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Aussie study finds HIV home-based test kits welcomed by gay and bisexual men

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The Public Health Agency of Canada (PHAC) estimates that about [20% of people](#) who have HIV in Canada are not aware that they are infected.

In Australia researchers have found that about 20% of gay and bisexual men have disclosed that either “they have never been tested...or their last HIV test was more than two years ago.”

These examples from two high-income countries underscore the need to increase opportunities for the offer of an HIV test.

Approaches to different test results

A negative test result should be followed by counselling and a discussion about options for preventing HIV infection.

A positive test result should be followed by supportive counselling and swift referral to care where the benefits of treatment can be discussed and an offer of treatment can be made. People starting HIV treatment (ART) today have many generally safe and simple options that they can discuss with their doctor. By taking ART every day as prescribed and directed, the amount of HIV in a person's blood—their viral load—falls; usually within several months it falls to a level where it cannot be accurately counted by conventional tests (this low level is commonly called “undetectable”). By continuing to take ART every day, a person's viral load stays undetectable. Getting regular checkups and blood tests helps people track their viral load and keep abreast of any problems that may develop. All of these are steps toward improved health. This improved health means that researchers increasingly expect that many young adults who start ART today [will live into their senior years](#). Furthermore, studies have found that people with an undetectable viral load [do not pass on HIV to their sexual partners](#). Therefore, strategies that seek to help people discover their HIV status, and, in cases of a positive test result, enter into care and treatment, have much potential to reduce the spread of this virus at the level of a city, region or country.

Testing and prevention at home

One possible way to increase HIV testing is to make self-testing (also called home-based HIV testing) kits available. Such kits have been approved by regulatory authorities in France, the U.K. and the U.S. but not in Canada or Australia.

A well-designed study

In a randomized clinical trial, researchers in Australia recruited more than 300 HIV-negative men to compare different patterns of HIV testing behaviour. Prior to entering the study these men had disclosed that they had engaged in condomless intercourse with more than five male sexual partners in the past three months. Researchers divided participants into two groups as follows:

- One group received free HIV self-testing kits and were told to continue to use the sexual health and other clinics that they would visit from time to time for testing for sexually transmitted infections (STIs), including HIV.
- One group did not receive these kits and were told to continue to use the sexual health and other clinics that they would visit from time to time for testing for STIs, including HIV. This group acted as a control, or

comparison.

All participants were asked to complete an online questionnaire every three months.

In an article in the upcoming issue of the journal *Lancet HIV*, researchers presented findings on the first 12 months of the study. They found that rates of HIV testing doubled among men who were given the self-test kits. Among those who had not been tested in the past two years and who received the kits, rates of testing rose nearly fourfold. There was no significant change in the testing behaviour of men in the control group.

The researchers stated that “HIV self-testing [kits] should be made more widely available to help increase testing and earlier diagnosis.”

Study details

Researchers in Australia recruited men with the following history of HIV testing, which they grouped as follows:

- men who had their last HIV test within the past two years (called recent testers)
- men who had never previously been tested or who had their last HIV test more than two years ago (called non-recent testers)

On average, the men in the study were in their mid-30s. Participants were recruited from large urban sexual health clinics in the cities of Cairns, Melbourne and Sydney as well as from two community-based organizations. According to the researchers, between 17% and 24% of new clients attending those clinics had never been previously tested for HIV and between 12% to 18% were bisexual.

The study was promoted by posters in clinics, banners on gay websites and social media, and on the gay social network app Grindr.

The researchers advised all the men in the study to “continue to seek HIV and STI testing as they would normally at their preferred [clinics].” For the duration of the study, the men consented to these clinics disclosing the results of this testing to a member of the study team.

The HIV home test kits used in the study were the OraQuick home test kits made by OraSure Technologies (Bethlehem, Pennsylvania). These kits can produce a preliminary positive result, called a “reactive” test result, which must then be confirmed by a more accurate test at a clinic.

The research team offered speedy “confirmatory testing, clinical review and supportive counselling to any participant who had a reactive self-test result” at clinics associated with the study.

Participants in the self-testing group initially received four test kits and could request up to a maximum of 12 per year.

After 12 months, men in the control group were given self-testing kits and monitored for a further 12 months. Participants were informed that the self-test kits should not be used if a potential exposure occurred within the past three months, as there is a “window period” with the test. That is, the test works by detecting certain antibodies that are produced after infection with HIV. In the vast majority of people these antibodies are present after three months of infection.

Key findings

- Participants who received HIV self-test kits were twice as likely to engage in HIV testing at home and at clinics.
- Men who had never been tested or who had their last HIV test more than two years ago were even more likely (fourfold) to engage in HIV testing at home and at clinics.

These changes in HIV testing behaviour were statistically significant.

During the study there was no significant decrease in HIV and STI testing at clinics by participants who received the HIV self-testing kits (we will return to this point later in our report). This was found in participants who were recent testers as well as non-recent testers.

HIV infections

Three new HIV infections were diagnosed during the study. All three were in the group who received the self-testing kits. All three men were linked to care.

Reasons and views

According to the researchers, men who were given the HIV self-testing kits disclosed the following:

- they were more likely to use the kits than go to a clinic to find out their status
- they used the kits after they had engaged in high-risk behaviour
- they used the kits if they developed an illness or had a symptom that concerned them

After 12 months of experience using the self-testing kits, men disclosed the following:

- 97% found self-testing “easy”
- 95% said that they would go to a doctor’s office for confirmation of a reactive test result obtained with the kit
- 95% would recommend that other men use the test kits

The researchers also found that 78% of the men who used the test kits were willing to pay up to AUS\$30 per self-test kit should it be approved in Australia. This price is equivalent to about the following amounts in these currencies:

- Canadian - \$31
- Euro - €22
- U.S. - \$23

Telephone calls

Only 20 telephone calls were made to the study’s support phone line. The vast majority (90%) of these calls were requests for more test kits. Participants did not report any adverse effects as a result of using the test kits.

Commenting on the study

Researchers in New York City reviewed the findings from the Australian study and made several relevant comments on themes evoked by the study.

Social harms

The New York City researchers noticed that the Australian study did not find any social harms associated with the test kits. However, they cautioned that implementation of HIV testing strategies that in part rely on home-use test kits “must clearly address the potential for social harms, particularly those related to gender and sexuality oppression.”

Cost issues

The New York City researchers made the following statement:

“Ensuring access to regulated and approved self-tests should be a priority for country-level HIV prevention programmes. Yet, because most research has provided free self-tests, the effect of the cost of self-tests on consistent testing is not well understood.”

They noted that the cost of the self-test in the U.S. is between US\$40 and \$60 (between CAN\$53 and \$80). According to researchers in France, the cost of self-tests is generally between €20 and €40 (this is in the same price range as the cost of the tests in the U.S.).

The New York City researchers added:

“To avoid possible cost barriers, health authorities might need to provide free HIV self-tests to achieve the increased testing frequency [seen in the Australian study].”

Bear in mind

The Australian researchers found that home-use HIV-test kits were popular among gay and bisexual men in the study as testing rates increased. Thus, perhaps for certain populations, particularly gay and bisexual men in high-income countries, subsidized HIV self-test kits could be part of a strategy to reduce barriers to HIV testing.

The researchers also found that there was no decrease in participants' use of clinic-based HIV testing during the study. This is an important point because researchers in Seattle have produced computer simulations suggesting that the availability of self-testing could potentially lead to more HIV infections because patients would forgo clinic-based testing and rely on home tests, which are not reliable for detecting recent infections (infections that have occurred within three months).

Resources

Testing

[HIV home-based testing: Potential benefits and ongoing concerns](#) - *Prevention in Focus*

[HIV testing technologies](#) - fact sheet

[The HIV testing process](#) - fact sheet

HIV Prevention

[CATIE statement on the use of antiretroviral treatment \(ART\) as a highly effective strategy to maintain an undetectable viral load to prevent the sexual transmission of HIV](#)

[Pre-exposure prophylaxis \(PrEP\) resources](#)

[CATIE's prevention resources](#)

HIV, ART and survival

[Impressive gains in survival for older people with HIV but still less than general population](#) - *CATIE News*

[What reduces survival 10 years after starting ART in North America and Europe?](#) - *TreatmentUpdate* 217

[Longer life expectancy for HIV-positive people in North America](#) - *TreatmentUpdate* 200

[Exploring factors linked to longer survival among ART users](#) - *TreatmentUpdate* 200

[Long-term HIV infection and health-related quality of life](#) - *CATIE News*

[Swiss researchers investigate drug use and its impact on health and survival](#) - *CATIE News*

—Sean R. Hosein

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