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Feasibility and acceptability of offering rapid HIV tests to patients registering with primary care in London (UK): a pilot study

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ABSTRACT

Objective

To assess the acceptability and feasibility of offering rapid HIV tests to patients registering with primary care in London.

Methods

We sought to recruit all Anglophone and Francophone patients aged between 18 and 55 attending a large inner city general practice in London (UK) for a new patient health check. All eligible patients were offered a rapid HIV test on oral fluid and asked to participate in a qualitative interview. We measured the uptake of rapid HIV testing among participants and carried out semi-structured interviews focusing on the advantages and disadvantages of testing for HIV in primary care.

Results

111 people attended the health check, of whom 85 were eligible, 47 took part in the study and 20 completed qualitative interviews. Nearly half of eligible participants (38/85, 45%) accepted a rapid HIV test. The main reason for accepting a test was because it was offered as 'part of a check up'. As a combined group, Black African and Black Caribbean patients were more likely to test in the study compared with patients from other ethnic backgrounds ($p = .014$).

Participants in the qualitative interviews felt that having rapid HIV tests available in general practice was acceptable but expressed concerns about support for the newly diagnosed.

Conclusions

This study shows that offering patients a rapid HIV test in primary care is feasible and could be an effective means to increase testing rates in this setting. A larger descriptive study or a pragmatic trial is needed to determine whether this strategy could increase timely diagnosis and reduce the proportion of undiagnosed HIV infections in the UK.

ABSTRACT WORD COUNT: 264

WORD COUNT: 2,145

INTRODUCTION

A quarter of the 77,400 adults currently living with HIV in Britain are unaware of their infection. [1] Many are diagnosed at a late stage of illness, resulting in poorer prognoses and an increased risk of onward transmission. [1,2] Men who have sex with men (MSM) remain the group at highest risk of acquiring HIV in the UK, but an increased number of new diagnoses are found among heterosexuals, the majority of whom are people of sub-Saharan African origin. UK national guidelines recommend an increase in HIV testing in general medical services and primary care. [3] This is premised upon research showing that opportunities for early diagnosis are often missed in both primary and secondary care. [4-5]

The availability of rapid, point of care HIV tests presents new opportunities to increase the offer of HIV testing in a diverse range of settings. US studies have shown that rapid tests are acceptable to patients attending Emergency Departments and community-based testing services. [6-8] In the UK, rapid tests are used in some sexual health clinics and community-based testing services, but are not currently offered in primary care. [9] Our study aimed to determine the feasibility and acceptability of offering a rapid HIV test to new patients registering with primary care in London. Specifically, we sought to measure the uptake of rapid HIV testing among patients attending a registration health check in primary care, as well as their reasons for accepting or declining a test. We also aimed to explore patients' views about HIV testing in this setting.

METHODS

Patients registering with primary care in the UK are routinely offered a registration health check. This is usually carried out by a practice nurse or health care assistant. [10] We sought to recruit all new Anglophone and Francophone patients aged between 18 and 55 attending a registration health check at a large inner city general practice over a six week period between December 2007 and March 2008. The practice serves an ethnically diverse patient group, including many who have recently migrated to the UK from sub-Saharan Africa. Patients recruited to the study could take part in one or both of the following activities: (a) undergoing a

rapid HIV test using OraQuick Advance HIV-1/2 on oral mucosal fluid (OraSure, Technologies, Bethlehem, Pennsylvania); (b) participating in a semi-structured qualitative interview. The main researcher (AP) obtained written informed consent from all patients participating in the study. Rapid HIV tests were carried out by two healthcare assistants or the main researcher, all of whom had been trained to carry out a pre-test discussion and use the rapid tests. The pre-test discussion included a description of the testing process, a discussion about the benefits of testing and the window period, and details of the procedure for giving results. The study team established protocols for rapid HIV testing and took part in an external quality control scheme. We also put in place a referral system with a local sexual health clinic to ensure that patients with preliminary positive results would be seen for a confirmatory blood test and linked to onward care and treatment. In the event of a reactive rapid test, the patient was given the result and post-test discussion by a GP. A blood sample was immediately taken and sent to the local virology laboratory for confirmation.

We recorded the age, gender and country of birth of all patients who attended the new patient health check during the study period. In addition, we recorded patients' reasons for not participating in the study, whether or not they accepted an HIV test, and their reasons for accepting or refusing a test. We compared the characteristics of participants who accepted a test and those of participants who did not using Student's t-test for continuous measures and chi square tests for categorical measures in SPSS (version 14.0; SPSS, Chicago, IL, USA).

In addition, we used semi-structured interviews to explore the acceptability of rapid HIV testing among patients attending the health check. We carried out 20 semi-structured interviews: 17 with patients who accepted a test and 3 with patients who declined. We purposively sampled participants from a range of ethnic backgrounds, including participants of sub-Saharan African origin. Interviews were carried out by AP in a private room located in the clinic. For patients who accepted a rapid HIV test, the interview was carried out after the test but before giving the result. These interviews, lasting between 20 and 40 minutes each, were recorded and transcribed verbatim. We used a framework approach to analyse the data and

identify emerging themes. [11] This study was approved by Redbridge and Waltham Forest Local Research Ethics Committee.

RESULTS

Participation and uptake of rapid HIV testing

A total of 111 patients from 34 different countries attended the practice for a new patient health check during the study period. The characteristics of these attendees are described in Table 1. Of the 111 patients who attended, 85 were eligible to participate and 38 (44.7%) agreed to have a rapid HIV test. One patient had a reactive rapid HIV test, which was subsequently confirmed HIV positive in the local sexual health clinic. Among the 47 eligible patients who did not participate in the study, reasons given for not participating included 'I am not at risk for HIV' (36%) and 'I have had an HIV test recently' (19%). The main reason given for accepting a test was because it was 'part of a health check up' (78.9%). A third (31.6%) of patients who agreed to have a rapid test were Black African or Black Caribbean, while 29% were White British. As a combined group, Black Caribbean and Black African patients were more likely to test as part of the study than patients from other ethnic groups ($p = .014$). There were no other significant differences between patients who accepted a test and those who refused.

Acceptability of being offered a rapid HIV test in general practice

We carried out semi-structured interviews with 20 people attending the new patient health check. The average age of participants was 30. Eleven participants were women. Four interviewees were born in sub-Saharan Africa, 6 were from the UK and 5 from other EU countries. The remaining participants were from Algeria, Brazil, Jamaica and Canada.

All patients interviewed as part of the study felt that having rapid HIV tests in general practice was appropriate, although three declined a test because they did not feel at risk or had tested recently. Interview participants identified several benefits to using rapid tests in primary care (see Box 1). Rapid tests reduced the time spent waiting for results and made the testing process seem 'routine'. Participants felt that rapid tests could be used either during a general

check up or as part of a sexual health consultation. Furthermore, they suggested that patients reluctant to access sexual health clinics would be encouraged to know their HIV status if rapid tests were available in primary care. However, there were also perceived disadvantages to rapid testing in this setting: three participants felt that patients would not have sufficient time to prepare for the test result. Others suggested that support for the newly diagnosed would be difficult to provide in the context of a busy clinic. A small number of participants also raised concerns about the accuracy of the test and the possibility of false positives.

Interview participants had different views about the ways in which rapid HIV tests could be offered in primary care. Over two thirds of interviewees (n= 14) thought that the new patient health check was a good time to offer the test because it felt part of a routine health check up. However, a further five participants said that the tests should instead be given when requested by patients or when specifically recommended by a GP. Most interviewees thought that all trained healthcare workers including healthcare assistants and nurses should be able to carry out the rapid test and pre-test discussion. However, all suggested that a GP should give reactive results and provide appropriate support and information following a reactive test (see Box 2).

DISCUSSION

Our study provides preliminary evidence that rapid HIV tests may be acceptable to patients attending primary care. Rapid testing was seen as appropriate both when requested by patients and as part of a 'check up' initiated by primary care staff. The fact that Black African and Black Caribbean patients were more likely to test in the study compared to patients from other ethnic backgrounds suggests that offering HIV tests in a primary care context could increase the uptake of testing in this group. This is critical in order to achieve reductions in the number of late diagnoses among patients of sub-Saharan African origin in the UK.

The study had several limitations. We did not collect data on patients' HIV risk and serostatus. We are therefore unable to determine whether offering rapid HIV tests would meaningfully increase the number of previously undiagnosed HIV infections detected in this setting. While one third of those who declined an HIV test said they were not at risk, 19% said they had 'recently' been tested, suggesting they could have been at risk. Finally, we did not compare the acceptability of rapid HIV tests on oral fluid with that of rapid tests on blood samples, although our qualitative data suggests that finger-pricking or drawing blood would have deterred some participants from testing.

The study revealed four key feasibility issues linked to offering rapid HIV testing in primary care. These were all potentially resolvable with appropriate training and resource allocation. First, health care assistants expressed concern about giving HIV positive results. Arrangements need to be in place to ensure adequate medical staffing levels to deal with patients who have reactive test results as well as timely onward referral to appropriate specialist care. Secondly, rapid tests require regular quality control to be carried out by a designated member of staff. This is necessary whether the test takes place at the time of registration or during a follow-up consultation. Thirdly, some primary care consultations, including the new patient check, do not allow adequate time for a lengthy pre-test discussion. It may therefore be difficult for staff to accurately assess a patients' risk and to prepare them for a possible positive result. Finally, the new patient health check does not always provide a confidential space to discuss testing, since many patients attend with partners or children.

This can act as a barrier to testing because both patients and staff may be uncomfortable discussing HIV in front of relatives or partners. Despite these issues, primary care staff who participated in our study found the rapid HIV test easy to use and interpret.

Our findings have implications for current debates concerning the best ways to reduce late HIV diagnosis in the UK. There are three main strategies to achieve this. The first is to carry out opt-out HIV testing in health care facilities attended by people at high risk of HIV infection, for example in sexual health clinics. This approach may not be sufficient to substantially reduce levels of undiagnosed HIV infection, because stigma, lack of information and socioeconomic barriers often prevent people at risk from accessing sexual health services. [12] A second approach involves routinising HIV testing in secondary care settings where patients present with HIV-related conditions that may reflect underlying immunosuppression. [13, 14] Finally, a third strategy to reduce levels of undiagnosed HIV infection could be to carry out 'opt-out' HIV testing with standard or rapid tests in primary care clinics located in high HIV prevalence areas. Half of the patients in our study had previously tested for HIV; further research will need to establish whether increasing the number of tests carried out in primary care would effectively reduce the number of previously undiagnosed infections. Further rollout of testing in primary care should be guided by local prevalence data, and should be carefully evaluated to determine whether it increases timely HIV diagnosis. Our study shows that the offer of rapid HIV tests is potentially acceptable to patients and staff in primary care. Future work should focus on evaluating the effectiveness and cost-effectiveness of this strategy on a larger scale.

Table 1 Characteristics of participants

	Health check attendees (n=111)	Eligible and accepted a rapid HIV test (n=38)	Eligible and refused a rapid HIV test (n=47)
Age			
Mean \pm SD	33 \pm 13	32 \pm 8	34 \pm 15
Gender, % (n)			
Female	62 (56)	16 (42)	30 (64)
Ethnicity			
Black African & Black Caribbean	21 (19)	12 (32)	8 (17)
White UK	34 (31)	11 (29)	18 (38)
White Other	36 (32)	11 (29)	13 (28)
Other	20 (18)	4 (11)	8 (17)
Ever tested for HIV			
Yes	43 (39)	16 (42)	25 (53)

Including Asian (n=2), Chinese (n=2), British Asian (n=2), Black British (n= 2) and mixed White/ Black Caribbean

Box 1 Rapid HIV testing in primary care – advantages & disadvantages

Advantages

Reducing the wait for results

I think that what I remember about HIV tests was the wait. [...] I don't think that much can take away the stress of possibly testing positive for HIV, but I think that if you can close the gap between giving the initial sample and getting the result, it certainly would alleviate a lot of anxiety. (Female participant, Canada, 35)

The minute you have to wait for something that long [...] it probably starts feeling like a bigger deal. And it kind of emphasises the whole 'HIV is something that does stand out, it is different from the other diseases I can get'. I think the fact that it only takes 20 minutes makes it seem more like one of the other ones that you would get a test done for quickly, because you're here and you get asked. (Female participant, Denmark, 27)

Primary care more accessible than sexual health clinics

IV: Do you think GPs should have these tests?

IE: Oh, yes. They should have them because this will enable a lot of people to find out in time. You know, sometimes to go to some AIDS clinic, once you go there, once you go in, people just know what you're there for. They know you most probably have some sexual disease going down there. [...] With a GP nobody knows, so you could be sick for anything. It could be a headache, it could be flu, it could be anything, so they don't know. So I think it's good if the GP has it. Nobody ever, ever offered me an HIV test. [...] They will only find out in the hospital when I'm sick [...] Before they've found out, probably five, ten people, they've got it through me, but with a GP, you can easily find out [...] With the AIDS clinic, you don't go there until when you know you have a problem, so I think the GP having it is good. (Male participant, Nigeria, 28)

I thought [that] if you wanted to get an HIV test it would be really hard normally. [...] I just didn't know GPs would offer it at all. I thought you had to go to a GUM clinic or go and queue in a long hospital queue or something. (Female participant, UK, 22)

Disadvantages

Potential lack of support for the newly diagnosed

I would also be concerned about the psychological support, if someone came up positive, about how the GPs would be able to cope with that. Maybe they'd have special training, maybe they already know how to cope with that. But in a sexual health clinic, I'm sure they already have special training. (Male participant, UK, 24)

Patients may be unprepared to test

Because it is so quick, you know, 20 minutes [...] especially if people hadn't maybe even, you know, gone in for that test, and then kind of thought, 'oh well I might as well try it', and then, and I'm sure it's a very sort of, small minority that actually would have a positive test, but you know, if they did, then it could be a real shock. (Female participant, UK, 27)

Box 2 – When should rapid tests be carried out and by whom?

During the new patient health check

I think [the new patient health check] is a great time. Yeah, as a new patient I think you just want to, you know, get, in a sense, a clean bill of health [...] and onward with your new GP. It's a good time to get people. (Male participant, UK, 54)

Who should carry out the test and give the results?

It's not so much who's doing the test, it's who's giving the results back, I think. At sexual health clinics ... because it's two weeks, it was, like, a two-week gap so you kind of get the impression that maybe if it was a positive result they'd get someone special in to tell you, or, you know, that'd be a bit more prepared to be deal with [...] your distress. (Female participant, UK, 26)

I'm not concerned about the, the place as a GP centre not being good enough to give this result. I think it's basic and it should be in a basic health care service, like a GP. (Female participant, Spain, 28)

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Conflict of Interest

All authors declare that the answer to the questions on your competing interest form are all No and therefore have nothing to declare.

Role of Contributors

AP designed and carried out the study. CG, DW and GH supervised the study. JA provided specialist HIV clinical input. All authors read and commented on drafts of this publication. AP is guarantor for the study.