



The COBATEST network: a platform to perform monitoring and evaluation of HIV community-based testing practices in Europe and conduct operational research

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ABSTRACT

The European project “HIV community-based testing practices in Europe” (HIV-COBATEST) has contributed to the establishment of a network of community-based voluntary counselling and testing services (CBVCTs) that monitors and evaluates HIV testing activity in the communities. The objective of this paper is to describe the data that have been collected during 2014 by the COBATEST network in order to provide an insight into testing activity of CBVCTs in Europe. Members of the CBVCT network share common instruments for data collection and data entry. The network has a common database that allows global data analysis and comparison between different centres. In 2014, 40 CBVCTs of 18 European countries were participating in the network, and, from those, 20 CBVCTs were using the common COBATEST data collection tools. In these 20 CBVCTs, a total of 9266 HIV screening tests were performed on 8554 people, of which 1.58% (135/8554) were reactive and 51.1% (69/135) confirmed positive. Five cases were false positives, and 84.1% (58/69) of the confirmed positive cases were linked to care. Most of the tested individuals were men (70.8%), between 21 and 35 years of age (57.6%) and natives (67.1%). A higher proportion of men who had sex with men (MSM) (38.8%; 3267/8554) were tested compared to heterosexual men (27.7%) and women (23.5%). Rapid blood test was used in 78.5% of the cases and mostly performed in CBVCT offices (88.3%). Among sex workers (SWs), the percentage of reactive screening tests was particularly high (4.0%), especially among male SWs (7.7%) as compared to other risk groups, such as MSM (3.1%). The COBATEST network contributes to the availability of standardized information about the activity and impact of CBVCT centres in Europe. This information and standardized tools can help improve these services and inform decision-makers to better contextualize these interventions within their national HIV-prevention programmes.

ARTICLE HISTORY

Received 2 October 2015
Accepted 20 January 2016

KEYWORDS

HIV infection–diagnosis–prevention and control–therapy; early diagnosis; counselling; community health services; health services accessibility; Europe



Background

HIV infection remains of major public health importance in Europe. A total of 136,235 new HIV diagnoses of infections were reported in 51 countries in 2013, a rate of 15.7 per 100,000 population (European Centre for Disease Prevention and Control, 2014) and approximately 900,000 people are living with HIV in Western and Central Europe (UNAIDS, 2013). However, the exact number of people infected remains unknown. In Europe, recent estimates of the proportion of infected individuals who are undiagnosed ranged from 20% to 40% (Birrell et al., 2013; Hamers & Phillips, 2008; van Sighem et al., 2015).

Evidence suggests that a reduction in the proportion of people with undiagnosed HIV infection will be achieved through expansion in the coverage and

frequency of HIV testing (European Centre for Disease Prevention and Control, 2011). Therefore, with the aim of improving targeted testing for people most likely to be infected with HIV, European policies are increasingly promoting community-based voluntary counselling and testing services (CBVCTs) (European Commission, 2009; Jakab & Marmot, 2012; World Health Organization, 2010). These centres are recognized to be a good model for improving access to testing for HIV services for key populations (Suthar et al., 2013).

The European project HIV community-based testing practices in Europe (HIV-COBATEST) was implemented from 2010 to 2012, in order to promote early diagnosis of HIV infection in Europe by improving CBVCT practices. This project has contributed to the establishment of a network of CBVCT services (COBATEST network) and

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has developed standard data collection instruments and procedures to promote HIV testing and counselling for hard-to-reach key populations.

A survey performed as part of the HIV-COBATEST project showed that HIV/AIDS National Focal Points did not have reliable information on CBVCTs in their countries (Reyes-Urueña et al., 2015), demonstrating a need to collect data at CBVCTs and make it available and useful for National HIV Programmes. The objective of this paper is to describe the data that have been collected during 2014 by the COBATEST network, from individual CBVCTs using the common tools, in order to provide an insight into CBVCTs testing activity in Europe.

Methods

We undertook a descriptive study analysing HIV testing activity of CBVCTs in the COBATEST network. All data for 2014 were collected from individual centres using common data collection and web-based data entry tools. Information was collected on paper during the client's visit for HIV testing at the CBVCTs and subsequently entered on the web-based data entry tool.

The standardized questionnaire included questions related to socio-demographic characteristics, risk behaviours and HIV testing results. Data were entered into a centralized database that allowed global and stratified analysis of pooled data from all participating centres. CBVCTs use a unique Client Identification Code that ensured the anonymity of the client and allowed the identification of repeat testers. Each CBVCT centre had access to its own disaggregated data in the common data-set. The descriptive analysis included socio-demographic characteristics, risk behaviour and HIV testing results. Results for the percentage of people with a reactive screening test were stratified by sex, age group and key population. Data analysis was performed using PASW Statistics for Windows, version 18.0.

Results

In 2014, 20 of the 40 member CBVCTs from 18 European countries who form the network were using the common data collecting tools and were included in this analysis. A total of 9266 HIV screening tests were performed on 8554 individuals, of which 1.6% (135/8554) were reactive. Of these reactive tests, 63.1% (69/135) had a confirmatory test, 51.1% (69/135) of which were confirmed as positive, and 84.1% (58/69) of the confirmed positives were successfully linked to care (Figure 1). There were five people with reactive screening test results who were linked to care without having a confirmatory test through the CBVCTs.

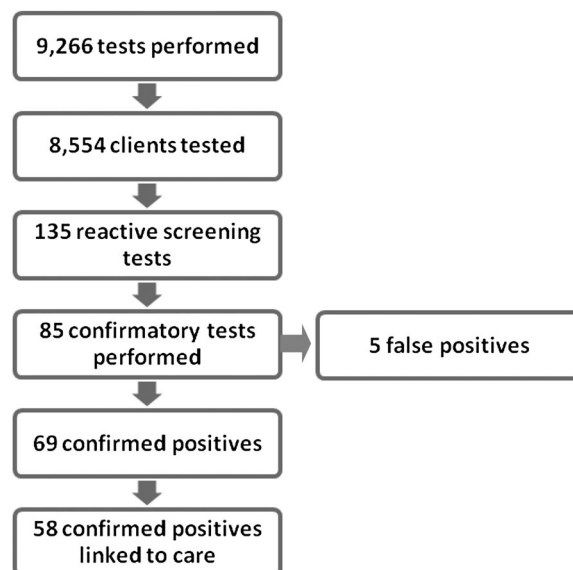


Figure 1. Key performance indicators of the COBATEST CBVCT centres, collected through the COBATEST network's* tools during 2014. *Only data from CBVCTs that used the common data entry tool were included in the analyses.

There were five false positive results, all men. One was a person who injected drugs (PWID), two were men who had sex with men (MSM) and two were heterosexuals. In four of these cases, the test was performed on blood, the last on an oral sample.

Four individuals with confirmed HIV infection were not linked to care and for seven the information about linkage to care was missing. Of these 11 cases, 10 were MSM and one a female sex worker (SW). Three of the cases not linked to care were tourists.

Most of the tested individuals were men (70.8%) aged between 21 and 35 years (57.6%) and natives (67.1%). A higher proportion of persons tested were MSM (38.8%) in comparison to heterosexual men (27.7%) or women (23.5%). Rapid blood tests were used in 78.5% of cases and were mostly performed in CBVCT offices (88.3%) (Table 1). Among the total number of tested individuals, 35.7% were new testers.

Table 2 presents the percentage of reactive screening tests stratified by sex, age group and key population. The percentage of reactive screening tests was particularly high among SWs (4.0%), especially male SWs (7.7%), as compared to other risk groups, such as MSM (3.1%). It is noteworthy that no PWID had a reactive test result as not many CBVCTs participating in this network were serving PWID.

Discussion

Our results show that the people accessing the CBVCTs in the COBATEST network were mostly MSM, between 21

Table 1. Socio-demographic characteristics, risk behaviour and HIV testing information for people that have been tested during 2014 in the CBVCTs participating in the COBATEST network^a.

| | N | Percentage |
|--------------------|------|------------|
| Gender | | |
| Male | 6057 | 70.8 |
| Female | 2370 | 27.7 |
| Transgender | 125 | 1.5 |
| Age groups | | |
| <20 | 728 | 8.7 |
| ≥21–35 | 4795 | 57.6 |
| ≥36–50 | 2238 | 26.9 |
| >50 | 566 | 6.8 |
| Migrants | | |
| Yes | 2811 | 32.9 |
| Key populations | | |
| PWID | 134 | 1.6 |
| Male sex worker | 346 | 4.1 |
| MSM | 3267 | 38.8 |
| Women sex worker | 365 | 4.3 |
| Heterosexual women | 1983 | 23.5 |
| Heterosexual men | 2334 | 27.7 |
| Type of test used | | |
| Rapid blood test | 6717 | 78.5 |
| Rapid oral test | 1679 | 19.6 |
| Conventional test | 156 | 1.8 |
| Testing sites | | |
| CBVCT office | 7556 | 88.3 |
| Outdoors/Van | 23 | 0.30 |
| Sex work venue | 56 | 0.7 |
| Sauna/sex venue | 176 | 2.1 |
| Public venue | 48 | 0.6 |
| Amusement venue | 192 | 2.2 |
| Other | 503 | 5.9 |
| Previous HIV test | | |
| Yes | 5500 | 64.3 |

PWID, people who inject drugs; MSM, men who have sex with men; CBVCTs, community-based voluntary counselling and testing services.

^aOnly data from CBVCTs that used the common data entry tool were included in the analyses.

and 35 years old, and native. Although the pooled prevalence estimate was not very high (1.6%), the prevalence estimates among specific groups, such as MSM (3.1%), and, especially, male SW (7.7%) were much higher, suggesting that these particular CBVCTs are mainly targeting MSM rather than other key populations. It is important to note that just 11.7% of tests were performed during outreach activities. Finally, since the percentage of people reported as first-time testers (35.7%) was high, our results showed the great potential of CBVCT services to reach people who have never been tested.

Although there was a high number of people with a reactive screening test who did not have a confirmatory test, subsequent checking in a subset of CBVCTs revealed discrepancies between data in the database (around 35% of individuals with a reactive test had no confirmatory test) and direct reports from those centres. Those reports stated that almost 99% of individuals with a reactive screening HIV test were confirmed, suggesting that information about confirmation could sometimes be not introduced because it is collected at a later stage.

Table 2. Percentage of reactive HIV screening tests stratified by sex, age group and key population among individuals tested during 2014 in the CBVCTs participating in the COBATEST network^a.

| | All | Males | Females | <25 | ≥25 |
|--|-------|-------|---------|-------|-------|
| Numerator: Number of clients with reactive screening HIV test result | 135 | 73 | 12 | 18 | 71 |
| Denominator: Number of clients tested for HIV with a screening test | 8554 | 6182 | 2370 | 2038 | 6289 |
| Percentage of clients with reactive screening HIV test result | 1.58 | 1.93 | 1.09 | 1.51 | 2.0 |
| MSM | | | | | |
| Numerator: Number of clients with reactive screening HIV test result | 111 | 111 | – | 27 | 82 |
| Denominator: Number of clients tested for HIV with a screening test | 3546 | 3546 | – | 735 | 2732 |
| Percentage of clients with reactive screening HIV test result | 3.13% | 3.13% | – | 3.67% | 3.00% |
| SW | | | | | |
| Numerator: Number of clients with reactive screening HIV test result | 29 | 27 | 2 | 9 | 20 |
| Denominator: Number of clients tested for HIV with a screening test | 721 | 351 | 369 | 141 | 570 |
| Percentage of clients with reactive screening HIV test result | 4.02 | 7.69 | 0.54 | 6.38 | 3.51 |
| PWID | | | | | |
| Numerator: Number of clients with reactive screening HIV test result | 0 | 0 | 0 | 0 | 0 |
| Denominator: Number of clients tested for HIV with a screening test | 134 | 113 | 21 | 17 | 114 |
| Percentage of clients with reactive screening HIV test result | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Migrants | | | | | |
| Numerator: Number of clients with reactive screening HIV test result | 63 | 48 | 15 | 16 | 46 |
| Denominator: Number of clients tested for HIV with a screening test | 2811 | 1812 | 999 | 646 | 2165 |
| Percentage of clients with reactive screening HIV test result | 2.24 | 2.65 | 1.50 | 2.47 | 2.12 |

PWID, people who inject drugs; MSM, men who have sex with men; SW, sex workers.

Note: Individuals may be members of more than one key population at a time, so the categories are not mutually exclusive.

^aOnly data from CBVCTs that used the common data entry tool were included in the analyses.

Our results, together with other studies (Suthar et al., 2013; Thornton, Delpech, Kall, & Nardone, 2012), indicate that CBVCTs are successful in diagnosing previously undiagnosed HIV infections among key populations, and that these centres have a substantial proportion of first-time testers. This is explained by the fact that CBVCTs are serving key populations with many access barriers to HIV testing. On the other

hand, our results showed that the percentage of confirmed cases linked to care was high (84.1%) compared to other studies 80.1% (95% CI 74.8–85.4%) (Suthar et al., 2013), although data may be not comparable, because of differing definitions of linkage to care. In most studies, linkage to care is defined as a CD4 count taken within 3 months of initial test, but because CD4 results are not often available to CBVCTs, this definition should be different. The concept of linkage to care from the perspective of CBVCTs should therefore be defined as the percentage of people with a reactive screening tests that had contact with specialist HIV care. Additional effort is needed within the COBATEST network to accurately measure linkage to care.

The data collected through the COBATEST network can be a source of strategic HIV-related evidence for the need to strengthen community-based service delivery models as an integral part of strategic HIV interventions, as recently stated in the Consolidated Strategic Information Guidelines (World Health Organization, 2015). Also, taking into account that CBVCT approaches have been successful in reaching key populations early in the course of HIV infection (Suthar et al., 2013), these data might lead to a deeper understanding of the context of the epidemic, such as the vulnerability and the risks to which key populations are exposed and the options for actions to reduce the burden of HIV.

An important limitation is that this analysis was conducted in CBVCTs that participate in the COBATEST network and use common tools. Results are therefore not generalizable to all CBVCTs in Europe, and cannot be representative at the national or European level, because in some countries there are several participating CBVCTs, but in most countries there is a single centre participating in the network. In a second phase, data from the remaining member CBVCTs of the COBATEST network will be included in the analysis, increasing both the data volume and its representativeness.

In conclusion, the first monitoring and evaluation results from the COBATEST network prove the feasibility of collecting standardized data from CBVCTs in different countries across Europe, as well as demonstrating usefulness of such data. The COBATEST network and its data contributions over time will be crucial in considering which CBVCT indicators should be included in the Dublin Declaration monitoring process, to better assess the cascade of prevention, care and treatment services and to improve the effectiveness of CBVCTs across Europe.

Acknowledgements

We are grateful to all colleagues from the CBVCT centres participating in the COBATEST network for their collaboration in

the network (AIDS Fondet* (Denmark), Fondazione LILA Milano* (Italy), Demetra* (Lithuania), Algarabía (Spain)*, AVACOS*, PRAKSIS*, CAS Gibraltar*, OMSIDA* (Spain), StopSida* (Spain), Àmbit Prevenció* (Spain), Gais Positius* (Spain), SAPS-Creu Roja* (Spain), Centre Jove d'Anticoncepció i Sexualitat* (CJAS) (Spain), Creu Roja Tarragona* (Spain), Actuavallès* (Spain), ACASC* (Spain), Associació Antisida de Lleida* (Spain), Assexora Tgn* (Spain), ACCAS* (Spain), Baltic HIV Association* (Latvia), ACAS Girona* (Spain), Asociación SILOÉ* (Spain), Associació Lambda* (Spain), Centro Social Polivalente Mujer Gades* (Spain), IEMEKAIÉ* (Spain), Gay-alliance (Ukraine), Asociación Concordia* (Spain); Cruz Roja Córdoba (Spain); Asociación ADHARA (Spain); Proyecto Hombre (Spain); Concordia Marbella (Spain); AIDS-Hilfe NRW e.V (Germany); ARAS-Asociata Romana Anti-SIDA (Romania); Checkpoint LX (Portugal); Association AIDES (France); Legebitra (Slovenia); Czech AIDS Help Societ (Czech Republic); Association "Prevent" (Serbia); Positive Voice (Greece); AIDS Hilfe Wien (Austria); CBVCT network Poland; LASS (UK), Le Kioske (France); Anonymous AIDS Association (Hungary); ISKORAK (Croatia)). CBVCTs marked with an asterisk are those which contributed with data for this analysis.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was co-funded by CHAFEA [grant agreement no. 20091211].

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