially implemented to recruit participants, except a local initiative in France with a poster to promote the study during outreach testing sessions (see annex 6.1). Potential participants were given specific information about COBA-Cohort and the implications of participation (verbal and written explanations using the informed consent, see annex6.2, and/or the leaflet of COBA-Cohort, see annex0).

Refusal data

For attendees who met the inclusion criteria but refused to participate, a minimum set of information was gathered through a questionnaire, filled in by the client himself or by the counsellor during the face-to-face interview. The refusal questionnaire collected the following information: date of the current test, gender, date and country of birth, country of residence, education, occupation, definition of sexual orientation, date of the last HIV test, main reasons for not participating (see annex 6.4). Many participants refused to answer these questions, so it was decided, during the course of the project, to change this for a refusal register which gathered very little data (see annex 6.5).

Baseline questionnaire

When someone agreed to participate, he answered the baseline questionnaire (see annex 6.6), gathering data about: Socio-demographic profile (baseline questionnaire only); General health and HIV risk; HIV testing (history, patterns, intentions, and attitudes); Sexual behaviour (history, types of partners, condom use and partner's serological status data depending on the partner type, etc.); STI and hepatitis B and C (history, testing patterns and vaccines); and pre- and post-exposure prophylaxis (awareness, use and intention to use). Several questions also gathered information about alcohol and drug use during sex (type of drugs and frequency) as well as history of injecting drug use (whether or not related to sex and the date of last injection).

When possible, the questions were taken from existing questionnaires, in particular those of BCN Checkpoint and CheckpointLX, but also from other studies like EMIS in order to have a point of comparison at the European level.

The last part of the baseline questionnaire had to be filled in by CBVCT providers. This section gathered data regarding the general characteristics of each participant's visit: counselling, type of test, HIV and other STIs test results, linkage to care, etc. These indicators are mainly derived from the standardised form currently used in the European COBATEST network (Fernàndez López et al., 2012), for comparability and also compatibility reasons because several COBA-Cohort study partners are also part of the COBATEST network.

2.2.2 Follow-up

As mentioned previously, COBA-Cohort did not aim to alter the day-to-day work and procedures of participating CBVCT services, so the participants were not asked to come back for the study on a regular basis.

However, as they usually do, CBVCT providers do recommend that their attendees get tested on a regular basis. Recommendations for testing frequency differ between countries and CBVCT services, but they all recommended, at the beginning of the study implementation, having at least one test per year, or more according to the risk practices. Participants enrolled in COBA-Cohort are encouraged to be retested according to these recommendations. It was initially planned to implement reminder tools at the local level in order to increase the frequency of test, but only AIDES, GAT/CheckpointLX and PV/Ath-Thess Checkpoints did so.

The frequency of follow-up in COBA-Cohort participants thus depends on the services' recommendations and on the participants' willingness to return for a test. When they come back, they have to answer a shorter version of the baseline questionnaire (see annex 6.7).

2.2.3 Ethical and data protection issues

The study protocol of COBA-Cohort has been approved by the ethics committee of the Germans Trias i Pujol Hospital (Badalona, Spain) for the WP leader (CEEISCAT), and all participating CBVCT services have been granted ethical approval by their respective Health Authorities, and by Data Protection National Committees when required (in France and Portugal).

Each COBA-Cohort participant is anonymously identified by a unique participant identifier (UPI), assigned at the baseline visit and used for the duration of the study. The UPI avoids duplication of participants in the database and to keeps anonymity. For CBVCT services which did not previously had a system to assign easily retrievable UPIs (without using a given code that the participant should memorise), the adoption of the UPI used in the COBATEST form was recommended. The COBATEST UPI is composed of 10 or 11 digits and one letter: gender (0 male, 1 female), month (2 digits), day (2 digits) and year of birth (4 digits), number of older brothers, number of older sisters, and initial letter of mother's first name. In the databases, each participant is identified only with his UPI and the CBVCT service where he was recruited. The coexistence of different UPI systems among study partners may have resulted in participant duplication from one study partner to another, although this situation was not reported by CBVCT providers.

Except for the CBVCT service staff that may collect (or have access to) participants' personal data like name, email or phone number, nobody else can access these personal data; neither the WP leader nor those performing the database management and statistical analyses.

2.3 Study implementation

2.3.1 Fieldwork

Before implementing the cohort, each study partner had to translate all the materials (questionnaires, leaflets, and sometimes the protocol if required by the local ethical committee), to pilot the questionnaires in their own language and to train the CBVCT service staff members. In GAT/CheckpointLX, despite already running a cohort of HIV-negative MSM, they had to obtain ethical approval locally, and to modify their own questionnaire to include new questions from COBA-Cohort.

In the framework of Euro HIV EDAT, the recruitment of COBA-Cohort participants was supposed to start in January 2015. However, the first site, Legebitra, started only in February 2015, two more in April 2015, and the other three in 2016 (Table 2.3—1).

Table 2.3—1 COBA-Cohort recruitment periods

CBVCT services		Recruitment commencement	Duration
Legebitra (Slovenia)	Ljubljana	February 2015	24 months
GAT/CheckpointLX (Portugal)	Lisbon	April 2015	21 months
Aids Fondet (Denmark)	Copenhagen Aarhus	April 2015 May 2015	18 months 17 months
AIDES (France)	All sites	January 2016	18 months
PV /Ath-Thess Checkpoints (Greece)	Athens Thessaloniki	February 2016 April 2016	Still ongoing Still ongoing
F. LILA Milano (Italy)	Milano	September 2016	Still ongoing

Those delays were mainly due to the fieldwork preparation but due to the time necessary to obtain ethical/data protection approvals. Requirements were sometimes very difficult or even impossible to comply with, like in France or in Germany. The German study partner (AIDS Hilfe) had to leave COBA-Cohort because their local ethical committee requested the presence of a doctor for the entire study period even though their testing sites were completely non-medicalised. In France, AIDES had to rewrite and adapt the protocol to comply with the national data protection laws. AIDES had to find a way to collect baseline and follow-up data in a strictly anonymous way, ensuring that nobody, including CBVCT service staff, had access to the data. To do so, AIDES implemented their own data collection system, handled entirely by the participant using tablets. The cases of LILA Milano and PV / Ath-Thess Checkpoints are different since they joined the project later on.

2.3.2 Data collection methods

According to the initial protocol, all questionnaires (baseline, follow-up and refusal) had to be self-completed, except for GAT/CheckpointLX since they were already using a computer-assisted questionnaire administered by the checkpoint staff.

In all sites but AIDES, CBVCT services staff had to digitalise the questionnaires through the online data entry tool developed by the WP leader (see annex 6.8).This tool is secured by an https connection protocol. Only the CBVCT services members participating in COBA-Cohort and the WP leader have access to the tool, using a personal account (login and password). The tool has different levels of accessibility: the WP leader can access all the databases while each study partner can only access its own database.

In the framework of Euro HIV EDAT, each study partner was expected to share the data every 6 months (4 data censorships during the project). Study partners using the pen-and-paper questionnaire entered the data in the 3 months following the data censorship; AIDES and GAT/CheckpointLX had to submit the database including COBA-Cohort variables coded according to a specification file provided by the WP leader.

Following the experience of AIDES, the WP leader implemented, for those study partners using the data entry tool of COBA-Cohort, a tablet-based questionnaire in March 2017. The WP leader also took the opportunity to include, at the end of the participant's questionnaire, a reminder tool. The reminder tool consists of an additional question asking the participant whether he would like to receive an email to be reminded when to return for a test. If he accepts, he has to provide an email address and to decide in how many months he wants to be reminded. These (reminder acceptance and time until next reminder) are also stored in the WP leader database, without the email of the participant. Indeed, when the participant finalises the questionnaire, the email address is automatically encrypted and stored in a separate database that is not accessible by the WP leader.

2.3.3 COBA-Cohort challenges

In general, COBA-Cohort was well perceived and accepted by both CBVCT services staff members and participants, but several difficulties arose during the course of the study.

Challenges from CBVCT providers' side

Lack of time was the main problem faced by COBA-Cohort study partners. Although the study aimed to not disturb the daily work of the CBVCT services, inviting all eligible men to participate was sometimes complicated, and even impossible if many attendees were visiting the CBVCT service at the same time. In addition, trying to convince someone who just obtained a negative result to participate in COBA-Cohort before leaving was also challenging. This did not occurred in GAT/CheckpointLX since cohort participation is offered to all attendees between the test and the results. Attendees were invited to stay with the CBVCT provider to answer the questionnaire which is also used as a basis for a counselling discussion, or to go in the waiting room. In general participants felt comfortable talking about their sexual behaviour with the CBVCT providers.

The other major challenge, for study partners using the pen-and-paper questionnaires, was the data entry. The data entry is particularly time-consuming, especially for the longer baseline questionnaire. The implementation of the tablet-based questionnaire considerably improved the study implementation although it still requires several adjustments. CBVCT providers find it easy to use, and participants, especially those who previously filled in the pen and paper questionnaire, were very happy to use the tablet and sometimes felt more "protected" regarding confidentiality and anonymity.

Recruiting participants during outreach testing sessions resulted in more complications than expected, initially for AIDES but later for all study partners using when they switched to tablets, since a Wi-Fi or 3G internet connections was not always available in gay venues. AIDES also faced another problem: AIDES has many volunteers and a high turnover in the teams participating in COBA-Cohort, so the French coordinator of COBA-Cohort had to repeat the training sessions of the CBVCT providers, which proved to be unsustainable.

The follow-up of participant is also one of the main challenges for COBA-Cohort study partners. Many participants will thus be considered as "lost to follow-up" because they were not asked or they did not remember to tell the CBVCT provider they were part of the COBA-Cohort. In order to remind both CBVCT providers and participants to talk about possible participation in COBA-Cohort, posters were created for AIDES, LILA Milano, Legebitra and PV/Ath-Thess Checkpoints (see annex 6.10). In AIDS-Fondet, a list of all COBA-Cohort participants was established at the end of the recruitment period in order to check, for those who already have an UPI, if they were part of the cohort or not. In PV/Ath-Thess Checkpoints however, the UPI cannot be retrieved like the COBATEST UPI, and so participants are provided with a special card from the checkpoints with their COBA-Cohort code.

Challenges from participants' side

Most participants were very happy to contribute to COBA-Cohort by completing questionnaires, but some of them found the questionnaire to be too long. According to the feedback received by COBA-Cohort study partners, this did not affect the willingness of participants to come back for a test, but they sometimes came back and refused to complete a follow-up questionnaire. In GAT/ CheckpointLX, when a participant did not want to fill in a questionnaire, Checkpoint staff filled an "empty" follow-up questionnaire (selecting "do not answer" everywhere) and registered the rapid test results in order not to lose those data for incidence estimates.

Recently, it was decided to reduce the size of the questionnaires, in order not to lose participants. This will be done in the coming months.

2.4 Data Management and Analysis

2.4.1 COBA-Cohort databases

The databases used to prepare this report comprise baseline, refusal and follow-up data from all participating sites until 31st March 2017, except for LILA Milano and PV/Ath-Thess Checkpoints where data until 30th June 2017 were included since the recruitment was still ongoing.

The databases shared by GAT/CheckpointLX are somewhat incomplete because they do not have all COBA-Cohort questions in their questionnaire.

Legebitra is also missing follow-up data, since it was not possible for them to use the COBA-Cohort follow-up questionnaire until February 2017. Legebitra thus send an incomplete follow-up database for the period prior to February 2017, based on the data collected routinely among the attendees included in COBA-Cohort.

The refusal database had some general issues (incompleteness, duplicates, etc.; see section 2.6.3), and the AIDES's refusal data differed greatly from the other study partners. It was not possible for AIDES to implement a refusal questionnaire and/or refusal register, so they sent a database which was an extraction from their own monitoring database. AIDES routinely collects basic data for all tested users at a national level: age, previously tested or not, born abroad, etc. The COBA-Cohort coordinator in AIDES first selected the data collected during the study period and at sites where COBA-Cohort participation was offered, then removed individuals who had agreed to enter the COBA-Cohort and those who were not eligible (younger than 18 and not MSM). The AIDES' refusal database is much more exhaustive than in other countries (but with fewer variables) and it is not possible to know which individuals in the database were actually offered participation in COBA-Cohort.

2.4.1 Main indicators' construction

Many indicators were created in the complete database. Table 2.4—1 presents the most important ones used in this report.

Table 2.4—1 Main indicators' construction

Indicator	Question	Recoded items
Education	"What is your highest education qualification?" (International Standard Classification of Education, ISCED 1997) · ISCED 1: no secondary qualification · ISCED 2: lower secondary or second stage of basic education · ISCED 3: (upper) secondary education · ISCED 4: post-secondary, non-tertiary education · ISCED 5: first stage of tertiary education · ISCED 6: second stage of tertiary education	1 Secondary education or less (ISCED 1-2-3) 2 First stage of tertiary education (ISCED 4-5) 3 Second stage of tertiary education (ISCED 6)
Employment	"Which of the following best describes your current occupation?" · Employed full-time · Employed part-time · Self employed · Non-declared work, moonlighting · Unemployed (with or without subsidy) · Student · Retired · Long-term sick-leave/medically retired · Other	1 In active employment (Employed full-time, employed part-time, self-employed) 2 Not in active employment (unemployed, with or without subsidy) 3 Other situations (Non-declared work, moonlighting, student, retired, long-term sick-leave, other)
ICU casual (Inconsistent condom use)	"In the previous 12 months, how often condoms were used for anal intercourse (insertive or receptive) with your casual male partners?" · Always · Almost always · Sometimes · Rarely · Never · Did not practice anal sex with casual partners in this period	1 No ICU (always or Did not practice anal sex with casual partners) 2 ICU (Almost always, sometimes, rarely, never)
ICU casual and/or steady	ICU casual ICU steady	1 No ICU (No ICU Casual and No ICU steady) 2 ICU (ICU casual and/or ICU steady)
ICU steady	"In the previous 12 months, how often were condoms used for anal intercourse (insertive or receptive) with this steady partner?" · Always · Almost always · Sometimes · Rarely · Never · Did not practice anal sex with this partner	1 No ICU (always or Did not practice anal sex with the steady partner) 2 ICU (Almost always, sometimes, rarely, never)

Table 2.4—1 (continued)

Indicator	Question	Recoded items
Last risk exposition	The original question was: "In your view, when have you been at risk of HIV infection for the last time?" · Within the 24 hours · Within the last week · Within the last month · Within the last 6 months · Within the last 12 months · More than 12 months ago · I have never been at risk of infection	1 Less than 6 months 2 Less than 12 months 3 More than 12 months 4 Never at-risk
Outness	"Thinking about all the people who know you (including family, friends and work or study colleagues) what proportion knows that you are attracted to men? · All or almost all · More than half · Less than half · Few · None	1 More than half (items 1-2) 2 Less than half (3-4) 3 None (4)
Partnership	"Currently, do you have a steady male partner, i.e. that you consider as your main/principal partner?" (Yes/No) "How many different casual male partners have you had sex with in the previous 12 months?"	1 Steady partner only (0 casual partner) 2 Steady and casual partners 3 Casual partners only
Perceived risk of HIV infection (scale)	The original question was "In a scale from 1 to 10; 1 representing the lowest risk of getting infected by HIV and 10 the highest, what would you say about your risk of getting infected by HIV"	1 Low risk: items 1-3 2 Medium: items 4-7 3 High risk: items 8-10
Self-definition according to sexual orientation	"Which of the following options best describes how you think of yourself?" · Gay or homosexual · Bisexual · Straight or heterosexual · Any other term · I don't usually use a term	1 Gay/homosexual 2 Bisexual 3 Other
Sex under the influence of Chemsex drugs	"In the previous 12 months, did you have sex under the influence of alcohol or drugs?" (Yes/No) "If yes, in the previous 12 months, how often did you have sex under the influence of:" (list of substances)	1 Yes (at least one substance among: GHB, Crystal meth, Ketamine, Mephedrone) 2 No (none of these substances)
Total number of sexual partners	"How many different casual male partners have you had sex with in the previous 12 months?"	Number of casual partner +1 if also a steady partner

2.5 Statistical analysis

Descriptive analyses were performed on each variable at the baseline and for the refusal questionnaires in order to describe the activity and the main characteristics of COBA-Cohort (both the total and separately for each study partner). Statistical significance for the comparison of categorical variables was checked using Chi-square tests (or Fisher exact tests when required), and with the Kruskal-Wallis test for comparisons of continuous variables.

All missing values were removed from the denominator of each variable. Where the number of missing values was higher than 10% or 20% this is indicated in the corresponding table.

Data management and statistical analyses were performed using Stata 15 (College Station, TX: StataCorp LP), and R Studio version 1.1.383.

2.5.1 Determinants of routine testing

The main reason for getting tested at baseline visit ("regular control/to know my health status", see section 3.2.1) was analysed in order to find the factors associated with routine testing.

For this analysis, a sub-sample was selected. It was decided to select the participants who were enrolled in COBA-Cohort more than 18 months prior to the 4th data censorship to have a total follow-up period large enough to ensure participants had the opportunity to return. The criterion of 18 months was chosen based on the initial recommendations of testing shared by almost all study partners (at least one test per year) plus a margin of 6 months, given than testing every 12 months was only a recommendation. In addition, even though the longest period of time observed between the baseline and the first follow-up visit was 23 months (which would have excluded almost all COBA-Cohort participants since the longest time in follow-up in COBA-Cohort was 26 months), the longest period of time between the first and the second follow-up visits was 18 months (see Table 3.3—2).

The criterion thus excluded all participants recruited in the three sites who started COBA-Cohort in 2016 (AIDES, PV/Ath-Thess Checkpoints and LILA Milano) from this analysis. All participants recruited in the other three sites before 1st October 2015 were included (n=1,011).

Chi-square and Kruskal-Wallis tests were used for all univariate, with a significance threshold of 0.10. All significant associations were then included in a multivariate logistic regression model. The final

model was obtained using a forward-stepwise selection method based on the Wald test (entry threshold p-value < 0.05).

2.5.2 HIV incidence estimates

To calculate the HIV incidence, participants were first classified in three categories: (1) participants who seroconverted, (2) participants in active follow-up and (3) participants lost to follow-up at the time of the 4th data censorship. Participants were classified in the latter category when the time between their last visit and the censorship date was longer than 18 months, using the same reasoning as for the selection of participants in the analysis of determinants of routine testing.

The person-year contribution of each participant was calculated as follows:

(1) For participants who seroconverted: time between the baseline visit and the mid-point between the visit with reactive result and the previous one,
(2) For those in active follow-up: time between the baseline visit and the censorship date,
(3) For those lost to follow-up: time between the baseline visit and the last visit in COBA-Cohort.

The HIV incidence rates (computed per 1000 person-year units) have been estimated for the whole sample and for each study partner where at least one seroconversion occurred. The 90% confidence intervals of these rates were calculated using the Normal approximation.

2.5.3 Determinants of sexual risk behaviour

Similarly to the analysis of the determinants of routine testing, a specific analysis was performed to identify factors associated with inconsistent condom use with casual partners in the last 12 months (see section 2.4.1 for the construction of this indicator).

Univariate comparisons with the most relevant indicators were performed using Chi-square and Kruskal-Wallis tests on the subsample of MSM who reported at least one casual partner in the previous 12 months (n=3,477). All variables significantly associated with the outcome in the univariate analysis (p-value < 0.10) were included in the multivariate logistic regression. The final multivariate model was obtained using a forward-stepwise selection method based on the Wald test (entry threshold p-value < 0.05).

2.6 Sample selection

2.6.1 Participants enrolment

Overall, 4,276 participants were enrolled in COBA-Cohort between the study launch in February 2015 and June 2017. Figure 2.6—1 shows the number of participants enrolled each month according to the study partner.

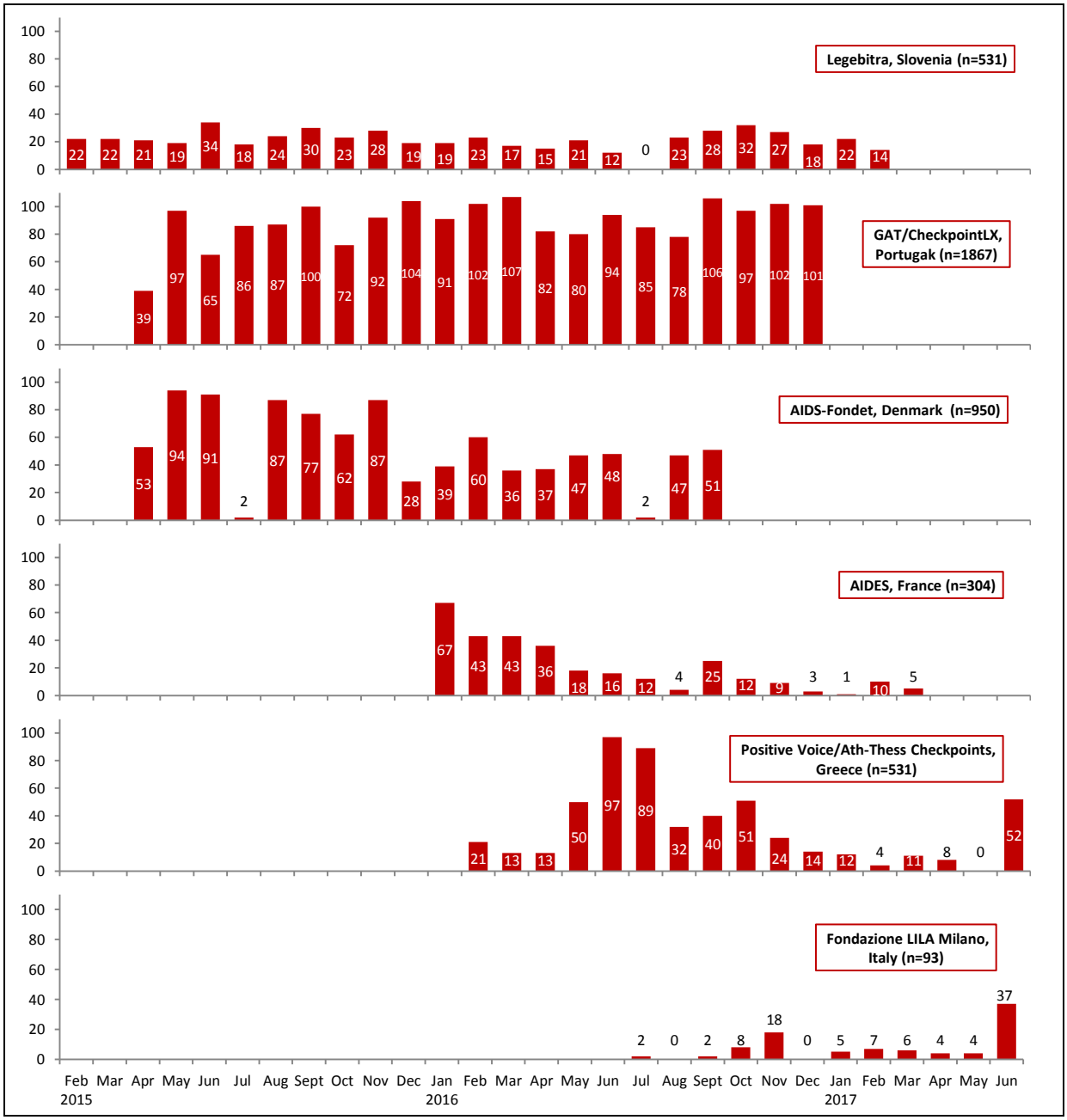


Figure 2.6—1 Monthly frequencies of enrolment in COBA-Cohort (N=4,276)

The study partners who started recruiting for COBA-Cohort in 2015 (Legebitra, AIDS-Fondet and GAT/CheckpointLX) were the most "regular", with around 20-30 participant recruited monthly in Slovenia throughout the study period, 80-100 in GAT/CheckpointLX and 60-90 in AIDS-Fondet for the first year, 30-50 for the second year (excluding the months of July where AIDS-Fondet is closed, as well as Legebitra in 2016). The lower rate of enrolment in the second year in AIDS-Fondet is mainly due to the fact that many attendees were already COBA-Cohort participants in 2016.

Two other study partners started in early 2016 (AIDES and PV/Ath-Thess Checkpoints), while LILA Milano officially started on October 2016 (the 4 participants enrolled before that date were pilots). The decreasing numbers of enrolled participants in AIDES showed that it has been very complicated maintain recruitment numbers when, as mentioned earlier, the teams are mainly composed of volunteers, with high turnover rate. Recruitment stopped in March 2017, as did follow-up of participants. AIDES is currently thinking about how to restart the study, probably in a smaller number of sites, and focussed in AIDES' premises rather than outreach testing sessions.

In PV/Ath-Thess Checkpoints and LILA Milano, recruitment was still ongoing in June 2016. The low monthly enrolment rate in LILA Milano is linked to the organisation of the CBVCT service: few testing sessions per month and people not willing to wait and complete the COBA-Cohort questionnaire as they already have their test result and often had to wait for a long time before the test. The two peaks (November 2016 and June 2017) correspond to the European Testing Week and the Gay Pride events, respectively.

The irregular enrolment frequency observed in PV / Ath-Thess Checkpoints does not have an obvious explanation.

2.6.2 Final sample

The "final sample" refers to the cleaned database including data (baseline and follow-up) for all participating sites at the time of the 4th data censorship (31stMarch 2017 for all; 30th June 2017 for LILA Milano and PV / Ath-Thess Checkpoints).

The database of COBA-Cohort comprises all data from the WP5 data entry tool / tablet-based questionnaire, the baseline and follow-up databases from GAT/CheckpointLX and AIDES, and some follow-up data from Legebitra for the period they were not using the follow-up questionnaire.

Many quality controls were implemented throughout all the process of data management and data analysis. Figure 2.6—2 shows the data cleaning completed in the row database to obtain the final sample.

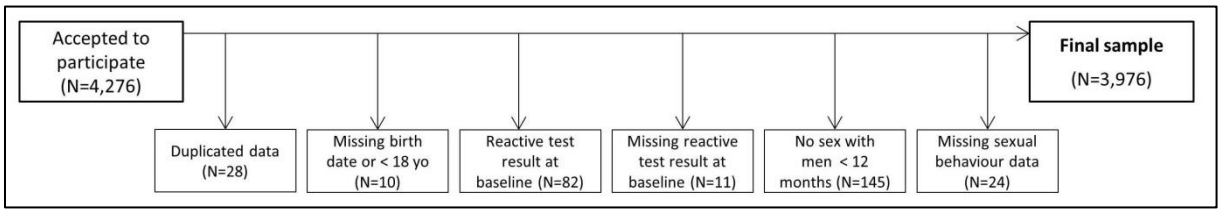


Figure 2.6—2 Flowchart of data cleaning (Final sample: N=3,976)

Overall, 28 questionnaires were removed because accidentally duplicated in AIDES's database, 10 individuals were removed because they were younger than 18 or with missing date of birth and 82 because they had a reactive test at baseline (mainly from GAT/CheckpointLX where data are collected for all users, n=71). Among the 11 individuals with missing test result at baseline (here removed), 9 had tested negative and will be considered in the next extraction of COBA-Cohort's data, and 2 were not tested that day. This also occurred in Legebitra during follow-up visits: several participants came for a reason other than testing at the CBVCT service, but completed the questionnaire.

The other 169 individuals removed from the database were those not reporting any sexual activity with men in the previous 12 months (n=145), and those who did not complete any questions in the section on sexuality (n=24, most of them actually dropped out the questionnaire at this stage).

The final sample of COBA-Cohort is thus composed of 3976 individuals; the distribution by study partner is shown in Figure 2.6—3.

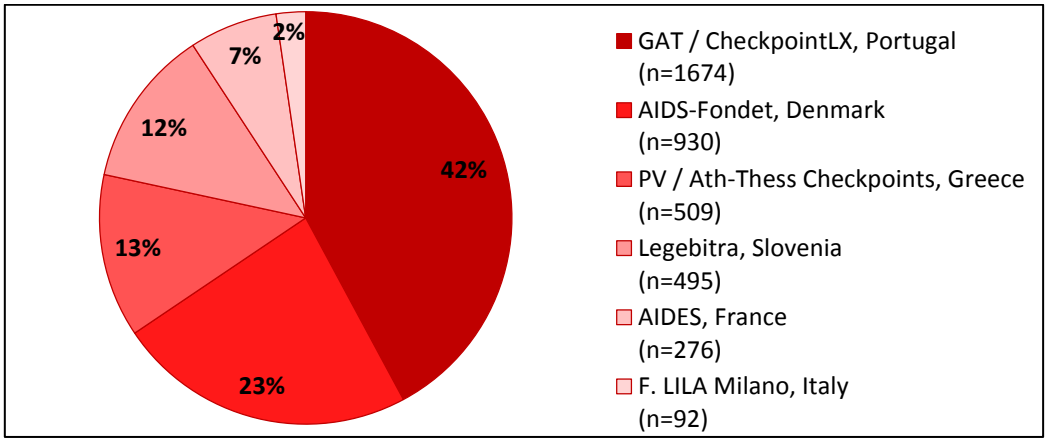


Figure 2.6—3 Final sample distribution (N=3,976)

2.6.3 Refusals

Refusal data should be interpreted with caution. First, because duplicates cannot be identified since the questionnaire was anonymous (without UPI), so people may have refused to participate in COBA-Cohort twice or more. Second, the completeness of the refusal database is quite low and missing data not always randomly distributed (e.g. the sites who switched from the refusal questionnaire to the refusal register). Third, the information collected for the refusal database is not the same across all study partners.

Among the 8,483 refusals included in the final database, 83% came from AIDES. As previously mentioned, AIDES' data are much more exhaustive than that of other study partners. In the AIDES' data it is not possible to differentiate between those who refused to participate and those who were not offered the possibility to participate. AIDES will thus be considered separately from the other study partners when exploring at the overall refusal. Data from LILA Milano will not be taken into account in the following descriptions because of the small sample size (n=9).

Refusal rates

Although calculating the overall refusal rate does not make sense because of the exhaustive data from AIDES, Table 2.6—1 displays the refusal rates for each partner, and the total refusal rate calculated using data from all study partners except AIDES.

Table 2.6—1 Refusal rates by study partner

	Accepted	Refused	Refusal rate
AIDES (France)	276	7088	96.3
AIDS-Fondet (Denmark)	930	212	18.6
F. LILA Milano (Italy)	92	9	8.9
GAT / CheckpointLX (Portugal)	1674	931	35.7
Legebitra (Slovenia)	495	62	11.1
PV / Ath-Thess Checkpoints (Greece)	509	181	26.2
TOTAL*	3700	1395	27.4

* Excluding data from AIDES.

The total refusal rate in COBA-Cohort by the time of the 4th data censorship was 27.4%. This rate is certainly an underestimate since CBVCT providers mentioned that several attendees did not want to answer any questions (including for the refusal register). The lowest refusal rates were observed in the smallest sites. Beyond the personal motivation of the Slovenian CBVCTs users to participate in a research study, the rate is probably lower because they can take the advantage of the systematic

waiting time before the test to fill-in the questionnaire. Additionally, peer counsellors may spend more time with them as the annual number of tests is smaller than in other sites.

In LILA Milano however, the difficulty of recruiting participants (as explained at the end of section 2.6.1) is not reflected here, may be because many of those who refused to participate did not want to provide any data.

In GAT/CheckpointLX, the refusal rate (here 35.7%) has been quite stable since they started to implement their cohort. Feedback from CBVCT providers reported that many attendees could be duplicated in the refusal database since they refused participation more than once. However, they also reported that lots of participants refused to take part in the cohort while they were coming for a first test in GAT/CheckpointLX, but then accepted when they returned.

Selection bias

Table 2.6—2 presents the comparison of those who refused to those who agreed to participate in COBA-Cohort, excluding data from AIDES and LILA Milano for the reasons previously mentioned. Participants enrolled in COBA-Cohort are more likely to be young, male, not born abroad and defining themselves as gay.

Table 2.6—2 Comparison of refusal and baseline data

		Refusal (n=1386)	Baseline (n=3608)	p-value
Age	median[IQR]	29[24-37]	28[23-37]	0.059
Gender	Male	97.9	99.5	<0.001
	Transgender	2.1	0.5	
Born abroad	Yes	32.8[2]	22.5	<0.001
	No	67.2[2]	77.5	
In Active employment	Yes	65.1	66.4	0.426
	No	34.9	33.6	
Self-definition*	Gay, homosexual	73.7	82.9	<0.001
	Bisexual	19.7	12.8	
	Other	6.5	4.3	
Last HIV Test	< 12 months	42.6	43.8	0.688
	> 12 months	28.1	27.9	
	Missing/not tested	29.3	28.2	

Data from all partners but AIDES and LILA Milano.*Not available in Positive Voice. IQR: interquartile range. [2] Missing values > 20%.

Interestingly, although there was no difference regarding the time since the last HIV test when comparing all refusal and baseline data, this indicator was significantly different when looking at each study partner separately (Table 2.6—3). Indeed, in GAT/CheckpointLX, participants of COBA-Cohort

were more likely to report no HIV test in the previous 12 months, while the other study partners seem to have recruited more participants recently tested.

Table 2.6—3 Comparison of refusal and baseline data by study partners

		Refusal	Baseline	p-value
AIDES (France)		(n=7088)	(n=276)	
Age	median[IQR]	31[25-42]	31[23-39]	0.006
Gender	Male	97.6	98.2	0.537
	Transgender	2.4	1.8	
Born abroad	Yes	26.3	21.7	0.09
	No	73.7	78.3	
Last HIV Test	< 12 months	61.1	74.3	<0.001
	> 12 months	27	19.9	
	Missing/not tested	11.9	5.8	
AIDS-Fondet (Denmark)		(n=212)	(n=930)	
Age	median[IQR]	32[25-39]	33[26-42]	0.048
Gender	Male	99.5	99.8	0.453
	Transgender	0.5	0.2	
Born abroad	Yes	30.2	29.9	0.929
	No	69.8	70.1	
In Active employment	Yes	68.3	68.5	0.969
	No	31.7	31.5	
Self-definition	Gay, homosexual	73.1[2]	86.4	<0.001
	Bisexual	20.6[2]	10.8	
	Other	6.3[2]	2.8	
Last HIV Test	< 12 months	31.1	48.2	<0.001
	> 12 months	42	30.8	
	Missing/not tested	26.9	21.1	
GAT/CheckpointLX (portugal)		(n=931)	(n=1674)	
Age	median[IQR]	29[24-37]	28[23-36]	<0.001
Gender	Male	97.4	99.2	<0.001
	Transgender	2.6	0.8	
Born abroad	Yes	38.6	28.3	<0.001
	No	61.4	71.7	
In Active employment	Yes	65.4 [2]	69.2 [1]	0.093
	No	34.6 [2]	30.8 [1]	
Self-definition	Gay, homosexual	74.9	82.2 [1]	<0.001
	Bisexual	19.2	13.9 [1]	
	Other	5.8	3.9	
Last HIV Test	< 12 months	49.3	35.5	<0.001
	> 12 months	21.6	29.4	
	Missing/not tested	29.1	35.1	
Legebitra (Slovenia)		(n=62)	(n=495)	
Age	median[IQR]	29[23-38]	29[24-37]	0.815
Gender	Male	100	100	--
	Transgender	0	0	
Born abroad	Yes	9.7	3.4	0.031
	No	90.3	96.6	
In Active employment	Yes	68.9	60.6	0.212
	No	31.1	39.4	
Self-definition	Gay, homosexual	57.4	78.5	0.001
	Bisexual	24.6	13.4	
	Other	18	8.1	
Last HIV Test	< 12 months	32.3	39.8	0.004
	> 12 months	19.4	32.1	
	Missing/not tested	48.4	28.1	

Table 2.6—3 (continued)

PV / Ath-Thess Checkpoints (Greece)		(n=181)	(n=509)	
Age	median[IQR]	28[23-34]	25[22-33]	0.003
Gender	Male	97.8	99.8	0.019
	Transgender	2.2	0.2	
Born abroad	Yes	14.4	8.3	0.019
	No	85.6	91.7	
In Active employment	Yes	59.1	60.2	0.806
	No	40.9	39.8	
Last HIV Test	< 12 months	25.4	67.4	<0.001
	> 12 months	48.1	13.9	
	Missing/not tested	26.5	18.7	

"Self-definition" not available in AIDES and Positive Voice; "Employment status" not available in AIDES. IQR: interquartile range. [1] Missing values > 10%. [2] Missing values > 20%.

The difference regarding age in the overall comparison between agreed and refused also hides differences between study partners: the median age of study participants from AIDES, GAT/CheckpointLX and PV/Ath-Thess Checkpoints is lower than those who refused to participate, while in AIDS-Fondet it is higher.

Main reasons for refusal

The main reasons why people did not want to enter COBA-Cohort in GAT/CheckpointLX, AIDS-Fondet and Legebitra are shown in Figure 2.6—4.

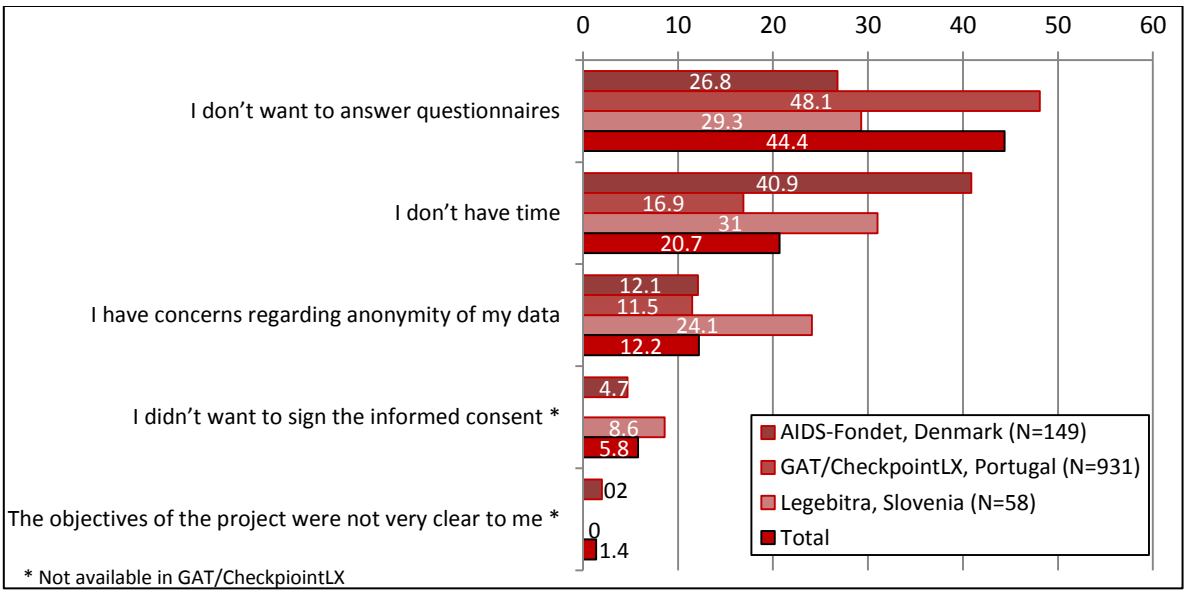


Figure 2.6—4 Refusal reasons (N=1,138)

AIDES did not collect the information, and neither did LILA Milano and PV/Ath-Thess Checkpoints since they used the refusal register where the information is not collected (see section 2.2.1, Refusal

data). Reasons for refusing are not well documented in the database, with many missing values in AIDS-Fondet and Legebitra (29.7% and 6.5%, respectively, also due to the switch from refusal questionnaire to the register of refusals).

Overall, “I don’t want to answer questionnaires” was the preferred option to explain non-participation (44.4%), but this was particularly true in GAT/CheckpointLX (48.1%, while less than 30% in the other study partners). In AIDS-Fondet and Legebitra, the first reason for not participating was the lack of time (40.9% and 31%, respectively), while the concerns about anonymity were highest Legebitra (24.1% while 12.1% of less in AIDS-Fondet and GAT/CheckpointLX).

3 Findings

3.1 Sample description

3.1.1 Demographics

Participants of COBA-Cohort were aged between 18 and 84 years old at entrance, with a higher proportion of people aged less than 25 recruited in PV/Ath-Thess Checkpoints, and a higher proportion of people aged over 45 in AIDS-Fondet (Figure 3.1—1). Overall, the median age was 39 and almost all participants were male (99.4%); the highest proportion of transgender people was recruited by AIDES (Table 3.1—1).

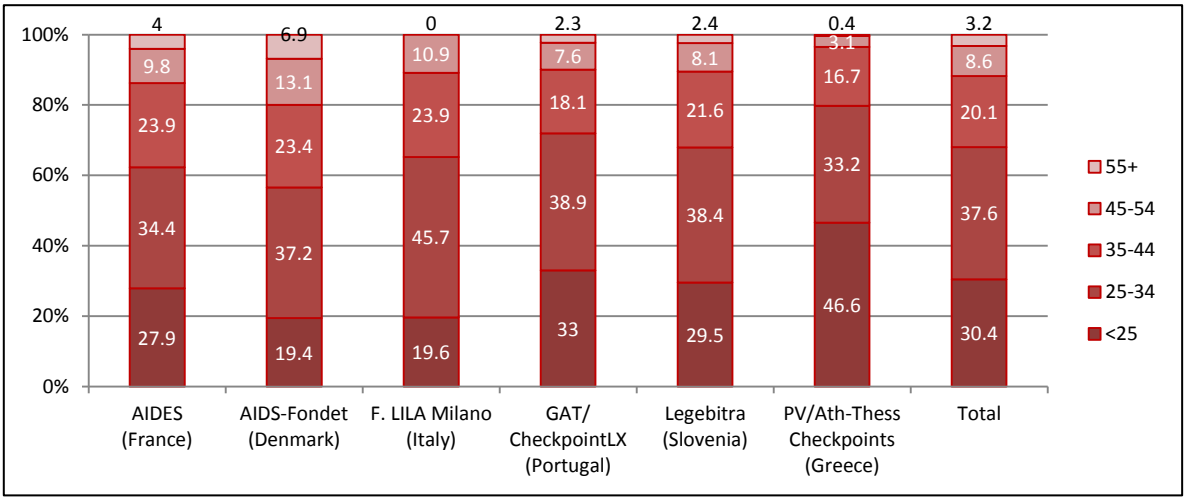


Figure 3.1—1 Age group distribution by study partner (N=3,976)

The proportion of participants born abroad varied from 3.4% in Legebitra to 30.2% in AIDS-Fondet, with the longest median period of residence in their current country observed in France (38 years versus 4 to 18 years elsewhere).

Half of the sample (51.2%) reported an educational level equivalent to the first stage of tertiary education. The highest proportions of people who have completed the second stage of tertiary education were observed in LILA Milano and GAT/CheckpointLX, but may be due to different classification of the study levels. Almost two in three participants (62.6%) were in active employment at entrance to COBA-Cohort, with higher rates of unemployed people observed in AIDES and PV/Ath-Thess Checkpoints (12.3% and 13.2%, respectively).

Table 3.1—1 Demographics (N=3,976)

		AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
		(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Age at baseline								
	Median[IQR]	31[23-39]	33[26-42]	30[26-36]	28[23-36]	29[24-37]	25[22-33]	29[23-37]
Gender								
	Male	98.2	99.8	100	99.2	100	99.8	99.4
	Transgender	1.8	0.2	0	0.8	0	0.2	0.6
Born abroad								
	Yes	21.8	30.2	14.6	28.4	3.4	8.6	22.5
	No	78.2	69.8	85.4	71.6	96.6	91.4	77.5
Time since arrival (in years)								
	Median[IQR] (n*)	38[29-41] (50)	4[1-11] (263)	4[1-22] (413)	2[1-10] (14)	7[3-16] (41)	18[4-24] (36)	4[1-16] (817)
Education								
	High school graduate or less	26.8	31.2	32.2	40.0	38.5	18.7	33.9
	First stage of tertiary education	67.0	64.0	23.3	37.5	53.1	66.9	51.2
	Second stage of tertiary education	6.2	4.9	44.4	22.5	8.3	14.4	14.9
Occupation								
	In active employment	62.3	67.5	65.2	61.4	60.1	59.3	62.6
	Other situation (students, non-declared work, retired, sick-leave etc.)	25.4	28.0	26.1	32.1	33.6	27.5	30.1
	Unemployed	12.3	4.5	8.7	6.5	6.3	13.2	7.3

IQR: interquartile range. * sample sizes of participants who provided the date or their arrival.

Figure 3.1—2 suggests that participants from PV/Ath-Thess Checkpoints were experiencing more difficulties regarding their living conditions (putting aside the item about annual holidays) while AIDES's participants were experiencing less.

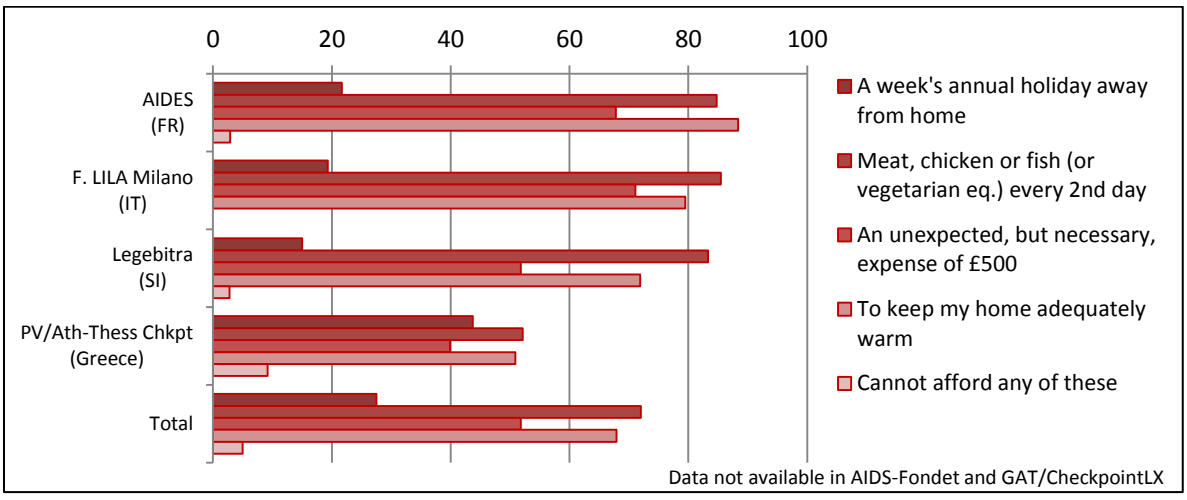


Figure 3.1—2 Which of the following can your household afford? (N=1,372)

3.1.2 Sexual orientation and outness

More than four in five participants defined themselves as gay or homosexual (82.4%), and more than one in ten (12.3%) as bisexual (Table 3.1—2). Legebitra and PV/Ath-Thess Checkpoints had the highest proportions of participants who chose "I usually don't use a term to define myself" (8.1% and 12.3%, respectively).

Table 3.1—2 Self-definition according to one's sexual orientation and outness (N=3,976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Self-definition							
Gay or homosexual	83.0	86.4	90.1	82.2[1]	78.5	78.0	82.4
Bisexual	13.0	10.8	8.8	13.9[1]	13.4	9.7	12.3
Other	4.0	2.8	1.1	3.9[1]	8.1	12.3	5.3
Proportions of participants' relatives (family, friends and work or study colleagues) aware they are attracted to men							
More than half	75.0	82.0	68.5	--	56.1	51.0	68.1
Less than half	19.9	13.8	25.0	--	36.9	45.9	27.1
None	5.1	4.3	6.5	--	6.9	3.1	4.8
Is your family doctor/general practitioner aware of your sexual orientation?							
Yes he is	49.6	52.5	20.7	--	26.4	16.5	37.2
No he is not	34.8	24.0	58.7	--	47.8	41.1	35.7
Do not know	9.1	21.5	18.5	--	23.6	4.5	16.5
Do not have a family doctor/general practitioner	6.5	2.0	2.2	--	2.2	37.8	10.6

[1]: missing values >10%.

The level of outness[1] also reflected this difference. Participants from Legebitra and PV/Ath-Thess Checkpoint were living their sexuality less openly than in other study sites: only 56.1% and 51.0%, respectively, reported that more than half of their family, friends and colleagues were aware they were attracted to men, whereas the proportions varied from 68.5% to 82.2% elsewhere. Equally, only 26.4% and 16.5%, reported that their family doctor was aware of their sexual orientation in Legebitra and PV/Ath-Thess Checkpoints, respectively, versus 49.6% and 52.5% in AIDES and AIDS-Fondet, respectively. In LILA Milano, the proportion of those whose family doctor was aware of their sexual orientation is surprisingly low (20.7%) compared with the number of participants defining themselves as gay/homosexual (90.1%) or reporting that more than half of their relatives were aware of their sexual orientation.

Participants were also asked about a possible experience of verbal or physical abuse in their lifetime because of their sexual orientation (Figure 3.1—3).

[1] As defined in SIALON and EMIS 2010 studies (Mirandola et al., 2016; The EMIS Network, 2013).

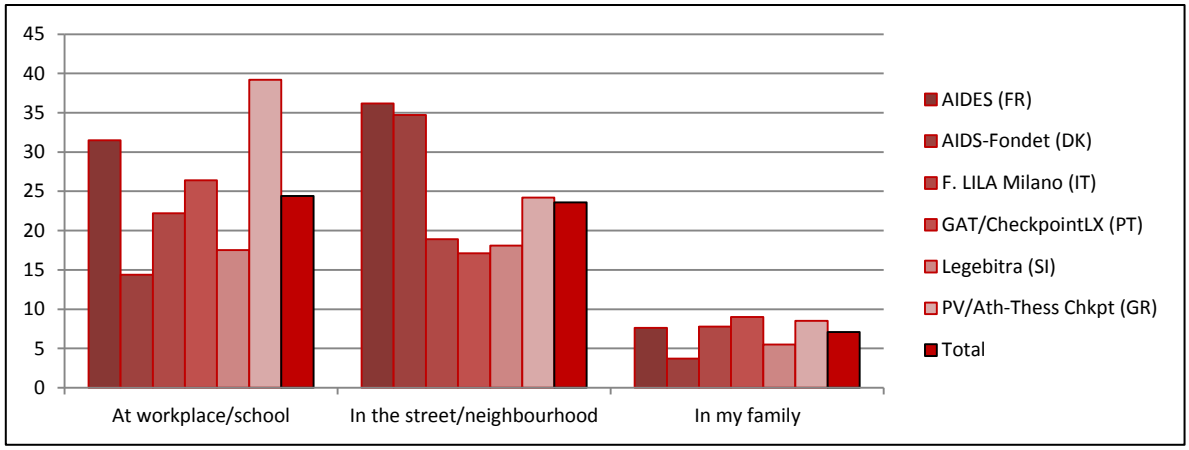


Figure 3.1—3 Ever been victim of verbal/physical abuse (N=3,976**)**

While verbal/physical abuse was very uncommon in participant's families, almost one in four experienced verbal/physical abuse at workplace or at school (24.4%) and in the street of in their neighbourhood (23.6%), which is consistent with the EMIS 2010 survey (The EMIS Network, 2013). Those sites where participants were more 'out' to their relatives and family doctor are those reporting more verbal/physical abuse in the street/neighbourhood (36.2% and 34.7% in AIDES and AIDS-Fondet, respectively), while participants from PV/Ath-Thess Checkpoints, those less out, reported much more verbal/physical abuse at workplace/school (39.2% versus 14.4% to 31.5% elsewhere).

3.1.3 Health, HIV risk perception and STIs

Participants of COBA-Cohort felt healthy at entrance, with about three in four declaring an excellent or very good state of health (76.7%), with the exception of AIDES where the proportion of respondents reporting a fair state of health is higher than in other study sites (8.3% versus 2.2 to 2.4% elsewhere). (Table 3.1—3)

When asked to place themselves on a risk scale from 1 – lowest risk to 10 – highest risk of HIV infection, 50% of the sample positioned themselves between 2 to 5. When dividing the scale into three categories, about 50% of the samples from LILA Milano and PV/Ath-Thess Checkpoints were classified as medium or high risk of HIV infection (versus less than 40% elsewhere).

Participants recruited in AIDES, AIDS-Fondet, LILA Milano and GAT/CheckpointLX were those whose last risk exposition was the most recent: 29.3% to 38.5% within the last month versus 18.9% and 22.1% in Legebitra and PV/Ath-Thess Checkpoints.

One in ten participants reported at least one STI/hepatitis in the last 12 months before inclusion, and about one in five more than 12 months ago. Overall, about 60% of participants from AIDES and AIDS-Fondet never had any STIs/hepatitis, whereas this proportion varied about 76.5% to 77.3% elsewhere.

Table 3.1—3 Global health, perception of HIV risk and STI/Hepatitis history (N=3,976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Perceived state of health							
Excellent	19.6	29.9	20.7	--	32.0	18.2	26.1
Very good	46	49.7	44.6	--	47.1	59.3	50.6
Good	25.4	17.7	31.5	--	18.3	20.4	19.9
Fair	8.3	2.3	2.2	--	2.4	2.2	3.0
Poor	0.7	0.4	1.1	--	0.2	0	0.4
Affiliated to the public social security							
Yes	96.7	--	80.3 [2]	--	98.4	84.1	91.8
No	3.3	--	19.7 [2]	--	1.6	15.9	8.2
Perceived risk of HIV infection							
Median [IQR]	3[2-5]	3[2-4]	3[2-5]	--	3[2-5]	4[2-5]	3[2-5]
Low risk	62.7	66.4	51.1	--	64.2	49.1	61.0
Medium risk	32.2	29.7	42.4	--	31.3	42.4	33.7
High risk	5.1	3.9	6.5	--	4.5	8.5	5.3
Last risk exposition							
Within the last month	32.3	33.5	29.3	38.5 [1]	22.1	18.9	31.8
Within the last 6 months	36.6	40.5	42.4	33.5 [1]	43.4	34.3	37.1
Within the last 12 months	10.1	10.6	7.6	9.2 [1]	11.7	16.6	10.9
More than 12 months ago	10.5	10.0	16.3	10.3 [1]	12.1	14.6	11.2
I have never been at risk of HIV infection	10.5	5.5	4.3	8.5 [1]	10.7	15.6	9.0
History of STI or Hepatitis							
Yes, within the last 12 months	16.7	13.4	8.0	8.1	9.5	12.5	10.7
Yes, more than 12 months ago	23.9	29.7	14.8	14.6	13.7	11	18.1
No	59.4	56.8	77.3	77.3	76.8	76.5	71.2
Syphilis baseline test							
Reactive %(sample size*)	--	3.5(817)	0(32)	7.9(1531)	3.4(382)	3.9(103)	5.8(2865)
HCV baseline test							
Reactive%(sample size*)	--	0.7(127)	0(7)	0.3(581)	0(2)	0(21)	0.3(669)

IQR: interquartile range. [1]: missing values >10%; [2]: missing values >20%. * Sample size of tested participants.

Among the STIs/hepatitis reported by the participants in the last 12 months, the most frequent were: gonorrhoea (39.5%), chlamydia (21.9%), syphilis (17.4%), condilomas (16.6%) and human papilloma virus or HPV (12.8%) (Figure 3.1—4). Data from LILA Milano are not discussed here because of the small number of reported cases (n=7).

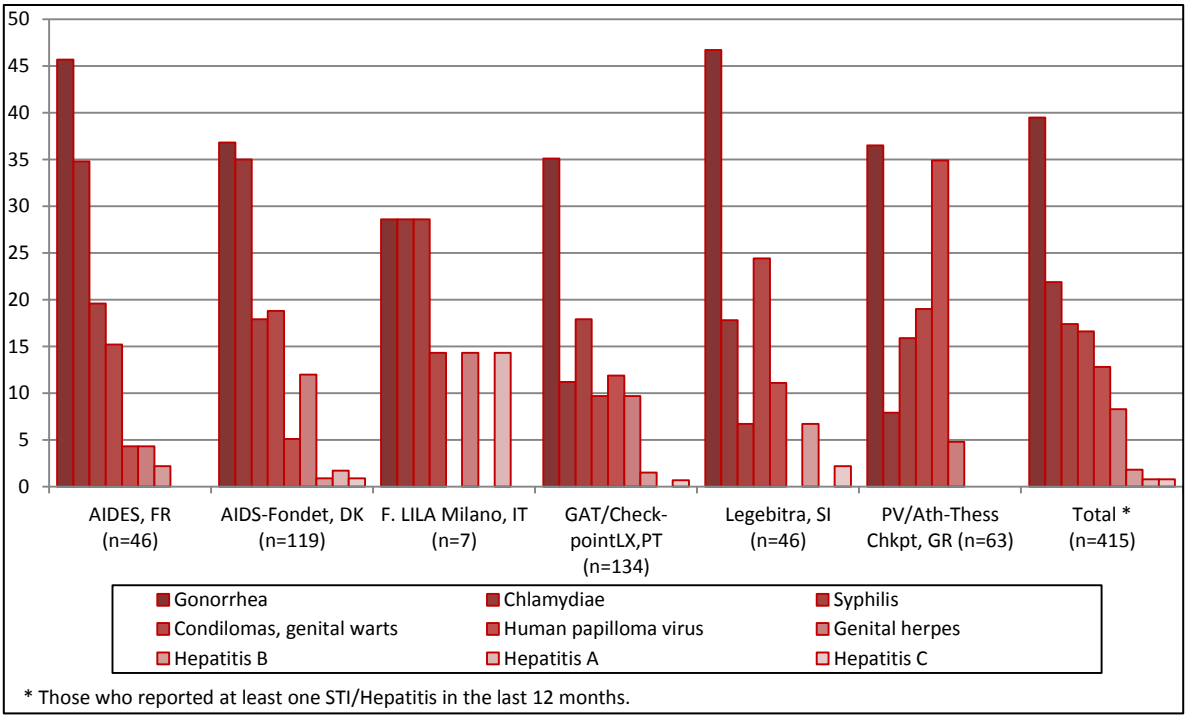


Figure 3.1—4 STIs/Hepatitis in last the last 12 months, distribution by study partner (N=415)

Different patterns are shown according to the study partner. Gonorrhoea was the infection most reported in all study partners. While the second most reported infection was chlamydia in AIDES and AIDS-Fondet, syphilis, condilomas and HPV were the most reported in GAT/CheckpointLX, Legebitra and PV/Ath-Thess Checkpoint, respectively. Higher proportions of genital herpes in AIDS-Fondet and GAT/CheckpointLX can also be seen, as well as higher proportions of HPV in GAT/CheckpointLX and Legebitra, and a higher proportion of hepatitis A in Legebitra. See the complete distribution of STIs/Hepatitis by study partner in annex 6.11 (Table 6.11—1).

The day of their baseline visits, 72% of the whole sample was also tested for syphilis and 16.8% for HCV (Table 3.1—3). Among those tested, the highest prevalence of syphilis was observed in GAT/CheckpointLX: 7.9% versus 0% to 3.9% elsewhere. CheckpointLX reported 2 reactive HCV results (0.3%), and AIDS-Fondet one (0.7%), but was due to a serological scar (previous infection). The study partners offer these tests according to whether clients' behaviour matches a risk profile. Study partners may have different thresholds at which they offer tests, thus we do not know if the data on prevalence are comparable.

3.2 HIV/STI testing patterns

3.2.1 HIV/STI testing history and baseline test

Upon entering COBA-Cohort, a large majority of participants (84%) reported at least one previous HIV test (Table 3.2—1). The proportion of first-time testers for HIV at baseline was much higher in GAT/CheckpointLX and Legebitra (19.9% and 23.2%, respectively) compared with the other study partners (5.4% to 13.2%). Overall, less than half (41.7%) were previously tested for STIs/Hepatitis, and even less in GAT/CheckpointLX: 27.5% compared to between 42.4% and 61.6% elsewhere.

Table 3.2—1 HIV/STI testing history (N=3,976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Ever been tested for HIV?							
Yes	94.6	89.7	87.0	80.1	76.8	86.8	84.0
No	5.4	10.3	13.0	19.9	23.2	13.2	16.0
Tested for STIs or Hepatitis (<12 months)							
Yes	61.6	52.7	50.6	27.5	42.4	56.2	41.7
No	38.4	47.3	49.4	72.5	57.6	43.8	58.3

Participants mainly heard about the CBVCT service where they were recruited for COBA-Cohort through a friend (41.8%), on the Internet (35.4%) or because they had previously been tested in that CBVCT service (Figure 3.2—1). This ranking varies according to the study site, see Table 6.11—2 in annex.

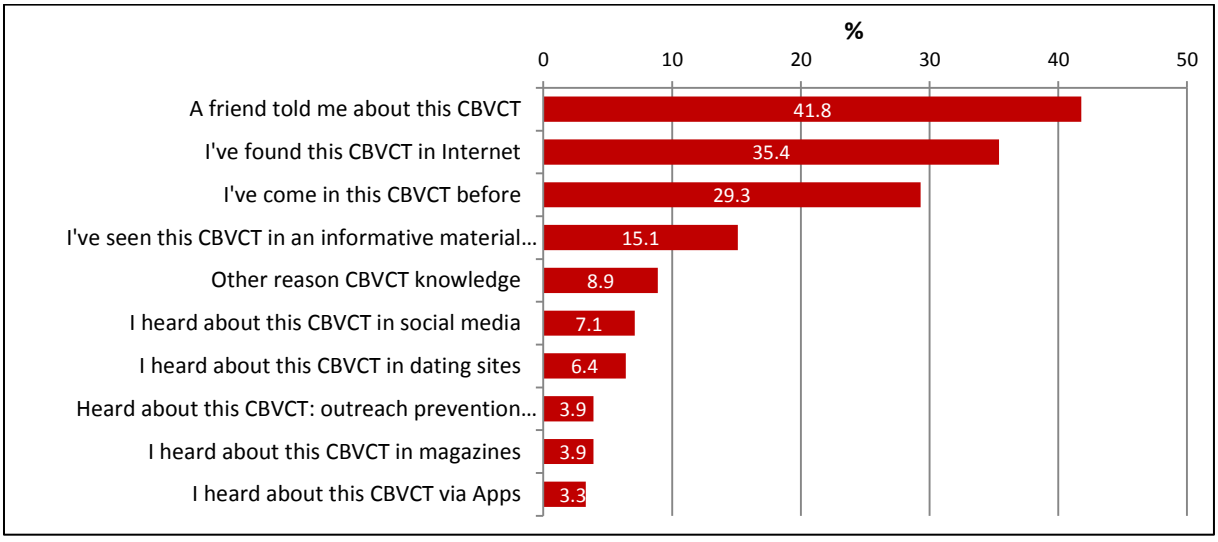


Figure 3.2—1 Knowledge of the CBVCT service (N=3,976)

Surprisingly, "regular control / to know my health status" was the first reason for getting tested the day of participants' baseline visit (Figure 3.2—2). In the COBA-Cohort questionnaire, this item was created using the answers of two separate items ("regular control" and "to know my health status") to be consistent with the data from GAT/CheckpointLX. Even without this correction, "regular control" was the primary reason for the baseline test across all study partners, except in AIDS-Fondet and LILA Milano, where the "episode of unprotected anal sex" was selected slightly more (see all distribution by partner in Table 6.11—2 in annex). The second and third reasons for the baseline HIV test were: episode of unprotected anal and oral sex, respectively.

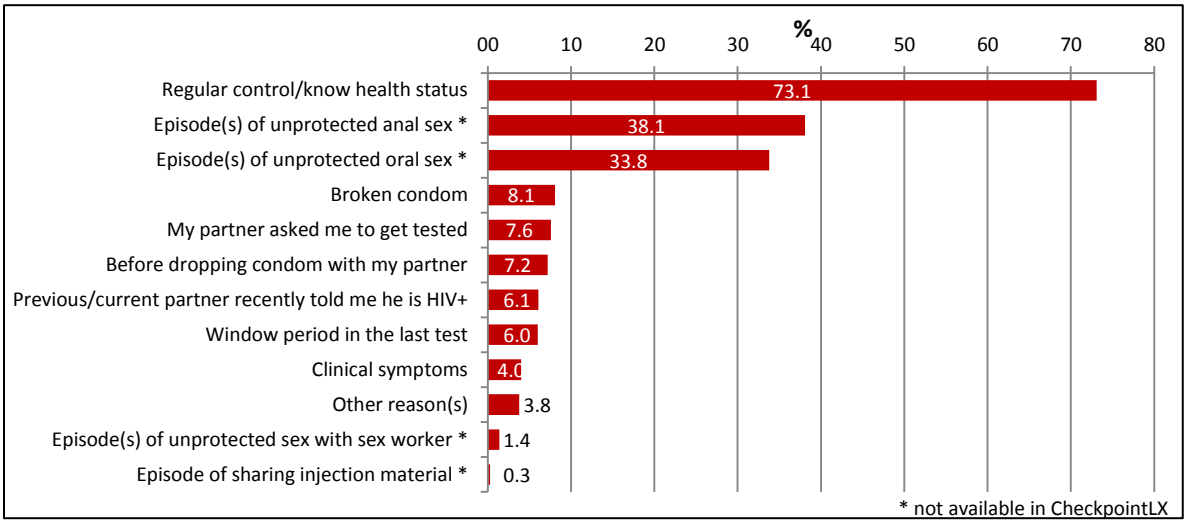


Figure 3.2—2 Main reasons for the baseline test (N=3,976)

Table 3.2—2 presents the main testing patterns of participants who reported at least one previous test before entering COBA-Cohort. Overall, median time since last test was 9 months, varying between study partners: 6-7 months in AIDES, LILA Milano and PV/Ath-Thess Checkpoints versus 10-11 months in the others. This may be due to the recent changes in the recommendations and practices regarding HIV testing: it is now much more common to recommend a test every 6 months for all MSM compared to when AIDS-Fondet, GAT/CheckpointLX and Legebitra started recruiting for COBA-Cohort in early 2015. The proportion of participants last tested more than 12 months prior to the study was also higher in AIDS-Fondet, GAT/CheckpointLX and Legebitra (39% to 44.7%) compared to those starting COBA-Cohort recruitment in 2016 (17.1% to 31.6%).

Table 3.2—2 HIV testing patterns of participants already tested for HIV (N=3,341)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=261)	(n=835)	(n=80)	(n=1343)	(n=380)	(n=442)	(n=3341)
Time since last HIV Test							
Median[IQR]	6[3-11]	10[5-20] [1]	7[5-14]	11[6-22] [1]	11[7-23]	6[4-11]	9[5-18]
<6 months	56.9	33.0 [1]	44.3	30.8 [1]	24.4	54.8	36.6
6-12 months	21.9	28.1 [1]	24.1	23.9 [1]	30.9	28.0	26.2
>12 months	21.2	39.0 [1]	31.6	45.3 [1]	44.7	17.1	37.1
Did you receive the result of that test?							
Yes	98.5	98.6	97.3	99.9	96.2	98.4	98.8
No	1.5	1.3	2.7	0.1	3.3	1.4	1.1
I prefer not to answer	0	0.1	0	0	0.5	0.2	0.1
Where did you go for that last HIV test?							
In this centre	34.5	41.8	13.8	20.7	34.8	75.5	35.7
In a public clinical setting	25.3	31.7	56.3	26.4	41.2	**8.7**	27.6
Elsewhere	0.8	15.4	2.5	35.4	2.7	0.5	18.6
In a private clinical setting	**24.5**	3.1	8.8	11.3	4.5	8.2	9.1
In another community-based centre	6.9	5.4	**12.5**	1.2	5.1	5.0	3.9
In a bar/pub, club, sauna or outdoors/van	7.7	2.1	0	3.0	7.7	1.1	3.4
In a blood bank, while donating blood	0	0	3.8	1.7	3.5	0.9	1.3
At home (using a self-testing kit)	0.4	0.5	2.5	0.2	0.5	0	0.4
Tested in this CBVCT service in the last 12 months							
Yes	61.3	48.2[2]	18.8	17.8	36.6	77.6	38.9
No	38.7	51.8[2]	81.3	82.2	63.4	22.4	61.1
Ever been tested for HIV with rapid tests							
No	21.8	31.6	--	47.5	78.2	16.1	36.4
Yes blood rapid test(s)	74.7	64.1	--	21.3	8.6	63.4	53.0
Yes, oral rapid test(s)	0.4	0.6	--	21.3	11.3	3.9	4.2
Yes, both	3.1	3.6	--	10	1.9	16.6	6.4
Ever forced or tricked into taking an HIV test when you did not want to							
Yes	1.5	--	1.3	--	1.1	6.2	3.1
No	94.3	--	97.4	--	92.2	92.2	93.0
I don't know	4.2	--	1.3	--	6.7	1.6	3.8

[1]: missing values >10%; [2]: missing values >20%.

More than one in three participants (35.7%) performed his last test in the CBVCT service where he attended for the baseline test, and this was even higher in PV/Ath-Thess Checkpoints (75.5%). More than one in four (27.6%) were tested in a public clinical setting. Almost one in five (18.6%) answered "Elsewhere", a result which is mainly informed by the biggest sites: AIDS-Fondet and GAT/CheckpointLX (15.4 and 34.4%, respectively, versus 0.5% to 2.7% for other study partners). Those participants who chose "Elsewhere" had the opportunity to give more details. AIDS-Fondet's most cited answers were "doctor" or "own doctor". Equally, "Public VCT" or "abroad" were the most cited answers for GAT. For both partners, many "Elsewhere" answers should thus be recoded as public or private clinical setting.

More than half of the whole sample (53%) has previously been tested with rapid HIV blood tests, but the proportion is much less in GAT/CheckpointLX and Legebitra (21.3% and 8.6%, respectively). Legebitra's results are not surprising since rapid tests are not commonly used in Slovenia. Very few participants (3.1%) reported they were ever forced or tricked into talking an HIV test when they did

not want to, and this was more frequent in PV/Ath-Thess Checkpoints (6.2%) than in other sites (ranging from 1.1% to 1.5%) where the information was available.

3.2.2 HIV/STI testing habits and HIV testing intentions

When asked about their HIV testing habits in general, participants were quite consistent with the reasons they gave for being tested at baseline since the main pattern was to test periodically for HIV (60.8%) (Figure 3.2—3). The other leading reasons for testing were: "when I feel that I have been at risk of HIV infection" (32.8%), "When I have a new regular partner" (18.9%), "As part of a routine check-up" (15.6%) and "When an opportunity arises" (12.2%).

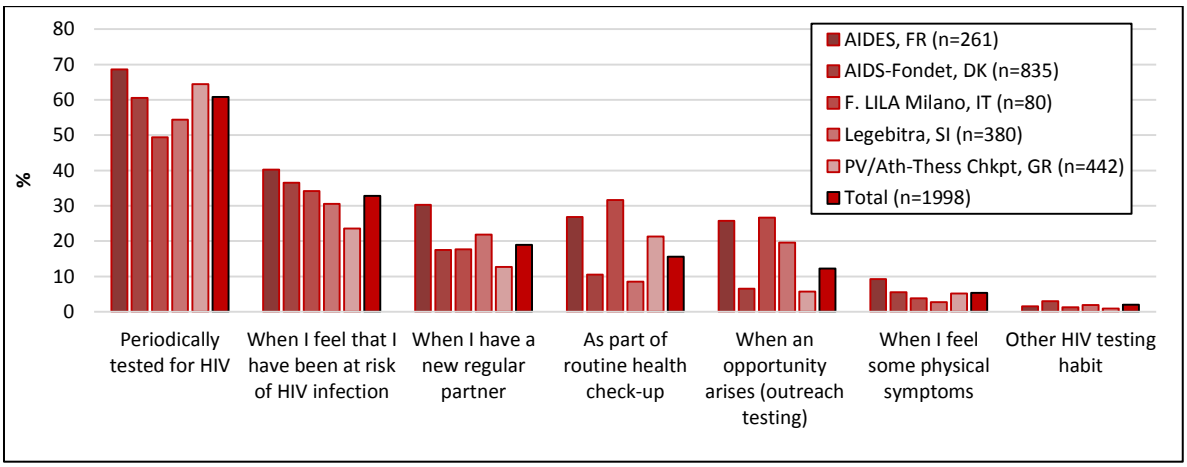


Figure 3.2—3 HIV testing habits (N=1,998)
(Among those already tested. Information not available in GAT/CheckpointLX)

Participants recruited in the sites that started participating in COBA-Cohort in 2016 seemed to be more likely to consider HIV testing as part of a routine check-up (more than 20%) than those recruited in AIDS-Fondet or Legebitra who started in 2015 (10.5% and 8.5% respectively), similar to the pattern seen in "time since last HIV test". Differences regarding HIV testing uptake if an opportunity arises may indicate that opportunities to get tested for HIV out of the well-known settings (e.g. STI clinics, CBVCT services) are less common in Denmark and in Greece (where less than 7% declared getting tested when an opportunity arises) than in other participating countries (where more than 20% declared the same).

STIs/Hepatitis testing habits differ slightly to HIV testing habits (Figure 3.2—4). Getting tested periodically (49.8%) and "when I feel I have been at risk of STIs/Hepatitis" (28.2%) were still the most common patterns, but with different proportion between study partners. The third most common

pattern was the routine check-up including STIs/Hepatitis (instead of "When I have a new regular partner" for HIV testing); and it can also be seen that previous access to STIs/Hepatitis testing is very differ greatly among study partners: while only 5.2% of participants recruited in PV/Ath-Thess Checkpoints reported they had never been tested for STIs/Hepatitis, this rate was of 50.6% in GAT/CheckpointLX.

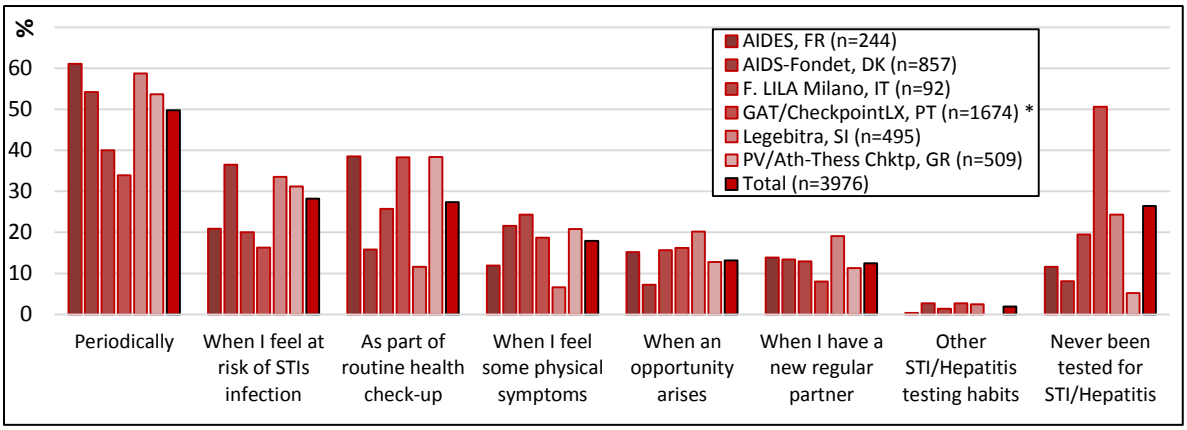


Figure 3.2—4 STIs/Hepatitis testing habits (N=3,976)

Getting tested due to symptoms seemed more frequent for STIs/Hepatitis (17.9%) than for HIV (5.3%); probably because participants felt that STIs symptoms (if any) were recognizable while HIV infection is still assumed to be asymptomatic for years.

Participants were also invited to explain what would cause them to get tested for HIV in the future (Figure 3.2—5). Intentions to test for HIV in the future were very similar to current/past HIV testing patterns and in the same proportions and differences according to the partners. The only difference is in testing in case of physical symptoms, where the proportions were slightly higher than for current/past testing habits.

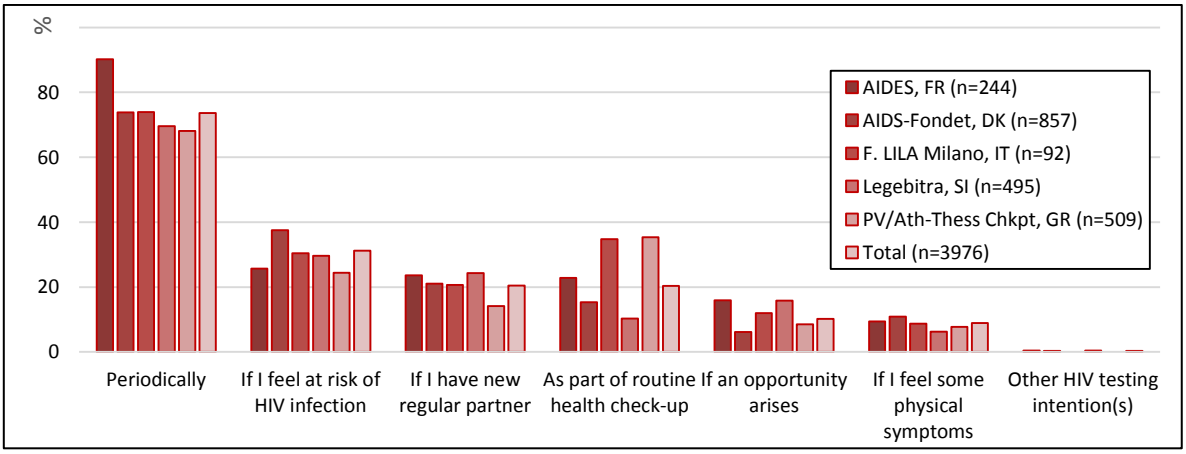


Figure 3.2—5 Intention to test for HIV in the future (N=3,976)

3.2.3 Determinants of routine HIV test seeking behaviour

In order to better characterise the profile of those getting tested at baseline because of a regular control and/or to know their health status, we compared participants who came for that reason with those who did not among the first 1,011 participants enrolled in COBA-Cohort (see the methods section 2.5.1).

Variables not significantly associated with routine testing are presented in annex (Table 6.11—3). Being born abroad, the proportion of participants' relatives aware they are attracted to men, their perceived state of health, having had sex for money/goods/drugs, having had sex under the influence of ChemSex drugs, previous use of PEP/PrEP and intention to use PrEP in the future were not significantly associated with routine testing as a reason for the baseline HIV test.

All significant univariate associations are shown in Table 3.2—3. Participants who came to be tested because of a regular control were significantly younger (median[interquartile range, IQR]: 28[24-37] versus 32[26-42]), more likely to have completed a second stage of tertiary education (13.2% vs. 7.1%), to define themselves as gay/homosexual (85% vs. 80.7%) and, unexpectedly, less likely to report a previous HIV test (83.1% vs. 91.3%) compared with those who did not came to be tested for regular control. Conversely, they were also more likely to report a previous test in the last 12 months in the same CBVCT service (35.9% vs. 29.6%).

Those whose motive for testing was not "regular control/to know my health status" seemed to be at higher risk of HIV infection than those who did: they were more likely to report at least one event of STI/Hepatitis in their life (37.4% vs. 31.3%), to perceive themselves at medium (35% vs. 28.7%) or high (6.4% vs. 39%) risk of HIV infection, and to report episode(s) of unprotected anal sex as a reason for the present test (52.3% vs. 37.1%). They were also more likely to report a risk exposure in the last 6 months (77.4% vs. 68.3%), inconsistent condom use with steady and/or casual partners (70.4% vs. 60.6%) and a higher number of sexual partners (median[IQR]: 6[3-11] vs. 5[2-10]) compared with those who came for a routine HIV test.

Table 3.2—3 Univariate comparisons on routine testing (significant associations) (n=1,011)

	Came for a routine test	Did not come for a routine test	Total	p-value
	(n=730)	(n=281)	(n=1,011)	
Study partner				<0.001
AIDS-Fondet (DK)	31.5	60.9	39.7	
GAT/CheckpointLX (PT)	49.5	23.5	42.2	
Legebitra (SI)	19.0	15.7	18.1	
At least one follow-up visit				<0.001
Yes	49.2	36.7	45.7	
No	50.8	63.3	54.3	
Age				
Median[IQR]	28[24-37]	32[26-42]	29[24-38]	
Education				0.012
High school graduate or less	39.3	38.1	38.9	
First stage of tertiary education	47.5	54.8	49.6	
Second stage of tertiary education	13.2	7.1	11.5	
Occupation				0.075
In active employment	59.8	66.1	61.5	
Other situation (students, non-declared work, retired, etc.)	34.6	27.1	32.5	
Unemployed	5.6	6.8	6.0	
Self-definition according to sexual orientation				0.024
Gay or homosexual	85.0	80.7	83.8	
Bisexual	9.8	15.8	11.5	
Other	5.2	3.5	4.7	
STIs history and HIV risk perception				
Ever had an STI/Hepatitis				0.071
Yes	31.3	37.4	33.0	
No	68.7	62.6	67.0	
Perceived risk of HIV infection *				0.084
Low risk	67.4	58.6	64.2	
Medium risk	28.7	35.0	31.0	
High risk	3.9	6.4	4.8	
Last risk exposition				0.041
<6 months	68.3	77.4	70.8	
<12 months	12.9	10.1	12.1	
> 12months	10.9	8.2	10.2	
Never been at risk	7.9	4.3	6.9	
HIV/STIs testing				
Reasons for the baseline HIV test				
Unprotected anal intercourse *	37.1	52.3	42.7	<0.001
Unprotected oral sex *	37.1	33.2	35.7	0.337
Ever tested for HIV				0.001
Yes	83.1	91.3	85.4	
No	16.9	8.7	14.6	
Tested in this CBVCT in the last 12 months				0.051
Yes	35.9	29.6	31.4	
No	64.1	70.4	68.6	
Tested for STIs or Hepatitis in the last 12 months				0.038
Yes	41.6	48.9	43.6	
No	58.4	51.1	56.4	
Sexual behaviour				
All partnership types				0.006
Steady only	11.9	6.8	10.5	
Steady and casual	31.6	40.4	34.0	
Casual only	56.5	52.9	55.5	
Total number of partners				0.049
median[IQR]	5[2-10]	6[3-11]	5[2-11]	
Inconsistent condom use with steady and/or casual partners				0.004
Yes	60.6	70.4	63.3	
No	39.4	29.6	36.7	

* Not available in GAT/CheckpointLX. IQR: interquartile range.

After adjustment for the study partner, age and educational level, the multivariate logistic regression model confirmed that those participants who did not come for a regular control were significantly more likely to report inconsistent condom use with their sexual partners in the last 12 months (Table 3.2—4). Those who came for a routine test were significantly more likely to define themselves as gay/homosexual, and to have returned at least once to get tested for HIV in the course of the study.

Table 3.2—4 Multivariate logistic regression on routine HIV testing (N=917)

		aORs	95% CI	p-value
Study partner				
	AIDS-Fondet	1		
	GAT/CheckpointLX	4.31	[2.91-6.38]	<0.001
	Legebitra	2.19	[1.45-3.3]	<0.001
At least one follow-up visit				
	No	1		
	Yes	1.73	[1.26-2.37]	0.001
Age				
	Median [IQR]	0.98	[0.97-0.998]	0.017
Education				
	High school graduate or less	1		
	First stage of tertiary education	1.01	[0.73-1.41]	0.933
	Second stage of tertiary education	1.32	[0.7-2.52]	0.391
Self-definition according to sexual orientation				
	Gay/Homosexual	1		
	Bisexual	0.52	[0.33-0.83]	0.006
	Other	1.09	[0.49-2.41]	0.830
ICU with steady and/or casual partners				
	No	1		
	Yes	0.71	[0.51-0.99]	0.044

aOR: adjusted odds ratios. IQR: interquartile range. ICU: inconsistent condom use.

3.3 Patterns of CBVCT use and seroconversions

3.3.1 Follow-up of participants

Overall, more than one in four participants (27.8%) of COBA-Cohort had returned at least once after the baseline visit by the time of the 4th data censorship (Table 3.3—1). As expected, the proportion of participants only attending once was much higher among the study partners who started in 2016 (from 85.1% to 91.3%) than among those who started in 2015 (from 64.8% to 70.1%).

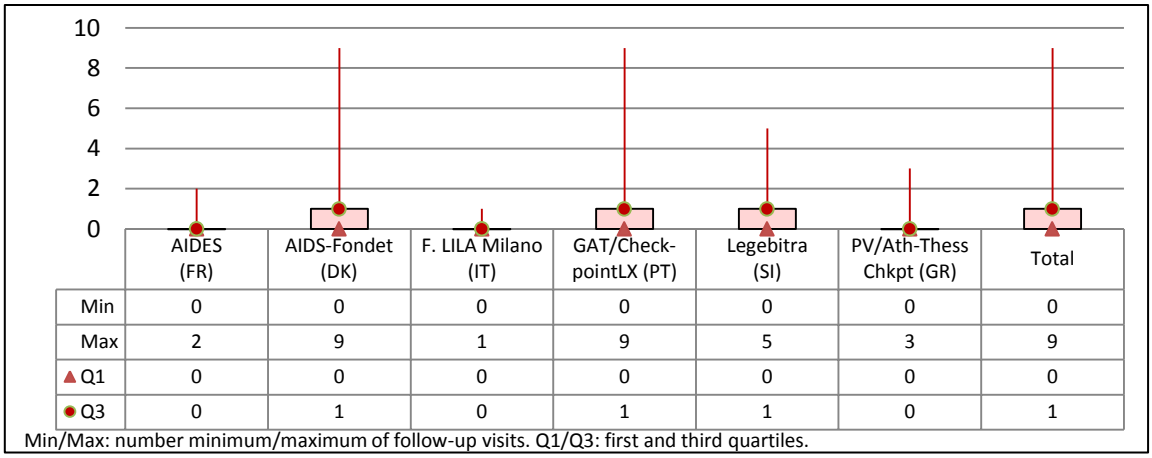
Table 3.3—1 Baseline and follow-up visits (N=3,976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1,674)	(n=495)	(n=509)	(n=3,976)
Baseline visit only	89.5	64.8	91.3	70.1	66.5	85.1	72.2
One follow-up visit only	8.7	22.3	8.7	19.4	22.6	13.6	18.7
At least 2 follow-up visits	1.8	12.9	0	10.5	10.9	1.4	9.1
Already tested in that CBVCT service (<12 months)	(n=160)	(n=311*)	(n=15)	(n=224)	(n=139)	(n=343)	(n=1192)
Baseline visit only	90.6	48.9	86.7	75.9	54.0	83.1	70.5
One follow-up visit only	8.1	**28.0**	**13.3**	14.3	**23.7**	**15.5**	18.5
At least 2 follow-up visits	1.3	**23.2**	0	9.8	**22.3**	**1.5**	11.1

* Can be underestimated since the corresponding variables “already tested here” comprised > 20% of missing values.

Among participants who reported a previous test in the same CBVCT service in the 12 months prior to joining the cohort, the proportion of participants who returned once or at least twice after their baseline visit was higher, except in AIDES and GAT/CheckpointLX. In AIDS-Fondet and Legebitra, the number of participants returning at least twice during the study period was much higher among those who reported a previous test in the same CBVCT service: 23.2% and 22.3%, respectively, compared to 12.9% and 10.9%, respectively, in the overall sample.

Similarly, the total number of visits is higher in study partners starting in 2015, but although Legebitra was the first site to start, the highest number of follow-up visits was observed in AIDS-Fondet and GAT/CheckpointLX, both with 9 follow-up visit versus 5 in Legebitra (Figure 3.3—1).



	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpt (GR)	Total
Min	0	0	0	0	0	0	0
Max	2	9	1	9	5	3	9
▲ Q1	0	0	0	0	0	0	0
● Q3	0	1	0	1	1	0	1

Min/Max: number minimum/maximum of follow-up visits. Q1/Q3: first and third quartiles.

Figure 3.3—1 Number of follow-up visit by partner (N=3,976)

From the study partners we know that some participants returned for a test but did not complete the follow-up questionnaire, so the real number of follow-up visit is probably higher although this is impossible to measure. There were various reasons for this: participants and/or the CBVCT providers forgot to ask about the study, participants did not want to complete the questionnaire anymore, or simply saying “not this time” for participants coming back a few weeks after the last visit.

The time between each visit was quite heterogeneous in COBA-Cohort, in particular between the baseline and the first follow-up visit, with times between visits varying from 0 to 23 months between baseline and first follow-up visit (Table 3.3—2). However, the overall median time between visits was 6, revealing that those who repeated their HIV during the study period were getting tested consistently with current testing recommendations.

Table 3.3—2 Time between follow-up visits (N=3,976)

Time between visits	N	Proportion of the overall sample	[min-max]	Median[IQR]
Baseline – FU 1	1107	27.8%	[0-23]	6[4-10]
FU1 – FU2	362	9.1%	[0-18]	5[3-7]
FU2 – FU3	133	3.3%	[0-13]	3[2-6]
FU3 – FU4	50	1.3%	[0-12]	3[2-5]
FU4 – FU5	24	0.6%	[1-10]	3[2-4]
FU5 – FU6	12	0.3%	[1-7]	3[2-5]
FU6 – FU7	5	0.1%	[1-7]	4[2-4]
FU7 – FU8	3	0.1%	[2-2]	2[2-2]
FU8 – FU9	2	0.1%	[1-3]	2[1-3]
Overall	**1107**	**27.8%**	**[0-23]**	**6[4-9]**

FU: Follow-up. [min-max]: smallest and longest periods of time observed between visits (in months). [IQR]: interquartile range.

A longer time between visits may indicate that the participant is likely to get tested regularly but not frequently. The participants who returned twice during the study period (n=362) did so within a shorter period of time (less than 18 months) than between baseline-first follow-up visit, and even

shorter among those who returned three times (less than 13 months). The medians also suggest that the time between visits remained stable or shorter while repeating the test three times or more, but the sample sizes are too small to know if this trend would persist over time.

3.3.2 Seroconversions

By the time of the 4th data censorship 11.7% were considered lost to follow-up according to the criterion detailed in methods (see section 2.5.2). A highest attrition rate was observed in AIDS-Fondet (19.5%), then Legebitra (16.6%) and the lowest in GAT/CheckpointLX (11.9%). No participants from other study sites were removed since they started recruiting less than 18 months before the 4th data censorship. Their attrition rates were thus 0%, but this was due to the shorter time of follow-up in these sites.

Overall, 12 participants seroconverted in the course of the study period, resulting in an incidence rate for the total sample of 3.43/1000 person-year (Table 3.3—3). The lowest incidence was observed in AIDS-Fondet (3.24/1000 person-year), and the highest in CheckpointLX (4.84/1000 person-year). Unfortunately, the confidence intervals are quite large and include zero in AIDS-Fondet and Legebitra's estimations; longer follow-up time would probably be needed to be more accurate.

Table 3.3—3 HIV incidence estimates

Study partner	Seroconversions	Person-year	Incidence*	95% CI
CheckpointLX (PT)	7	1447.2	4.84	1.25-8.42
AIDS-Fondet (DK)	3	926.6	3.24	0-6.90
Legebitra (SI)	2	430.2	4.65	0-11.09
TOTAL**	**12**	**3501.7**	**3.43**	**1.49-5.37**

* Per 1000 person-year. CI: confidence interval. ** Including data from all sites, including those without seroconversion.

Seven of the participants diagnosed HIV-positive seroconverted between the baseline and the first follow-up visit, two between the first and the second follow-up visit, and the other three participants between the second and the third, the third and the fourth, and between the fourth and the fifth, respectively. All were confirmed positive and linked to care, except in in GAT/CheckpointLX where we only know if participants accepted to be referred for confirmation and care.

Two seroconverters from AIDS-Fondet were linked to care one day after the reactive test; the information was not available for all other participants who seroconverted.

3.4 Sexual behaviours

3.4.1 Partnerships and condom use in general

Questions about sexual behaviour were asked in the baseline questionnaire of COBA-Cohort, and a reduced number of questions in follow-up visits, in order to characterise the initial profiles of participants and try to identify possible changes in the course of the study. Many of these questions were only asked for those who reported having the corresponding type of sexual partners (steady or casual).

Overall, 11.1% of participants reported having only a steady partner at enrolment, 56.6% reported only casual partners (in the previous 12 months) and 33.2% reported both types of sexual partners (Table 3.4—1).

Table 3.4—1 General sexual behaviour (N=3,341)

		AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
		(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Age at first anal intercourse with a man/boy								
	Median[IQR]	18[15-20]	18[16-21]	20[18-24]	19[17-22]	19[17-22]	19[17-21]	19[17-22]
Type of partners (<12 months)								
	Steady only	10.7	4.9	6.6	13.7	13.4	13.2	11.1
	Steady and casual	38.2	38.0	30.8	29.1	35.8	26.1	32.3
	Casual only	51.1	57.1	62.6	57.2	50.8	60.7	56.6
Condomless anal intercourse (CAI) with… (<12 months, multiple answers)								
	Men	69.9	75.0	60.4	67.7	63.3	63.0	68.2
	Women	4.3	3.5	1.1	6.0	3.3	3.8	4.6
	Transgender persons	0.4	1.4	1.1	0.5	0.2	0.8	0.7
	HIV-positive men	6.5	6.3	4.4	5.2	0.8	2.6	4.7
	Injecting drug users	3.3	0.3	0	0.7	0.4	0.2	0.7
	Sex workers (even without paying)	0.7	1.0	0	0.5	0.4	1.2	0.7
	Men during trios/sex parties	12.0	7.5	2.2	9.1	4.3	4.0	7.5
	No CAI in the last 12 months	26.8	22.8	38.5	29.9	35.9	34.6	29.6
Have been given money, drugs or goods for sex (<12 months)								
	Yes	6.2	3.0	3.3	3.0	1.0	6.8	3.5
	No	93.8	97	96.7	97	99	93.2	96.5

Before asking more details about each type of sexual partner, a “general” question was asked about the use of condom in various situations. A large majority of the whole sample (68.2%) reported at least one episode of condomless anal intercourse (CAI) with a man in the 12 months prior to their enrolment in COBA-Cohort, with little variability between sites (60.4% to 75%). A small but significant proportion of the participants also reported CAI during trios or sex parties (7.5%), especially in those recruited in AIDES (12%). CAI with women was also reported (4.6%), with a higher than average proportion in GAT/CheckpointLX participants (6%).

Overall, very few participants reported having been given money, drugs or goods for sex in the last 12 months (3.5%), but the proportions were higher in AIDES and PV/Ath-Thess Checkpoints participants (6.2% and 6.8% respectively).

3.4.2 Use of psychoactive substances in relation to sex

Having sex under the influence of drugs or alcohol varied substantially between COBA-Cohort study partners (Table 3.4—2). Among respondents, 54.8% reported using psychoactive substances before or during sex in the last 12 months, ranging from 27.8% in LILA Milano to 67.1% in AIDS-Fondet.

Those who reported having sex under the influence of psychoactive substances were asked to select their frequency of use from a list of substances (Figure 3.4—1). However, the questionnaire of GAT/CheckpointLX only gathered yes/no answers for this list, so the detailed frequency of drug use for the other COBA-Cohort partners are only shown in annex (Table 6.11—4).

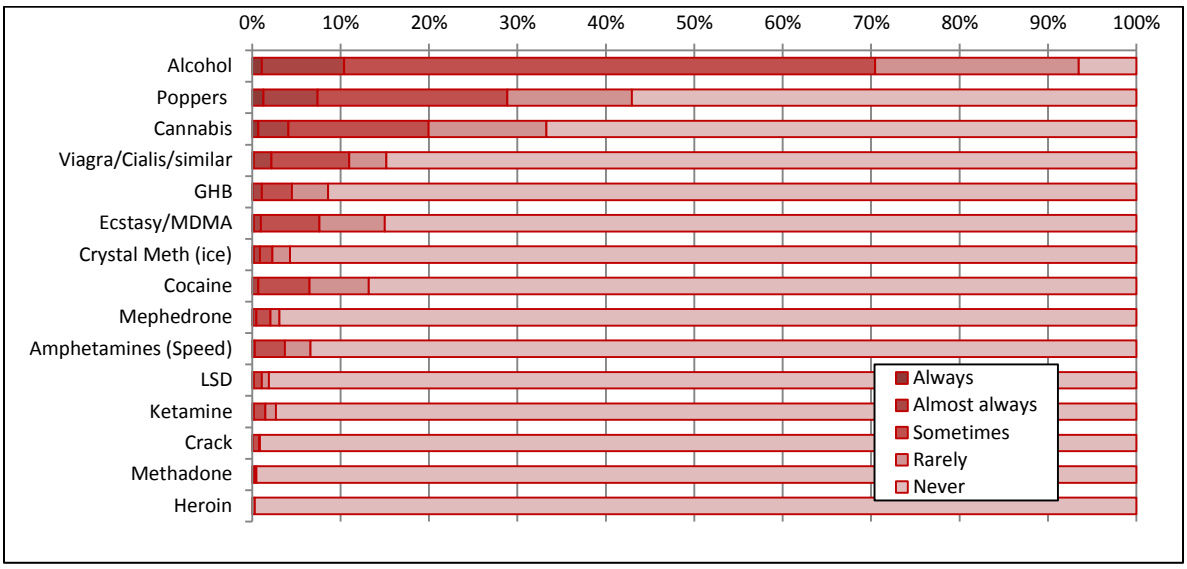


Figure 3.4—1 Frequency of sex under the influence of psychoactive products (N=2,162)
(All partners but GAT/CheckpointLX)

The main products used by COBA-Cohort participants were as follows: alcohol (90.7%), poppers (37.1%), cannabis (31.8%), cocaine (13.3%), Ecstasy/MDMA (11.9%) and Viagra®/Cialis®/similar (11.5%) (Table 3.4—2). Aside from alcohol (86.9% to 96.5%), the variability of substance use across study partner is quite notable, probably because of the accessibility of each product and the trend of what is socially accepted in MSM differ between countries.

Table 3.4—2 Use of psychoactive products before or during sex (N=3,976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Sex under the influence of psychoactive products (<12 months)							
Yes	61.0	67.1	27.8	55.5	48.5	37.4	54.8
No	39.0	32.9	72.2	44.5	51.5	62.6	45.2
Sex under the influence of... (at least once)*							
Sample sizes:	***166***	***621***	***25***	***923***	***237***	***190***	***2162***
Alcohol	93.3	96.5	88.0	86.9	90.2	88.9	90.7
Poppers	70.1	38.8	52.0	29.5	41.9	32.6	37.1
Cannabis	42.7	22.5	48.0	29.9	39.3	49.5	31.8
Cocaine	21.3	10.7	24.0	13.4	8.5	18.4	13.3
Ecstasy/MDMA	29.9	10.0	12.0	7.7	17.1	16.3	11.9
Viagra/Cialis/similar	14.0	16.1	24.0	6.5	13.2	14.7	11.5
GHB	18.3	4.9	8.0	3.0	13.7	5.3	6.2
Amphetamines (Speed)	9.8	3.8	8.0	1.7	10.7	7.4	4.5
Crystal Methamphetamine (ice)	7.9	2.1	8.0	0.9	3.0	8.9	2.8
Ketamine	6.1	2.1	8.0	1.4	0.4	3.7	2.1
Mephedrone	8.5	0.8	4.0	0.3	3.0	5.3	1.9
LSD	3.7	0.3	0	1.4	0.9	6.8	1.7
Other drug	0.6	0.2	0	0.8	0	1.6	0.6
Methadone	1.2	0	0	0.1	0.9	1.6	0.4
Heroin	0.6	0	0	0.1	0.4	1.1	0.2
Sex under the influence of "ChemSex drugs" *							
Yes	24.4	6.6	8.0	4.6	15.4	13.7	8.7
No	75.6	93.4	92	95.4	84.6	86.3	91.3
Ever injected drugs							
Never	95.7	98.4	98.9	98.4	99.4	98.4	98.3
Yes, related to sex	1.4	0.5	0	0.0	0	1.0	0.6
Yes, not related to sex	2.5	1	1.1	1.6	0.6	0.6	1.0
Yes, both related and not related to sex	0.4	0.1	0	0.1	0	0	0.1
Time since last injection **							
<6 months	50.0	38.5	100	34.6	33.3	50.0	45.7
6-12 months	0	15.4	0	7.7	0	0	5.7
12-24 months	8.3	15.4	0	19.2	0	16.7	11.4
>24 months	41.7	30.8	0	38.5	66.7	33.3	37.1

* Among those who reported they had sex under the influence of psychoactive products in the last 12 months. ** Among those who reported at least one injection

In line with a recent analysis of the data from EMIS 2010 (Schmidt et al., 2016), we built an indicator of “ChemSex”, which should be interpreted with caution since we had no reported data about participation in ChemSex sessions. This proxy of ChemSex is only based on the type of drugs used. Someone who reported having sex under the influence of at least one of these: GHB, crystal methamphetamine, ketamine, mephedrone, was considered to have used ChemSex drugs.

Users of ChemSex drugs were more numerous among AIDES, Legebitra and PV/Ath-Thess Checkpoints (24.4%, 15.4% and 13.7% respectively) but it does not mean that in other study sites participants were not taking part in ChemSex sessions. Indeed, other products such as ecstasy/MDMA, cocaine, amphetamines and poppers as well as Viagra®/Cialis®/similar are also used quite often during ChemSex sessions.

Drug injection was minimal in our sample of HIV-negative MSM, but was more prevalent in AIDES participants (4.3% in total versus 0.6% to 1.7% elsewhere); half of which reported that they last injected less than 6 months ago.

3.4.3 Steady partners

Among the 44.3% of the participants who had a steady partner at enrolment (median length of relationship 13 months), 9.6% reported that this partner was HIV-positive and 21.2% did not know his HIV status, with large disparities between study partners (Table 3.4—3).

Table 3.4—3 Sexual behaviour with the steady male partner (N=1,719)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=133)	(n=397)	(n=34)	(n=713)	(n=242)	(n=200)	(n=1719)
Time with steady partner							
Median[IQR]	21[3-49]	19[3-75]	18[5-87]	13[5-37]	21[4-67]	7[2-18]	13[4-47]
HIV status of the steady partner							
HIV positive	9.1	12	8.8	10.8	0.8	11.7	9.6
HIV negative	78	69.1	70.6	64	72.7	77.7	69.2
I don't know/Don't remember	12.9	18.9	20.6	25.1	26.5	10.7	21.2
Steady partner under treatment *							
Yes	100	93.6	100	76.6	50	91.3	85.4
No	0	4.3	0	20.8	0	8.7	12.2
I don't know	0	2.1	0	2.6	50	0	2.4
Last viral load of the steady partner *							
Undetectable	75	80.4	66.7	67.5	0	87	73.6
Detectable	0	2.2	33.3	20.8	50	8.7	12.9
I don't know	25	17.4	0	11.7	50	4.3	13.5
Frequency of condom use for AI with steady partner (<12months)							
Always	28	23.1	17.6	25.5	22.7	29.9	25.1
Almost always	15.2	16.6	29.4	24.5	20.6	22.2	21.3
Sometimes	4.5	8.8	2.9	15.5	9.2	13.9	11.8
Rarely	5.3	13.2	17.6	13.8	13.0	11.3	12.7
Never	42.4	32.5	29.4	18.4	29.8	20.6	25.6
Did not practice anal sex with this steady partner	4.5	5.7	2.9	2.4	4.6	2.1	3.6
Condom use at last AI with your steady partner							
Yes	*40.0*[2]	32.7	45.5	46.3	40.1	50.3	42.4
No	*60.0*[2]	67.3	54.5	53.7	59.9	49.7	57.6
Sex with other partners than the steady partner (<12 months)							
Yes	75.9	63.0	61.8	68.0	45.0	32.0	59.9
No	24.1	37.0	38.2	32.0	55.0	68.0	40.1
Time since last AI with steady partner							
<1 month	77.8	*74.1*[1]	84.4	--	83.6	89.8	80.4
1-2 months	4.8	*7.9*[1]	3.1	--	2.7	3.7	5.2
2-3 months	4.8	*3.4*[1]	3.1	--	4.1	0.5	3.2
>3 months	12.7	*14.6*[1]	9.4	--	9.5	5.9	11.2

IQR: interquartile range; AI: anal intercourse.* Among those reporting an HIV-positive partner. [1]: missing values >10%; [2]: missing values = 74%.

Among those reporting an HIV-positive steady partner, the large majority reported their partners were in treatment (85.4%) and with an undetectable viral load (73.6%). In Legebitra, only 2

respondents reported being in steady partnership with an HIV-positive man: one of them whose partner was in treatment but with detectable viral load; the other did not know whether his partner was in treatment or whether he had a detectable or undetectable viral load.

As expected, the frequency of consistent condom use for anal intercourse (AI) in steady partnership is relatively low with one in four participants (25.1%) reporting always using condom. However, the use of condom during the last AI with a steady partner (less than a month ago in 80.4% of the cases) was higher (42.4%) and varied from 32.7% in AIDS-Fondet to 50.3% in PV/Ath-Thess Checkpoints.

Overall, almost three in five respondents with a steady partner also reported having concurrent casual male partners (59.9%). This dynamic was much more prevalent in AIDES (75.9%) than in PV/Ath-Thess Checkpoints (32%) for example.

3.4.4 Casual partners

The median number of casual partners in the 12 months prior to the study was 6, but it varied substantially between study partners: from 4 in Legebitra to 11 in AIDES (Table 3.4—4).

Table 3.4—4 Sexual behaviour with casual male partners (N=3,516)

		AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
		(n=243)	(n=881)	(n=85)	(n=1,439)	(n=426)	(n=442)	(n=3,516)
Number of casual partner (<12 months)								
	Median[IQR]	11[5-30]	9[5-15]	7[3-15]	5[2-10]	4[2-6]	6[3-12]	6[3-12]
Talk about HIV status with casual partners (<12months)								
	Yes, with all or almost all of them	31.3	23.7	24.7	--	36.0	21.5	26.7
	Yes, with more than half of them	15.4	12.4	7.1	--	8.4	15.8	12.4
	Yes, with less than half of them	7.1	8.8	4.7	--	4.3	8.7	7.5
	Yes, with few of them	26.7	26.6	36.5	--	22.7	33.0	27.6
	No, never	19.6	28.6	27.1	--	28.6	21.1	25.9
HIV status of the casual partners (<12 months, multiple answer)								
	Some of them were HIV+ with undetectable viral load	20.0	12.3	12.9	4.0	2.4	10.2	8.0
	Some of them were HIV+ with detectable viral load	0.4	0.5	0	0.4	0.7	1.6	0.6
	Some of them were HIV+ without knowing their viral load levels	5.8	4.5	2.4	2.8	1.7	5.3	3.6
	Do not know if some of them were HIV+	50.8	58.1	70.6	64.8	54.0	57.4	60.1
	None of them were HIV+	24.6	25.1	14.1	28	41.4	26.9	28.2
Frequency of condom use for AI with casual partners (<12months)								
	Always	39.6	34.4	48.2	48.4	43.5	50.9	44.1
	Almost always	38.8	40.7	30.6	32.7	34.4	38.0	35.9
	Sometimes	10.4	9.9	5.9	5.1	6.9	5.3	6.9
	Rarely	2.5	4.5	4.7	2.1	2.6	1.8	2.8
	Never	4.6	2.6	3.5	3.1	2.4	1.6	2.8
	Did not practice anal sex with casual partner	4.2	8	7.1	8.6	10.0	2.3	7.5

Although only one in four participants (25.9%) reported that they never talked about HIV status with their casual partners, the majority (56.8% in total and up to 70.6% in LILA Milano) reported that they did not know if some of their partners were HIV-positive. For those who did know, very few had partners that were HIV-positive with detectable or unknown viral load level (0.6% and 3.6%, respectively), while 8% reported that they had sex with HIV-positive partners with undetectable viral load (from 2.4% in Legebitra to 20% in AIDES). In Legebitra, 41.4% reported that none of their casual partners were HIV-positive (compared to between 14.1% and 26.9% elsewhere). This may indicate that stigma towards HIV is more notable in Ljubljana (one of the smallest cities participating where COBA-Cohort is implemented) than in other study partners' cities.

Overall, 44.1% reported always using condom with casual partners in the previous 12 months, 35.9% almost always, and 12.5% sometimes, rarely or never.

Participants were also asked where they met their casual male partners during the last 12 months (Figure 3.4—2). Although a large majority met their partners on mobile apps or on the internet, differences can be found between study partners. For example, only one in three participants (33.7%) from Legebitra used mobile apps, and only two in five (40.5%) from LILA Milano used internet. Participants from AIDES disproportionately responded that they met their partners in venues like saunas, sex clubs, backroom etc. because the AIDES recruitment was mainly done during outreach activities in such venues.

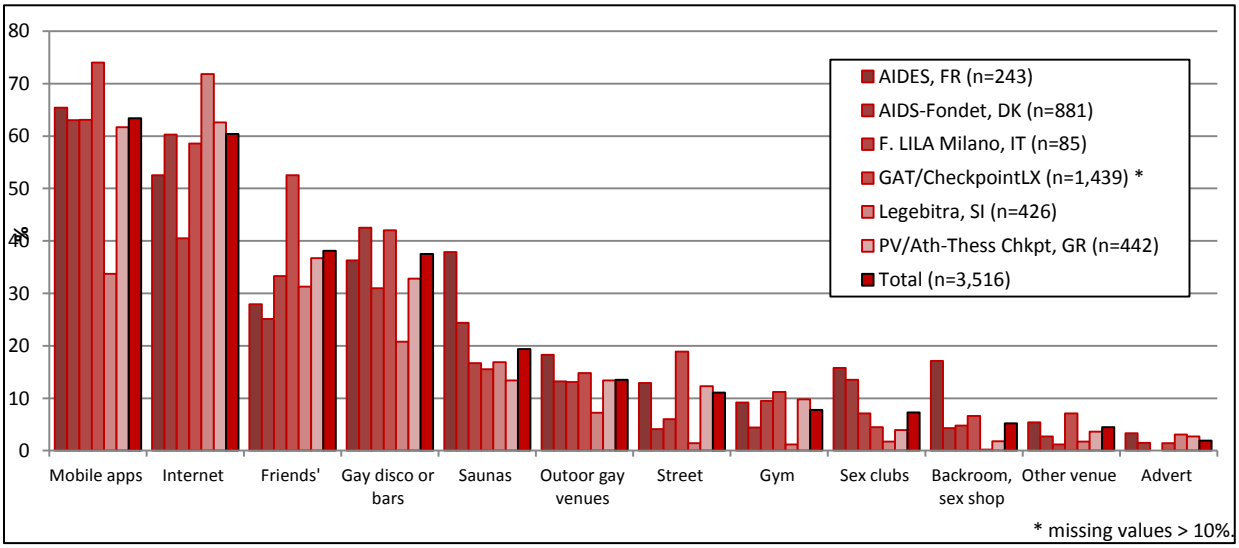


Figure 3.4—2 Places of meetings of casual partners (N=3,516)

For almost one in six participants (58.1%), the last sexual relation with AI occurred less than one month prior to the study enrolment. In 50.4% of the cases, participants were having sex with this partner for the first time, and one in four (24.8%) reported they did not use a condom (Table 3.4—5).

About half of the sample (48.6%) reported they discussed HIV status with their last partner, and 3.7% reported that their last partner was HIV-positive (AIDES participants had the highest proportion: 6.8%). Between 42.8% (Legebitra) and 52.7% (LILA Milano) reported they did not know the HIV-status of their last partner.

Table 3.4—5 Last sexual relation with a casual male partner (N=3,516)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=243)	(n=881)	(n=85)	(n=1,439)	(n=426)	(n=442)	(n=3,516)
Time since last AI with a casual partner							
<1 month	70.0	56.2[1]	49.4	--	50.0	63.9	58.1
1-2 months	8.4	12.4[1]	17.7	--	14.2	9.9	12.0
<3 months	6.3	8.8[1]	16.5	--	9.6	7.5	8.7
>3 months	15.2	22.6[1]	16.5	--	26.2	18.6	21.3
Previously had sex with the last casual partner							
No	56.2	52.0	59.0	--	41.8	50.9	50.4
Yes, once	18.7	17.4	15.7	--	23.7	19.8	19.3
Yes, more than once	25.1	30.6	25.3	--	34.5	29.3	30.2
Condom use at last AI with a casual partner							
Yes	70.6	67.8	79.3	78.5	77.4	78.5	75.2
No	29.4	32.2	20.7	21.5	22.6	21.5	24.8
Talked about your HIV status with the last casual partner							
Yes	52.8	45.4	42.7	--	51.3	51.4	48.6
No	47.2	54.6	57.3	--	48.7	48.6	51.4
HIV status of the last casual partner							
HIV positive	6.8	4.0	1.2	--	0.8	4.7	3.7
HIV negative	46.8	44.1	36.1	--	56.5	46.3	47.1
I Don't know/Don't remember	46.4	51.9	62.7	--	42.8	49.1	49.2
Last casual partner under treatment *							
Yes	93.8	90.6	100	--	100	70.0	86.1
No	6.3	3.1	0	--	0	10.0	5.6
I don't know	0	6.3	0	--	0	20.0	8.3
Last casual partner's viral load *							
Undetectable	87.5	51.5	0	--	33.3	70.0	63.0
Detectable	0	0	0	--	33.3	0	1.4
I don't know	12.5	48.5	100	--	33.3	30.0	35.6

IQR: interquartile range; AI: anal intercourse. * Among those reporting that their last casual partner was HIV positive. [1]: missing values >10%.

Among those who had an HIV-positive partner, the large majority (86.1%) reported that this partner was in treatment but 35.6% did not knew about the partner's viral load level (up to 48.5% in AIDS-Fondet and 100% in LILA Milano but corresponding to 1 individual).

3.4.5 Determinants of sexual risk behaviour with casual partners

The most at-risk participant who reported inconsistent condom use in the last 12 months with casual partners (ICU) were compared with those who always used condoms or did not have anal sex with their casual partners in that period (see the methods section 2.5.3).

Variables not significantly associated with ICU are presented in annex (Table 6.11—5). Age, being born abroad, occupation, self-definition according to one's sexual orientation, reporting HIV-positive partners with detectable viral load or no HIV-positive partner, meeting men in sex clubs, in outdoor gay venues, in the street, at the gym, at friends, via adverts, and ever using PEP were not significantly associated with ICU.

All significant univariate associations are shown in Table 3.4—6. Participants who reported ICU had the following characteristics: they had a higher number of sexual partners (median[IQR]: 7[3-15] vs. 5[3-10]), they were more likely to have sex under the influence of Chemsex drugs (8.2% vs. 2.3%), to have ever injected drugs (2.2% vs. 1.4%), to meet partners in places such as a sauna (21.1% vs 17.8%), backrooms, sex-shops (6.2% vs. 4.4%), on the internet (63.1% vs. 57.6%), to report at least one previous event of STI or hepatitis (33.7% vs. 27.4%) and to have used PrEP (1.8% vs. 1.0%), compared to those who always used condom or did not have anal sex with their casual partners.

Participants reporting ICU were also more likely to be out (72.3% vs. 65.3%), to perceive themselves as medium (42.1% vs. 26.7%) or high (7.5% vs. 3.4%) risk of infection and to have been tested for HIV in the last 6 months prior to the study (34.6% vs. 28.1%). They were more willing to take PrEP in the future if available (50.6% vs. 40.9%), showing that they were more aware of being at risk of HIV infection. In addition, they reported having talked about HIV status with their casual partners more often (77.4% vs. 70.9%) and having had HIV-positive partners with undetectable (11.2% vs. 5.1%), or of unknown (4.9% vs. 2.5%) viral load levels. Conversely, those who did not report ICU were significantly more likely to report not knowing if some of their casual partners were HIV-positive (63.2% vs. 56.8%).

Table 3.4—6 Univariate comparisons on ICU with casual partners (significant associations) (n=3,477)

		Inconsistent condom use	Always used condom or no anal sex	Total	p-value
		% (n=1684)	% (n=1793)	% (n=3477)	
Study partner					
	AIDES (FR)	8.0	5.9	6.9	< 0.001
	AIDS-Fondet (DK)	29.5	20.4	24.8	
	GAT/CheckpointLX (PT)	36.7	45.8	41.4	
	Fondazione LILA Milano (IT)	2.3	2.6	2.4	
	Legebitra (SI)	11.5	12.5	12.0	
	PV/Ath-Thess Checkpoints (GR)	12.1	12.9	12.5	
Education					
	High school graduate or less	37.5	31.0	34.1	< 0.001
	Post-secondary education and/or first stage of tertiary education	51.2	51.0	51.1	
	Second stage of tertiary education	11.3	18.1	14.8	
Proportion of participants' relatives aware they are attracted to men *					
	more than half	72.3	65.3	69.0	0.003
	less than half	23.3	29.1	26.1	
	none	4.4	5.6	4.9	
Ever victim of verbal/physical abuse		41.6	37.7	39.6	0.021
Perceived risk of HIV infection *					
	Low risk	50.4	69.9	59.7	< 0.001
	Medium risk	42.1	26.7	34.8	
	High risk	7.5	3.4	5.5	
Time since last HIV test					
	<6 months	34.6	28.1	31.3	< 0.001
	6-12 months	21.7	21.5	21.6	
	>12 months	27.0	33.7	30.5	
	never tested	16.7	16.6	16.7	
Type of partnerships					
	Steady and casual	32.2	39.8	36.2	< 0.001
	Casual only	67.8	60.2	63.8	
Number of casual male partners (<12 months) (median[IQR])		7[3-15]	5[3-10]	6[3-12]	< 0.001
Ever been given money/goods/drugs for sex					
	Yes	4.1	3.4	3.7	0.026
	No	94.9	96.3	95.6	
	I prefer not to answer	1.0	0.3	0.7	
Had sex under the influence of ChemSex drugs		8.2	2.3	5.1	< 0.001
Drug injection					
	Never	97.8	98.6	98.2	0.091
	At least once	2.2	1.4	1.8	
Talked about HIV status with casual partners *		77.4	70.9	74.1	0.001
Some of your partners were…					
	HIV+ with undetectable viral load	11.2	5.1	8.0	< 0.001
	HIV+ without knowing viral load level	4.9	2.5	3.6	< 0.001
	Don't know if some of the casual partners were HIV+	56.8	63.2	60.1	< 0.001
Casual male partners met…					
	In gay disco or bars	40.5	34.7	37.5	0.001
	In saunas	21.1	17.8	19.4	0.018
	In backroom, sex shop	6.2	4.4	5.2	0.019
	On the internet	63.1	57.6	60.4	0.002
	On mobile apps	65.4	61.8	63.4	0.034
Ever had an STI or Hepatitis		33.7	27.4	30.3	< 0.001
Ever tested for STI or Hepatitis		47.1	39	42.8	< 0.001
Ever used PrEP		1.8	1.0	1.4	0.047
Would consider taking PrEP if available					
	Yes	50.6	40.9	45.5	< 0.001
	Perhaps/Don't know	37.2	39.9	38.7	
	No	12.2	19.2	15.8	

* Not available in GAT/CheckpointLX. PEP/PrEP: pre-/post-exposure prophylaxis.

After adjustment for the study partner, age and educational level, the multivariate logistic regression model confirmed that those who reported ICU had a high risk profile according to other risk indicators (place of meeting partner, ChemSex drug use). It also confirmed that they are well informed regarding HIV prevention, they knew the viral load level of some of their HIV positive partner, and many would like to prevent negative consequences of their behaviour by using PrEP if available (Table 3.4—7).

Table 3.4—7 Multivariate logistic regression on ICU with casual partners (N=3,030)

		Odds Ratio	95% CI	p-value
Study partner (vs. AIDES)				
	AIDS-Fondet	1.12	[0.81-1.53]	0.498
	F. LILA Milano	0.81	[0.47-1.38]	0.430
	GAT/CheckpointLX	0.77	[0.56-1.04]	0.092
	Legebitra	0.78	[0.54-1.11]	0.161
	Positive Voice	0.81	[0.58-1.14]	0.230
Age	(continuous)	1.00	[0.99-1.01]	0.996
Education (vs. high school graduate or less)				
	Post-secondary education and/or first stage of tertiary education	0.83	[0.70-0.98]	0.027
	Second stage of tertiary education	0.60	[0.47-0.77]	<0.001
Time since last HIV test (vs. <6 months)				
	6-12 months	0.89	[0.72-1.09]	0.267
	>12 months	0.73	[0.60-0.89]	0.002
	never tested	0.92	[0.73-1.16]	0.501
Casual partners only (vs. steady and casual partners)		1.34	[1.15-1.57]	<0.001
Casual male partners met…				
	In gay disco, or bars (vs. No)	1.19	[1.02-1.4]	0.027
	On the internet (vs. No)	1.27	[1.09-1.47]	0.002
Had sex under the influence of ChemSex drugs (vs. No)		2.70	[1.81-4.00]	<0.001
Had HIV+ casual partners with undetectable viral load (versus No)		1.70	[1.26-2.28]	<0.001
Would consider taking PrEP if available (vs. no)				
	Perhaps/Don't know	1.29	[1.03-1.61]	0.028
	Yes	1.63	[1.31-2.03]	<0.001

PEP/PrEP: pre-/post-exposure prophylaxis.

3.5 Pre- and post-exposure prophylaxis

At the end of the questionnaire, participants were asked about knowledge of, use of and willingness to use pre- and post-exposure prophylaxis (PEP, PrEP) (Table 3.5—1).

Level of knowledge varied considerably according to the study partner: those recruited in GAT/CheckpointLX were the least aware of both PEP and PrEP (45.9% and 27.9%, respectively); while participants from AIDES were those most aware (89.1% and 77.5%, respectively). These discrepancies can be explained by the local/national contexts where participants were recruited. In France for example, PEP promotion has been a priority in both general and target populations such as MSM, and a quite large communication around PrEP has been done before and after the IPERGAY clinical trial (Molina et al., 2015). However, it can be seen that participants of LILA Milano and PV/Ath-Thess Checkpoints are almost as aware as AIDES participants.

In GAT/CheckpointLX, no information about PEP and PrEP was given to participants prior to the question, whereas in COBA-Cohort's questionnaires, the questions were formulated as follows: "**Have you ever heard about PEP, an antiretroviral treatment that can be taken immediately <u>after</u> a possible HIV exposure in order to prevent HIV infection?**" and "**Have you ever heard about PrEP, an antiretroviral treatment that can be taken <u>before</u> a possible HIV exposure in order to prevent HIV infection?**". This difference certainly explains to the disproportionately low level of PEP and PrEP knowledge in GAT/CheckpointLX compared to other sites.

Table 3.5—1 Knowledge and use of PEP and PrEP (N=3,976)

		AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
		(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
Ever heard about PEP								
	Yes	89.1	68.0	70.8	45.9 [1]	63.9	85.4	63.0
	No	10.9	32.0	29.2	54.1 [1]	36.1	14.6	37.0
Ever used PEP *								
	Yes, within the last 12 months	6.5	1.9	6.3	4.4	1.0	6.1	3.9
	Yes, more than 12 months ago	13.4	7.1	6.3	6.4	1.7	5.9	6.6
	No	80.1	91	87.3	89.1	97.4	88.0	89.5
Ever heard about PrEP								
	Yes	77.5	48.5	73.0	27.9 [1]	43.9	71.3	45.9
	No	22.5	51.5	27.0	72.1 [1]	56.1	28.7	54.1
Ever used PrEP **								
	Yes, within the last 12 months	8.9	1.7	3.1	1.8	0	0.8	2.3
	Yes, more than 12 months ago	1.9	0.5	0	0.3	0.5	0.6	0.6
	No	89.3	97.8	96.9	98	99.5	98.6	97.1
Would consider taking PrEP if available								
	No	12.5	10.2	9.1	22.7	9.1	16.0	16.2
	Perhaps/Don't know	45.6	45.0	45.5	28.1	52.7	47.3	39.1
	Yes	41.9	44.9	45.5	49.2	38.3	36.7	44.6

PEP: post-exposure prophylaxis; PrEP: pre-exposure prophylaxis. * Among those reporting knowing what PEP is; ** Among those reporting knowing what PrEP is. [1]: missing values >10%.

Previous use of PEP did not vary a lot between study partners, but previous PrEP use did (10.8% ever accessed it in AIDES versus 0.5% to 3.1% elsewhere). Again, the French context where PrEP is available and free of charge may explain that difference.

Regarding the question "would you consider taking PrEP in the future if available?", 39.1% of participants were not sure or did not know, while 44.6% would. Here again, the differences between study partners may be explained by the differences in information, consensus and debates around PrEP in each country or city.

Compared to the Flash PrEP study recently conducted in Europe[2], the proportions of knowledge of and interest in PrEP observed in COBA-Cohort were quite similar to those observed in Germany (representing 70% of the Flash PrEP study sample), where 37% knew the existence of PrEP and 44% would be interested in taking PrEP. In the rest of the Flash PrEP sample, the proportions were much higher: 77% aware of PrEP, 54% interested in taking PrEP.

These indicators are also well-known predictors of or at least factors associated with riskier sexual practices. This should be taken into account in the analyses which will be performed in the coming months.

[2] First results of the Flash PrEP study available here: http://www.aides.org/sites/default/files/Aides/bloc_telechargement/ResultPrepGB_vf.pdf.

4 Discussion

4.1 Feasibility of a multicentre community-based cohort

COBA-Cohort is the first service-based cohort of HIV-negative MSM collecting the same type of data simultaneously in different European countries. Although delayed in some study partners sites and cancelled in one, the implementation of COBA-Cohort has been successful. This success is certainly due to the close collaboration with participating community-based organisations, from the design of the protocol, the questionnaires and, of course, the field work that completely relied on their efforts.

Many data have been and are still being collected, and their dissemination in national and international congresses, as well as in the grey literature shows that the contribution of COBA-Cohort to scientific knowledge is valuable (see the bibliography of COBA-Cohort in annex 6.12). Although it was not possible to explore the determinants of seroconversion, all other research objectives have been addressed by the data of COBA-Cohort.

This report also constitutes a unique opportunity for study partners to better understand the characteristics of their attendees. All study partners were collecting basic data routinely before COBA-Cohort, but it was usually not possible to follow-up these users and to have a broader view of their attitudes towards testing, their sexual behaviour, etc. (except in GAT/CheckpointLX where a cohort was already implemented). The collaboration of all study partners in COBA-Cohort was also a good opportunity for them to share their experiences and good practice regarding given aspects of their work or the cohort implementation.

4.2 Study limitations

The data presented in this report should be considered in light of several limitations. First, the non-representativeness of MSM getting tested in CBVCT services in Europe. Indeed, many differences were observed between populations accessing the different CBVCT services, so we cannot preclude the possibility of even more differences between other cities or countries. In South-Eastern Europe for instance, internalised homonegativity is more frequent than in Western Europe (Mirandola et al., 2016). This was also reflected in our sample regarding outness, much lower in Legebitra and PV/Ath-Thess checkpoints than in other study sites.

The short follow-up time in the framework of Euro HIV EDAT (especially for the sites that started in 2016) did not allowed deep longitudinal analysis that could highlight changes over time. The short follow-up time also had an impact on HIV incidence estimates, since it was only possible to include sites which started in 2015, but with a maximum follow-up of 25 months, which is still short for this type of analysis.

A selection bias should also be taken into account when interpreting the data. The comparisons between agreed and refused participants showed that: transgender people, those born abroad and those self-defining as bisexual or using another term were underrepresented in COBA-Cohort participants. This is quite usual in studies among MSM, especially regarding the low representation of transgender people and men who do not identify themselves as gay/homosexual (The EMIS Network, 2013). The age of COBA-Cohort participants also differed from those who refused to participate in several study partners: they were younger in AIDES, GAT/CheckpointLX and PV/Ath-Thess Checkpoints, and older in AIDS-Fondet. With regards to reporting a HIV test in the previous 12 months: AIDES, AIDS-Fondet, Legebitra and PV/Ath-Thess Checkpoints recruited more recent testers while GAT/CheckpointLX recruited less, compared to those who refused to enter COBA-Cohort.

4.3 Normalisation of routine testing?

Although many differences observed regarding HIV testing patterns across study partners, the most common one, based on participant's reasons for the baseline test, was a "regular control/to know my health status", unlike other studies in CBVCT services where the first reason was a risk exposure (Gumy et al., 2012; Marcus, Gassowski, & Drewes, 2016). Slight differences were seen between HIV and STIs patterns when looking at general attitudes towards testing, but getting tested routinely was still the primary pattern for both HIV and STIs testing, and again when participants were asked about their intention to get tested for HIV in the future.

"Episode(s) of unprotected anal intercourse" was the second most-reported reason for participants' baseline tests, consistent with their attitudes towards both HIV and STI testing in general. Equally, the second most common pattern regarding HIV testing intentions was when participants feel they have been at risk of HIV infection.

It was more common to test due to physical symptoms for STIs than for HIV. This can maybe be explained by some STIs having more obvious symptoms than HIV. But this also may indicate a need for education on the primary infection symptoms of HIV to get diagnosed and access to treatment as

close as possible to the seroconversion. A broader promotion of regular STI testing also seems to be needed since less than half of the overall sample had been tested for STI in the 12 months prior to enrolment.

MSM recruited in sites that started COBA-Cohort in 2016 had been tested more recently and thus seemed more aware of the benefits of routine and frequent testing than those recruited in the sites that started COBA-Cohort in 2015. This may reflect changes in testing recommendations and practices, but this should be verified with more follow-up data.

CBVCT use patterns suggest that routine HIV testing has been normalised or at least became more common. Many participants already tested for HIV reported they got tested in the same CBVCT service in the 12 months prior to COBA-Cohort enrolment, and many of them have returned during the study period. The period of time between follow-up visits tended to shorten over time, indicating that participants may have been tested on a more frequent basis. More follow-up data is needed to confirm this trend.

Participants initially tested for a regular control or to know their health status were more likely to return later and were younger and more likely to self-define as gay or homosexual. This group may get tested both for themselves and according to a "community" responsibility as suggested elsewhere (Boydell, Buston, & McDaid, 2017). On the contrary, those who did not test for a regular control got tested in reaction to a risk exposure, and were less likely to return later. This group was more exposed to HIV risk, and perceived themselves at higher risk compared to those getting tested routinely.

Even though routine HIV testing seems very common now in participating MSM, we are still struggling to test those at higher risk frequently. More efforts should be made in order to better characterise this group and identify the barriers that prevent them from increasing their testing uptake.

4.4 Decreasing HIV incidence?

The 12 participants who seroconverted during the study may not be representative due to loss to follow-up and/or information. We know that in Legebitra, at least one COBA-Cohort participant informed them he had just been diagnosed HIV-positive in a local clinic. As no questionnaire was filled in at the moment of the seroconversion, this information was not taken into account and this

participant was considered as lost to follow-up instead of someone who seroconverted. The same may have occurred in AIDS-Fondet where CBVCT providers reported that many participants returned for a test but opted out of COBA-Cohort. Some of them may have seroconverted but the data was not recorded in COBA-Cohort, unlike GAT/CheckpointLX did. As all CBVCT sites are routinely collecting data among all CBVCT users, including those who do not participate in COBA-Cohort, an effort should be made in the future to crosscheck COBA-Cohort's data with their local data in order to collect at least this information.

The overall incidence estimate in COBA-Cohort for the study period (February 2015-March/June 2016 depending on the sites) was 3.43/1000 person-years (95% confidence interval: [1.49-5.37]), ranging from 3.24/1000 person-years (95%-CI: [0-6.90]) in AIDS-Fondet, to 4.84/1000 person-years (95%-CI: [1.25-8.42]) in GAT/CheckpointLX. These rates were much lower than the ones observed in the BCN Checkpoint and CheckpointLX MSM cohorts a few years ago: 2.4/100 person-years (95%-CI: [1.9-2.9]) and 2.80/100 person-years (95%-CI: [1.89–4.14]), respectively (Ferrer et al., 2016; Meireles, Lucas, Carvalho, et al., 2015).

From this study we cannot state that HIV incidence decreased over the last few years. Part of these differences between this cohort and the previous BCN and CheckpointLX cohort may be explained by the lower follow-up time of COBA-Cohort participants (2 years vs. 3 years in BCN and CheckpointLX MSM cohorts), or by the criterion used to classify participants as lost to follow-up (no follow-up visit 18 months after enrolment in COBA-Cohort vs. after 12 months in BCN and CheckpointLX MSM cohorts).

The previously mentioned normalisation of routine testing highlighted in COBA-Cohort probably had an impact on overall HIV incidence, if more people are getting tested and on a more frequent basis, which is consistent with a recent simulation model studying the impact of higher HIV testing rates on HIV incidence in MSM (Phillips et al., 2015). In London, the number of new diagnoses recently decreased in MSM, while the number of HIV tests, repeat tests, and early treatment initiation increased in the same period (Brown et al., 2017). The counselling provided together with HIV testing in all CBVCT services may have helped participants to better understand how to reduce the risk of HIV infection, raising awareness of biomedical strategies (treatment as prevention, PEP and PrEP) but also proposing psychosocial support, ChemSex counselling, and/or referral to other care professionals. However, many MSM still do not test for HIV frequently and this group seems to be more exposed to HIV risk than their frequently testing counterparts. It is important to understand the barriers to testing in this group.

4.5 Sex, ChemSex and PrEP: time for action!

As expected, the description of COBA-Cohort participants' sexual behaviour showed high-risk behaviour prior to the study. Around one in two participants did not use a condom with all his casual partners, one in two reported sex under the influence of psychoactive substances, and in AIDES up to one in four reported sex under the influence of ChemSex drugs. Proportions of drug injection were minimal in our sample, similar to those reported recently in SIALON (Mirandola et al., 2016).

A strong association between non- systematic condom use and sex under the influence of ChemSex drugs was observed in our sample. Our data also showed that those reporting inconsistent condom use were more likely to know the HIV status of their casual partners, which suggests that they may be more aware of the benefits of treatment as prevention. Overall, participants reporting inconsistent condom use seemed more aware of their risky behaviour, and were more willing to use PrEP in order to prevent HIV infection.

Further analysis of these data will be needed to better disentangle all the information collected around risk behaviour, in particular using multidimensional methods in order to include more parameters and identify different risk profiles according to participants' attitudes and behaviour. Our preliminary analysis showed that there is an urgent need for providing more counselling regarding ChemSex, as already implemented in many sites participating in COBA-Cohort, but also to develop access to PrEP for men at higher risk of infection and who perceive themselves as such.

4.6 Lessons learnt and sustainability of COBA-Cohort(s)

Conducting longitudinal studies in CBVCT services is challenging since their work is focused on HIV testing and prevention activities. As mentioned earlier, the implementation of COBA-Cohort was successful, but several barriers have been identified, and sometimes solved, as shown in Table 4.6—1.

Table 4.6—1 Challenges faced by COBA-Cohort

Challenges	Solutions
Recruitment and follow-up during outreach activities	Recruiting participants during outreach activities is feasible, but the follow-up should be done from the CBVCT venues. In LILA Milano, many participants were recruited during Pride events, and most of them came to the NGO afterwards. Conversely, it has been quite complicated for AIDES to complete follow-up during outreach testing sessions, and using tablets is sometimes logistically complicated (tablets lost, no internet connection, etc.). Recruitment, or at least follow-up of participants should be done in CBVCT venues.

Table 4.6—1 (Continued)

Challenges	Solutions
High staff turnover while implementing COBA-Cohort	The teams participating in COBA-Cohort should not change frequently since training is required for all new CBVCT providers in order to learn the procedures of COBA-Cohort, and remind them to ask all users if they are already part of the cohort or not.
Identify COBA-Cohort participants to collect follow-up data	In GAT/CheckpointLX, CBVCT staff always asked users if they are participating in the cohort or not, while in other sites it depends on the staff members (some always ask, others don't). The publicity posters can help both participants and CBVCT staff to talk about COBA-Cohort. In the future, the reminder mail should include the UPI when it is not easily retrievable. In AIDS-Fondet, where the recruitment period is over, a list of COBA-Cohort participants has been made (using the UPIs) in order to identify them easily.
Active follow-up	Sending reminders to participants when their next test is due has been implemented recently for sites using COBA-Cohort's tablet but it is too early to know the impact of this tool. In GAT/CheckpointLX and AIDES, similar reminder tools have been implemented.
Time spent digitalising and error associated with data entry from paper questionnaires	The implementation of a tablet-based questionnaire was a real need and considerably reduced the impact of the COBA-Cohort implementation in the day-to-day work of study partners.
Length of questionnaires	Feedback from COBA-Cohort participants showed that the COBA-Cohort questionnaires, especially the baseline one, were too long. In the near future, a reduction of the questionnaire will be discussed within the study group. The possibility to customise the questionnaires locally (to include important questions for an NGO but not for all) will also be examined.

One of the most important lessons learnt from COBA-Cohort is that the implementation of such a study did not seem to trouble CBVCT users. Most users were happy to participate, happy to help the community through their participation, and did not show reluctance to return in the CBVCT service even when they opted out of the COBA-Cohort. Importantly, participants (but also non-participants considering the reduced refusal data) were not concerned regarding anonymity and data protection. However, the implementation of the tablet-based questionnaire made them even more comfortable in that respect.

Currently, the main challenge regarding COBA-Cohort is to make it sustainable. Following a meeting held in Barcelona in July 2017, all study partners showed their interest in continuing the collaboration after the close of the Euro HIV EDAT project, although no extra funds were available. In that meeting, other NGOs who showed interest in contributing to the COBA-Cohort were invited and plan on joining the study in the next few months.

COBA-Cohort will now become “COBA-Cohorts”, a European collaboration of community-based MSM cohorts. Like the Lisbon MSM cohort of GAT/CheckpointLX, each study partner is invited to decide their own cohort name and disseminate their own data according to their needs. A common cooperation agreement should soon be concluded between all COBA-Cohorts members in order to define the main terms of the collaboration including: data sharing, governance, steering committee, dissemination rules, etc. The COBA-Cohorts coordinator will be in charge of the maintenance of the database, the realisation of common analysis as well as specific analysis required by study partners, and will also explore fund-raising options to arrange physical meetings where data can be presented, discussed, and where each study partner can contribute to the common reflection and future evolution of the collaboration.

Further analyses and dissemination of the COBA-Cohorts data that are available will be essential in order to increase visibility and also help fund-raising through the publication of valuable data. A joint analysis of COBA-Cohort and Amsterdam cohort data has also been discussed and should be explored in the near future.

With a longer follow-up time, COBA-Cohorts’ data will allow better understanding of the dynamic of the HIV epidemic in MSM in cities where the study is implemented as well as the role and impact of the participating CBVCT services. These data will be crucial to identify subgroups of MSM with a higher incidence, and therefore help study partners to tailor preventative interventions aimed at increasing testing uptake and reducing the risk of HIV infection.

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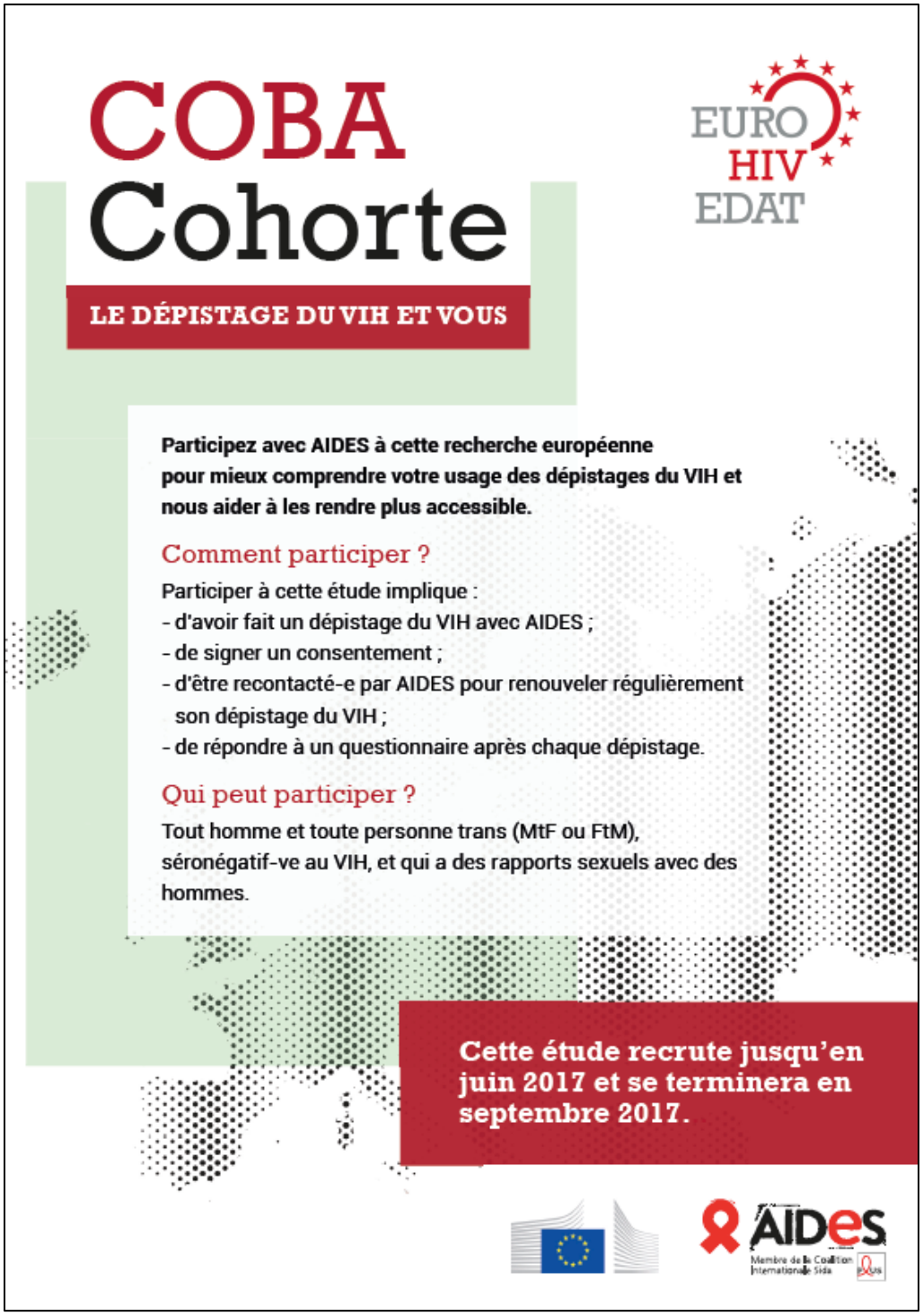
6 Annexes

6.1 Promotion poster for COBA-Cohort (AIDES)



6.2 Informed consent

Informed consent for taking part in a cohort of gays and other men who have sex with men attending HIV testing checkpoints (The Euro HIV Edat Study, WP5)

Today, HIV testing and in particular repeat testing is a key issue regarding HIV prevention among gay men and men who have sex with other men (MSM). The Euro HIV Edat study would enable policy makers to improve access to testing and prevention programmes targeting MSM.

This study aims to implement, for the first time simultaneously in several European countries, a cohort of HIV negative gays and MSM among those attending participating checkpoints. The main research objectives are to describe the use of these checkpoints, determinants of both HIV/STIs test seeking and sexual risk behaviours, but also to estimate how fast HIV is spreading, and to identify factors associated with seroconversion.

We would like to have your consent to participate in this study (this consent can be withdrawn whenever you want). Participation involves answering a short questionnaire at the inclusion and a much shorter questionnaire every time you will come back to get HIV tested here. Even if you give personal data to the checkpoint (name, phone number to be called etc.) the study team will not have access to such data, but only to anonymous data.

PLEASE NOTE that the present study is limited to the collection of anonymous data. It means that this study will not interfere with the current practices of the checkpoint or of the health system in vigour in the participant's country. In case of a confirmed HIV diagnosis, the participant is referred to an HIV unit in the local reference hospital in order to access to the standard public HIV care of his country.

In case you do not agree to participate, only a minimum set of demographics data will be collected.

With this I declare that I have been informed of:

- ❒ The objectives of the study
- ❒ The methodology of the study
- ❒ The possibility to withdraw my consent
- ❒ The possibility, for [name of the checkpoint], to use my personal contact details to remind me to get tested
- ❒ The fact that anonymous data will be sent to the organization responsible for analysis and processed in accordance with current legislation on data protection.

Therefore, voluntarily agree to participate in the study.

Signature of the participant:

Date: _____

Name and signature of the counsellor:

Date: _____

For any clarification please contact:

The national representative of the project:
[name of the national representative, organisation, phone number]

Or the principal investigator of the project:
Jordi Casabona, CEEISCAT (Barcelonna, Spain). Tel: +34 93 497 88 91

Funded by the European Commission

6.3 Leaflet

/

Take part in…

… The first cohort of HIV negative gay and other men who have sex in men

… Simultaneously held in 6 European countries

What are you supposed to do?

Just to answer short questionnaires when you come back to repeat your HIV-test

Help us!

#Gays #Men who have sex with men

#Research #Prevention

#HIV-testing

#Sexual Behaviours

Main Partner:

Associated Partners:

Please do not hesitate to ask the checkpoint's team for any clarifications

[Name of the checkpoint]

Coordination of the study:
Centre d'Estudis Epidemiològics sobre les Infeccions de Transmissió Sexual i Sida de Catalunya (CEEISCAT), (Barcelona, Spain).

Cohort of HIV-negative gay and other men who have sex with men

An overview

The Euro HIV Edat Project

Funded by the

Denmark – France – Greece – Italy
Portugal – Slovenia

EURO HIV EDAT

WHAT?

The **Euro HIV Edat study** is a large project (funded by the European Commission) which aims to generate knowledge to better understand the role and impact of community-based testing in Europe, in particular among gay and other men who have sex with men (MSM).

The Euro HIV Edat project involves 30 associated or collaborating partners from 18 European countries and is divided into 6 sub-studies. One of them is the purpose of the present brochure: an **opportunistic cohort of gays and MSM, implemented for the first time simultaneously in several European countries**.

HOW?

This **opportunistic cohort** recruits HIV negative gays and MSM in community-based voluntary counselling and testing services (CBVCTs, also named checkpoints) from 6 European countries (Denmark, France, Germany, Greece, Portugal, and Slovenia). Recruitment will end in June 2016 and follow-up of participant on March 2017.

WHO?

The cohort specifically targets men who attend the participating checkpoints/CBVCTs, older than 18, with a negative test result at the moment of inclusion, and who report sex with other men in the previous 12 months. Enrolled men must also be resident of the area of the [*name of the checkpoint*], or to visit frequently the region of the checkpoint in order to be able to come back to get tested.

WHY?

Today, gays and MSM are recommended to get HIV-tested more frequently, HIV testing being a key issue in HIV/AIDS prevention in this population. Community-based testing (in checkpoints) already showed to be very efficient in reaching less tested and more exposed men, and in increasing HIV testing uptake (in particular by recalling attendees to repeat testing), but also early access to care. [*name of the checkpoint*] currently recommend to get tested at least every X months, more often if risk exposition if more frequent.

PARTICIPATION INVOLVES:

- **To sign an informed consent** allowing the checkpoint and the research team to use anonymous data collected during the study. This consent can be withdrawn in any moment.
- **The possibility to be recalled** (phone, SMS or mail) by the checkpoint when it is time to get tested for HIV again.
- **To answer short questionnaires:** one at the inclusion, and a shorter one before each test in the checkpoint.

PLEASE NOTE that the present study is limited to the collection of anonymous data. This cohort is "**opportunistic**" in so far as it doesn't interfere with the current practices of the checkpoint, and does not require further effort from the participants.

USEFULNESS OF SUCH DATA…

…for the checkpoint and its attendees:

The benefits of such gay/MSM cohort are numerous. First of all, following MSM allows the Checkpoint to directly monitor its activity, and to measure changes in behaviour such as test seeking and sexual behaviours. The checkpoint can in turn adapt its own procedures to be more efficient and to better fit the attendees' needs. [+ other motivations / benefits for the Checkpoint ….?].
Attendees will profit by a personalized follow-up, and by a counselling specifically adapted to their needs.

…for Prevention and Public Health:

The cohort will contribute to **improve scientific knowledge** regarding the use of community-based testing, as well as to follow the evolution of (risky-) sexual behaviours over time from test to test. If founds are available, this study could lead a large and consistent European cohort.

This will in turn **help policy makers to improve access to testing and to better design preventive interventions, targeting the most affected subgroups** in order to reduce the burden of HIV in the whole gay/MSM population.

6.4 Refusal questionnaire

Hello,

You just refused to take part in the Euro HIV Edat study, but we would need a piece of information regarding your socio-demographic profile and the main reasons for not participating. This is crucial for us in order to ensure the representativeness of our study sample, and it will take you less than 5 minutes.Thank you in advance for your contribution.

Q0. Name of the checkpoint
.....

Q1. Date of the present test
(DD-MM-YYYY)

Q2. What is your gender?
Male
Transgender/Transsexual

Q3. When were you born?
__ - ____ (MM-YYYY)

Q4. In which country were you born?
.....

Q5. In which country do you currently live?
.....

Q6. What is your highest education qualification?
ISCED 1: no secondary qualification
ISCED 2: lower secondary or second stage of basic education
ISCED 3: (upper) secondary education
ISCED 4: post-secondary, non-tertiary education
ISCED 5: first stage of tertiary education
ISCED 6: second stage of tertiary education

Q7. Which of the following best describes your current occupation?
Employed full-time
Employed part-time
Self-employed
Non-declared work, moonlighting
Unemployed (with or without subsidy)
Student
Retired
Long-term sick-leave/medically retired
Other

Q8. Which of the following options best describes how you think of yourself?
Gay or homosexual
Bisexual
Straight or heterosexual
Any other terms
I don't usually use a term

Q9. Before the present test, when did you last get tested for HIV?
(MM-YYYY)

Q10. Here are listed the main reasons for not participating in the study. Please quote those who most correspond to your situation (mult answers):
I don't have time
I don't want to answer questionnaires
I have some concerns regarding anonymity of my data
I don't wanted to firm the informed consent
The objectives of the project are not very clear to me
Other, please explain: .....

6.5 Refusal register

COBA-Cohort

Register of Users Declining to Participate

CBVCT service name:	City:

No.	Date (DD/MM/YYYY)	Gender	Year of birth (YYYY)	Born	In active employment	Year of last HIV test (YYYY)
1.	__/__/____	❑ Male ❑ Transgender	____	❑ Abroad ❑ Here	❑ Yes ❑ No	____
2.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
3.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
4.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
5.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
6.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
7.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
8.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
9.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
10.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
11.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
12.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
13.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
14.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
15.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
16.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
17.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
18.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
19.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____
20.	__/__/____	❑ M ❑ T	____	❑ Abroad ❑ Here	❑ Y ❑ N	____

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6.6 Baseline questionnaire

Baseline Questionnaire

Unique Personal Identifier of the participant: _____
Date of the visit: __ - __ - ____ *(DD-MM-YYYY)*

Hello,
You are about to fill-in your inclusion questionnaire that may be a bit longer than those you will fill-in during the study follow-up. These data are really important to improve HIV prevention in gays and men who have sex with men in general, so ***please answer all the questions, as spontaneously as possible, according to the following instructions****:*

- *If not specified, only one option can be chosen, so please tick just one box (❍),*
- *When "multiple answers" is mentioned, more than one box can be chosen (tick as many ❒ as needed),*

If you selected a framed option (❍ Yes), please have a look at the end of the raw and go directly to the question or section mentioned. If not, go to the question that follows.
Many thanks in advance for your contribution.

The Euro HIV Edat Study Team (WP5)

SOCIO-DEMOGRAPHICS

1 What is your gender?
- ❍ *Male*
- ❍ *Transgender/Transsexual*

2 When were you born?
__ - __ - ____ *(DD-MM-YYYY)*

3 Which country do you currently live in?
[Country] **3.b) Municipality or home town** *(Denmark only)*: _____

4 a) Were you born in the country you currently live in?
- ❍ *Yes* ***(---> Go to question 5)***
- ❍ *No*

b) If no, where were you born?
[Country]

c) When did you arrive in the country you currently live in?
____ *(YYYY)*

5 What is your highest education qualification? (International Standard Classification of Education, ISCED 1997) *
- ❍ *ISCED 1: no secondary qualification*
- ❍ *ISCED 2: lower secondary or second stage of basic education*
- ❍ *ISCED 3: (upper) secondary education*
- ❍ *ISCED 4: post-secondary, non-tertiary education*
- ❍ *ISCED 5: first stage of tertiary education*
- ❍ *ISCED 6: second stage of tertiary education*

6 Which of the following best describes your current occupation?
- ❍ *Employed full-time*
- ❍ *Employed part-time*
- ❍ *Self employed*
- ❍ *Non-declared work, moonlighting*
- ❍ *Unemployed (with or without subsidy)*
- ❍ *Student*
- ❍ *Retired*
- ❍ *Long-term sick-leave/medically retired*
- ❍ *Other:* _____

* Items must be adapted to each country's levels and diplomas (find more details at: http://www.uis.unesco.org/Library/Documents/isced97-en.pdf, page 19)

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7 In general, you would say your global health is:

- ❍ *Excellent*
- ❍ *Very good*
- ❍ *Good*
- ❍ *Fair*
- ❍ *Poor*

8 *Which of the following can your household afford? (Optional)* *(Multiple answers)*

- ❒ *To pay for a week's annual holiday away from home*
- ❒ *To eat meat, chicken or fish (or vegetarian equivalent) every second day*
- ❒ *To pay an unexpected, but necessary, expense of £500*
- ❒ *To keep your home adequately warm*
- ❒ *Afford none of these*

9 Which of the following options best describes how you think of yourself?

- ❍ *Gay or homosexual*
- ❍ *Bisexual*
- ❍ *Straight or heterosexual*
- ❍ *Any other term*
- ❍ *I don't usually use a term*

10 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?

- ❍ *All or almost all*
- ❍ *More than half*
- ❍ *Less than half*
- ❍ *Few*
- ❍ *None*

11 Have you ever been victim of verbal or physical abuse because of your sexual orientation or your gender identity? *(multiple answers)*

- ❒ *Yes at workplace/school*
- ❒ *Yes in the street/neighbourhood*
- ❒ *Yes, in my family*
- ❒ *No*

General health and HIV risk

12 *Are you affiliated to the public social security? (Optional)*

- ❍ *Yes*
- ❍ *No*

13 Is your family doctor/general practitioner aware of your sexual orientation?

- ❍ *Yes he is*
- ❍ *No he is not*
- ❍ *Do not know*
- ❍ *Do not have a family doctor/general practitioner*

14 In a scale from 1 to 10; 1 representing the lowest risk of getting infected by HIV and 10 representing the highest, what would you say about your risk of getting infected by HIV? *(circle the digit of your answer)*

1 -- 2 -- 3 -- 4 -- 5 -- 6 -- 7 -- 8 -- 9 -- 10

15 In your view, when have you been at-risk of HIV infection for the last time?

- ❍ *Within the last 24 hours*
- ❍ *Within the last week*
- ❍ *Within the last month*
- ❍ *Within the last 6 months*
- ❍ *Within the last 12 months*
- ❍ *More than 12 months ago*
- ❍ *I have never been at risk of HIV infection*

HIV TESTING

16 Before today, have you ever been tested for HIV?

- ❍ *No* ***(---> Go to question 22)***
- ❍ *Yes, once*
- ❍ *Yes between 2 to 5 times*
- ❍ *Yes, more than 5 times*

17 In general, you would say you get tested for HIV: *(multiple answers)*

- ❒ *Periodically (every 2 years, once a year, twice a year etc.)*
- ❒ *As part of routine health check-up*
- ❒ *When I feel that I have been at risk of HIV infection*
- ❒ *When I feel some physical symptoms*
- ❒ *When I have a new steady or regular partner*
- ❒ *When an opportunity arises (outreach testing)*
- ❒ *Other: _____*

18 In the last 12 months, have you been tested in [name of the checkpoint]?

- ❍ *Yes*
- ❍ *No*

19 a) Before today, when did you last have an HIV test?

__ - ____ (MM-YYYY)

b) Did you receive the result of that test?

- ❍ *Yes*
- ❍ *No*
- ❍ *I prefer not to answer*

c) Where did you go for that last HIV test?

- ❍ *In this centre*
- ❍ *In another community-based centre*
- ❍ *In a public clinical setting*
- ❍ *In a private clinical setting*
- ❍ *In a blood bank, while donating blood*
- ❍ *At home (using a self-testing kit)*
- ❍ *In a bar/pub, club, sauna or outdoors/van*
- ❍ *Elsewhere: _____*

20 Have you ever been forced or tricked into taking an HIV test when you did not want to take one? (optional)

- ❍ *Yes*
- ❍ *No*
- ❍ *I don't know*

21 Have you ever been tested for HIV with rapid tests?

- ❍ *No*
- ❍ *Yes, blood rapid test(s)*
- ❍ *Yes, oral rapid test(s)*
- ❍ *Yes both*

22 Within the last 5 years, have you ever been tested without accessing to the result? *(multiple answers)*

- ❒ *No*
- ❒ *Yes, because I did not have time to come back / I had to leave the town*
- ❒ *Yes, because of fear of the result*
- ❒ *Yes, because of a bad experience during the test (feeling judged, rejected)*
- ❒ *Yes, for other reasons*

23 How did you hear about [name of the checkpoint]? *(multiple answers)*

- ❒ *I've come here before*
- ❒ *A friend told me about this CBVCT*
- ❒ *I've seen this CBVCT in an informative material (poster flyers, condoms)*
- ❒ *I've found this CBVCT in Internet*
- ❒ *During outreach prevention activities (including outreach testing)*
- ❒ *Social media*
- ❒ *Apps*
- ❒ *Dating sites*
- ❒ *Reminder service*
- ❒ *Magazines*
- ❒ *Other :* _____

24 Why do you want an HIV test today? *(Multiple answers)*

- ❒ *Episode(s) of unprotected anal sex*
- ❒ *Episode(s) of unprotected oral sex*
- ❒ *Broken condom*
- ❒ *Episode(s) of unprotected sex with sex worker*
- ❒ *A previous/current partner recently told me he is HIV-positive*
- ❒ *Episode of sharing injection material*
- ❒ *My partner asked me to get tested*
- ❒ *Before dropping condom with my partner*
- ❒ *Regular control*
- ❒ *Only to know my health status*
- ❒ *Window period in the last test*
- ❒ *Clinical symptoms*
- ❒ *Other reason:* _____

25 In the future, you would say you intend to get tested for HIV: *(multiple answers)*

- ❒ *Periodically (every 2 years, once a year, twice a year etc.)*
- ❒ *As part of routine health check-up*
- ❒ *If I feel that I have been at risk of HIV infection*
- ❒ *If I feel some physical symptoms*
- ❒ *If I have a new steady or regular partner*
- ❒ *If an opportunity arises (outreach testing)*
- ❒ *Other :* _____

26 a) For each statement below, please tell me how much you agree or disagree about the effects of HIV testing on your health beliefs and sexual behaviour : *(tick one box per line)*

	Strongly disagree	*Disagree*	*Neither agree or disagree*	*Agree*	*Strongly Agree*
A negative HIV test means that my safe sex behaviours are working	❍	❍	❍	❍	❍
A negative HIV test encourages me to keep practicing safer sex	❍	❍	❍	❍	❍
A negative HIV test reinforces my safe sex behaviours	❍	❍	❍	❍	❍
After a negative HIV test, I feel lucky that I did not get HIV	❍	❍	❍	❍	❍
After a negative HIV test, I feel like I dodged a bullet	❍	❍	❍	❍	❍
After a negative HIV test, I feel that I do not need to protect myself	❍	❍	❍	❍	❍
After a negative HIV test, I feel like I should have protected sex every time	❍	❍	❍	❍	❍

b) The following statements are about your feelings as a result of receiving more than one negative HIV test result in your lifetime: *(tick one box per line)*

	Strongly disagree	*Disagree*	*Neither agree or disagree*	*Agree*	*Strongly Agree*
The more times I test negative for HIV, the less worried I am about contracting it	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel that I am immune against HIV	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel that it is difficult for me to become infected	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel invincible against the disease	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel like my luck will run out	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I think I take care of my health	❍	❍	❍	❍	❍

SEXUAL LIFE

27 How old were you the very first time you had anal intercourse with a man/boy?

__ *years old* *or* ❒ *I prefer not to answer*

28 In the previous 12 months, you had sex with: *(multiple answers)*

- ❒ *Men*
- ❒ *Women*
- ❒ *Transgenders/Transsexuals*
- ❍ *I didn't have sex* ***(---> Go to the section "Previous STIs/Hepatitis")***

29 In the previous 12 months, did you have condomless anal intercourse: *(multiple answers)*

- ❒ *With men*
- ❒ *With women*
- ❒ *With transgenders/Transsexuals*
- ❒ *With HIV-positive men*
- ❒ *With injecting drug users*
- ❒ *With sex workers (even without paying)*
- ❒ *During trios/Sex in group*
- ❒ *I did not have condomless anal sex in the previous 12 months*

30 In the previous 12 months, have you been given money, goods or drugs by a man to have sex with him?

- ❍ *Yes*
- ❍ *No*
- ❍ *I prefer not to answer*

31 a) In the previous 12 months, did you have sex under the influence of alcohol or drugs?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 32)***
- ❍ *I prefer not to answer*

b) If yes, in the previous 12 months, how often did you have sex under the influence of *(tick one box per line)*:

	Never	*Rarely*	*Sometimes*	*Almost Always*	*Always*
Alcohol	❍	❍	❍	❍	❍
Cannabis	❍	❍	❍	❍	❍
Cocaine	❍	❍	❍	❍	❍
Crack	❍	❍	❍	❍	❍
Ecstasy / MDMA	❍	❍	❍	❍	❍
Poppers	❍	❍	❍	❍	❍
Viagra/Cialis/similar	❍	❍	❍	❍	❍
Amphetamines (Speed)	❍	❍	❍	❍	❍
LSD	❍	❍	❍	❍	❍
GHB	❍	❍	❍	❍	❍
Ketamine	❍	❍	❍	❍	❍
Heroin	❍	❍	❍	❍	❍
Methadone	❍	❍	❍	❍	❍
Mephedrone	❍	❍	❍	❍	❍
Crystal Meth (ice)	❍	❍	❍	❍	❍
Other(s): _____	❍	❍	❍	❍	❍

32 a) Have you ever injected any drug? *(multiple answers)*

- ❒ *No, never* ***(---> Go to the subsection "Steady male partner")***
- ❒ *Yes, related to sex*
- ❒ *Yes, but not related to sex*

b) If yes, when was the last time you injected drugs?

__ - ____ *(MM-YYYY)*

Steady male partner

33 Currently, do you have a steady male partner, i.e. that you consider as your main/principal partner?

- ❍ *Yes*
- ❍ *No* ***(---> Go to the subsection "Casual Male Partners")***

34 When did this relation start?

__ - ____ *(MM-YYYY)*

35 a) What is the HIV status of this steady partner?

- ❍ *HIV positive*
- ❍ *HIV negative* ***(---> Go to question 36)***
- ❍ *I don't know* ***(---> Go to question 36)***

b) If positive: is your steady partner under treatment?

- ❍ *Yes*
- ❍ *No*
- ❍ *I don't know*

c) His last viral load was:

- ❍ *Detectable*
- ❍ *Undetectable*
- ❍ *I Don't know*

36 In the previous 12 months, how often were condoms used for anal intercourse (insertive or receptive) with this steady partner?

- ❍ *Always*
- ❍ *Almost always*
- ❍ *Sometimes*
- ❍ *Rarely*
- ❍ *Never*
- ❍ *Did not practice anal sex with this partner*

37 During the last time you had anal intercourse with your steady partner, did you use a condom?

- ❍ *Yes*
- ❍ *No*

38 When was this last time you had anal intercourse with your steady partner?

__ - ____ *(MM-YYYY)*

39 In the previous 12 months, did you have sex with other partners in the meantime you were with your steady partner?

- ❍ *Yes*
- ❍ *No*

Casual male partners

40 How many different casual male partners have you had sex with in the previous 12 months?

____ *(Approximation if you don't remember exactly)* ***If zero, tick this box ❒ and go to the section "STIs/Hepatitis"***

41 During the same period, did you talk about HIV status with these casual partners?

- ❍ *Yes, with all or almost all of them*
- ❍ *Yes, with more than half of them*
- ❍ *Yes, with less than half of them*
- ❍ *Yes, with few of them*
- ❍ *No, never*

42 Were some of these casual partners HIV+? *(multiple answers)*

- ❒ *Yes, with undetectable viral load*
- ❒ *Yes, with detectable viral load*
- ❒ *Yes, without knowing his/their viral load level(s)*
- ❒ *I don't know*
- ❒ *No*

43 In the previous 12 months, where did you meet your casual male partners? *(Multiple answers)*

- ❒ *Gay disco or bars*
- ❒ *Saunas*
- ❒ *Backroom, sex shop*
- ❒ *Sex clubs*
- ❒ *Internet*
- ❒ *Smartphone apps*
- ❒ *Outdoor gay venues*
- ❒ *Street*
- ❒ *Gym*
- ❒ *Friends*
- ❒ *Advert*
- ❒ *Other:* _____

44 In the previous 12 months, how often condoms were used for anal intercourse (insertive or receptive) with your casual male partners?

- ❍ *Always*
- ❍ *Almost always*
- ❍ *Sometimes*
- ❍ *Rarely*
- ❍ *Never*
- ❍ *Did not practice anal sex with casual partners in this period*

45 When did you last have anal intercourse with a casual partner?

__ -____ *(MM-YYYY)*

46 Have you had sex with him before (on a different occasion)?

- ❍ *No*
- ❍ *Yes, once*
- ❍ *Yes, more than once*

47 Did you talk about your HIV statuses?

- ❍ *Yes*
- ❍ *No*

48 a) This partner was:

- ❍ *HIV positive*
- ❍ *HIV negative* ***(---> Go to question 49)***
- ❍ *I Don't know/I don't remember* ***(---> Go to question 49)***

b) <u>If positive</u>: was this casual partner under treatment?

- ❍ *Yes*
- ❍ *No*
- ❍ *I don't know*

c) His last viral load was:

- ❍ *Detectable*
- ❍ *Undetectable*
- ❍ *I Don't know*

49 Did you use a condom during this last time you had anal intercourse with a casual partner?

- ❍ *Yes*
- ❍ *No*

PREVIOUS STIs, HEPATITIS

50 a) Have you ever had any STI or hepatitis?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 51)***

b) If yes, have you had one in the previous 12 months?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 51)***

c) If yes, which one(s) in the previous 12 months? *(multiple answers)*

- ❒ *Syphilis*
- ❒ *Gonorrhoea*
- ❒ *Condilomas or genital warts*
- ❒ *Hepatitis A*
- ❒ *Chlamydia*
- ❒ *Human papilloma virus (HPV) infection*
- ❒ *Hepatitis B*
- ❒ *Genital herpes*
- ❒ *Other(s):* _____
- ❒ *Hepatitis C*
- ❒ *Linfogranuloma Venereal (LGV)*

51 In general, you would say that you get tested for STIs or Hepatitis? *(Multiple answers)*

- ❒ *Periodically (every 2 years, once a year, twice a year etc.)*
- ❒ *As part of routine health check-up*
- ❒ *When I feel that I have been at risk of STIs infection*
- ❒ *When I feel some physical symptoms*
- ❒ *When I have a new steady or regular partner*
- ❒ *When an opportunity arises (outreach testing)*
- ❒ *Other :* _____
- ❍ *I have never been tested for STIs or Hepatitis* ***(---> Go to the next section)***

52 In the previous 12 months, have you been tested for STIs or Hepatitis?

- ❍ *Yes*
- ❍ *No*

POST- AND PRE-EXPOSURE PROPHYLAXIS

53 a) Have you ever heard about PEP, an antiretroviral treatment that can be taken immediately after a possible HIV exposure in order to prevent HIV infection?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 54)***

b) If yes, have you ever used PEP?

- ❍ *Yes, within the last 12 months*
- ❍ *Yes, more than 12 months ago*
- ❍ *No*

54 a) Have you ever heard about PrEP, an antiretroviral treatment that can be taken before a possible HIV exposure in order to prevent HIV infection?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 55)***

b) If yes, have you ever used PrEP?

- ❍ *Yes, within the last 12 months*
- ❍ *Yes, more than 12 months ago*
- ❍ *No*

55 If available, would you consider taking PrEP to prevent HIV infection?

- ❍ *Yes*
- ❍ *Perhaps*
- ❍ *I don't know*
- ❍ *No*

VISIT'S CHARACTERISTICS
(To be filled by the counsellor)

1 **Name of the checkpoint**

- ❍ *AF Checkpoint CPH (Denmark)*
- ❍ *Aides (France), Paris 2*
- ❍ *Aides (France), Lyon*
- ❍ *Aides (France), Nice*
- ❍ *Aides (France), Lille*
- ❍ *Ath Checkpoint (Greece)*
- ❍ *AF Checkpoint AAR (Denmark)*
- ❍ *Checkpoint LX (Portugal)*
- ❍ *Legebitra (Slovenia)*
- ❍ *AF Checkpoint AAR (Denmark)*
- ❍ *Aides (France), Marseille Nord*
- ❍ *Aides (France), Montpellier*
- ❍ *Aides (France), Paris 8*
- ❍ *Aides (France), Paris 12*
- ❍ *Aides (France), Paris 19*
- ❍ *Aides (France), Marseille Sud*
- ❍ *Thess Checkpoint (Greece)*

2 **Name/number of the counsellor (i.e. the one who performed almost all the testing procedure and counselling)**

(Text???)

3 **Pre-test counselling duration**

- ❍ *Yes, < 5 min*
- ❍ *Yes, 5 to 10 min*
- ❍ *Yes, 15 to 30 min*
- ❍ *Yes, > 30 min*
- ❍ *No pre-test counselling*

4 **Post-test counselling**

- ❍ *Yes, < 5 min*
- ❍ *Yes, 5 to 10 min*
- ❍ *Yes, 15 to 30 min*
- ❍ *Yes, > 30 min*
- ❍ *No pre-test counselling*

4x **Did the participant accept to be reminded?**

- ❍ *Yes, by mail*
- ❍ *Yes, by SMS*
- ❍ *Yes, other: : _____*
- ❍ *No*

HIV Test

5 **a) Date of the test / specimen collection:**

__ - __ - ____ *(DD-MM-YYYY)*

b) Type of HIV test used

- ❍ *Blood rapid test*
- ❍ *Oral rapid test*
- ❍ *Conventional blood test (Elisa)*

c) HIV test result

- ❍ *Reactive*
- ❍ *Non Reactive*

d) Did the client receive the HIV test result?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 6)*
- ❍ *Don't know* *(---> Go to question 6)*

e) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

6 **a) Confirmatory HIV test performed?**

- ❍ *Yes*
- ❍ *No* *(---> Go to question 7)*
- ❍ *Don't know* *(---> Go to question 7)*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

c) Confirmatory HIV test result

- ❍ *Positive*
- ❍ *Negative*
- ❍ *Inconclusive*

d) Did the client receive the HIV confirmatory test result?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 7)*
- ❍ *Don't know* *(---> Go to question 7)*

e) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

7 **a) Patient linked to healthcare system?**

- ❍ *Yes*
- ❍ *No* *(---> Go to section syphilis)*
- ❍ *Don't know* *(---> Go to section syphilis)*

b) Date of linkage to care

__ - __ - ____ *(DD-MM-YYYY)*

c) First CD4 cell count

Syphilis test (if applicable)

8 **a) Previous syphilis diagnosis?**

- ❍ *Yes*
- ❍ *No* — *(---> Go to question 9)*
- ❍ *Don't know* — *(---> Go to question 9)*

b) Indicate the date (last diagnosis)

__ - __ - ____ *(DD-MM-YYYY)*

9 **a) Syphilis test performed?**

- ❍ *Yes*
- ❍ *No* — *(---> Go to the "HCV section")*
- ❍ *Don't know* — *(---> Go to the "HCV section")*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

10 **a) Type of syphilis test used**

- ❍ *Rapid test*
- ❍ *Conventional test*

b) Test result (rapid or conventional)

- ❍ *Reactive*
- ❍ *Non Reactive* — *(---> Go to question 11)*

c) Diagnosis (confirmation) test performed?

- ❍ *Yes*
- ❍ *No* — *(---> Go to question 11)*
- ❍ *Don't know* — *(---> Go to question 11)*

d) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

11 **Syphilis diagnosis**

- ❍ *Active infection*
- ❍ *Serological scar (old or cured infection)*
- ❍ *Not known*

HCV test (if applicable)

12 **a) Previous HCV diagnosis?**

- ❍ *Yes*
- ❍ *No* — *(---> Go to question 13)*
- ❍ *Don't know* — *(---> Go to question 13)*

b) Indicate the date (last diagnosis)

__ - __ - ____ *(DD-MM-YYYY)*

13 **a) HCV test performed?**

- ❍ *Yes*
- ❍ *No* — *(---> Go to the section "Hepatitis A and B vaccination")*
- ❍ *Don't know* — *(---> Go to the section "Hepatitis A and B vaccination")*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

14 **a) Type of HCV test used**

- ❍ *Rapid oral test*
- ❍ *Rapid blood test*
- ❍ *Conventional test* — *(---> Go to question 15)*

b) Rapid HCV test result

- ❍ *Reactive*
- ❍ *Non Reactive* — *(---> Go to question 15)*

c) HCV RNA performed?

- ❍ *Yes*
- ❍ *No* — *(---> Go to question 15)*
- ❍ *Don't know* — *(---> Go to question 15)*

d) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

15 **HCV diagnosis**

- ❍ *Active infection*
- ❍ *Serological scar (old or cured infection)*
- ❍ *Not known*

Hepatitis A and B vaccination

16 **Vaccination for Hepatitis A (with all required doses)?**

- ❍ *Yes*
- ❍ *No*
- ❍ *Don't know*

17 **Vaccination for Hepatitis B (with all required doses)?**

- ❍ *Yes*
- ❍ *No*
- ❍ *Don't know*

6.7 Follow-up questionnaire

Follow-up Questionnaire

Unique Personal Identifier of the participant: _____
Date of the visit: __ - __ - ____ *(DD-MM-YYYY)*

Hello,

You are about to fill-in your follow-up questionnaire that is much shorter than the one you filled-in during your inclusion visit. These data are really important to improve HIV prevention in gays and men who have sex with men in general, so ***please answer all the questions, as spontaneously as possible, according to the following instructions****:*

- *If not specified, only one option can be chosen, so please tick just one box (❍),*
- *When "multiple answers" is mentioned, more than one box can be chosen (tick as many ❒ as needed),*

If you selected a framed option (❍ Yes), please have a look at the end of the raw and go directly to the question or section mentioned. If not, go to the question that follows.

Many thanks in advance for your contribution.

The Euro HIV Edat Study Team (WP5)

General health, abuse and HIV risk

1 In general, you would say your global health is:

- ❍ *Excellent*
- ❍ *Very good*
- ❍ *Good*
- ❍ *Fair*
- ❍ *Poor*

2 Since the last visit, have you been victim of verbal or physical abuse because of your sexual orientation or your gender identity? *(Multiple answers)*

- ❒ *Yes at workplace/school*
- ❒ *Yes in the street/neighbourhood*
- ❒ *Yes, in my family*
- ❒ *No*

3 In a scale from 1 to 10; 1 representing the lowest risk of getting infected by HIV and 10 representing the highest, what would you say about your risk of getting infected by HIV? *(Circle the digit of your answer)*

1 -- 2 -- 3 -- 4 -- 5 -- 6 -- 7 -- 8 -- 9 -- 10

4 In your view, when have you been at-risk of HIV infection for the last time?

- ❍ *Within the last 24 hours*
- ❍ *Within the last week*
- ❍ *Within the last month*
- ❍ *Within the last 6 months*
- ❍ *Within the last 12 months*
- ❍ *More than 12 months ago*
- ❍ *I have never been at risk of HIV infection*

HIV TESTING

5 a) Since your last visit in [name of the checkpoint], have you been tested elsewhere for HIV?

- ❍ *Yes*
- ❍ *No* ***(if No ---> Go to question 6)***

b) If yes, How many times?

__ *times*

c) Where was your last HIV test performed?

- ❍ *In another community-based centre*
- ❍ *In a public clinical setting*
- ❍ *In a private clinical setting*
- ❍ *In a blood bank, while donating blood*
- ❍ *At home (using a self-testing kit)*
- ❍ *In a bar/pub, club, sauna or outdoors/van*
- ❍ *Elsewhere:* _____

6 Since the last visit, have you been contacted by [name of the checkpoint] (call, mail, SMS)?

- ❍ *Yes, within the last week*
- ❍ *Yes, within the last month*
- ❍ *Yes, more than one months ago*
- ❍ *No*

7 In the future, you would say you intend to get tested for HIV: *(Multiple answers)*

- ❒ *Periodically (every 2 years, once a year, twice a year etc.)*
- ❒ *As part of routine health check-up*
- ❒ *If I feel that I have been at risk of HIV infection*
- ❒ *If I feel some physical symptoms*
- ❒ *If I have a new steady or regular partner*
- ❒ *If an opportunity arises (outreach testing)*
- ❒ *Other:* _____

8 a) For each statement below, please tell me how much you agree or disagree about the effects of HIV testing on your health beliefs and sexual behaviour : *(tick one box per line)*	*Strongly disagree*	*Disagree*	*Neither agree or disagree*	*Agree*	*Strongly Agree*
A negative HIV test means that my safe sex behaviours are working	❍	❍	❍	❍	❍
A negative HIV test encourages me to keep practicing safer sex	❍	❍	❍	❍	❍
A negative HIV test reinforces my safe sex behaviours	❍	❍	❍	❍	❍
After a negative HIV test, I feel lucky that I did not get HIV	❍	❍	❍	❍	❍
After a negative HIV test, I feel like I dodged a bullet	❍	❍	❍	❍	❍
After a negative HIV test, I feel that I do not need to protect myself	❍	❍	❍	❍	❍
After a negative HIV test, I feel like I should have protected sex every time	❍	❍	❍	❍	❍

b) The following statements are about your feelings as a result of receiving more than one negative HIV test result in your lifetime: *(tick one box per line)*	*Strongly disagree*	*Disagree*	*Neither agree or disagree*	*Agree*	*Strongly Agree*
The more times I test negative for HIV, the less worried I am about contracting it	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel that I am immune against HIV	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel that it is difficult for me to become infected	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel invincible against the disease	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I feel like my luck will run out	❍	❍	❍	❍	❍
The more times I test negative for HIV, the more I think I take care of my health	❍	❍	❍	❍	❍

SEXUAL LIFE

9 Since the last visit, you had sex with: *(Multiple answers)*

- ❒ *Men*
- ❒ *Women*
- ❒ *Transgenders/Transsexuals*
- ❍ *I didn't have sex* ***(---> Go to the section "Previous STIs/Hepatitis")***

10 Since the last visit, did you have condomless anal intercourse: *(Multiple answers)*

- ❒ *With men*
- ❒ *With women*
- ❒ *With transgenders/Transsexuals*
- ❒ *With HIV-positive men*
- ❒ *With injecting drug users*
- ❒ *With sex workers (even without paying)*
- ❒ *During trios/Sex in group*
- ❒ *I did not have condomless anal sex since the last visit*

11 Since the last visit, have you been given money, goods or drugs by a man to have sex with him?

- ❍ *Yes*
- ❍ *No*
- ❍ *I prefer not to answer*

12 a) Since the last visit, did you have sex under the influence of alcohol or drugs?

- ❍ *Yes*
- ❍ *No* ***(If No ---> Go to question 13)***
- ❍ *I prefer not to answer*

b) If yes: since the last visit, how often did you have sex under the influence of *(Tick one box per line)*:

	Never	*Rarely*	*Sometimes*	*Almost Always*	*Always*
Alcohol	❍	❍	❍	❍	❍
Cannabis	❍	❍	❍	❍	❍
Cocaine	❍	❍	❍	❍	❍
Crack	❍	❍	❍	❍	❍
Ecstasy / MDMA	❍	❍	❍	❍	❍
Poppers	❍	❍	❍	❍	❍
Viagra/Cialis/similar	❍	❍	❍	❍	❍
Amphetamines (Speed)	❍	❍	❍	❍	❍
LSD	❍	❍	❍	❍	❍
GHB	❍	❍	❍	❍	❍
Ketamine	❍	❍	❍	❍	❍
Heroin	❍	❍	❍	❍	❍
Methadone	❍	❍	❍	❍	❍
Mephedrone	❍	❍	❍	❍	❍
Crystal Meth (ice)	❍	❍	❍	❍	❍
Other(s): _____	❍	❍	❍	❍	❍

13 Since the last visit, have you injected any drug? *(Multiple answers)*

- ❒ *No, never*
- ❒ *Yes, related to sex*
- ❒ *Yes, but not related to sex*

Steady male partner

14 Currently, do you have a steady male partner, i.e. that you consider as your main/principal partner?

- ❍ *Yes*
- ❍ *No* ***(if No ---> Go to section "Casual Male Partners")***

15 When did this relation start?

__ -____ *(MM-YYYY)*

16 a) What is the HIV status of this steady partner?

- ❍ *HIV positive*
- ❍ *HIV negative* ***(---> Go to question 17)***
- ❍ *I don't know* ***(---> Go to question 17)***

b) If positive: is your steady partner under treatment?

- ❍ *Yes*
- ❍ *No*
- ❍ *I don't know*

c) His last viral load was:

- ❍ *Detectable*
- ❍ *Undetectable*
- ❍ *I Don't know*

17 Since the last visit, how often were condoms used for anal intercourse (insertive or receptive) with this steady partner?

- ❍ *Always*
- ❍ *Almost always*
- ❍ *Sometimes*
- ❍ *Rarely*
- ❍ *Never*
- ❍ *Did not practice anal sex with this partner*

18 During the last time you had anal intercourse with your steady partner, did you use a condom?

- ❍ *Yes*
- ❍ *No*

19 When was this last time you had anal intercourse with your steady partner?

__ -____ *(MM-YYYY)*

20 Since the last visit, did you have sex with other partners in the meantime you were with your steady partner?

- ❍ *Yes*
- ❍ *No*

Casual male partners

21 How many different casual male partners have you had sex with since the last visit?

___ *(Approximation if you don't remember exactly)* ***If zero, tick this box ❒ and go to the section "STIs/Hepatitis"***

22 During the same period, did you talk about HIV status with these casual partners?

- ❍ *Yes, with all or almost all of them*
- ❍ *Yes, with more than half of them*
- ❍ *Yes, with less than half of them*
- ❍ *Yes, with few of them*
- ❍ *No, never*

23 Were some of these casual partners HIV+? *(Multiple answers)*

- ❒ *Yes, with undetectable viral load*
- ❒ *Yes, with detectable viral load*
- ❒ *Yes, without knowing his/their viral load level(s)*
- ❒ *I don't know*
- ❒ *No*

24 Since the last visit, where did you meet your casual male partners? *(Multiple answers)*

- ❒ *Gay disco or bars*
- ❒ *Saunas*
- ❒ *Backroom, sex shop*
- ❒ *Sex clubs*
- ❒ *Internet*
- ❒ *Smartphone apps*
- ❒ *Outdoor gay venues*
- ❒ *Street*
- ❒ *Gym*
- ❒ *Friends*
- ❒ *Advert*
- ❒ *Other:* _____

25 Since the last visit, how often condoms were used for anal intercourse (insertive or receptive) with your casual male partners?

- ❍ *Always*
- ❍ *Almost always*
- ❍ *Sometimes*
- ❍ *Rarely*
- ❍ *Never*
- ❍ *Did not practice anal sex with casual partners in this period*

26 When did you last have anal intercourse with a casual partner?

__ - ____ *(MM-YYYY)*

27 Have you had sex with him before (on a different occasion)?

- ❍ *No*
- ❍ *Yes, once*
- ❍ *Yes, more than once*

28 Did you talk about your HIV statuses?

- ❍ *Yes*
- ❍ *No*

29 a) This partner was:

- ❍ *HIV positive*
- ❍ *HIV negative* ***(---> Go to question 30)***
- ❍ *I Don't know/I don't remember* ***(---> Go to question 30)***

b) <u>If positive</u>: was this casual partner under treatment?

- ❍ *Yes*
- ❍ *No*
- ❍ *I don't know*

c) His last viral load was:

- ❍ *Detectable*
- ❍ *Undetectable*
- ❍ *I Don't know*

30 Did you use a condom during this last time you had anal intercourse with a casual partner?

- ❍ *Yes*
- ❍ *No*

STIs, HEPATITIS

31 a) Since your last visit, have you had any STI or hepatitis?

- ❍ *Yes*
- ❍ *No* ***(---> Go to question 32)***

b) If yes, which one(s) since the last visit? *(Multiple answers)*

- ❒ *Syphilis*
- ❒ *Hepatitis A*
- ❒ *Hepatitis B*
- ❒ *Hepatitis C*
- ❒ *Gonorrhoea*
- ❒ *Chlamydia*
- ❒ *Genital herpes*
- ❒ *Linfogranuloma Venereal (LGV)*
- ❒ *Condilomas or genital warts*
- ❒ *Human papilloma virus (HPV) infection*
- ❒ *Other(s):* _____

32 Since the last visit, have you been tested for STIs or Hepatitis?

- ❍ *Yes*
- ❍ *No*

POST- AND PRE-EXPOSURE PROPHYLAXIS

33 Since the last visit, have you used PEP?

- ❍ *Yes*
- ❍ *No*
- ❍ *I prefer not to answer*

34 Since the last visit, have you used PrEP?

- ❍ *Yes*
- ❍ *No*
- ❍ *I prefer not to answer*

35 If available, would you consider taking PrEP to prevent HIV infection?

- ❍ *Yes*
- ❍ *Perhaps*
- ❍ *I don't know*
- ❍ *No*

VISIT'S CHARACTERISTICS
(To be filled by the counsellor)

1 Name of the checkpoint

- ❍ *AF Checkpoint CPH (Denmark)*
- ❍ *Aides (France), Paris 2*
- ❍ *Aides (France), Lyon*
- ❍ *Aides (France), Nice*
- ❍ *Aides (France), Lille*
- ❍ *Ath Checkpoint (Greece)*
- ❍ *AF Checkpoint AAR (Denmark)*
- ❍ *Checkpoint LX (Portugal)*
- ❍ *Legebitra (Slovenia)*
- ❍ *AF Checkpoint AAR (Denmark)*
- ❍ *Aides (France), Marseille Nord*
- ❍ *Aides (France), Montpellier*
- ❍ *Aides (France), Paris 8*
- ❍ *Aides (France), Paris 12*
- ❍ *Aides (France), Paris 19*
- ❍ *Aides (France), Marseille Sud*
- ❍ *Thess Checkpoint (Greece)*

2 Name/number of the counsellor (i.e. the one who performed almost all the testing procedure and counselling)

(Text???)

3 Pre-test counselling duration

- ❍ *Yes, < 5 min*
- ❍ *Yes, 5 to 10 min*
- ❍ *Yes, 15 to 30 min*
- ❍ *Yes, > 30 min*
- ❍ *No pre-test counselling*

4 Post-test counselling

- ❍ *Yes, < 5 min*
- ❍ *Yes, 5 to 10 min*
- ❍ *Yes, 15 to 30 min*
- ❍ *Yes, > 30 min*
- ❍ *No pre-test counselling*

4x Did the participant accept to be reminded?

- ❍ *Yes, by mail*
- ❍ *Yes, by SMS*
- ❍ *Yes, other: : _____*
- ❍ *No*

HIV Test

5 a) Date of the test / specimen collection:

__ - __ - ____ *(DD-MM-YYYY)*

b) Type of HIV test used

- ❍ *Blood rapid test*
- ❍ *Oral rapid test*
- ❍ *Conventional blood test (Elisa)*

c) HIV test result

- ❍ *Reactive*
- ❍ *Non Reactive*

d) Did the client receive the HIV test result?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 6)*
- ❍ *Don't know* *(---> Go to question 6)*

e) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

6 a) Confirmatory HIV test performed?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 7)*
- ❍ *Don't know* *(---> Go to question 7)*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

c) Confirmatory HIV test result

- ❍ *Positive*
- ❍ *Negative*
- ❍ *Inconclusive*

d) Did the client receive the HIV confirmatory test result?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 7)*
- ❍ *Don't know* *(---> Go to question 7)*

e) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

7 a) Patient linked to healthcare system?

- ❍ *Yes*
- ❍ *No* *(---> Go to section syphilis)*
- ❍ *Don't know* *(---> Go to section syphilis)*

b) Date of linkage to care

__ - __ - ____ *(DD-MM-YYYY)*

c) First CD4 cell count

Syphilis test (if applicable)

8 **a) Previous syphilis diagnosis?**

- ❍ *Yes*
- ❍ *No* *(---> Go to question 9)*
- ❍ *Don't know* *(---> Go to question 9)*

b) Indicate the date (last diagnosis)

__ - __ - ____ *(DD-MM-YYYY)*

9 **a) Syphilis test performed?**

- ❍ *Yes*
- ❍ *No* *(---> Go to the "HCV section")*
- ❍ *Don't know* *(---> Go to the "HCV section")*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

10 **a) Type of syphilis test used**

- ❍ *Rapid test*
- ❍ *Conventional test*

b) Test result (rapid or conventional)

- ❍ *Reactive*
- ❍ *Non Reactive* *(---> Go to question 11)*

c) Diagnosis (confirmation) test performed?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 11)*
- ❍ *Don't know* *(---> Go to question 11)*

d) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

11 **Syphilis diagnosis**

- ❍ *Active infection*
- ❍ *Serological scar (old or cured infection)*
- ❍ *Not known*

HCV test (if applicable)

12 **a) Previous HCV diagnosis?**

- ❍ *Yes*
- ❍ *No* *(---> Go to question 13)*
- ❍ *Don't know* *(---> Go to question 13)*

b) Indicate the date (last diagnosis)

__ - __ - ____ *(DD-MM-YYYY)*

13 **a) HCV test performed?**

- ❍ *Yes*
- ❍ *No* *(---> Go to the section "Hepatitis A and B vaccination")*
- ❍ *Don't know* *(---> Go to the section "Hepatitis A and B vaccination")*

b) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

14 **a) Type of HCV test used**

- ❍ *Rapid oral test*
- ❍ *Rapid blood test*
- ❍ *Conventional test* *(---> Go to question 15)*

b) Rapid HCV test result

- ❍ *Reactive*
- ❍ *Non Reactive* *(---> Go to question 15)*

c) HCV RNA performed?

- ❍ *Yes*
- ❍ *No* *(---> Go to question 15)*
- ❍ *Don't know* *(---> Go to question 15)*

d) Indicate the date

__ - __ - ____ *(DD-MM-YYYY)*

15 **HCV diagnosis**

- ❍ *Active infection*
- ❍ *Serological scar (old or cured infection)*
- ❍ *Not known*

Hepatitis A and B vaccination

16 **Vaccination for Hepatitis A (with all required doses)?**

- ❍ *Yes*
- ❍ *No*
- ❍ *Don't know*

17 **Vaccination for Hepatitis B (with all required doses)?**

- ❍ *Yes*
- ❍ *No*
- ❍ *Don't know*

6.8 Data entry tool, tutorial

WP5 Data Entry Tool – Tutorial

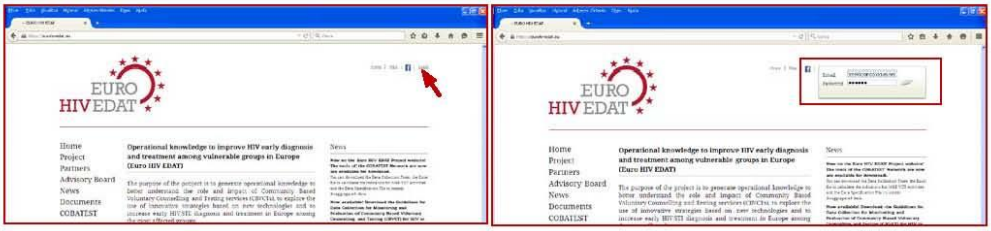
Version of November 16th, 2015

(Updated on January 21st, 2016)

If something is missing or incorrect, and in case of any problem regarding the data entry tool, please contact Nicolas Lorente at +34 93 497 89 48, or send an email to nlorente@iconcologia.net, copying in with Conrad Rovira (crovira@a16.com).

The Euro HIV EDAT website

The Euro HIV EDAT Website is available at https://eurohivedat.eu/. To access to the private area of the website, click on "login" and then enter your email address and password:



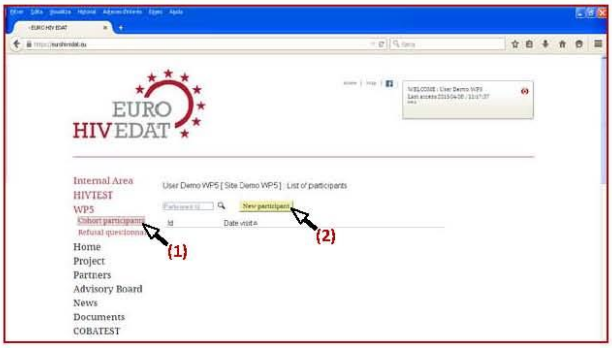
On the left menu you can access to the private zones, including "WP5" for the cohort data entry tool:

Data entry tool

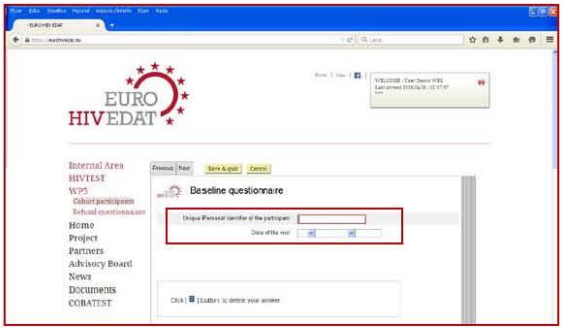
Click on "WP5" to develop the WP5 tool options ("Cohort participants" and "Refusal questionnaires"):

I. New Participant, baseline questionnaire

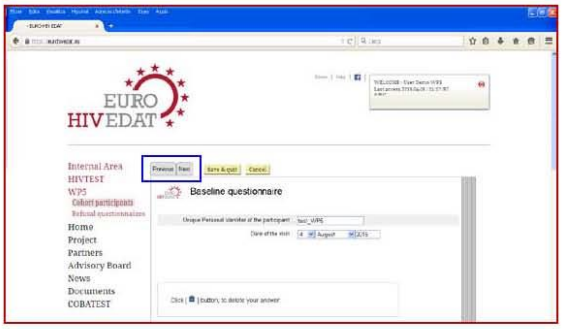
To add a new participant in the cohort database, click on "Cohort participants" (1) and then on "New Participant" (2):



You are now able to enter the data of the pen-and-paper questionnaire, starting by 2 mandatory elements: the participant identifier and the date of the baseline visit:



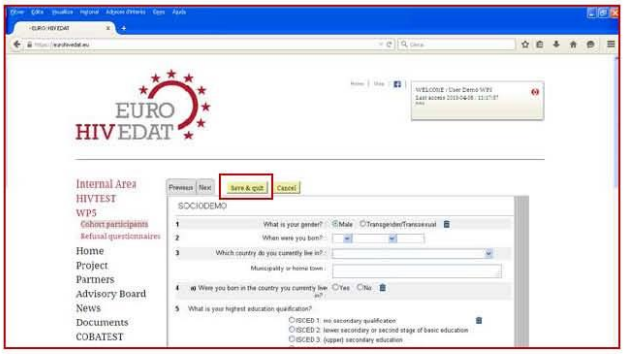
Then you can click on "Next" to continue entering data (this button is also available at the bottom of the page). If you missed or need to correct something, you can click on "Previous" to go back to the previous page.



NB: the text boxes allowing to add more information (ex: "Yes, other:.....") should be filled in English.

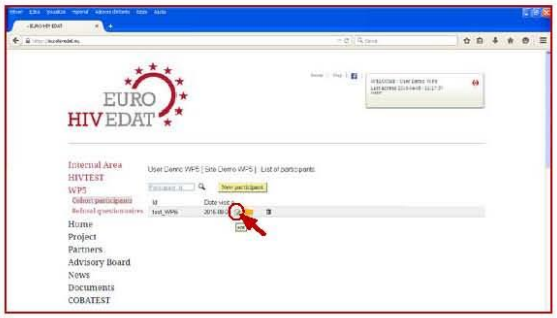
II. Save, modify or delete a questionnaire

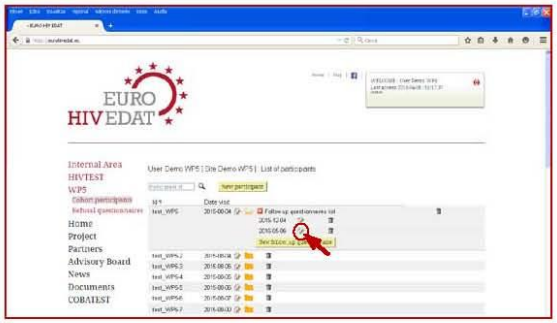
The tool is supposed to save each page of the questionnaire when you click on "Next". However, we hardly recommend using the "Save and quit" button in order to save all entered data, even if data entry is not finished.



NB: the "Cancel" button goes back to the list of the questionnaires and do not save anything.

At any time, you can edit and modify a questionnaire. To do so, click on the button of the corresponding questionnaire (baseline, follow-up or refusal):

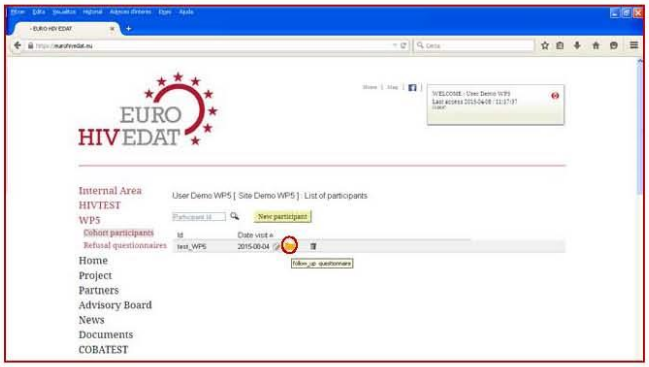




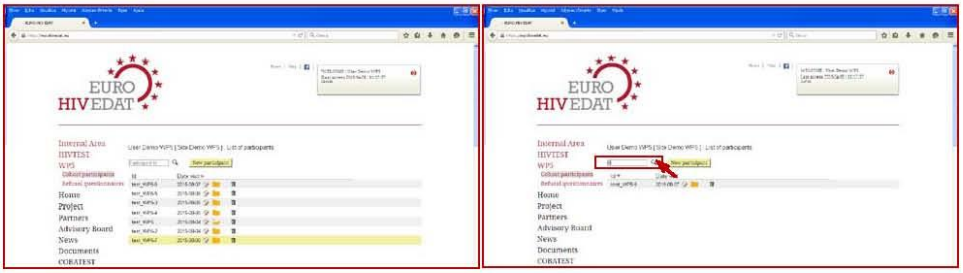
To delete a questionnaire, click on the button, please note that if you delete a baseline questionnaire of a participant having follow-up questionnaires, you will also delete all his follow-up questionnaires.

III. Follow-up visit: enter a new follow-up questionnaire

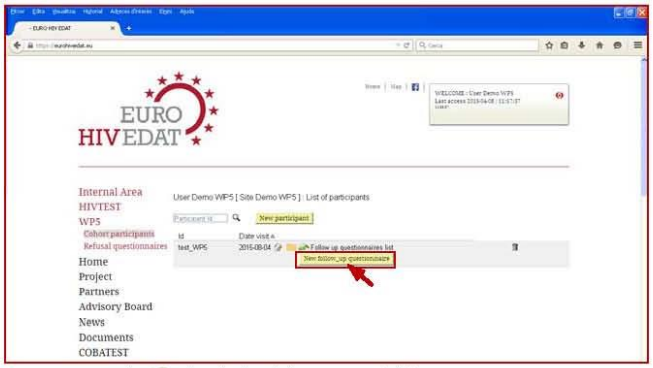
To enter a follow-up questionnaire, click on the button of the concerned participant:



If the participants list contains many items and pages, you can find a participant by using the search box:

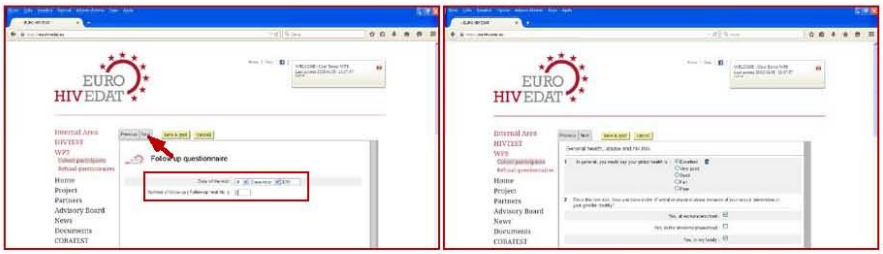


To start entering the new follow-up questionnaire click on the corresponding button:

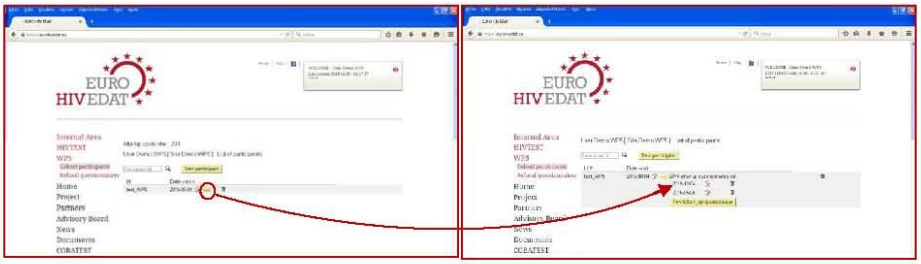


NB: *the close the list of the participant's follow-up questionnaires.*

You can then entry the date of the visit and the number of follow-up visit, and access to the rest of the questionnaire with the next button:

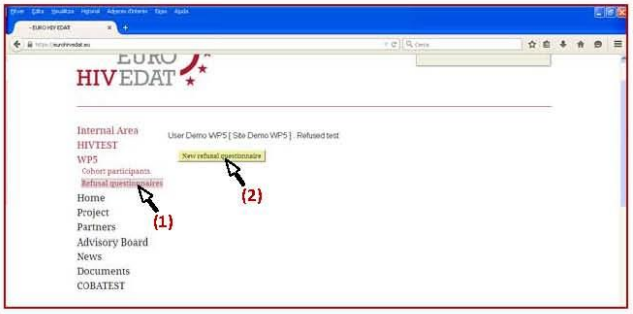


Once a follow-up questionnaire has been entered and saved, the folder button ( ) changes to , showing that the participant has at least one follow-up questionnaire.



IV. Refusal questionnaire

On the left menu, click on "Refusal questionnaires" (1) and then on "New refusal questionnaire" (2):



As the other questionnaires, the refusal questionnaires can be edited ( ) or deleted ( ).

PLEASE NOTE that although a participant does not want to answer the refusal questionnaire, a new refusal questionnaire must be saved, with the date of the visit as a unique data (blank questionnaire).

6.9 Tablet-based questionnaires, tutorial

COBA-Cohort
Tablet-based Questionnaire

Tutorial

November 21st, 2016

(Updated on April 6th 2017)

If something is missing or incorrect, or in case of any problem regarding the tablet-based questionnaire, please contact COBA-Cohort's coordinator (Nicolas Lorente at +34 93 497 89 48, or send an email to nlorente@iconcologia.net.)

1

I. Caution: data saving and "test_user" account

All data entered in the Tablet-based questionnaire are automatically stored in the secure database of COBA-Cohort. So please **do not use your "real" account to perform tests questionnaires**.

To try the questionnaire, and check the questions, the translations etc., please use the following account, so that we do not mix "real" and "test" data in your own databases:

Test account connexion data:	
User:	counsellor@email.com
Password:	123654789

If you forgot to use this account to test the questionnaire, please remember to delete the questionnaire through your account (https://eurohivedat.eu) or ask the coordinator of COBA-Cohort as soon as possible.

II. Overview of the tablet-based questionnaire of COBA-Cohort

First of all, please keep in mind that the current version of the tool can only be used for a questionnaire completed "at the moment", i.e. the same day of the participant's visit. Indeed, the date of the day is collected automatically in the tablet-based questionnaire, so if a participant completes a paper-questionnaire, you will have to enter it through the original data entry tool (accessible at https://eurohivedat.eu/). If you prefer entering a paper-questionnaire of another day through the tablet, you must remember to change the date of the questionnaire in the original tool.

In brief, the tablet-based questionnaire is a user-friendly adaptation of the COBA-Cohort questionnaires, allowing participants to self-complete their questionnaire directly through a tablet device. The counsellor just has to: (1) enter her/his own connexion data, (2) choose the type of the questionnaire (baseline or follow-up), (3) to enter the unique participant identifier (UPI), and (4) choose the language.

III. Installation of the tool: Add a shortcut

The tablet-based questionnaire is not an Apps, but a special webpage adapted to tablet/mobile devices. To have a better experience of the tool, CBVCT workers are invited to create a shortcut of the webpage, so that they will have a direct access to the tool.

To do so: open the navigator of the tablet (try to avoid using Google Chrome) and go to: https://eurohivedat.eu/mar/wp5.htm.

Once you are on the homepage of the tool, keep your digit on "BOOKMARKS" and select "Add shortcut on home screen" (see the following screenshots).

That's it! As you can see on the last picture, the shortcut "Eurohivedat" has been created.

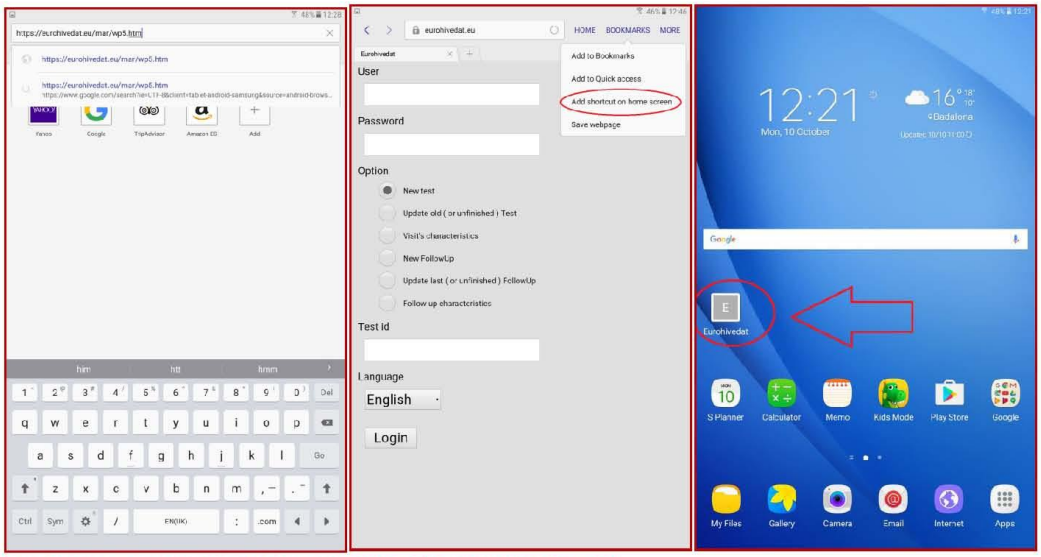


Figure 1. Step by step: creation of the shortcut for the tablet-based data entry tool.

IV. Tool homepage and questionnaire starting

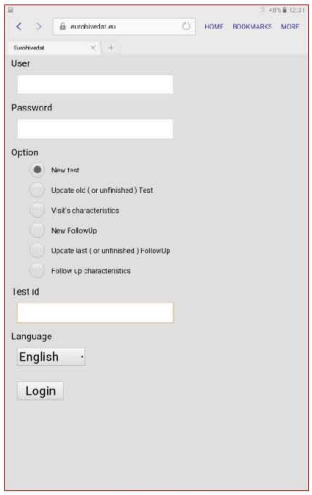


Figure 2. Tablet-based questionnaire homepage.

This is the homepage of the tablet-based questionnaire (https://eurohivedat.eu/mar/wp5.htm).

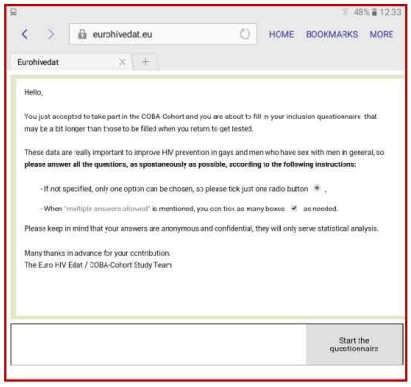
From this page, the counsellor has the opportunity to choose all needed elements before giving the tablet to a participant to fill-in his baseline/follow-up questionnaire. This homepage also allows the counsellor to enter the data of the visit's characteristics (counsellor questionnaire).

1. New Participant, baseline questionnaire

Figure 3. Tablet-based questionnaire homepage

To display a **baseline questionnaire** for a new participant, you have to click on the shortcut "eurohivedat" previously created in the homepage of the tablet, then:

(1) Enter your e-mail and your password,
(2) Select "New baseline questionnaire" (1st option)[1],
(3) Enter the identifier of the new participant,
(4) Choose the language and click on Login/Start questionnaire.



Once you see the first page of the questionnaire, you can give the tablet to the participant, who will have to click on "Start the questionnaire" after reading the introduction/instructions text.

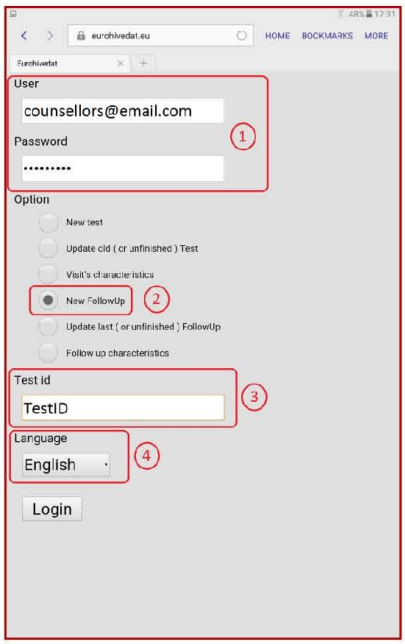
If a problem occurs (loss of internet connexion, involuntary refresh page, etc.) the user is redirected to the login page.

In this case, you have to repeat the same steps **(1)...(4)**, but in **(2)** you will choose "**Update existing or unfinished baseline questionnaire**" (2nd option), and use the same participant ID.

The participant will then have to click on "next", "next"... until the page where was answering.

[1] The name has changed since the screenshot was done.

2. Follow-up questionnaire



To display a **follow-up questionnaire**, the procedure is the same as for the baseline questionnaire, except in step (2) where you must choose "New follow-up" (3rd option).

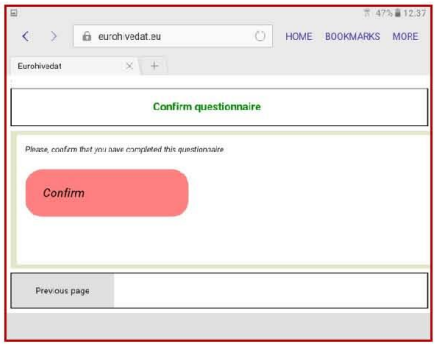
(1) Enter your e-mail and your password,
(2) Select **"New Follow-up questionnaire",**
(3) Enter the identifier of the new participant,
(4) Choose the language and click on Login.

As for the baseline questionnaire, if a problem occurred (loss of internet connexion, update of the page, etc.) the user is redirected to the homepage.

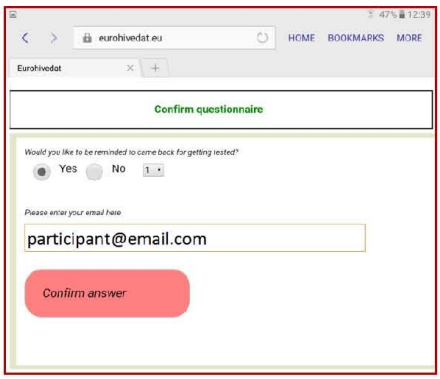
In this case, you have to repeat the same steps **(1)…(4)**, choosing "Update old (or unfinished) Follow-up" at step **(2).**

The participant will then have to click on "next", "next"… until he founds the page where he left the questionnaire.

V. End of the participants' questionnaire: confirmation and Reminder service



When the participant arrives at the last page of the questionnaire (PEP/PrEP section), the "Next" button will take him/her to the "Confirmation page" of the questionnaire.



After confirmation, the "reminder" page is displayed: the participant can accept or refuse to be reminded, and also choose the delay of the reminder (in months).

NB: Once the participant confirmed the answer, the text "**Please return the tablet to your counsellor**" appears.

Seeing that message ensures you that the participant completed its questionnaire.

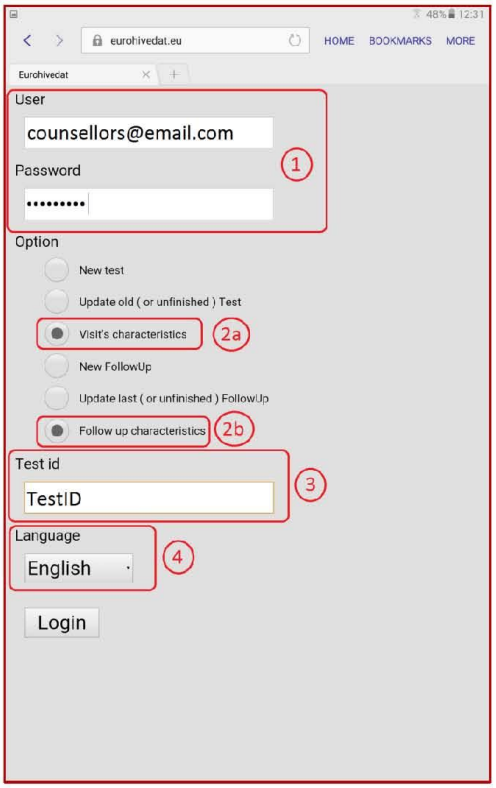
If you see the 1st page instead (identification and questionnaire choice), you might ask the participant about a possible undesired "refresh" of the webpage or a loss of Wi-fi connexion that may have produced a return to the first page.

The counsellor should hence "Update existing baseline" or "Update last follow-up" and click "next" until the page with a question surrounded by a blue line showing the last not-saved questions.

VI. Modification/Update of a questionnaire

Follow the same steps as explained in sections IV-1 and IV-2, but choosing "update baseline" or "update follow-up" at step **(2)**.

VII. Visit's Characteristics (counsellor's questionnaire)



The "visit's characteristics" section should be completed by the counsellors just after the participant filled the questionnaire, **or at least in the same day** to avoid possible problem of "matching" with different dates of data entry. If not, it is preferable to enter those data through the original data entry tool.

The procedure to enter the data of this section is the same as previously, except for the choice of the questionnaire. Click on the shortcut "eurohivedat" (if you are not already in the homepage of the tool) and:

(1) Enter your e-mail and your password,ç
(2) Select:
- **(2a)** "Visit's characteristics" for a the baseline visit's characteristics section,
- **(2b)** "Follow-up characteristics" for a the follow-up visit's characteristics section,

(3) Enter the identifier of the new participant,
(4) Choose the language and click on Login.

NB: it is also possible to fill-in the visit's characteristics section through the web-based form, as usual. Enter to the WP5 section of the https://eurohivedat.eu website, then search the participant's questionnaire using the ID and go the last page of the form.

VIII. Several tips to solve many problems

Use the tablet browser instead of Google Chrome (adding a shortcut as explained in section III)

In the Google browser (Chrome), scrolling the page down rapidly with you finger automatically refresh the current page. In our case, this "refresh" will bring you back to the homepage of the tool. So if someone is filling a questionnaire and did this involuntarily, he/she may think the questionnaire is finished while is not.

The tablet-based questionnaire always keeps the date of the completion

If you have to enter a paper questionnaire and prefer using the tablet instead of a computer, you can. BUT: you will have to go to the original data entry tool and change the date of the visit (first question) once you found the participant on the list (https://eurohivedat.eu/ > WP5 > Cohort participants).

After translation updates and other changes: clean the cache

Clearing the browser's cache each time you update something in the translation, or when the webmaster performed major changes is really important in order to upload the new version of the translation/questionnaire.

Other specific problems you may face:

- **If you "refreshed" the webpage involuntarily**, you will be redirected to the home page. If a participant was filling a questionnaire, you have to choose "update Baseline" or "update last follow-up" and press "next" until the page the participant was answering.

- If you **don't find a participant**, i.e. if you see the error message "**ID does not exist**" for a follow-up questionnaire:
  (i) Be sure the participant has already been enrolled in COBA-Cohort (possible confusion with other study, questionnaire, etc.)
  (ii) If he is sure to have been enrolled, you should try to find him in the WP5 database by going to the original data entry tool: https://eurohivedat.eu/ > WP5 > Cohort participants, ordering the list by date for example
  (iii) If you don't find him at all, suggest to fill-in another baseline questionnaire, or enter a "false" baseline questionnaire, including only ID of the participant and press "next" until confirmation.

- If you have any problem using the tool, please keep in mind to collect at least:
  (i) The unique participant identifier of the person affected by the problem,
  (ii) Your centre name (NGO/CBVCT site),
  (iii) The name or email of the counsellor (user account).

6.10 Posters

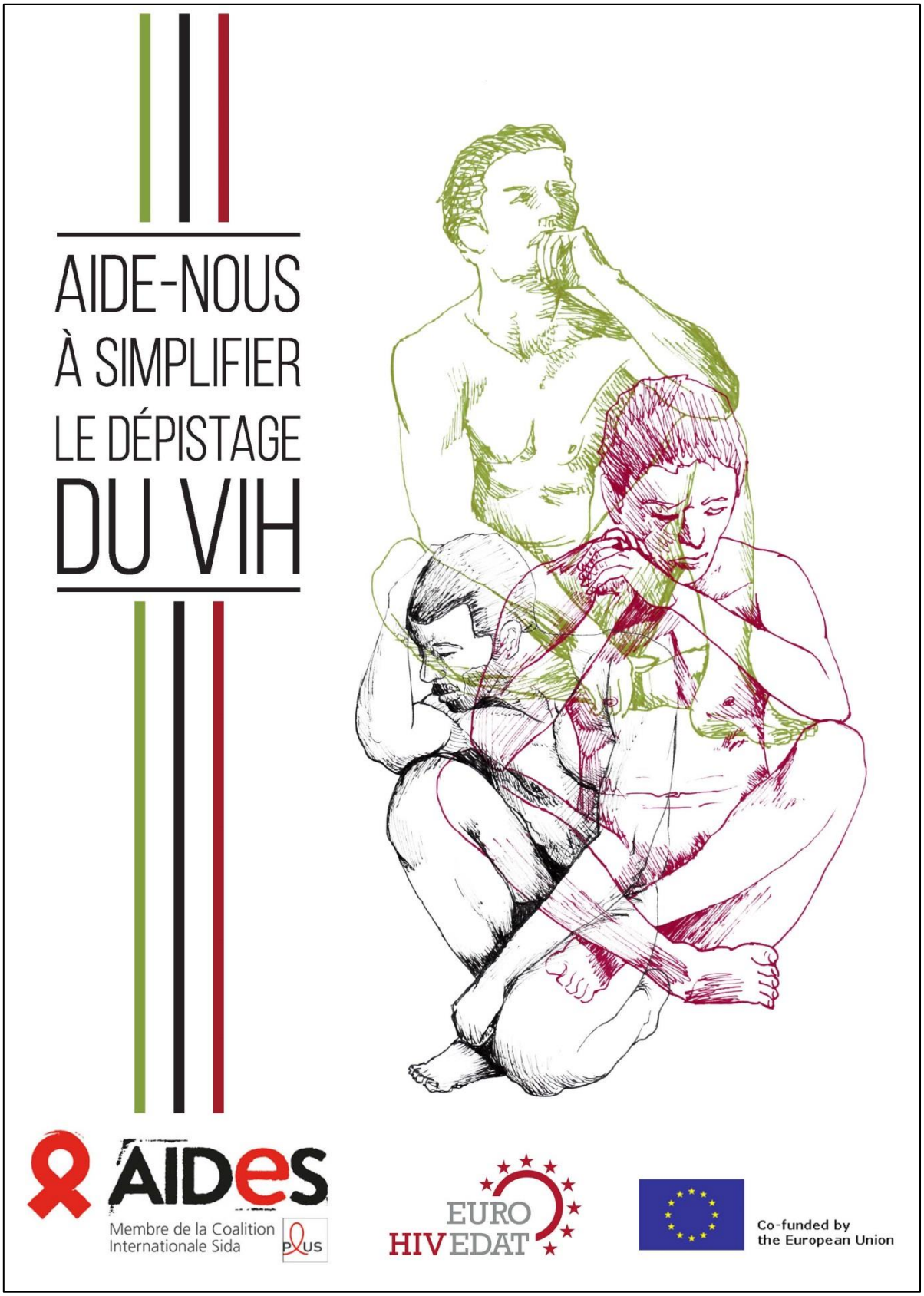


Figure 6.10—1 Poster designed for AIDES (France)

Figure 6.10—2 Poster designed for LILA Milano (Italy)

Figure 6.10—3 Poster designed for Legebitra (Slovenia)

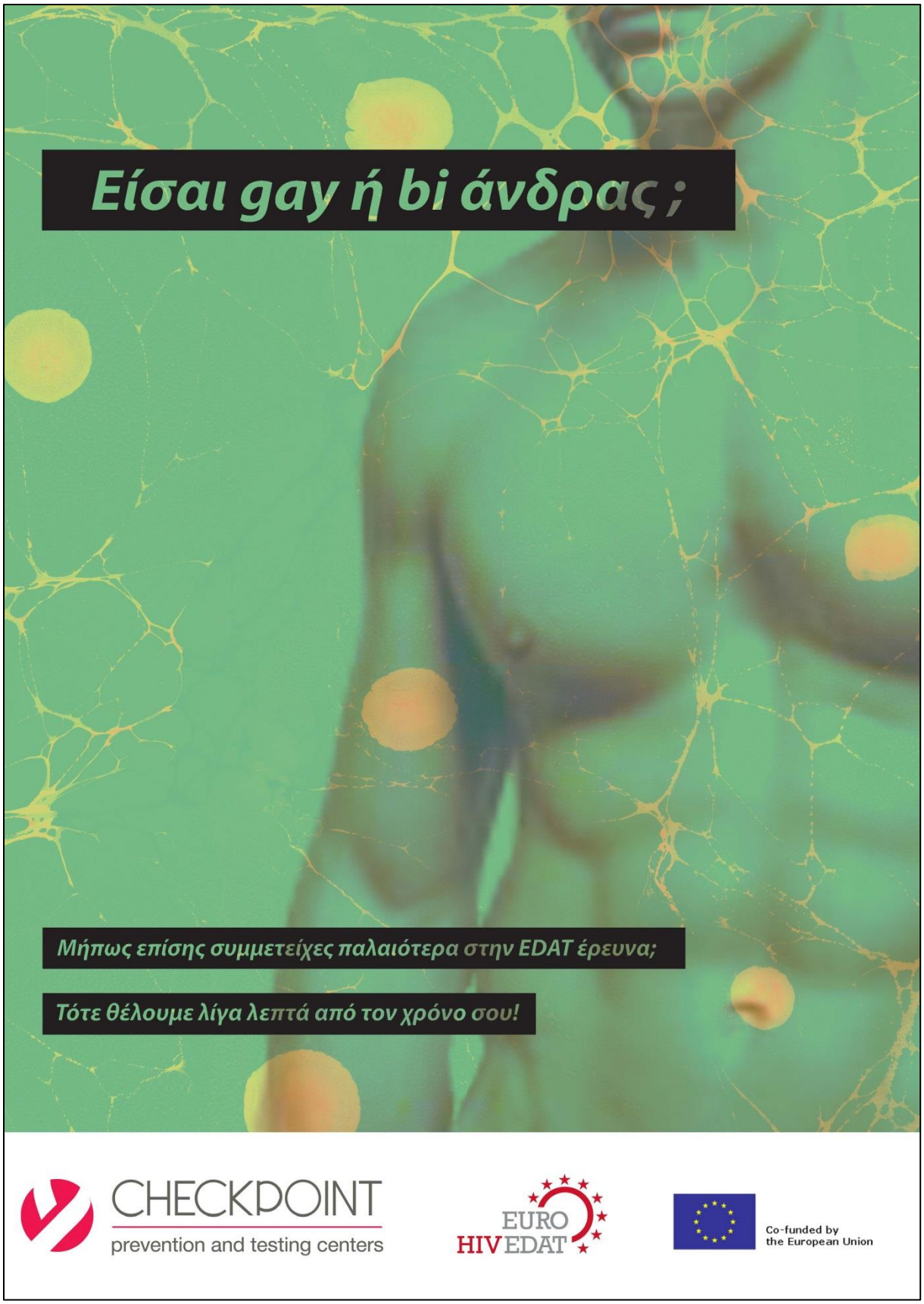


Figure 6.10—4 Poster designed for Positive Voice / Ath-Thess Checkpoints (Greece)

6.11 Further results

Table 6.11—1 STIs/Hepatitis distribution by partner (last 12 months)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=46)	(n=119)	(n=7)	(n=134) *	(n=46)	(n=63)	(n=415) **
Gonorrhoea	45.7	36.8	28.6	39.5	46.7	36.5	39.5
Chlamydia	34.8	35	28.6	12.6	17.8	7.9	21.9
Syphilis	19.6	17.9	28.6	20.2	6.7	15.9	17.4
Condilomas or genital warts	15.2	18.8	14.3	10.9	24.4	19	16.6
Human papilloma virus	4.3	5.1	0	13.4	11.1	34.9	12.8
Genital herpes	4.3	12	14.3	10.9	0	4.8	8.3
Other STI	8.7	3.4	0	0	2.2	1.6	2.5
Hepatitis B	2.2	0.9	0	1.7	6.7	0	1.8
Hepatitis A	0	1.7	14.3	0	0	0	0.8
Hepatitis C	0	0.9	0	0.8	2.2	0	0.8
Lymphogranuloma Venereal	0	0	0	0	0	0	0

* Missing values >10%. ** Total of participants reporting at least one STI/hepatitis in the last 12 months.

Table 6.11—2 Knowledge of CBVCT service and reasons for the present test (n=3976)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	GAT/ Check-pointLX (PT)	Legebitra (SI)	PV/Ath-Thess Chkpts (GR)	Total
	(n=276)	(n=930)	(n=92)	(n=1674)	(n=495)	(n=509)	(n=3976)
How did you heard about this CBVCT (multiple answers)							
A friend told me about this CBVCT	24.3	31.1	28.6	46.1	43.4	57.4	41.8
I've found this CBVCT in Internet	22.5	45.4	39.6	24.9	54.8	39.1	35.4
I've come in this CBVCT before	41.7	43.6	9.9	21.6	28.4	25.9	29.3
I've seen this CBVCT in an informative material (poster flyers, condoms)	12.3	24.4	6.6	4.5	14	37.3	15.1
Other reason CBVCT knowledge	6.9	2.4	9.9	17	2	1.8	8.9
I heard about this CBVCT in social media	8.3	7.8	16.5	1.3	16.6	13.2	7.1
I heard about this CBVCT in dating sites	7.6	14.6	0	0.3	9.9	8.8	6.4
Heard about this CBVCT: outreach prevention activities/testing	11.6	2.5	13.2	0.9	7.5	7.3	3.9
I heard about this CBVCT in magazines	3.6	7.8	0	0.8	1.2	10.2	3.9
I heard about this CBVCT via Apps	7.6	5.2	2.2	0	6.5	5.1	3.3
Reason(s) for the present test (multiple answers)							
Episode(s) of unprotected anal sex	36.6	49	38.5	--	23	33.6	38.1
Episode(s) of unprotected oral sex	40.9	38.1	39.6	--	29.9	24.5	33.8
Episode(s) of unprotected sex with sex worker	2.2	1.9	1.1	--	1	0.2	1.4
Broken condom	7.2	9.3	13.2	8.1	5.9	7.5	8.1
Previous/current partner recently told me he is HIV+	4.7	3.9	4.4	9.7	0.6	5.1	6.1
Episode of sharing injection material	0.4	0.2	0	--	0.2	0.4	0.3
My partner asked me to get tested	5.4	9.6	5.5	6	11.3	7.5	7.6
Before dropping condom with my partner	6.9	10.8	3.3	6.8	5.5	4.5	7.2
Regular control	40.9	42.5	33	--	38.2	51.2	42.9
To know my health status	34.8	36	25.3	--	59.6	7.3	34.2
Regular control/know health status	61.2	59.9	46.2	89.5	74.5	53.6	73.1
Window period in the last test	4.3	2.8	8.8	5.8	5.1	14	6
Clinical symptoms	4.3	1.5	1.1	6.8	1.2	2.4	4
Other reason(s)	4.7	3.6	1.1	4.8	2.6	2	3.8

Table 6.11—3 Univariate comparisons on routine testing (non-significant associations) (n=1,011)

	Came for a routine test	Did not come for a routine test	Total	p-value
	(n=730)	(n=281)	(n=1,011)	
Born abroad				0.369
Yes	20.5	23.1	21.2	
No	79.5	76.9	78.8	
Proportion of participants' relatives aware they are attracted to men *				0.500
More than half	74.7	77	75.6	
Less than half	21.7	18.2	20.4	
None	3.6	4.8	4	
Perceived state of health				0.903
Excellent	29.2	27	28.4	
Very good	51.1	54.5	52.3	
Good	17.5	16.6	17.2	
Fair/poor	2.2	1.9	1.7	
Sexual behaviour				
Ever been given money, goods or drugs to have sex				0.168
Yes	2.8	3.9	3.1	
No	97	95	96.4	
I prefer not to answer	0.3	1.1	0.5	
Sex under the influence of chemsex drugs				0.413
Yes	3.6	4.7	3.9	
No	96.4	95.3	96.1	
PEP/PrEP awareness and use				
Ever used PEP				0.701
Yes	3.5	4	3.6	
No	96.5	96	96.4	
Ever used PrEP				0.542
Yes	0.7	0.4	0.6	
No	99.3	99.6	99.4	
Would consider taking PrEP if available				0.604
No	17.1	15.2	16.6	
Perhaps/Don't know	40.3	38.9	39.9	
Yes	42.6	45.9	43.5	

* Not available in GAT/CheckpointLX. PEP: post-exposure prophylaxis. PrEP: post-exposure prophylaxis.

Table 6.11—4 Frequencies of substance use before/during sex (n=1,239)

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	Legebitra (SI)	PV/Ath-Thess Chkpt (GR)	Total
	N=166	N=621	N=25	N=237	N=190	N=1239
Alcohol						
Never	6.7	3.5	12	9.8	11.1	**6.5**
Rarely	16.5	18.3	12	41.9	22.1	**23**
Sometimes	54.3	67.4	76	44.9	57.9	**60**
Almost always	20.1	9.7	0	2.6	8.4	**9.3**
Always	2.4	1.2	0	0.9	0.5	**1.1**
Cannabis						
Never	57.3	77.5	52	60.7	50.5	**66.8**
Rarely	13.4	11.5	12	15.4	16.3	**13.3**
Sometimes	19.5	10.2	36	18.4	25.3	**15.9**
Almost always	7.3	0.8	0	5.1	6.3	**3.4**
Always	2.4	0	0	0.4	1.6	**0.7**
Cocaine						
Never	78.7	89.3	76	91.5	81.6	**86.8**
Rarely	9.8	5.8	4	6.8	7.4	**6.7**
Sometimes	8.5	4.6	20	1.7	10.5	**5.8**
Almost always	3	0.3	0	0	0.5	**0.7**
Crack						
Never	99.4	99.3	96	100	97.9	**99.2**
Rarely	0	0	0	0	0.5	**0.1**
Sometimes	0.6	0.7	4	0	1.1	**0.7**
Almost always	0	0	0	0	0.5	**0.1**

Table 6.11—4 Continued

	AIDES (FR)	AIDS-Fondet (DK)	F. LILA Milano (IT)	Legebitra (SI)	PV/Ath-Thess Chkpt (GR)	Total
Ecstasy/MDMA						
Never	70.1	90	88	82.9	83.7	**84.9**
Rarely	12.2	5.4	8	9.8	6.3	**7.4**
Sometimes	14	4.3	4	6.4	8.4	**6.6**
Almost always	2.4	0.2	0	0.9	1.6	**0.8**
Always	1.2	0.2	0	0	0	**0.2**
Poppers						
Never	29.9	61.2	48	58.1	67.4	**57.1**
Rarely	21.3	13.7	20	16.7	5.3	**14.1**
Sometimes	28	20.6	32	18.4	21.1	**21.5**
Almost always	14.6	4.4	0	5.6	5.3	**6.1**
Always	6.1	0.2	0	1.3	1.1	**1.3**
Viagra/Cialis/similar						
Never	86	83.9	76	86.8	85.3	**84.8**
Rarely	1.8	4.4	12	6	2.1	**4.2**
Sometimes	9.1	9.7	12	5.6	9.5	**8.8**
Almost always	2.4	2	0	1.3	3.2	**2**
Always	0.6	0	0	0.4	0	**0.2**
Amphetamines (Speed)						
Never	90.2	96.2	92	89.3	92.6	**93.4**
Rarely	4.3	2.1	4	4.7	1.6	**2.9**
Sometimes	3	1.6	4	6	5.8	**3.4**
Almost always	2.4	0	0	0	0	**0.3**
LSD						
Never	96.3	99.7	100	99.1	93.2	**98.1**
Rarely	0.6	0.2	0	0.9	3.2	**0.8**
Sometimes	2.4	0.2	0	0	3.2	**0.9**
Almost always	0.6	0	0	0	0.5	**0.2**
GHB						
Never	81.7	95.1	92	86.3	94.7	**91.5**
Rarely	6.7	3	4	8.1	0.5	**4.1**
Sometimes	6.7	1.6	4	5.1	3.7	**3.4**
Almost always	4.9	0.2	0	0.4	1.1	**1**
Always	0	0.2	0	0	0	**0.1**
Ketamine						
Never	93.9	97.9	92	99.6	96.3	**97.3**
Rarely	1.8	1.2	4	0.4	1.6	**1.2**
Sometimes	3	1	4	0	2.1	**1.3**
Almost always	1.2	0	0	0	0	**0.2**
Heroin						
Never	99.4	100	100	99.6	98.9	**99.7**
Sometimes	0.6	0	0	0.4	1.1	**0.3**
Methadone						
Never	98.8	100	100	99.1	98.4	**99.4**
Rarely	0	0	0	0.9	0.5	**0.2**
Sometimes	1.2	0	0	0	0.5	**0.2**
Almost always	0	0	0	0	0.5	**0.1**
Mephedrone						
Never	91.5	99.2	96	97	94.7	**97**
Rarely	1.8	0.3	0	1.7	1.6	**1**
Sometimes	4.3	0.5	4	1.3	2.6	**1.6**
Almost always	1.8	0	0	0	1.1	**0.4**
Always	0.6	0	0	0	0	**0.1**
Crystal Meth (ice)						
Never	92.1	97.9	92	97	91.1	**95.7**
Rarely	3.7	1.2	4	1.7	3.2	**2**
Sometimes	0.6	0.8	4	0.9	4.2	**1.4**
Almost always	2.4	0.2	0	0.4	1.6	**0.7**
Always	1.2	0	0	0	0	**0.2**
Other drug						
Never	99.4	99.8	100	100	98.4	**99.6**
Sometimes	0.6	0	0	0	1.6	**0.3**
Almost always	0	0.2	0	0	0	**0.1**

Table 6.11—5 Univariate comparisons on ICU with casual partners (non-significant associations) (n=3,477)

		Iconsistent condom use	Always condom or no anal sex	Total	p-value
		(n=1684)	(n=1793)	(n=3477)	
Age					
	Median [IQR]	29 [24-38]	29 [23-38]	29 [24-38]	0.467
Born Abroad					
	Yes	23.4	22.9	23.2	0.784
	No	76.6	77.1	76.8	
Occupation					
	In active employment	62.1	64	63.1	0.530
	Other situation (students, non-declared work, retired, sick-leave etc.)	30.6	29	29.7	
	Unemployed	7.3	7.1	7.2	
Sexual Orientation					
	Gay or homosexual	83.1	81.6	82.3	0.520
	Bisexual	11.8	12.7	12.2	
	Other	5.2	5.8	5.5	
HIV+ partners with detectable viral load		0.7	0.5	0.6	0.714
No HIV+ casual partners were HIV+					
	Not selected	72.8	71	71.8	0.251
Casual male partners met…					
	In Sex clubs	8.1	6.6	7.3	0.122
	In outdoor gay venues	14	13.1	13.5	0.464
	In the street	11.6	10.8	11.2	0.468
	At the gym	7.8	7.7	7.7	0.938
	At friends	39.2	37.2	38.1	0.254
	Via advert	2.1	1.8	1.9	0.605
	In other venues	4.5	4.6	4.5	0.963
Ever used PEP					
	Yes	6.8	6.2	6.5	0.491
	No	93.2	93.8	93.5	

6.12 COBA-Cohort's bibliography

6.12.1 Article, peer review journals

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6.12.2 Article, grey literature

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6.12.3 International conferences

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6.12.4 National conferences

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6.12.5 Seminar

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