

Monitoring Community HIV Testing in Ireland, 2018

Version 1.0

June 2019

Key points

- A pilot study on monitoring voluntary community-based HIV testing (VCBT) was carried out in Ireland in 2018; this was facilitated by a new collaboration between statutory organisations, non-government organisations (NGOs) and other community-based organisations (CBOs) that provide VCBT services in Ireland, and was overseen by a multisectoral steering group.
- All four NGOs that provided VCBT services in Ireland during 2018 participated.
- In 2018:
 - 4,846 community-based HIV tests were carried out, using either rapid point-of-care testing (POCT) methods (54%), or laboratory-based testing methods (46%).
 - Eighty-four people had reactive/positive tests, corresponding to a 1.7% test reactivity rate. Excluding people who were previously diagnosed HIV positive, the rate was 1.5%.
 - For rapid testing, the rate was 2.4% among migrants coming from countries of high HIV prevalence, and 1.1% among men who have sex with men (MSM).
 - For laboratory-based testing, the rate was 5.0% among international protection applicants in asylum accommodation settings.



Suggested citation: HSE Health Protection Surveillance Centre. Monitoring Community HIV Testing in Ireland, 2018. Dublin: HSE HPSC; 2019.

© HSE Health Protection Surveillance Centre, 2019. Reproduction is authorised, provided source is acknowledged.

Table of Contents

Introduction	3
Methods	3
Results.....	4
i. Rapid (point-of-care) testing	4
ii. Laboratory-based testing	8
Discussion	9
Technical notes.....	12
Acknowledgements.....	13
References	13
Appendices	14

Introduction

Voluntary community-based HIV testing (VCBT) services are offered free of charge in non-clinical community settings, and target individuals who are most at risk of HIV infection in order to improve HIV detection, to initiate early treatment, and to prevent onward transmission of HIV. VCBT is designed to be accessible for key population/at-risk groups and is provided in a range of settings, including mobile and outreach settings. VCBT can be carried out using either standard testing methods, where a blood sample is sent to a laboratory for testing, or rapid point-of-care testing (POCT) methods, where a trained volunteer or staff member uses a rapid diagnostic test and then refers a person who has a reactive test result to an HIV confirmatory testing service. Those whose reactive results are confirmed positive are then linked to HIV care and treatment services.

VCBT is monitored in order to analyse trends in HIV reactive rates and to determine whether at-risk groups are being effectively reached in the community.

A pilot study to assess the feasibility of national VCBT monitoring in Ireland was undertaken in 2018 by the HSE-Health Protection Surveillance Centre (HPSC) in partnership with HSE Social Inclusion and Vulnerable Groups, non-government organisations (NGOs) and other community-based organisations (CBOs). The study had oversight from a multisectoral steering group, comprising investigators from HPSC; HSE Sexual Health and Crisis Pregnancy Programme (SHCPP); HSE Social Inclusion and Vulnerable Groups; Safetynet Primary Care Mobile Health and Screening Unit (MHSU); HIV Ireland; the KnowNow programme; Gender, Orientation, Sexual Health and HIV (GOSHH); and AIDS Care Education and Training (ACET). See Appendix 1 for membership of the steering group.

This report presents a summary of the results for 2018 and is the first national report on VCBT monitoring. The results are presented as HIV test reactivity rate; this can also be called HIV testing prevalence rate or HIV seropositivity rate.

Methods

Data on VCBT has been collated nationally since June 2018, for testing carried out since 1 January 2017. This report focuses on the results for 2018.

Participants in VCBT monitoring submit data to HPSC on a quarterly basis. A small anonymised case-based dataset of information is collated, including demographic characteristics, the setting where testing occurred, as well as information on reactive tests, indicating possible HIV infection, requiring further testing and confirmation. This is in line with European Centre for Disease Prevention and Control (ECDC) recommendations [1]. Data are collected electronically using a standardised template that contains predetermined answer options, provided by HPSC.

Anonymised case-based data could be provided by all organisations that used rapid testing. Data completeness was suboptimal for three variables; whether or not the person was testing for the first time (completed for 92%); age (completed for 64%); and whether or not the person had a confirmatory HIV test (completed for 90%).

Case-based data could not be provided by two out of three organisations that used standard laboratory-based testing, comprising 74% of laboratory-based testing. Those that could not provide data in case-based format provided aggregate data.

Results

Six organisations participated in the pilot; including all four NGOs that provide VCBT in Ireland. The list of all participating organisations is set out in Technical note 1.

In all, there were 4,846 community-based HIV tests carried out in Ireland during 2018. Testing was conducted using either rapid testing (n=2,643; 54%) or laboratory-based testing methods (n=2,203; 46%). HIV testing methods are explained further in Technical note 4 and 5.

In total, 84 individuals had reactive or positive tests, corresponding to a 1.7% HIV test reactivity rate. When adjusted to exclude nine individuals who were subsequently identified as previously diagnosed HIV positive, the rate was 1.5%.

i. Rapid (point-of-care) testing

Rapid testing was carried out in a range of high risk settings by the following NGOs: AIDSWest; GOSHH; the Sexual Health Centre (SHC) Cork; and via the KnowNow programme in Galway, Limerick, Cork and Dublin. Data could be provided in case-based format for all rapid testing.

Table 1 provides a summary of the demographic characteristics of all individuals tested and of those with reactive tests. The HIV test reactivity rate should be interpreted with caution due to low numbers tested (<100) among some demographic subgroups.

Of 2,643 rapid tests carried out in 2018, there were 21 reactive or positive tests, corresponding to a 0.8% HIV test reactivity rate among those tested. Excluding two individuals who were subsequently identified as previously diagnosed HIV positive, the rate was 0.7%.

By test setting, the highest proportion of rapid testing was carried out in bar/club settings (40%). The test reactivity rate was 1.2% in bar/club settings, and 1.1% in Lesbian, Gay, Bisexual and Transgender (LGBT) community resource centres. The rate was 1.4% in direct provision/asylum accommodation centre settings (centres for international protection applicants (persons seeking asylum)); this rate should be interpreted with caution due to low numbers tested (<100).

Of those who had a rapid test, 29% (n=776) had never previously tested for HIV, 63% (n=1667) had previously tested and testing history was unknown for 8% (n=200). Of those who had reactive tests, 29% (n=6) had never previously tested for HIV and 71% (n=15) had previously tested. The test reactivity rate was similar among first time testers (0.8%) and repeat testers (0.9%).

By gender, the rate was higher in males (0.9%) than in females (0.2%). Age in years could be provided for 64% (n=1,679) of individuals who had a rapid test; median age overall was 29 years, for first time testers it was 26 years and for people who had tested for HIV previously it was 31 years. Age in years could be provided for 86% (n=18) of those with reactive tests; median age overall for those with reactive tests was 29 years; for first time testers it was 32 years and for repeat testers it was 28 years.

By region of origin, the test reactivity rate was 3.6% among individuals born in Latin America, 1.9% among individuals born in sub-Saharan Africa, and 0.4% among individuals born in Ireland.

Individuals could be reported as part of one or more key population/at-risk groups. By at-risk group among those with a reactive test result, the rate was 2.4% among migrants coming from countries of high HIV prevalence (defined as HIV prevalence >1% in the adult population, see

Technical note 7 for further information), and it was 1% among men who have sex with men (MSM). The rate was 3.6% among sex workers/escorts; however this rate should be interpreted with caution due to low numbers tested.

Of the 21 individuals who had reactive tests, data on whether or not they had a confirmatory test was reported for 19, and could not be reported for two as information on confirmatory testing is not routinely collected by all NGOs. Of the 19 individuals with information on confirmatory testing, 16 underwent confirmatory testing, all of whom were confirmed HIV positive. The remaining three did not undergo confirmatory testing; as two were later identified as having been previously diagnosed with HIV and already linked to care, and one opted not to engage with confirmatory testing services.

Table 1 HIV test reactivity rate (%) and demographic characteristics, voluntary community-based rapid point-of-care testing in Ireland, 2018.

		All tests	Reactive tests	Reactivity rate
		N	N	%
Total		2643	21	0.8
Setting where test was provided	Bar/ club	1046	13	1.2
	Sauna/ sex-on-premises venue	192	1	0.5
	Organisational headquarters	574	3	0.5
	LGBT community resource centre	279	3	1.1
	Emergency accommodation/ homeless service/ charity	167	0	0.0
	College/ University	142	0	0.0
	Addiction service/ resource centre	92	0	0.0
	Direct provision/ asylum accommodation centre [†]	73	1	1.4
	Family/ community resource centre	45	0	0.0
	Probation service	16	0	0.0
	Festival/ episodic event	12	0	0.0
Other/Unknown	5	0	0.0	
First time testing for HIV	Yes	776	6	0.8
	No	1667	15	0.9
	Unknown	200	0	0.0
Gender identity ⁺⁺	Male	2173	20	0.9
	Female	456	1	0.2
	Trans male	6	0	0.0
	Trans female	2	0	0.0
	Other	6	0	0.0
Age in years (median, range) [*]		29 (17-80)	29 (19-60)	
Region of origin	Ireland	1483	6	0.4
	Western Europe	345	1	0.3
	Latin America	281	10	3.6
	South and South East Asia	109	0	0.0
	Central or Eastern Europe	148	0	0.0
	Sub-Saharan Africa	108	2	1.9
	North America [†]	54	1	1.9
	North Africa and Middle East [†]	30	1	3.3
	Other/Unknown	85	0	0.0
Key population/at-risk group ^{**}	MSM	1724	19	1.1
	Sex with a person of opposite sex	916	2	0.2
	People who inject drugs (ever injected drugs)	115	0	0.0
	Migrant coming from a country of high HIV prevalence	127	3	2.4
	Sex worker/ escort [†]	28	1	3.6
	Undetermined (none identified from the given list)	21	0	0.0
	Unknown (question not asked or client did not want to say)	21	0	0.0

[†] Interpret rate with caution due to low numbers tested.

⁺⁺ Gender identity is explained in Technical note 6.

^{*} Age in years not available for 36% of individuals.

^{**} Individuals could be reported as part of one or more key population/at-risk groups.

ii. Laboratory-based testing

Of 2,203 laboratory-based tests carried out in 2018, 63 (2.9%) were positive. Excluding seven individuals who were subsequently identified as previously diagnosed HIV positive, the rate was 2.6%.

Testing was carried out by HIV Ireland (n=650), Safetynet Primary Care MHSU (n=567), and HSE Social Inclusion and Vulnerable Groups (n=986).

1. HIV Ireland

Of 650 tests provided by HIV Ireland, 548 were carried out at HIV Ireland offices in Dublin and 102 were carried out by the Red Door Project (RDP), an outreach drug addiction service that operates in Drogheda. Demographic data could be provided on those tested but could not be provided for those who had positive tests.

- For HIV Ireland in Dublin, 553 individuals presented (registered) for testing, of those 548 (99%) actually tested. Fifty two percent of those tested were female. Age could not be provided in the format requested but could be provided in an alternative age grouping; the commonest age group was 26-30 years (29%). Data could not be provided on all at-risk groupings, but the proportion tested that was MSM could be provided (17%). Thirty seven percent of individuals tested were from Ireland and 19% were from Latin America. In all, seven (1.3%) individuals had a positive HIV test. Of those, one was confirmed positive, and the remaining six did not undergo confirmatory testing as they were later identified as having been previously diagnosed with HIV and already linked to care in Ireland.
- For testing by the Red Door Project, 56% of people tested were male, the commonest age group was 20-24 years (24%), 75% of people tested were from Ireland, 7% were from sub-Saharan Africa, and 7% were from North Africa and Middle East. Key population/at-risk group was unknown or undetermined for 80% of those tested, 11% were reported as migrants coming from countries of high HIV prevalence, and 9% were reported as people who inject drugs (PWID). In all, two (2.0%) individuals had a positive test result; information on confirmatory testing could not be provided.

2. HSE Social Inclusion and Vulnerable Groups

HSE Social Inclusion and Vulnerable Groups could provide data for testing in Baleskin Reception Centre, which is Ireland's largest accommodation centre providing specialist health screening for international protection applicants (persons seeking asylum) and their families in north Dublin. Data could be provided on the total number of individuals screened for HIV in Baleskin in 2018, and on the total number of individuals with a positive HIV test result. In total, 986 individuals were screened for HIV, representing 81% of residents who were invited for holistic screening. Forty-nine (5.0%) individuals had a positive test result; all of whom originated from countries in sub-Saharan Africa. Information on whether or not individuals were previously diagnosed HIV positive in another country could not be provided. There are other testing sites in HSE for protection applicants but they are not included in HIV testing monitoring at this time.

3. Safetynet Primary Care Mobile Health and Screening Unit

Safetynet Primary Care is a medical charity that has been contracted by the HSE to offer VCBT services and medical care to international protection applicants in direct provision/asylum accommodation centres that have reduced capacity to manage the numbers of protection applicants arriving to Ireland. Safetynet also carries out active case finding for TB and blood borne viruses for marginalised people who do not have access to healthcare, including homeless people, drug users and migrants, via its MHSU which operates in various locations in the vicinity of homeless hostels in Dublin, Galway and Limerick. Case-based data could be provided by Safetynet for HIV testing carried out between 9 June 2018 and 31 December 2018. Of 567 tests carried out during this period, five (0.9%) individuals had a positive test result. Of those, three were female and two were male, and their median age was 38 years. One (male born in Ireland) was later identified as having been previously diagnosed with HIV and already linked to care. The remaining four individuals were international protection applicants tested in asylum accommodation settings, all originated from countries of high HIV prevalence in sub-Saharan Africa.

Discussion

This is the first national report on HIV VCBT, and was facilitated through a new collaboration between HPSC, NGOs and other organisations that provide community HIV testing services in Ireland. All NGOs and participants supported this project, and made extensive efforts to

contribute, which, in addition to the findings of this report, resulted in the strengthening of valuable connections between key organisations.

The proportion of first time testers was considerable (29%), and it is clear that community testing services are providing an important option for where individuals can have an HIV test, for first time testers and for repeat testers. The findings of this study indicate a 1.7% HIV test reactivity rate among individuals who undertook HIV VCBT in Ireland in 2018. The rate differed by test setting and among at-risk groups. For rapid testing by at-risk group, the rate was 2.4% among migrants born in countries of high HIV prevalence, and 1.1% among MSM, highlighting the vulnerability to HIV infection and the importance of targeted HIV VCBT services among these two groups. For laboratory-based testing, the HIV test positivity rate was 5.0% among international protection applicants at one accommodation centre, further underscoring the importance of providing HIV VCBT services to protection applicants and migrants coming from countries of high HIV prevalence so that they can be detected early and linked promptly to care and treatment.

National data on community HIV test reactivity rates in other countries is limited. The rate in England in 2016 was 0.6% [3]. The European 'HIV community-based testing practices in Europe' (COBATEST) network, which monitors and evaluates HIV testing activity in community settings, reported an overall rate of 1.3% by 38 members in 16 European countries in 2017 [4]. Regional data for the Catalonia region of Spain show a rate of 2.2% in 2007 [5]. In the USA, CBOs in seven cities reported a rate of 1.1% for testing from 2004 to 2006 [6].

Despite substantial progress towards the UNAIDS global target for 90% of people living with HIV (PLHIV) to have their HIV status known, ECDC reported in 2017 that a significant number of PLHIV in Europe and Central Asia still do not know that they are infected and almost half of people being diagnosed are presenting late in their infection, significantly impacting their chances of survival within a year of diagnosis [7, 8]. In Ireland, it is currently estimated that 13% of PLHIV are undiagnosed, and of the 492 people who were diagnosed with HIV in 2017, 41% presented late, defined as CD4 cell count less than 350 cells/ μ l at diagnosis or an AIDS defining illness at diagnosis [9, 2]. VCBT is a proven way to expand availability and improve targeting of HIV testing [1]. The findings of this study highlight the importance of VCBT monitoring in Ireland, and demonstrate that VCBT monitoring can help inform national HIV testing guidelines (currently under development for Ireland), and guide local and regional community HIV testing

strategies. This will improve targeting of HIV testing among key populations most affected by HIV, reduce the undiagnosed fraction, and support early treatment and diagnosis, leading to personal and population health benefits.

There were some limitations to this study. Although the majority of data could be provided, completeness of some variables was suboptimal due to different data collection processes among organisations, including variables such as age in years, key population/at-risk group, history of testing for HIV, and confirmatory testing. The issue of suboptimal reporting of data on age was resolved by the beginning of 2019 for all rapid testing, and efforts are ongoing to improve completeness of other variables. Case-based data could not be provided by two partners who do not routinely collect case-based data; options to report case-based data are currently being explored. Data could not be provided by Safetynet MHSU for the first five months of 2018 but could be provided thereafter. Of the 84 individuals who had reactive/positive HIV tests, nine (11%) did not communicate their HIV-positive status at the time of testing; when these individuals were excluded from calculations, the HIV test reactivity rate was 1.5%. Work is ongoing among NGOs to encourage service users to communicate their HIV status before they test and also to understand reasons for not disclosing HIV status and testing when already known. Information on whether protection applicants in Baleskin were previously diagnosed HIV positive was not available; therefore the number of people previously diagnosed with HIV may be higher. Other HSE testing sites for protection applicants are not included in HIV testing monitoring at this time. Lastly, it's not currently possible to determine the cost-effectiveness of VCBT in Ireland as there is currently no recommended threshold for HIV testing in community settings. The seropositivity threshold deemed to be cost effective for routinely offering HIV testing in hospital settings, based on US data, is 1 in 1000 [10].

This was the first time that VCBT was monitored on a national level in Ireland; the study was successful due to development of strong links between key organisations and the extensive efforts made by participants to contribute. Following the pilot, a sustained national programme for VCBT monitoring was established, for community testing carried out from 1 January 2019 onwards. HIV testing in other settings including primary care, STI clinics, prisons, self-sampling and self-testing, is not currently monitored on a national level. Feasibility of monitoring HIV testing in these other settings will be explored as part of future developments in HIV testing monitoring.

Technical notes

1. Data on rapid testing were provided by [AIDSWest](#), [GOSHH](#) and [SHC](#), (inclusive of the outreach POCT programme known as [KnowNow](#)). Data on the targeted MSM outreach POCT programme in Dublin were provided by [HIV Ireland](#).
Data on testing using standard laboratory-based methods were provided by HIV Ireland (for testing at HIV Ireland offices in Dublin, and for testing carried out by the Red Door Project), by [Safetynet Primary Care MHSU](#), and by HSE Social Inclusion and Vulnerable Groups (for Ireland's largest asylum accommodation centre).
2. Data included in the analysis is for data received up to 8 February 2019.
3. Percentages are rounded up in the text and provided to one decimal place in the tables.
4. There are two methods in routine practice for HIV testing, involving venepuncture and a screening assay where blood is sent to a laboratory for testing, or a rapid POCT. As per UK National Guidelines for HIV Testing 2008, the recommended first-line assay is one which tests for HIV antibody and p24 antigen simultaneously, this test is laboratory based and is termed a fourth generation assay [9]. A rapid test offers the advantage of a result from either a fingerprick or mouth swab sample within minutes. Rapid testing has advantages of ease of use when venepuncture is not possible, e.g. outside conventional healthcare settings and where a delay in obtaining a result is a disadvantage, but these must be weighed against the disadvantages of a test which has reduced specificity and reduced sensitivity versus current fourth generation laboratory tests. Due to the low specificity of POCT and therefore the resulting poor positive predictive value all positive results must be confirmed by serological tests as there will be false positives, particularly in lower prevalence environments. Data on confirmation testing was available for 90% of reactive rapid tests in this study; of those there were no false positives reported.
5. The INSTI[®] Rapid HIV testing kit was used for all rapid testing in this study. The accuracy of the INSTI[®] HIV-1 Antibody test for all specimen types studied (fingerstick whole blood, venipuncture whole blood, plasma) is greater than or equal to 99.5% with the lower boundary of the 95% confidence interval (CI) greater than or equal to 99.0% for all sample types. This meets the FDA established requirements for approval of a rapid HIV test device [11].
6. Gender identity refers to a person's internal sense of themselves (how they feel inside) as being male, female, transmale, transfemale or something else. This may be different or the same as a person's assigned sex at birth. Further information and resources can be found at the website of Transgender Equality Network Ireland (www.teni.ie).

7. Countries of high HIV prevalence are countries with HIV prevalence >1% in the adult population, as per the UNAIDS 2014 [The Gap Report](#).
8. The denominator used to calculate HIV test reactivity rate is of all tests carried out, not of individuals tested, as some individuals may have tested more than once during 2018.

Acknowledgements

We would like to thank all those who contributed data to this report including all of the staff and volunteers at HIV Ireland; GOSHH; SHC; AIDSWest; ACET; Safetynet Primary Care; HSE Social Inclusion and Vulnerable Groups; nurse practitioners at the GUIDE clinic in St. James' Hospital, Dublin; and all of the staff and volunteers of the KnowNow programme. We would also like to thank the Community HIV Testing Monitoring Steering Group for study oversight and review of this report.

Report prepared by

This report was prepared by Melissa Brady and Derval Igoe (HPSC) on behalf of the Community HIV Testing Monitoring Steering Group.

References

1. European Centre for Disease Prevention and Control (ECDC), Meeting Report. Monitoring HIV Testing in the EU/EAA. 19-20 October 2016: Stockholm.
2. HSE Health Protection Surveillance Centre. HIV in Ireland, 2017. Dublin: HSE HPSC; 2018
3. Nash SG, Furegato M, Gill ON, Connor N and contributors. HIV testing in England: 2017 report. November 2017. Public Health England, London.
4. The COBATEST network: Community –Based Voluntary Counselling and Testing in Europe. 2017 Report.
5. Fernandez-Lopez, B Rifa, F Pujol, J Becerra, M Perez, M Meron et al. Impact of the introduction of rapid HIV testing in the Voluntary Counselling and Testing sites network of Catalonia, Spain. International Journal of STD & AIDS 2010; 21: 388–391. DOI: 10.1258/ijjsa.2008.008459.

6. Bowles K, Clark H, Tai E, Sullivan P, Song B, Tsang J et al. Public Health Reports (Washington DC). 2008 Nov-Dec; 123 Suppl 3:78-85. Implementing Rapid HIV Testing in Outreach and Community Settings: Results from an Advancing HIV Prevention Demonstration Project Conducted in Seven U.S. Cities.
7. European Centre for Disease Prevention and Control. HIV testing. Monitoring implementation of the Dublin Declaration on Partnership to fight HIV/AIDS in Europe and Central Asia: 2017 progress report.
8. Nash S, Desai S, Croxford S, Guerra L, Lowndes C, Connor N, Gill ON. Progress towards ending the HIV epidemic in the United Kingdom: 2018 report. November 2018, Public Health England, London.
9. Continuum of HIV Care, Ireland 2017. HSE Sexual Health and Crisis Pregnancy Programme (SHCPP), 2018.
10. UK National Guidelines for HIV Testing, 2008. British HIV Association and British Association of Sexual Health and HIV British Infection Society, 2008.
11. BioLytical, INSTI™ HIV-1 Antibody Test, Summary of Safety and Effectiveness <https://www.fda.gov/downloads/BloodBloodProducts/UCM235253.pdf>.

Appendices

Appendix 1 Membership of the Community HIV Testing Monitoring Steering Group

Name	Organisation
Derval Igoe (Chair)	HSE Health Protection Surveillance Centre (HPSC)
Melissa Brady	HSE Health Protection Surveillance Centre (HPSC)
Niall Mulligan	HIV Ireland
Erin Nugent	HIV Ireland
Adam Shanley	KnowNow
Caroline Hurley	HSE Sexual Health and Crisis Pregnancy Programme (SHCPP)
Margaret Fitzgerald	HSE National Social Inclusion Office
Maitiú ó Tuathail	Mobile Health and Screening Unit, Safetynet Primary Care
Richard Carson	AIDS Care Education & Training (ACET)
Cillian Flynn	Gender, Orientation, Sexual Health, HIV (GOSHH)