

# Survey of Attitudes Toward Rapid HIV Testing and Current HIV Testing Procedures Among Patients in Baltimore (USA) STD Clinic

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## ABSTRACT

**Objectives:** A survey-interview of 126 patients at the STD clinic in Baltimore, Maryland, USA was conducted to determine the patients' perception and feelings toward existing HIV procedures as compared to rapid HIV testing. Rapid HIV testing can be performed in less than fifteen minutes, as opposed to the traditional time-consuming ELISA test that takes 3.5 to 4 hours. **Methods:** Study subjects were between 14 and 68 years of age and were all patients of the STD clinic. The questionnaire surveyed patients' experiences with HIV counseling, reasons for getting tested, perceptions of HIV risk and feelings toward rapid HIV testing. **Results:** 33.3% of the patients had previously failed to return for HIV test results. A significant number of the patients cited inconvenience as the most significant factor in not retrieving test results. Most said that they would prefer rapid HIV testing. Sixty nine percent of the patients claimed that they never received any type of pre-test counselling. However, among the patients who received some type of counseling at the Baltimore STD clinic, 58.3% rated the session favourably as 5 out of 5. These results suggest that routine HIV counseling should be improved, and that it may be advantageous to introduce rapid HIV testing as an option for HIV testing in STD clinics.

## INTRODUCTION

Rapid human immunodeficiency virus (HIV) tests that make results available in less than an hour are currently being developed. Rapid testing would allow both pre-test and post-test counselling to be performed within the same clinic visit. Counselling is an important tool in HIV care as the disease is associated with significant psychological stressors. The availability of rapid HIV testing may influence the patients' reasons for getting tested and perceptions of testing procedures.

The Centers for Disease Control and Prevention (CDC) in Atlanta is now urging healthcare workers to screen patients with rapid HIV tests instead of using the time-consuming enzyme-linked immunosorbent assay (ELISA).<sup>1,2</sup> The CDC's recommendation was based on statistics that many test takers do not return for results. The CDC estimates that as many as 250,000 individuals in the United States are unaware that they are infected with HIV. It has been further estimated that rapid HIV testing may capture as many as 70,000 newly infected people each year.<sup>1,3</sup>

As its name suggests, rapid HIV tests can be performed in less than fifteen minutes, as opposed to the traditional time-consuming ELISA test that takes 3.5 to 4 hours. With the rapid HIV test, a negative result is considered definitive and does not require further testing.

Patients can then be alerted of the results and counselling can be initiated within a single clinic visit. Positive rapid tests require confirmatory testing. A person with positive results will be counseled accordingly and referred for HIV treatment.

Rapid HIV tests are believed to be both cost-effective and accurate. They have been shown to reduce costs by 82% compared to ELISA as there is no need for storage and transportation of specimens and for patients to return. In addition, rapid HIV tests demonstrate sensitivity and specificity comparable to ELISA tests (sensitivity > 96% and specificity > 99%).<sup>4</sup>

Rapid HIV tests are intended to promote more frequent testing among at risk populations and allow for more appropriate counseling. Rapid tests are recommended when the advantage of rapid reporting outweighs the potential danger of reporting false-positive results. This applies to pregnant women in labor who have not been tested or whose results are not available. Rapid tests could provide quick test results so that HIV-infected mothers can receive antiretrovirals to prevent vertical transmission.

This study is intended to provide a better understanding of patients' attitudes and motives toward HIV testing, and to highlight potential flaws in current procedures.

## PATIENTS AND METHODS

A survey was conducted on 126 patients between 14 and 68 years of age who visited the inner city Sexually Transmitted Disease (STD) clinic in Baltimore, Maryland during June, 2001. Only patients of the STD clinic were allowed to be included in the study. All study participants gave written informed consent. Participants were assured that refusal to participate did not penalize them or have any impact on future care at the STD clinic. All identifiers were removed to ensure patient confidentiality. The study was approved by the participating Institutional Review Board (IRB). The results from the survey were coded and entered into STATA version 7.0 for analysis.

The questionnaire included elements on the patients' experiences of pre-test and post-test HIV counseling, their reasons for getting tested, their perception of their risk to HIV and their feelings about rapid HIV testing. Participants were asked open-ended questions and the answers were recorded by the interviewer in a multiple-choice format.

## RESULTS

A total of 126 patients were enrolled in the study. Seventy-three (58%) were male ranging in age from 17 to 68 years, with a mean of 33 years (SD,  $\pm 11.6$ ) (Table 1). Fifty-three (42%) were female, ranging in age from 14 to 55 years, with a mean of 29 years (SD,  $\pm 10.6$ ). The vast majority of patients, 120 (95%), were of African-American descent. A total of 55 patients (44%) were tested within the preceding 6 months, while 42 (33%) patients had last been tested more than 12 months previously. Commonly cited reasons

for undergoing HIV testing included personal reassurance ( $n=73$ , 58%), routine clinical examination ( $n=37$ , 29%), pregnancy or release from jail ( $n=8$ , 6%), and financial incentive ( $n=4$ , 3%) (Table 2). Five patients (4%) did not cite a reason or had not previously been tested. Patients were also asked to rate their perceived risk of contracting HIV, from low (=1) to high (=5) risk. The largest number of patients ( $n=61$ , 49%) perceived their risk as low (=1), 20 patients (16%) rated their risk of infection at 2, 12 patients (10%) at 3, 8 patients (6%) at 4, and 23 patients (19%) at the highest risk level, 5. Among the subgroup of patients who cited personal reassurance as a motivation for undergoing testing ( $n=73$ ), 25 (47%) rated their risk at 1. The majority of patients ( $n=87$ , 69%) claimed to having never received counselling as part of their previous HIV testing procedure. This figure includes 24 patients whose HIV testing occurred as part of a routine clinical examination. Twelve patients who did receive HIV-related counselling as part of their routine examination revealed that the content of pre-test counselling included information only on the testing procedures and of risk awareness. Patients who confirmed having received HIV test-related counselling ( $n=39$ , 31%) rated their satisfaction of the testing procedures at the Baltimore STD clinic from low (=1) to high (=5). Twenty-two patients (56%) rated their satisfaction at 5, 8 (21%) rated it at 4, 6 (15%) rated it at 3, 1 (3%) rated it at 2, and 2 (5%) rated it at 1.

Sixty-seven percent (81 of 121 tested) of patients who had been tested previously returned for results. Fifty-two of these 81 patients (64%) returned at their scheduled appointment while the remaining 29 patients

**Table 1.** Patient Demographics ( $n=126$ )

Characteristics	n (%)
<b>Sex</b>	
Male	73 (58%)
Female	53 (42%)
<b>Age, mean <math>\pm</math> SD (range in years)</b>	
Male	33 $\pm$ 11.6 (17-68)
Female	29 $\pm$ 10.6 (14-55)
<b>Race</b>	
African-American	120 (95%)
Caucasian	6 (5%)

SD, standard deviation

**Table 2.** Cited reasons for undergoing HIV testing ( $n=126$ )

Reasons	n (%)
Personal assurance	73 (58%)
Routine clinical examination	37 (29%)
Required (due to pregnancy or release from jail)	8 (6%)
Financial incentive	4 (3%)
Not previously tested or no reason cited	5 (4%)

**Table 3.** Cited reasons for failure to return for HIV test results (n=40)

Reasons	n (%)
Assumed outcome of result	11 (28%)
Inconvenient to return the following week	10 (24%)
Feared results	4 (10%)
Results were insignificant	1 (2%)
No response given or could not recall	14 (36%)

(36%) returned at a later date. Of the patients who returned for results, only 36 (44%) reported to have had counselling at the time of receiving their results. The counselling included specifics on HIV/AIDS, such as an interpretation of what positive or negative results really mean, information on how to keep from getting infected if the test result is negative, and treatment options and ways to prevent transmission of HIV if the result is positive. Of the 40 patients that did not return for their results, 11 (28%) said they assumed the results, ten (24%) claimed it was inconvenient to return, four (10%) failed to return out of fear, one (2%) claimed the test result was insignificant and 14 (36%) were unable to recall why they failed to return for their results (Table 3).

When patients were asked whether they would prefer to know their HIV test results in a few hours rather than waiting one week, 89% wished to know their results in a few hours. Twenty-four percent of the patients who failed to return said it was inconvenient to return to the clinic the following week and preferred the rapid HIV test. Of the 14 patients who preferred the traditional one-week HIV test, 3 answered that they were skeptical of the rapid HIV test and would rather receive results that were reliable. They feared that reliability would be compromised with speed in getting the results. The others commented that they would rather not find out about their results that day for they were not emotionally prepared to receive their results. Eighty-eight percent of the patients who did not return for their results said that they would prefer the rapid HIV rapid test (Table 4). Some commented that they felt anxious waiting around for their test results. Also, it is interesting to note that only 38% of the patients who preferred the traditional HIV test and 32% of those who preferred the rapid HIV test rated themselves as high risk of getting HIV.

**Table 4.** Summary of preference for rapid HIV test

Population	% Preferring Rapid HIV Test
All Patients (n=126)	89%
Patients who failed to return for results	88%
Patients who failed to return for results due to inconvenience	23%
Patients with high (5 of 5) perceived risk of HIV infection	81%
Patients with 4 of 5 perceived risk of HIV infection	86%
Patients with 3 of 5 perceived risk of HIV infection	91%
Patients with 2 of 5 perceived risk of HIV infection	79%
Patients with low (1 of 5) perceived risk of HIV infection	95%

## DISCUSSION

It is important to realize that there may be a multitude of factors that may influence a patient's decision to test for HIV. For example, it may be due to issues around illness or death of friends, guilt, sexual assault, testing for personal assurance when relationships start or end, or when embarking on new financial ventures or planning a pregnancy. The limitation of the study is that the study population was a highly selected group. Since eligibility depended on being a STD clinic patient, the subjects were self-selected. Also, the survey results were purely based on patient interview in that none of the responses were checked against past records for accuracy.

Also, the patients' response on counselling brings light upon the fact that the delivery of counselling in certain clinics can be improved. Most of the patients claimed that they received no form of counselling before the test or at the time of the test results. However, according to Maryland state law, counselling is a mandatory process of HIV testing. This discrepancy may be due to mode effect on the question structure; it may have been due to the patients' impression of "counselling" or the interviewer's error of not clarifying the definition of counseling. Also this may also be due to recall bias, as many patients may have forgotten they received counseling if testing occurred over 6 months previously.

The results suggest that most patients are satisfied with the current testing procedures at the Baltimore STD clinic. However, the significant number of people who failed to return for their test results seems to suggest that rapid

HIV tests may be appropriate. Most patients explained that the reason why they did not return for their results the following week was because of inconvenience and that they would prefer a rapid HIV test. Thus in a clinical settings such as the STD clinic with high HIV prevalence and low percentage of persons returning for results, use of rapid tests may be beneficial. If health care providers choose to use rapid HIV test results to the patients, high quality testing and counseling must be ensured. With rapid testing, skilled staff must be present at all times and prepared to give immediate counseling when the test results are available a few hours later.

It is also important to consider the patients who raised important public health concerns regarding test accuracy and the immediate notification of test results. Hence, people have various preferences for HIV tests. By making multiple types of HIV tests available, people are given options to apply to different situations. Thus, more people will be encouraged to undergo HIV testing resulting in a higher percentage of the population being aware of their serological status. In this way, people will more likely behave responsibly regarding their sexual practices and health.

It is likely that high-risk individuals who are unaware of their HIV serological status may transmit the virus through risky behavior or miss the opportunity to receive early treatment. It is difficult to prevent or control

the HIV/AIDS epidemic when people who are infected unknowingly continue to spread the disease or fail to utilize the treatment options for HIV infection. Thus, the first and most important role in fighting the epidemic is to promote HIV testing so that people can receive treatment and referrals soon after their infection to prevent the emergence of opportunistic infections. Also, patients who learn of their positive status can take immediate precautions to prevent transmitting the virus to others.

It is not easy to promote HIV testing. Most people obtain false information about HIV testing or are unaware of the tests. Thus it is the responsibility of the public health practitioners and health care workers to maintain close communication among researchers, policy makers, and the community in order to make informed decisions for the current situation.

It is critical for health care workers to be familiar with the current HIV tests available and their advantages and disadvantages. The sensitivity, specificity, cost-effectiveness, efficiency, and the patient's personal preference must be considered before making a choice.

There are still many questions and problems regarding HIV testing that must still be resolved before any major changes can be made. In the meantime, small steps can be made by individuals by educating them about current HIV tests that are available and encouraging them to be tested.

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