Point-of-care HIV tests done by peers, Brazil
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Introduction
To respond to the human immunodeficiency virus (HIV) epidemic it is important to diagnose HIV-infected people early, because diagnosis allows infected people to start antiretroviral therapy (ART) and – by reducing their viral load – reduces HIV transmission.1 However, fear of the disease and the consequences of being infected make people hesitant to test themselves for HIV.2,4

Key populations – men who have sex with men, transgender people, sex workers and people who use drugs – are disproportionally affected by the HIV epidemic.5 Their risk of infection is higher than the general population and they face legal and social barriers in accessing health services. To improve access to HIV care and diagnosis, community-based interventions are essential.6,7

To expand HIV testing for key populations in Brazil, the health ministry developed a community-based testing strategy, called Viva Melhor Sabendo (“live better knowing”). We present lessons learnt during the first 15 months of its implementation.

Local context
In Brazil, the HIV epidemic is largely concentrated in key populations. For men who have sex with men, prevalence was 14.8% in 2015, 40 times higher than in the general population (0.4% in 2012). In other key populations the prevalence is about 5% (female commercial sex workers 4.9% in 2009; drug users 5.0% in 2013).5,12

The Brazilian acquired immunodeficiency syndrome (AIDS) programme has set a preventive actions for key populations such as financial support for specific activities, distribution of educational and prevention materials – such as male and female condoms – and workshops on HIV prevention. These actions are done in partnership with non-governmental organizations (NGOs). Since 2013, the health ministry aims to provide ART to every person living with HIV, irrespective of their CD4+ T-lymphocyte count.13

Approach
Once the programme implemented treatment as prevention, early diagnosis emerged as the next requirement, especially for key populations. To meet this need, the Department of Sexually Transmitted Infections (STIs), AIDS and Viral Hepatitis developed a key populations-focused strategy, which combined prevention, testing and counselling initiatives. The strategy included a peer point-of-care testing intervention with an oral fluid HIV rapid test. The test, DPP® HIV-1/2 (Biomanguinhos/Fiocruz, Rio de Janeiro, Brazil), is only for screening when administered alone, despite its high sensitivity (99.5%) and specificity (99.0%).14 Therefore, any positive result from an oral fluid rapid test needs diagnostic confirmation through a finger puncture rapid test or another conventional test.

Lessons from the field
The Brazilian Ministry of Health developed a strategy called Viva Melhor Sabendo (“live better knowing”) to increase HIV testing among key populations. In partnership with nongovernmental organizations (NGOs), a peer point-of-care testing intervention, using an oral fluid rapid test, was introduced at social venues for key populations at different times of the day.

Lessons learnt
The strategy improved access to HIV testing. Testing done by peers at times and locations suitable for key populations increased acceptance of testing. Working with relevant NGOs is a useful approach when reaching out to these key populations.

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AIDS and viral hepatitis coordination office. Staff were trained to implement the project by learning to develop an action plan; carry out the oral fluid test; counsel the person tested; inform only the patient of the results; make a referral to health services; and monitor the project.

The ministry provided NGOs with a booklet detailing the methods of the strategy and a training video showing how to do the tests.

When planning the interventions, NGOs and the local STI, AIDS and viral hepatitis coordinator mapped testing sites and coordinated referral services with local health management and municipal health facilities.

The NGO teams did all the work, from offering the test to referring those who tested positive to HIV services. The teams were free to develop their own ways of approaching people for testing. To improve uptake, the teams used their knowledge of each key population and their previous experience with community work. When possible, team members chose to approach people of the same population; for example, a transgender team member approached another transgender person. The teams carried out oral fluid testing at different times of the day in social venues they had mapped. The testing was free of charge and voluntary and the results were only revealed to the tested person. Although anyone could be tested at the venues, peers only offered tests to people they thought were part of the key populations. To be tested, the person had to fill out a consent form for taking the test and a registration form, which contained demographic information and information about the possible route of HIV transmission. Individual identification was not compulsory. Team members gave people with positive test results the address of a health facility where diagnosis could be confirmed and treatment and care provided. For those who chose not to provide personal identifiers on the registration form, the teams were unable to confirm enrolment in care.

The department developed a special monitoring and evaluation plan, a field log, monthly activity worksheets and technical reports with data collected during testing. Information from the registration form was inserted

Table 1. Characteristics of people tested for HIV with oral fluid rapid test, Brazil, January 2014 to March 2015

| Characteristics                      | No. tested | No. with a positive result (%) | P  |
|--------------------------------------|------------|--------------------------------|----|
| All                                  | 29,723     | 791 (2.7)                      | –  |
| Age, years                           |            |                                |    |
| ≤ 24                                 | 9,320      | 209 (2.2)                      | 0.002 |
| 25–34                                | 9,776      | 259 (2.6)                      |    |
| 35–49                                | 7,058      | 227 (3.2)                      |    |
| ≥ 50                                 | 3,190      | 82 (2.6)                       |    |
| Sex                                  |            |                                |    |
| Female                               | 13,085     | 205 (1.6)                      | 0.001 |
| Male                                 | 16,646     | 583 (3.5)                      |    |
| Education                            |            |                                |    |
| Incomplete primary                   | 4,856      | 156 (3.2)                      | 0.021 |
| Complete primary                     | 11,236     | 295 (2.6)                      |    |
| High school or more                  | 13,382     | 330 (2.5)                      |    |
| Population subgroup                  |            |                                |    |
| Transgender                          | 1,612      | 172 (10.7)                     | < 0.001 |
| Men who have sex with men            | 6,055      | 292 (4.8)                      |    |
| Heterosexual man                     | 9,253      | 153 (1.7)                      |    |
| Heterosexual woman                   | 1,122      | 6 (0.5)                        |    |
| Bisexual man                         | 1,852      | 26 (1.4)                       |    |
| Homosexual woman                     | 9,618      | 140 (1.5)                      |    |
| Sex work                             |            |                                |    |
| No sex work                          | 21,986     | 513 (2.3)                      | < 0.001 |
| Male sex worker                      | 1,889      | 165 (8.7)                      |    |
| Female sex worker                    | 5,848      | 113 (1.9)                      |    |
| Use of psychoactive substances       |            |                                |    |
| None                                 | 9,918      | 225 (2.3)                      | < 0.001 |
| One                                  | 13,554     | 354 (2.6)                      |    |
| Two                                  | 3,661      | 123 (3.4)                      |    |
| Three                                | 1,757      | 50 (2.8)                       |    |
| Four or more                         | 833        | 39 (4.7)                       |    |
| Had at least one HIV test in lifetime|            |                                |    |
| Yes                                  | 13,760     | 240 (1.7)                      | < 0.001 |
| No                                   | 15,646     | 532 (3.4)                      |    |
| Had any STI during the last 12 months|            |                                |    |
| Yes                                  | 27,118     | 614 (2.3)                      | < 0.001 |
| No                                   | 2,244      | 162 (7.2)                      |    |

HIV: human immunodeficiency virus; STI: sexually transmitted infection.

To assess the differences in the proportions in each group, we conducted χ² tests.

Note: Due to missing information, the sum of people in each sub-category does not add up to the total number of people tested.

Box 1. Summary of main lessons learnt

The strategy was designed to provide testing and prevention initiatives for populations with the highest human immunodeficiency virus (HIV) prevalence.

By reaching the key populations in their own environment, the peer-testing strategy increased HIV testing among people with higher HIV burden.

People accepted this testing strategy, in part because they were not exposed to possible discrimination experienced when visiting traditional health services.
Lessons learnt

A specific focus on increasing testing among key populations with the highest HIV burden resulted in an increase of early diagnoses. Two factors played a role in the increase. First, changes in the testing algorithm made it possible for trained peers to do the testing instead of health professionals. Second, the use of a non-invasive test for screening facilitated testing outside health-care centres.

The main lessons learnt are summarized in Box 1. Peer point-of-care using an oral fluid HIV test facilitated access for key populations to HIV testing and counselling. Furthermore, the people involved showed an increased acceptance of HIV testing, because the test was done by peers in convenient places and times of the day. The strategy also empowered the people working for participating NGOs by improving their ways of addressing key populations, increasing their knowledge about venues of social interest and tightening their relationship with the local health services. NGO team members developed skills and solved problems that moved the strategy forward.

The strategy promoted contacts between the Brazilian Federal Government and state and municipal STI and HIV/AIDS management. This kind of connection plays an important role within the operation of the Brazilian Unified Health System, since Brazil’s three government spheres – the union, states and municipalities – are mutually independent and their autonomy is ensured by the Brazilian Federal Constitution.

The proportion of positive tests identified during the project was almost seven times higher than in the general population – 2.7% versus 0.4%, respectively. This difference reinforces the need to expand initiatives focusing on the key populations to respond to the HIV epidemic in Brazil.

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**Box 1** Peer point-of-care: using an oral fluid HIV test facilitated access for key populations to HIV-testing and counselling.
Lessons from the field
HIV testing, Brazil

摘要
由同伴进行的 HIV 即时检测，巴西

问题 我们急需开展人体免疫缺陷病毒 (HIV) 感染的诊断——尤其是在性工作者、跨性别者、进行同性性行为的男同性恋者以及吸毒人群等重点人群中。

方法 巴西卫生部开发了一种名为 Viva Melhor Sabendo (“了解让生活更美好”) 的方案以提高重点人群中的 HIV 检测率。通过与非政府组织 (NGO) 的合作，开发出一项可利用口腔液体快速检测的即时检测干预，可在一天内不同时间在重点人群的社交场合开展。

当地环境 巴西重点人群中的 HIV 感染率可达到普通人群 HIV 感染率的 40 倍 (14.8% 比 0.4%)。

相关改变 对法律进行重新解释，因此，任何经卫生部快速检测培训的人员都可执行口腔液体检测。在 2014 年 1 月至 2015 年 3 月之间，一共进行了 29723 项口腔液体检测，其中 791 (2.7%) 呈阳性。在重点人群中，跨性别者的阳性检测结果所占比例最高 (10.7%; 172/1612)，其次是自称为性工作者的男性 (8.7%; 165/1889) 以及进行同性性行为的男同性恋者 (4.8%; 292/6055)。

经验教训 该措施提高了 HIV 的检测率。在适合重 点人群的地点和时间，由同伴进行的检测提高了检测的接受度。与相关 NGO 合作对于覆盖上述重点人群是一个有效方法。

Résumé
Tests du VIH par des pairs sur le lieu des soins au Brésil

Problème Il est nécessaire de procéder à un diagnostic précoce des infections par le virus de l'immunodéficience humaine (VIH), en particulier chez les groupes de population clés que forment notamment les travailleurs du sexe, les transsexuels, les hommes ayant des rapports sexuels avec des hommes et les personnes qui consomment des drogues.

Approche Le ministère brésilien de la Santé a mis au point une stratégie appelée Viva Melhor Sabendo (« Vivre mieux en étant informé ») pour accroître le dépistage du VIH dans les groupes de population clés. En partenariat avec des organisations non gouvernementales (ONG), des actions de dépistage par des pairs sur le lieu des soins, à l'aide d'un test salivaire rapide, ont été mises en place à différents moments de la journée dans des établissements sociaux pour les groupes de population clés.

Environnement local Au Brésil, la prévalence de l'infection par le VIH peut être jusqu'à 40 fois plus élevée dans les groupes de population clés que dans la population générale (14.8% contre 0.4%).

Changements significatifs La législation a été révisée de façon à ce que les tests salivaires rapides puissent être réalisés par toute personne formée aux méthodes de dépistage rapide par le ministère de la Santé. Sur les 29 723 tests salivaires effectués entre janvier 2014 et mars 2015, 791 (2,7%) étaient positifs. Dans les groupes de population clés, la plus forte proportion de résultats positifs revenait aux transsexuels (10,7%; 172/1612), suivis par les hommes qui se définissent eux-même comme étant des travailleurs de l'industrie du sexe (8,7%; 165/1889) et les hommes ayant des rapports sexuels avec des hommes (4,8%; 292/6055).

Leçons tirées La stratégie a permis d'améliorer l'accès au dépistage du VIH. La réalisation de tests par des pairs à des moments et dans des endroits appropriés pour les groupes de population clés a favorisé l'acceptation du dépistage. Il est utile de travailler avec les ONG compétentes pour approcher ces groupes de population clés.

Резюме
Тестирование на ВИЧ, выполненное по месту оказания медицинской помощи людьми из одной и той же группы населения, Бразилия

Проблема Ранее диагностирование заражений вирусом иммунодефицита человека (ВИЧ) необходимо, особенно среди представителей ключевых групп населения, к которым относятся работники секс-индустрии, транссексуалы, мужчины, практикующие секс с мужчинами, и люди, употребляющие наркотики.

Подход Министерством здравоохранения Бразилии была разработана стратегия под названием Viva Melhor Sabendo (Кать лучше знать), нацеленная на распространение тестирования на ВИЧ среди ключевых групп населения. В партнерстве с неправительственными организациями (НПО) тестирование по месту лечения, проводимое людьми из одной и той же группы населения, в котором использовался экспресс-анализ ротовой жидкости, было представлено для ключевых групп населения в местах проведения общественных мероприятий в разное время суток.

Местные условия Показатели распространенности ВИЧ среди представителей ключевых групп населения в Бразилии могут в 40 раз превышать показатели распространенности этого вируса среди населения в целом (14.8% против 0.4%).

Осуществленные переменны Законодательство было пересмотрено так, чтобы экспресс-анализы ротовой жидкости мог выполнять любой человек, которого Министерство здравоохранения обучило выполнению соответствующего экспресс-анализа. За период с января 2014 года по март 2015 года было выполнено 29 723 теста ротовой жидкости, результаты 791 (2.7%) из них были положительными. Среди представителей ключевых групп населения наибольшая доля положительных результатов пришлась на транссексуалов (10.7%; 172/1612); меньше доли пришлись на людей, которые заявили, что являются работниками сексуальной индустрии (8.7%; 165/1889); и мужчин, практикующих секс с мужчинами (4.8%; 292 из 6055).

Выводы В результате применения стратегии увеличилась доступность тестирования на ВИЧ. Согласие на тестирование стало более частым благодаря тому, что оно выполнялось людьми из той же группы населения, что и тестируемый, в такое время и в таком месте, которые удобны для представителей ключевых групп населения. Сотрудничество с соответствующими НПО является целесообразным подходом, когда необходимо оказать помощь этим ключевым группам населения.
Resumen

Pruebas del VIH en el punto de atención realizadas por expertos, Brasil

Situación Es necesario un diagnóstico temprano de infecciones por el virus de la inmunodeficiencia humana (VIH), especialmente en poblaciones clave como trabajadores sexuales, personas transexuales, hombres que mantienen relaciones sexuales con otros hombres y consumidores de drogas.

Enfoque El Ministerio de Sanidad brasileño desarrolló una estrategia denominada Viva Melhor Sabendo (“vive mejor sabiendo”) para aumentar las pruebas del VIH en poblaciones clave. En asociación con organizaciones no gubernamentales (ONG), se introdujo una intervención de prueba en el punto de atención realizada por expertos, mediante la utilización de una prueba rápida de fluidos orales, en centros sociales para poblaciones clave en distintos momentos del día.

Marco regional Las poblaciones clave en Brasil pueden tener una prevalencia de VIH 40 veces mayor que la población general (un 14,8% frente a un 0,4%).

Cambios importantes Se reinterpretó la legislación, de modo que cualquier persona formada en pruebas rápidas por el Ministerio de Sanidad pueda administrar las pruebas rápidas de fluidos orales. Entre enero de 2014 y marzo de 2015, se administraron 29 723 pruebas de fluidos orales, de las cuales 791 (2,7%) dieron resultados positivos. Entre las poblaciones clave, las personas transexuales tuvieron el mayor porcentaje de resultados positivos (10,7%; 172/1 612), seguidas de los hombres que declararon ser trabajadores sexuales (8,7%; 165/1 889) y los hombres que mantienen relaciones sexuales con otros hombres (4,8%; 292/6 055).

Lecciones aprendidas La estrategia mejoró el acceso a las pruebas del VIH. Las pruebas realizadas por expertos en momentos y lugares adecuados para poblaciones clave aumentaron la aceptación de las pruebas. Trabajar con ONG importantes es un enfoque útil a la hora de dirigirse a dichas poblaciones clave.

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