

LONDON  
SCHOOL of  
HYGIENE  
& TROPICAL  
MEDICINE



Baggaley, R; Hensen, B; Ajose, O; Grabbe, KL; Wong, VJ; Schilsky, A; Lo, YR; Lule, F; Granich, R; Hargreaves, J (2012) From caution to urgency: the evolution of HIV testing and counselling in Africa. *Bulletin of the World Health Organization*, 90 (9). 652-658B. ISSN 0042-9686 DOI: 10.2471/BLT.11.100818

Downloaded from: <http://researchonline.lshtm.ac.uk/2255443/>

DOI: [10.2471/BLT.11.100818](https://doi.org/10.2471/BLT.11.100818)

#### Usage Guidelines

Please refer to usage guidelines at <http://researchonline.lshtm.ac.uk/policies.html> or alternatively contact [researchonline@lshtm.ac.uk](mailto:researchonline@lshtm.ac.uk).

Available under license: <http://creativecommons.org/licenses/by-nc-nd/2.5/>

# From caution to urgency: the evolution of HIV testing and counselling in Africa

R Baggaley,<sup>a</sup> B Hensen,<sup>b</sup> O Ajose,<sup>c</sup> KL Grabbe,<sup>d</sup> VJ Wong,<sup>e</sup> A Schilsky,<sup>d</sup> Y-R Lo,<sup>a</sup> F Lule,<sup>f</sup> R Granich<sup>a</sup> & J Hargreaves<sup>b</sup>

**Objective** To describe recent changes in policy on provider-initiated testing and counselling (PITC) for human immunodeficiency virus (HIV) infection in African countries and to investigate patients' experiences of and views about PITC.

**Methods** A review of the published literature and of national HIV testing policies, strategic frameworks, plans and other relevant documents was carried out.

**Findings** Of the African countries reviewed, 42 (79.2%) had adopted a PITC policy. Of the 42, all recommended PITC for the prevention of mother-to-child HIV transmission, 66.7% recommended it for tuberculosis clinics and patients, and 45.2% for sexually transmitted infection clinics. Moreover, 43.6% adopted PITC in 2005 or 2006. The literature search identified 11 studies on patients' experiences of and views about PITC in clinical settings in Africa. The clear majority regarded PITC as acceptable. However, women in antenatal clinics were not always aware that they had the right to decline an HIV test.

**Conclusion** Policy and practice on HIV testing and counselling in Africa has shifted from a cautious approach that emphasizes confidentiality to greater acceptance of the routine offer of HIV testing. The introduction of PITC in clinical settings has contributed to increased HIV testing in several of these settings. Most patients regard PITC as acceptable. However, other approaches are needed to reach people who do not consult health-care services.

Abstracts in **عربي**, **中文**, **Français**, **Русский** and **Español** at the end of each article.

## Background

Since the first antibody tests for human immunodeficiency virus (HIV) infection became available, public health organizations and human rights activists have debated the best approach to HIV testing and counselling (HTC).<sup>1</sup> At a time when there was no effective treatment and HIV-infected individuals faced widespread discrimination and stigmatization,<sup>1</sup> many argued that HTC was inappropriate because it provided little benefit to the individual.<sup>1,2</sup> Conversely, others believed that testing was the key to promoting a change in behaviour.<sup>1,3</sup> These two concerns framed early debates about HTC.<sup>4</sup>

Initially, there was general support for a cautious response to HTC and HIV infection, although this was considered "exceptional" compared with responses to other infectious diseases.<sup>1,5</sup> For example, in 1987, the World Health Organization (WHO) emphasized caution in extending routine HIV testing beyond blood donors.<sup>1</sup> At that time, standards for HTC, which were based on an international consensus reached by WHO and other stakeholders, emphasized voluntarism and gave rise to the adoption of voluntary counselling and testing.<sup>1</sup> This approach consisted of three primary components: counselling before and after an HIV test, which included an individualized risk-reduction plan based on the test results; informed written consent; and confidentiality.<sup>1</sup>

As evidence emerged that antiretroviral therapy (ART) could significantly reduce mother-to-child HIV transmission and "alter the clinical course" of HIV infection, the HTC debate changed.<sup>1,3,6</sup> Clinicians and public health professionals now argued that an exceptional approach to HTC was no longer

appropriate. The view was that HTC should be standard clinical practice in settings where patients present with symptoms of an HIV infection and where ART is available.<sup>1,2</sup>

At first, however, ART was not universally available. In 2003, only 1% of individuals in need of ART had access to treatment and WHO declared a global health emergency.<sup>7</sup> This declaration gave rise to a series of initiatives for expanding access to ART in developing countries, including the 2003 WHO 3-by-5 initiative and The World Bank's Multi-Country HIV/AIDS Program.<sup>7-9</sup> In the same year, increased funding for extending treatment became available through the United States President's Emergency Plan for AIDS Relief and the Global Fund to Fight AIDS, Tuberculosis and Malaria. In addition, the political climate changed and increased access to prevention and treatment of HIV infection was endorsed. These developments profoundly influenced the debate on HTC at a time when fewer than 10% of those infected with HIV were aware of their status<sup>10</sup> and most were diagnosed at the end stage of the disease, when immune suppression made ART less effective.<sup>11,12</sup> Consequently, voluntary counselling and testing was no longer seen as sufficient for enabling people to become aware of their HIV status. In the era of ART, alternative approaches to HTC were required.<sup>1,2</sup>

One development was the emergence of provider-initiated HIV testing and counselling (PITC).<sup>1</sup> In 2003, only 52% of pregnant women in Botswana knew their HIV status.<sup>13</sup> To increase the knowledge of HIV status, the government instituted a policy of "routine" PITC in various clinical settings in 2004.<sup>14</sup> Similarly, Uganda implemented PITC in referral hospitals in 2005 and Zambia implemented it in tuberculosis

<sup>a</sup> HIV/AIDS Department, World Health Organization, Geneva, Switzerland.

<sup>b</sup> Department of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, England.

<sup>c</sup> Clinton Health Access Initiative, Dar es Salaam, United Republic of Tanzania.

<sup>d</sup> Division of Global HIV/AIDS, Centers for Disease Control and Prevention, Atlanta, United States of America (USA).

<sup>e</sup> Office of HIV/AIDS, United States Agency for International Development, Washington, USA.

<sup>f</sup> Communicable Diseases, World Health Organization Regional Office for Africa, Brazzaville, Congo.

Correspondence to B Hensen (e-mail: bernadette.hensen@lshtm.ac.uk).

(Submitted: 5 December 2011 – Revised version received: 9 May 2012 – Accepted: 11 May 2012 – Published online: 27 June 2012)

clinics in 2004.<sup>15,16</sup> In 2006, the United States Centers for Disease Control and Prevention recommended that PITC be offered to adults aged 13 to 64 years in all health-care settings, with consent being assumed unless the patient explicitly declined.<sup>1,17</sup> As treatment was scaled up, routine HTC gained traction and several countries introduced PITC in clinical settings. Early results demonstrated an increase in HTC uptake.<sup>18–20</sup> With the implementation of PITC expanding globally, WHO recognized the need for guidance. In 2007, WHO and the United Nations Programme on HIV/AIDS issued a document on PITC in health-care facilities. The final document was an extensive revision of an initial 2006 draft and took into account concerns about coercion, human rights and the definition of the word “routine”.<sup>1,7</sup>

The primary aim of this study was to review how policy in African countries has changed in response to the growing recognition that health-care providers should offer more HTC. The rationale for focusing on HTC policy in Africa was, first, that 68% of the estimated 34 million people with HIV infections worldwide at the end of 2010 resided in sub-Saharan Africa, a region with only 12% of the global population,<sup>21</sup> and, second, that it was important to examine policy responses in settings where there was an urgent need to address low HTC coverage, for example, to prevent mother-to-child HIV transmission or to identify individuals with HIV infections who could benefit from ART. Additional aims were to investigate patients' perceptions of PITC and their experience of the process of PITC, with particular reference to informed consent and counselling.

## Methods

National policy documents, strategies, plans, frameworks, guidelines and reports on HIV testing or HIV prevention and treatment were identified by searching the WHO Library Information System, Google Scholar and the knowledge base repositories of organizations and institutions, including the International Labour Organization, the United States Agency for International Development (the AIDSTAR One project), the University of California in San Francisco (the HIVInSite knowledge base) and Harvard University. The Evidence to Action HIV and AIDS Data Hub was also

searched. Where information was not readily available or further clarification was required, WHO country representatives were contacted. In addition, the review also considered documents that did not focus on HIV prevention alone but covered relevant broad issues, such as maternal and child health, human rights, tuberculosis and opportunistic infections.

Identified documents were grouped into three categories according to their overall objectives:

- guidelines, manuals, protocols, legislation and policy;
- national strategic plans, strategic frameworks and multisectoral frameworks;
- other literature, including published and unpublished reviews.

The date assumed for the adoption of a policy depended largely on the type of documents identified and the strength of the evidence available, with further confirmation being obtained from WHO country representatives. Since the date of publication of legislation, policy, guidelines, manuals and protocols (i.e. the first document category) explicitly indicated the date on which a policy was adopted, this date was used in preference to the dates of other documents. When these documents were not available, the publication date of a strategic plan (i.e. the second document category) was used. However, when the only documents identified belonged to the third category, the date on which a policy was adopted was determined by consultation with WHO country representatives.

To obtain information on patients' experiences of and views about PITC, we searched the MEDLINE, EMBASE, International Bibliography of the Social Sciences, PsychINFO and Global Health databases for relevant documents published in 2000 or later using the following terms: provider-initiated, routine, diagnostic, opt-out, HIV, human immunodeficiency virus, AIDS, acquired immune deficiency syndrome, counselling, testing, screening, experience, personal experience, opinion, attitude, acceptability and informed consent. We considered publications from a range of disciplines, with a focus on quantitative and qualitative studies of PITC. Reports of studies were reviewed if the studies: (i) involved the routine offer of HTC in an African country; (ii) were conducted in a clinical setting after HTC had been

offered to patients or involved patients who were recruited in a clinical setting and had experience of PITC in that clinical setting; or (iii) assessed the acceptability of PITC to patients or their experience with components of the PITC process, particularly the acquisition of informed consent; and (iv) were published in English. Data on the acceptability of PITC and on patients' experiences of PITC were extracted separately.

## Results

The policies, guidelines or strategic plans on PITC from 52 African countries were reviewed. Documents for one country could not be retrieved and Western Sahara was not included in the review. There was evidence that a policy had been adopted by 42 (79.2%) of 53 countries (Table 1), whereas 10 (18.9%) had not adopted a policy: Algeria, Angola, Chad, Egypt, Libya, Morocco, the Niger, Sao Tome and Principe and Tunisia (Fig. 1). Documents could not be retrieved for the Gambia. A large proportion of countries ( $n = 17$ ; 43.6%) adopted a PITC policy between 2005 and 2006, whereas 10 (25.6%) adopted a policy between 2003 and 2004 and 10 (25.6%), including the Comoros, the Congo, the Democratic Republic of the Congo and South Africa, adopted a policy between 2007 and 2008. The Central African Republic and Equatorial Guinea were the last of the 42 countries to adopt PITC, in 2009 and 2010, respectively (Table 1).

### Clinical settings and target populations

All 42 countries that adopted a PITC policy recommended that pregnant women should be covered either in antenatal clinics or in services provided for the prevention of mother-to-child HIV transmission. In addition, 73.8% of the 42 countries adopted a policy of universal PITC, which was defined as offering HTC to all patients or adults visiting a health-care facility. Documents for 66.7% of countries recommended PITC for either tuberculosis patients or clinics, 45.2% recommended it for patients with sexually transmitted infections, 14.3% for family planning clinics, 7.1% for most-at-risk populations and 7.1% for individuals attending out-patient departments (Table 1).

Table 1. **Provider-initiated HIV testing and counselling in African countries, 2003–2010**

Details of PITC policy	Countries
	No. (%)
<b>Policy adopted</b>	
Yes	42 (79.2)
No	10 (18.9)
No information	1 (1.9)
Total	53 (100)
<b>Year policy adopted<sup>a</sup></b>	
2003 or 2004	10 (25.6)
2005 or 2006	17 (43.6)
2007 or 2008	10 (25.6)
2009 or 2010	2 (5.1)
Total	39 (100)
<b>Document detailing PITC policy</b>	
National policy document	35 (83.3)
National strategic plan (excluding national policy documents)	7 (16.7)
Total	42 (100)
<b>Clinical services or settings in which PITC was offered<sup>b</sup></b>	
Pregnant women attending antenatal clinics or PMTCT services	42 (100)
All patients or all adults visiting a health-care facility	31 (73.8)
Tuberculosis clinics or patients	28 (66.7)
Sexually transmitted infection clinics or patients	19 (45.2)
Family planning services	6 (14.3)
Inpatients (adult or paediatric)	4 (9.5)
Infants of HIV-positive mothers	4 (9.5)
Most-at-risk populations (e.g. men who have sex with men, injecting drug users, female sex workers and commercial sex workers)	3 (7.1)
Outpatient departments	3 (7.1)
Therapeutic feeding centres or children with malnutrition	2 (4.8)
Psychiatric services	1 (2.4)
Male circumcision services	1 (2.4)

HIV, human immunodeficiency virus; PITC, provider-initiated HIV testing and counselling; PMTCT, prevention of mother-to-child HIV transmission.

<sup>a</sup> The date the policy was adopted could not be determined for three countries.

<sup>b</sup> The total exceeds 100% as some countries adopted PITC for more than one target population.

### Patient's perspectives and experience

The literature search identified over 2000 publications, of which 11 were considered eligible for inclusion in the review (Table 2 and Table 3, available at: <http://www.who.int/bulletin/volumes/90/9/11-100818>). The majority were observational studies; 8 investigated the acceptability of PITC to women or their experiences of it in antenatal clinics, whereas the remaining 3 involved tuberculosis patients, women attending immunization clinics with their infants and patients attending a medical emergency unit.

Overall, the large majority of individuals who received PITC found it acceptable (Table 2). For example, in Uganda 98.5% of women who were attending an antenatal clinic for the first

time considered the routine offer of HTC during pregnancy “good” or “very good”.<sup>26</sup> In South Africa, 93% of women offered HTC while attending midwife obstetric units agreed that all pregnant women should be tested for HIV.<sup>22</sup> Among pregnant women who opted for HTC in a study from Zimbabwe, 89% stated that the routine offer of HTC was helpful and empowering and enabled women to make an informed decision about the prevention of mother-to-child HIV transmission and infant feeding.<sup>24</sup>

In addition, experience of PITC was generally regarded as good (Table 3). For example, in Zimbabwe, 98% of pregnant women stated they were satisfied with the information they received on routine HTC.<sup>24</sup> In South Africa, 52% of pregnant women who had been tested for HIV felt they had made an informed choice

and had a positive experience, whereas 28% felt that their choice had been “less clear” and 20% that their voluntariness had been compromised.<sup>31</sup>

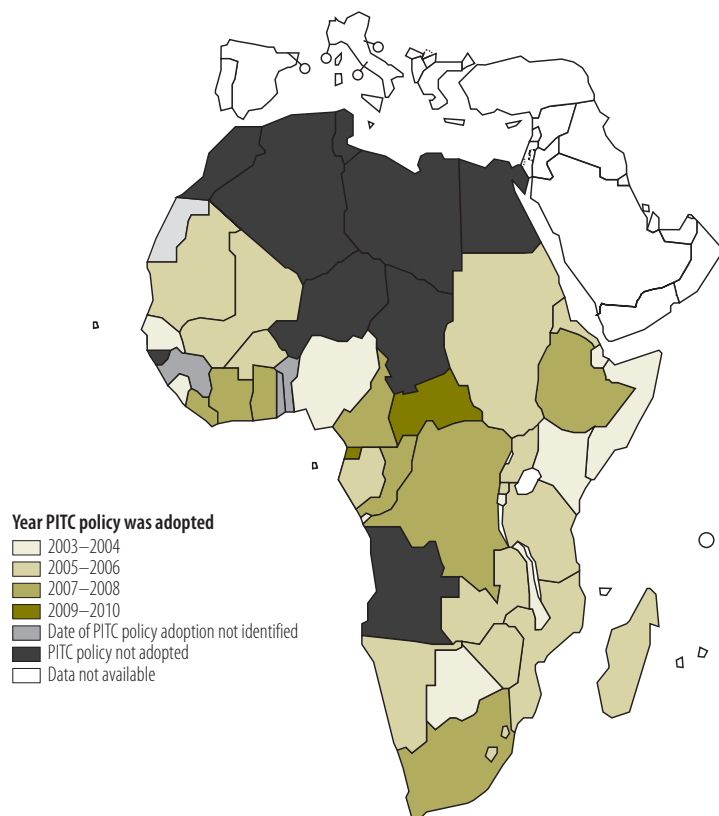
### Discussion

This review of HTC policy in Africa illustrates the changing response to HTC that has taken place in the last decade. Before WHO issued guidance on PITC in 2007, approximately 50% of African countries had adopted PITC in health-care facilities.<sup>3,33,34</sup> Subsequently, the number of countries that included PITC in their HIV policies or strategies increased and, by the time of writing, 42 African countries had elected to recommend PITC in health-care facilities, with a large proportion adopting such a policy between 2005 and 2006. With evidence that ART can reduce mother-to-child HIV transmission, all these countries recommended PITC in antenatal clinics. In addition, more than half recommended universal coverage for all adults and coverage for tuberculosis clinics and patients.

Previous studies of the acceptability of PITC have used the uptake of testing as an indicator of acceptability.<sup>35,36</sup> Although they provided evidence of the feasibility of PITC, these studies did not reflect patients' experiences of or views about PITC. Our review of the published literature suggests that PITC is generally acceptable to patients. Studies reported that more than 75% regarded PITC as acceptable, particularly in antenatal clinics.<sup>22</sup> However, findings from studies of pregnant women may not be generalizable to other population groups since these women may be more willing to undergo HIV testing because they believe it will benefit their children.<sup>37</sup> Patients in other clinical settings may find PITC less acceptable, perhaps because of their perceived risk of infection or fear.<sup>37</sup> In our review, evidence from four studies, the majority involving small groups of pregnant women, indicated that patients were not always aware they had the right to decline HTC in antenatal clinics, perhaps because of the power balance between patients and health-care providers.<sup>29,31</sup> However, studies in other regions suggest that women may find the routine offer of HTC acceptable because it “normalizes” the process of HTC.<sup>38</sup>

Our review has several limitations. It was difficult to retrieve all the documents required to understand national PITC policy fully. Although we con-

Fig. 1. Adoption of a policy on provider-initiated HIV testing and counselling, Africa, 2003–2010



HIV, human immunodeficiency virus; PITC, provider-initiated HIV testing and counselling.

tacted WHO country offices, it was not possible to obtain information for some countries and, for others, the date on which policy was adopted was unknown. In addition, the ambiguous language of some documents made it difficult to determine when and in which settings policies were adopted. Consequently, our data on the years in which PITC policies were adopted may be inaccurate. We minimized this inaccuracy by asking two reviewers to determine independently the date of policy adoption using the available evidence. Our review of patients' experiences of and views about PITC also has several limitations and the findings must be interpreted with caution. First, our review was subject to a language bias and a publication bias. Second, the majority of studies included took place in antenatal clinics and there may be studies from other clinical settings that we did not identify. Some studies that reported on the acceptability of PITC included only small samples of women and did not involve interviews with women who declined an

offer of HTC.<sup>28,31,32</sup> In addition, the studies included in our review are subject to their own limitations: the majority were nonrandomized studies and the difficulty of reporting and synthesizing evidence from nonrandomized studies is well documented.<sup>39</sup> Moreover, studies were subject to acquiescence bias<sup>40</sup> and, as the questions posed to patients were different in each study, it was difficult to compare their findings.

In general, the evidence suggests that the introduction of PITC in antenatal clinics has been associated with an increase in HIV testing rates. A 2010 WHO report on universal access stated that the testing rate in eastern and southern Africa rose from 48% in 2008 to 50% in 2009.<sup>10</sup> Moreover, with the increased uptake of HTC and the better access to ART that followed from the introduction of PITC,<sup>13</sup> mother-to-child HIV transmission has been virtually eliminated in some countries:<sup>13,24</sup> in 2009, four of the 25 countries with the highest HIV disease burden achieved the target set by the United Nations General As-

sembly Special Session on HIV/AIDS of providing at least 80% of HIV-infected pregnant women with ART.<sup>10</sup> In addition, one literature review found that the introduction of PITC in antenatal clinics contributed to the achievement of universal HTC in pregnant women.<sup>41</sup> Moreover, the results of the seven African-based studies included in our review indicate that implementation of PITC led to an increase in the uptake of HTC by pregnant women that ranged from 9.9% in Malawi to 65.6% in Uganda, with more than 75% of women accepting PITC across all seven studies.<sup>41</sup>

The implementation of PITC has also led to a high rate of HIV testing among individuals visiting tuberculosis and sexually transmitted infection clinics.<sup>15,42–44</sup> A cluster randomized trial conducted in tuberculosis clinics in South Africa in 2005 found that the introduction of opt-out PITC increased the uptake of HIV testing by 13.7%, from 6.5% when HIV testing was carried out on an opt-in basis to 20.2% with opt-out PITC.<sup>45</sup> The 2011 WHO report on global tuberculosis control stated that HTC is now standard for tuberculosis patients in many countries, especially in Africa. In 2010, more than 75% of tuberculosis patients knew their HIV status in 68 countries and territories, including 22 countries in the WHO African Region.<sup>46</sup> Further efforts are still needed globally, however, since only 34% of 6.2 million tuberculosis patients were aware of their HIV status in 2010.

Despite the availability of effective therapy and the increase in HIV testing, population-based surveys conducted between 2007 and 2009 in 10 sub-Saharan African countries indicated that the median proportion of people with an HIV infection who are aware of their status was under 40%.<sup>10,47</sup> Moreover, although PITC can contribute to increased testing in clinical settings,<sup>41</sup> the adoption of PITC alone will not achieve universal access to HTC. Other approaches that enable people not attending health-care services to access HIV testing should be developed in parallel to ensure that access to testing is equitable and that individuals with HIV infections are diagnosed before they become symptomatic. In 2011, the HIV Prevention Trials Network study 52 (HPTN052) confirmed that ART was effective for preventing the transmission of HIV in serodiscordant

couples.<sup>48</sup> There is a rationale, therefore, for considering and evaluating household or community-based testing in addition to expanding PITC.<sup>49</sup> Data on these alternative approaches would help

identify the most effective and appropriate way of implementing HIV testing in specific local contexts, while taking into account the resources available and social constraints. ■

### Acknowledgements

We would like to thank Chris Grundy for Fig. 1.

**Competing interests:** None declared.

### ملخص

من الحذر إلى الحاجة الملحة: تطور الاختبار والتوعية بشأن فيروس العوز المناعي البشري في إفريقيا  
الخدمات في عامي 2005 أو 2006. وحدد البحث في المواد المنشورة 11 دراسة حول تجارب وآراء المرضى بشأن الاختبار والتوعية بمبادرة من مقدمي الخدمات في مواقع العيادات في إفريقيا. وقد اعتبرت أغلبية واضحة أن الاختبار والتوعية بمبادرة من مقدمي الخدمات مقبول. ومع ذلك، فإن النساء في عيادات رعاية الحمل لم يكن دائما على دراية بحققهن في رفض إجراء اختبار فيروس العوز المناعي البشري. الاستنتاج تحولت السياسة والممارسة الخاصة بالاختبار والتوعية بشأن فيروس العوز المناعي البشري في إفريقيا من نهج حذر يؤكد على السرية إلى قبول أكبر للنهج الاعتيادي لإجراء اختبار فيروس العوز المناعي البشري. وقد ساهم تقديم الاختبار والتوعية بمبادرة من مقدمي الخدمات في مواقع العيادات في زيادة عدد اختبارات فيروس العوز المناعي البشري في العديد من هذه المواقع. واعتبر معظم المرضى أن الاختبار والتوعية بمبادرة من مقدمي الخدمات أمر مقبول. ومع ذلك، هناك حاجة إلى نهج أخرى للوصول إلى الأشخاص الذين لا يلجئون إلى خدمات الرعاية الصحية.

الغرض وصف التغيرات الأخيرة في السياسة الخاصة بالاختبار والتوعية بمبادرة من مقدمي الخدمات (PITC) بشأن عدوى فيروس العوز المناعي البشري (HIV) في البلدان الأفريقية وتجري تجارب وآراء المرضى حول الاختبار والتوعية بمبادرة من مقدمي الخدمات. الطريقة تم إجراء مراجعة للمواد المنشورة والسياسات الوطنية لاختبارات فيروس العوز المناعي البشري، والأطر الإستراتيجية، والخطط والمستندات الأخرى ذات الصلة. النتائج من بين بلدًا أفريقيًا خضعت للاستعراض، اعتمد 42 بلدًا (79.2%) سياسة الاختبار والتوعية بمبادرة من مقدمي الخدمات. وقد أوصت البلدان الأثنين والأربعين كلها بالاختبار والتوعية بمبادرة من مقدمي الخدمات وذلك لمنع انتقال فيروس العوز المناعي البشري من الأم إلى الطفل، وأوصت نسبة 66.7% منها بهذه السياسة لعيادات ومرضى السل، وأوصت نسبة 45.2% باستخدامها مع عيادات العدوى المنقولة جنسيا. علاوة على ذلك، اعتمدت نسبة 43.6% الاختبار والتوعية بمبادرة من مقدمي

### 摘要

#### 从谨慎到紧迫：非洲的艾滋病检测咨询的演变

**目的** 描述非洲各国最近在艾滋病毒 (HIV) 感染的医务人员主动提供检测咨询 (PITC) 政策方面的变化，并调查病人有关PITC的体验和看法。

**方法** 审查已发表的文献和国家HIV检测的政策、战略框架、计划和其他有关文件。

**结果** 在审查的个非洲国家中，有42个 (79.2%) 国家已经采用了PITC政策。在这42个国家当中，所有国家都推荐PITC用于预防母婴HIV传播，66.7%的国家推荐用于结核病诊所和患者，45.2%的国家推荐用于性传播感染诊所。此外，43.6%的国家在2005年或2006年采用PITC。文

献检索确定了11项有关病人对非洲诊所背景中PITC的体验和看法的研究。绝大多数人认为PITC是可接受的。然而，在产前诊所的妇女并不总是知道她们有拒绝接受HIV检测的权利。

**结论** 非洲HIV检测咨询的政策和实践已经从强调保密的谨慎态度转变为具有更大接受程度的常规HIV检测。在诊所背景中引进PITC有利于在多个这样的背景中增加HIV检测。大多数患者认为PITC是可以接受的。然而，还需要其他方法让没到医院看病的人也能被覆盖到。

### Résumé

#### De la prudence à l'urgence: l'évolution des activités de conseil et de dépistage du VIH en Afrique

**Objectif** Décrire les changements récents dans la politique d'activités de conseil et de dépistage à l'initiative du fournisseur (PITC), du virus de l'immunodéficience humaine (VIH) dans les pays africains, et enquêter sur les expériences et opinions des patients relatives à la PITC.

**Méthodes** Les publications, ainsi que les politiques nationales, les cadres stratégiques, les plans et autres documents pertinents relatifs au dépistage du VIH ont été étudiés.

**Résultats** Sur les pays africains passés en revue, 42 d'entre eux (79.2%) avaient adopté une PITC. Sur ces 42 pays, tous recommandaient la PITC pour la prévention de la transmission mère-enfant du VIH, 66,7% pour les cliniques soignant la tuberculose et les patients affectés par cette maladie, et 45,2%, pour les cliniques soignant les infections sexuellement transmissibles. En outre, 43,6% des pays avaient adopté la PITC en 2005 ou 2006. L'examen des publications a permis d'identifier 11 études

sur les expériences des patients et leur opinion relatives à la PITC dans les environnements cliniques en Afrique. La grande majorité considérait la PITC comme étant acceptable. Cependant, les femmes en consultations prénatales n'étaient pas toujours conscientes du fait qu'elles avaient le droit de refuser un dépistage du VIH.

**Conclusion** La politique et la pratique relatives aux activités de conseil et de dépistage du VIH en Afrique sont passées d'une approche prudente, mettant l'accent sur la confidentialité, à une plus grande acceptation de l'offre systématique de dépistage du VIH. L'introduction de la PITC dans les milieux cliniques a contribué à augmenter le dépistage du VIH dans plusieurs de ces environnements. La plupart des patients considèrent la PITC comme étant acceptable. Toutefois, d'autres approches sont nécessaires pour atteindre les personnes qui ne font pas appel aux services de santé.

## Резюме

### От предупреждения к необходимости: развитие консультирования и тестирования на ВИЧ в Африке

**Задача** Описать недавние изменения в стратегии тестирования и консультирования по инфекции вируса иммунодефицита человека (ВИЧ), проводимого по инициативе медицинских работников (ПИТС) в африканских странах, и исследовать опыт и отношение пациентов к ПИТС.

**Методы** Был проведен обзор опубликованной литературы и национальных стратегий тестирования на ВИЧ, основных схем оперативной деятельности, планов и других соответствующих документов.

**Результаты** Из рассмотренных африканских стран, в 42 (79,2%) странах была принята стратегия ПИТС. Из 42 стран, всеми рекомендована ПИТС для профилактики передачи ВИЧ от матери к ребенку, 66,7% рекомендовали стратегию для туберкулезных больниц и пациентов, страдающих туберкулезом, и 45,2% - для больниц, специализирующихся на инфекционных заболеваниях, передающихся половым путем. Кроме того, 43,6% приняли

ПИТС в 2005-2006 гг. Благодаря информационному поиску, было определено 11 исследований, посвященных опыту и отношению пациентов к ПИТС в условиях клинической практики в Африке. Явное большинство считало ПИТС приемлемой. Впрочем, женщины в клиниках дородового наблюдения не во всех случаях знали о своем праве на непрохождение теста на ВИЧ.

**Вывод** Стратегия и практика по консультированию и тестированию на ВИЧ в Африке изменилась с продуманного подхода, акцентированного на конфиденциальности, к большему принятию предложений о тестировании на ВИЧ в целях профилактики. Внедрение ПИТС в клиническую практику привело к увеличению числа тестов на ВИЧ в некоторых учреждениях. Большинство пациентов считают ПИТС приемлемой. Однако необходимо выработать другие подходы для людей, которые не пользуются услугами здравоохранения.

## Resumen

### De la cautela a la urgencia: La evolución de las pruebas de detección del VIH y el asesoramiento en África

**Objetivo** Describir los cambios recientes en la estrategia sobre la realización de pruebas de detección del virus de la inmunodeficiencia humana (VIH) y el asesoramiento emprendidos por los proveedores (PITC) en países africanos e investigar las experiencias de los pacientes y sus opiniones acerca de la PITC.

**Métodos** Se llevó a cabo un examen de las publicaciones y de estrategias de detección del VIH nacionales, convenios estratégicos, planes y otros documentos importantes.

**Resultados** De los países africanos examinados, 42 (79,2%) había adoptado la estrategia PITC. De esos 42, todos recomendaban la PITC para prevenir la transmisión materno-infantil del VIH, el 66,7% la recomendaba a las clínicas y pacientes con tuberculosis y el 42,5% a las clínicas de tratamiento de infecciones de transmisión sexual. Además, el 43,6% adoptó la PITC en el año 2005 o 2006. La búsqueda bibliográfica

identificó 11 estudios sobre las experiencias de los pacientes y sus opiniones acerca de la PITC en entornos clínicos de África. Una mayoría clara consideró la PITC aceptable. Sin embargo, las mujeres en las clínicas de atención prenatal no siempre fueron conscientes de que tenían el derecho a rechazar las pruebas de detección del VIH.

**Conclusión** La estrategia y práctica de las pruebas de detección del VIH y el asesoramiento en África han cambiado desde un enfoque cauteloso que enfatiza la confidencialidad a una mayor aceptación de la oferta sistemática de pruebas de detección del VIH. La introducción de la PITC en los entornos clínicos ha contribuido a incrementar el número de pruebas de detección del VIH en muchos de esos entornos. La mayoría de pacientes considera la PITC aceptable. No obstante, se necesitan otros enfoques para llegar a aquellas personas que no acuden a los servicios sanitarios.

## References

- Bayer R, Edington C. HIV testing, human rights, and the global AIDS policy: exceptionalism and its discontents. *J Health Polit Policy Law* 2009;34:301-23. doi:10.1215/03616878-2009-002 PMID:19451406
- De Cock KM, Mbori-Ngacha D, Marum E. Shadow on the continent: public health and HIV/AIDS in Africa in the 21st century. *Lancet* 2002;360:67-72. doi:10.1016/S0140-6736(02)09337-6 PMID:12114058
- Branson BM. To screen or not to screen: is that really the question? *Ann Intern Med* 2006;145:857-9. PMID:17146069
- Gruskin S, Tarantola D. HIV/AIDS and human rights revisited. *Can HIV AIDS Policy Law Rev* 2001;6:24-9. PMID:11837018
- Bayer R. Changing the paradigm for HIV testing - the end of exceptionalism. *N Engl J Med* 2006;355:647-9. doi:10.1056/NEJMp068153 PMID:16914699
- De Cock KM. HIV testing in the era of treatment scale up. *Health Hum Rights* 2005;8:31-5. doi:10.2307/4065331 PMID:17136900
- Jurgens R. "Routinizing" HIV testing in low- and middle-income countries. New York: Public Health Program Open Society Institute; 2007.
- Macklin R. Scaling up HIV testing: ethical issues. *Health Hum Rights* 2005;8:27-30. doi:10.2307/4065330 PMID:17136899
- The right to know: new approaches to HIV testing and counselling*. Geneva: World Health Organization; 2003.
- Towards universal access: scaling up priority HIV/AIDS interventions in the health sector*. Geneva: World Health Organization; 2006.
- Becker J, Tsague L, Sahabo R, Twyman P. Provider-initiated testing and counseling (PITC) for HIV in resource-limited clinical settings: important questions unanswered. *Pan Afr Med J* 2009;3:4. PMID:21532713
- Klein D, Hurlay LB, Merrill D, Quesenberry CP Jr; Consortium for HIV/AIDS Interregional Research. Review of medical encounters in the 5 years before a diagnosis of HIV-1 infection: implications for early detection. *J Acquir Immune Defic Syndr* 2003;32:143-52. doi:10.1097/00126334-200302010-00005 PMID:12571523
- Centers for Disease Control and Prevention (CDC). Introduction of routine HIV testing in prenatal care - Botswana, 2004. *MMWR Morb Mortal Wkly Rep* 2004;53:1083-6. PMID:15565017
- Weiser SD, Heisler M, Leiter K, Percy-de Korte F, Tlou S, DeMonner S et al. Routine HIV testing in Botswana: a population-based study on attitudes, practices, and human rights concerns. *PLoS Med* 2006;3:e261. doi:10.1371/journal.pmed.0030261 PMID:16834458
- Centers for Disease Control and Prevention. Provider-initiated HIV testing and counseling of TB patients - Livingstone District, Zambia, September 2004-December 2006. *MMWR Morb Mortal Wkly Rep* 2008;57:285-9. PMID:18354372
- Wanyenze RK, Nawavvu C, Namale AS, Mayanja B, Bunnell R, Abang B et al. Acceptability of routine HIV counselling and testing, and HIV seroprevalence in Ugandan hospitals. *Bull World Health Organ* 2008;86:302-9. doi:10.2471/BLT.07.042580 PMID:18438519
- Branson BM, Handsfield HH, Lampe MA, Janssen RS, Taylor AW, Lyss SB et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Morb Mortal Wkly Rep* 2006;55:1-17.

18. Wanyenze R, Kanya M, Liechty CA, Ronald A, Guzman DJ, Wabwire-Mangen F et al. HIV counseling and testing practices at an urban hospital in Kampala, Uganda. *AIDS Behav* 2006;10:361–7. doi:10.1007/s10461-005-9035-9 PMID:16395619
19. *Guidance on provider-initiated HIV testing and counselling in health facilities*. Geneva: World Health Organization and Joint United Nations Programme on HIV/AIDS; 2007.
20. Homsy J, Kalamya JN, Obonyo J, Ojwang J, Mugumya R, Opio C et al. Routine intrapartum HIV counseling and testing for prevention of mother-to-child transmission of HIV in a rural Ugandan hospital. *J Acquir Immune Defic Syndr* 2006;42:149–54. doi:10.1097/01.qai.0000225032.52766.c2 PMID:16760796
21. *UNAIDS World AIDS Day Report*. Geneva: World Health Organization and Joint United Nations Programme on HIV/AIDS; 2011.
22. Etiebet MA, Fransman D, Forsyth B, Coetzee N, Hussey G. Integrating prevention of mother-to-child transmission into antenatal care: learning from the experiences of women in South Africa. *AIDS Care* 2004;16:37–46. doi:10.1080/09540120310001633958 PMID:14660142
23. Nakanjako D, Kanya M, Daniel K, Mayanja-Kizza H, Freeres J, Whalen C et al. Acceptance of routine testing for HIV among adult patients at the medical emergency unit at a national referral hospital in Kampala, Uganda. *AIDS Behav* 2007;11:753–8. doi:10.1007/s10461-006-9180-9 PMID:17096199
24. Chandisarewa W, Stranix-Chibanda L, Chirapa E, Miller A, Simoyi M, Mahomva A et al. Routine offer of antenatal HIV testing ("opt-out" approach) to prevent mother-to-child transmission of HIV in urban Zimbabwe. *Bull World Health Organ* 2007;85:843–50. PMID:18038074
25. Corneli A, Jarrett NM, Sabue M, Duvall S, Bahati E, Behets F et al. Patient and provider perspectives on implementation models of HIV counseling and testing for patients with TB. *Int J Tuberc Lung Dis* 2008;12(Suppl 1):79–84. PMID:18302828
26. Byamugisha R, Tumwine JK, Ndeezi G, Karamagi CA, Tylleskär T. Attitudes to routine HIV counselling and testing, and knowledge about prevention of mother to child transmission of HIV in eastern Uganda: a cross-sectional survey among antenatal attendees. *J Int AIDS Soc* 2010;13:52. doi:10.1186/1758-2652-13-52 PMID:21144037
27. Rollins N, Mzolo S, Moodley T, Esterhuizen T, van Rooyen H. Universal HIV testing of infants at immunization clinics: an acceptable and feasible approach for early infant diagnosis in high HIV prevalence settings. *AIDS* 2009;23:1851–7. doi:10.1097/QAD.0b013e32832d84fd PMID:19491653
28. Angotti N, Dionne KY, Gaydos L. An offer you can't refuse? Provider-initiated HIV testing in antenatal clinics in rural Malawi. *Health Policy Plan* 2011;26:307–15. doi:10.1093/heapol/czq066 PMID:21047809
29. Larsson EC, Thorson A, Pariyo G, Conrad P, Arinaitwe M, Kemigisa M et al. Opt-out HIV testing during antenatal care: experiences of pregnant women in rural Uganda. *Health Policy Plan* 2012;27:69–75. doi:10.1093/heapol/czr009 PMID:21292708
30. Mugore L, Engelsman B, Ndro T, Dabis F, Perez F. An assessment of the understanding of the offer of routine HIV testing among pregnant women in rural Zimbabwe. *AIDS Care* 2008;20:660–6. doi:10.1097/QAI.0b013e318030ffa9 PMID:17211281
31. Groves AK, Maman S, Msomi S, Makhanya N, Moodley D. The complexity of consent: women's experiences testing for HIV at an antenatal clinic in Durban, South Africa. *AIDS Care* 2010;22:538–44. doi:10.1080/09540120903311508 PMID:20229376
32. Ujiji OA, Rubenson B, Ilako F, Marrone G, Wamalwa D, Wangalwa G et al. Is 'opt-out HIV testing' a real option among pregnant women in rural districts in Kenya? *BMC Public Health* 2011;11:151. doi:10.1186/1471-2458-11-151 PMID:21385423
33. Creek TL, Ntuny R, Seipone K, Smith M, Mogodi M, Smit M et al. Successful introduction of routine opt-out HIV testing in antenatal care in Botswana. *J Acquir Immune Defic Syndr* 2007;45:102–7. doi:10.1097/QAI.0b013e318047df88 PMID:17460473
34. Fenton KA. Sustaining HIV prevention: HIV testing in health care settings. *Top HIV Med* 2007;15:146–9. PMID:18073449
35. Perez F, Zvandaziva C, Engelsmann B, Dabis F. Acceptability of routine HIV testing ("opt-out") in antenatal services in two rural districts of Zimbabwe. *J Acquir Immune Defic Syndr* 2006;41:514–20. doi:10.1097/01.qai.0000191285.70331.a0 PMID:16652062
36. Jerene D, Endale A, Lindtjorn B. Acceptability of HIV counselling and testing among tuberculosis patients in south Ethiopia. *BMC Int Health Hum Rights* 2007;7:4. doi:10.1186/1472-698X-7-4 PMID:17537265
37. Obermeyer CM, Osborn M. The utilization of testing and counseling for HIV: a review of the social and behavioral evidence. *Am J Public Health* 2007;97:1762–74. doi:10.2105/AJPH.2006.096263 PMID:17761565
38. Oosterhoff P, Hardon AP, Nguyen TA, Pham NY, Wright P. Dealing with a positive result: routine HIV testing of pregnant women in Vietnam. *AIDS Care* 2008;20:654–9. doi:10.1080/09540120701687026 PMID:18576166
39. Deeks JJ, Dinnes J, D'Amico R, Sowden AJ, Sakarovich C, Song F et al.; International Stroke Trial Collaborative Group, European Carotid Surgery Trial Collaborative Group. Evaluating non-randomised intervention studies. *Health Technol Assess* 2003;7:iii–x, 1–173. PMID:14499048
40. Novick G. Women's experience of prenatal care: an integrative review. *J Midwifery Womens Health* 2009;54:226–37. doi:10.1016/j.jmwh.2009.02.003 PMID:19410215
41. Hensen B, Baggaley R, Wong VJ, Grabbe KL, Shaffer N, Lo YR et al. Universal voluntary HIV testing in antenatal care settings: a review of the contribution of provider-initiated testing and counselling. *Trop Med Int Health* 2011. Epub ahead of print PMID:22032300
42. Harris JB, Hatwiinda SM, Randels KM, Chi BH, Kancheya NG, Jham MA et al. Early lessons from the integration of tuberculosis and HIV services in primary care centers in Lusaka, Zambia. *Int J Tuberc Lung Dis* 2008;12:773–9. PMID:18544203
43. Sherr L, Fox Z, Lipton M, Whyte P, Jones P, Harrison U; Camden and Islington Steering Group. Sustaining HIV testing in pregnancy - evaluation of routine offer of HIV testing in three London hospitals over 2 years. *AIDS Care* 2006;18:183–8. doi:10.1080/09540120500456599 PMID:16615201
44. Haukoos JS, Hopkins E, Conroy AA, Silverman M, Bynny RL, Eisert S et al.; Denver Emergency Department HIV Opt-Out Study Group. Routine opt-out rapid HIV screening and detection of HIV infection in emergency department patients. *JAMA* 2010;304:284–92. doi:10.1001/jama.2010.953 PMID:20639562
45. Pope DS, Deluca AN, Kali P, Hausler H, Sheard C, Hoosain E et al. A cluster-randomized trial of provider-initiated (opt-out) HIV counseling and testing of tuberculosis patients in South Africa. *J Acquir Immune Defic Syndr* 2008;48:190–5. doi:10.1097/QAI.0b013e3181775926 PMID:18520677
46. *Global tuberculosis control*. Geneva: World Health Organization; 2011.
47. April MD. Rethinking HIV exceptionalism: the ethics of opt-out HIV testing in sub-Saharan Africa. *Bull World Health Organ* 2010;88:703–8. doi:10.2471/BLT.09.073049 PMID:20865076
48. Cohen MS, McCauley M, Gamble T, Hosseinipour MC, Kumarasamy N, Hakim JG et al.; HPTN 052 Study Team. Prevention of HIV-1 infection with early antiretroviral therapy. *N Engl J Med* 2011;365:493–505. doi:10.1056/NEJMoa1105243 PMID:21767103
49. Grabbe KL, Menzies N, Taegtmeyer M, Emukule G, Angala P, Mwega I et al. Increasing access to HIV counseling and testing through mobile services in Kenya: strategies, utilization, and cost-effectiveness. *J Acquir Immune Defic Syndr* 2010;54:317–23. doi:10.1097/QAI.0b013e3181ced126 PMID:20453819



Table 2. **Acceptability of provider-initiated HIV testing and counselling, Africa, 1999–2009**

Publication (Author, year)	Country	Primary objective	Sample size	Population group	Acceptability
Etiebet, 2004 <sup>22</sup>	South Africa	Knowledge, attitude and practices survey of women receiving prenatal or postnatal care	264	Women attending midwife obstetric units	(i) 93% agreed that all pregnant women should be tested for HIV; (ii) 98% agreed they would recommend attendance at a clinic that routinely offers HIV testing to a friend or sister
Nakanjako, 2007 <sup>23</sup>	Uganda	To determine whether patients would accept a routine offer of HIV testing in a medical emergency setting	233	Adult patients	(i) 99% expressed a need to integrate routine HTC into medical care at the emergency unit; (ii) 86% believed routine testing would help link HIV-positive patients to HIV care services
Chandisarewa, 2007 <sup>24</sup>	Zimbabwe	To assess the impact of routine ANC testing for PMTCT	221	Follow-up survey with pregnant women	(i) 89.1% stated that offering routine testing was helpful as it empowers women to "exercise their rights and responsibilities" with regard to accessing relevant information and making informed choices about PMTCT; (ii) 10.9% stated that the offer of routine antenatal testing was not helpful
Corneli, 2008 <sup>25</sup>	Democratic Republic of the Congo	To identify an acceptable approach to HIV testing for tuberculosis patients based on the views of patients and health-care workers	88	Tuberculosis patients	(i) 99% supported the incorporation of HIV testing into routine care for tuberculosis patients; (ii) 99% expressed the view that HIV testing should be offered at the start of tuberculosis treatment; (iii) 68% preferred HIV testing to be offered by a tuberculosis nurse (including 93% of tuberculosis patients who were tested in this way); (iv) 24% preferred referral to on-site HIV testing; (v) 8% preferred referral to a freestanding voluntary HTC site
Byamugisha, 2009 <sup>26</sup>	Uganda	To assess attitudes towards routine HIV testing among new ANC attendees	388	First-time ANC attendees	Question posed: "Nowadays in this clinic all mothers are tested for HIV unless they say no, what do you think about this system?" 98.5% responded "good" or "very good (helps them know their HIV status and thus plan for their future and that of their baby)"; 1.5% responded "fair", "bad" or "very bad"
Rollins, 2009 <sup>27</sup>	South Africa	To determine the acceptability and feasibility of universal HIV testing of 6-week-old infants attending immunization clinics	646	Women with infants	(i) Question posed: "How did you feel when offered the opportunity of HIV testing?" (for infants). Response: 77.9% comfortable; 11% surprised; 4.5% frightened; 3.4% shocked; 1.5% anxious; 0.3% preferred not to answer; 0.2% other; (ii) 89.8% would recommend HTC to "others"
Angotti, 2010 <sup>28</sup>	Malawi	To determine local perceptions of routine HIV testing and the potential consequences	18 (12 from an ANC attendee sample)	Women who had been offered HTC in an ANC and accepted	Interviewees made "favourable" comments about the routine offer of HTC and generally accepted its implementation in an ANC
Larsson, 2011 <sup>29</sup>	Uganda	To explore women's experiences of, and views on, the opt-out testing policy and associated HIV testing in an ANC	18	Pregnant women attending an ANC	Some women viewed the opt-out testing policy as positive as it could benefit their child and themselves

ANC, antenatal clinic; HIV, human immunodeficiency virus; HTC, HIV testing and counselling; PMTCT, prevention of mother-to-child HIV transmission.

Table 3. Users' experiences of provider-initiated HIV testing and counselling, Africa, 1999–2009

Publication (Author, year)	Country	Primary objective	Sample size	Population group	Experience
Etiebet, 2004 <sup>22</sup>	South Africa	Knowledge, attitude and practices survey of women receiving prenatal or postnatal care	264	Pregnant women	(i) 94% were satisfied with the counselling services offered to them; (ii) 0.34% felt pressured by nurses to accept testing (45% believed that women who accepted testing receive better care); (iii) 8% of women tested did not remember receiving post-test counselling
Chandisarewa, 2007 <sup>24</sup>	Zimbabwe	To assess the impact of routine ANC testing for PMTCT	2011	Exist survey with pregnant women	98% stated that the information provided by counsellors on routine testing had "adequately prepared" them for the result
Corneli, 2008 <sup>25</sup>	Democratic Republic of the Congo	To identify an acceptable approach to HIV testing for tuberculosis patients based on the views of patients and health-care workers	88	Tuberculosis patients	(i) The majority (71%) felt confident they had the right to choose whether or not to be tested; (ii) 29% believed it would be difficult to decline a routine offer of testing from a nurse and some said this was because of the power relationship whereas others felt it was because health-care workers know what is best for them
Mugore, 2008 <sup>30</sup>	Zimbabwe	To assess understanding of a routine offer of HTC among women attending ANC	146	Pregnant women	(i) 95% stated that the information they received during group education was sufficient to make a decision about whether or not to test for HIV; (ii) 94.1% knew their blood was being drawn for HTC; (iii) 77.8% of those who declined HTC said it would not deter them from seeking ANC at the health facility
Byamugisha, 2009 <sup>26</sup>	Uganda	To assess attitudes towards routine HIV testing among new ANC attendees	388	First time ANC attendees	(i) 90.2% had a "good" or "very good" experience with or opinion of the health education talk, whereas 9.8% had a "fair", "bad" or "very bad" experience; (ii) 86.3% had a "good" or "very good" experience with or opinion of pretest counselling, whereas 13.7% had a "fair", "bad" or "very bad" experience; (iii) 95.1% had a "good" or "very good" experience with or opinion of post-test counselling, whereas 4.9% had a "fair", "bad" or "very bad" experience
Groves, 2010 <sup>31</sup>	South Africa	To evaluate women's experiences with HTC	25	Women who had been tested for HIV during their most recent pregnancy	(i) 52% believed they had clearly consented to testing and had a positive experience of group and individual education sessions; (ii) 28% said their choice was "less clear" and were less positive about the education sessions; (iii) 20% felt their choice had been compromised (48% of these women expressed the view that they experienced less autonomy in deciding whether to be tested for HIV)
Angotti, 2010 <sup>28</sup>	Malawi	To determine local perceptions of routine HIV testing and the potential consequences	18 (12 from an ANC attendee sample)	Women that had been offered HTC in an ANC and accepted the offer	(i) 22.2% stated that refusing the offer of a test was an option and believed that women could still receive services if they opted out of testing; (ii) the majority who underwent HIV testing stated they were not given the option of refusing in the ANC; (iii) HTC was considered a precondition for receiving care
Larsson, 2011 <sup>29</sup>	Uganda	To explore women's experiences of, and views on, the opt-out testing policy and associated HIV testing in an ANC	18	Pregnant women attending an ANC	(i) Pregnant women recruited from facilities that offered testing on site perceived HIV testing as compulsory, despite pretest group counselling; (ii) generally women thought they could not receive any other ANC service if they declined testing; (iii) women felt obligated to attempt to persuade their partners to attend the ANC for HIV testing and felt anxious about asking their male partners to participate in couples testing; (iv) women highlighted the power asymmetry between themselves and health-care providers
Ujiji, 2011 <sup>32</sup>	Kenya	To identify factors associated with consent to opt-out of HTC	900	Pregnant women	(i) 17% understood that HIV testing was optional, whereas 83% did not; (ii) when asked: "If you could choose to HIV test or not, would you decline?", 80% responded "no" and 20% responded "yes"

ANC, antenatal clinic; HIV, human immunodeficiency virus; HTC, HIV testing and counselling; PMTCT, prevention of mother-to-child HIV transmission.