Gay and bisexual men's views on rapid self-testing for HIV.

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Abstract

Thirty one gay and bisexual men were interviewed on the acceptability, potential use, benefits and limitations of rapid self-testing for HIV in Australia. The majority of men supported the introduction of rapid self-testing, and would be likely to, or would use the tests for home use. However, most reported they would use them for interim testing and not to replace conventional blood testing at health services as they could not detect other sexually transmitted infections or provide the professional expertise and support provided at health services.

Keywords: MSM, rapid HIV test, self-testing; qualitative, acceptability

Introduction

In many developed countries, men who have sex with men (MSM) are most at risk of HIV acquisition and account for the majority of new HIV infections (1). While the proportion of MSM in Australia who have ever tested for HIV is relatively high compared to other developed countries (over 85%) - more so among gay-identified MSM (2, 3) - there is still considerable room for improvement with less than 60% of MSM having tested for HIV in the last 12 months (3) and only 20% of high risk MSM testing the recommending two or more times per year (4). Recent mathematical modelling suggests that approximately 31% of new HIV infections in Australia are transmitted by the 9% of HIV positive MSM who are unaware of their positive status (5). Increased frequency of HIV testing among Australian MSM could have a substantial impact on the control of HIV in Australia through the early identification of HIV infected men and reduced onward transmission (5).

A number of barriers to HIV testing among MSM have been identified, including perceptions of low risk, fear of testing positive, concerns about confidentiality and structural barriers such as accessibility to health services, the cost and inconvenience of attending clinics and waiting times for test results (6).

Point of care (POC) or rapid HIV tests have the potential to overcome many of these barriers and increase the uptake and frequency of HIV testing. Rapid tests have been used extensively in both developed and developing countries however, until recently have not been available for home use or self-testing (hereafter referred to as self-testing). In July 2012, the first rapid HIV test for self-testing, the OraQuick® In-Home HIV Test (OraSure®, Technologies, Bethlehem, PA, USA) was approved for use in the US by the FDA . In Australia, rapid testing for HIV is not currently

possible due to regulatory restrictions. Limited data are available on the views of people at risk of HIV on rapid HIV self-testing. This study aimed to explore MSMs views on the acceptability, potential use, benefits and limitations of rapid self-testing for HIV in Australia.

Methods

Qualitative description (QD) was used as the research approach in this study. QD is a pragmatic rather than theory-driven approach that is “*founded in existing knowledge, thoughtful linkages to the work of others in the field and clinical experience of the research-group*” (7). It is a particularly useful approach if your aim is to: provide a description of events or experiences rather than an interpretative or theory based analysis; use your data to inform the development of a questionnaire or intervention; or where time or resources are limited (7). We aim to use the data from this study to inform a larger questionnaire based study on rapid self-testing for HIV.

Men were recruited from two locations: the Melbourne Sexual Health Centre (MSHC), the largest sexual health clinic in Victoria, Australia, and the Victorian AIDS Council (VAC), a community based organisation providing support, programs and services to people living with and affected by HIV in the gay community. Participants were recruited from these locations as they allowed easy access to high risk MSM. Men were eligible for the study if they had sex with men, were aged 18 years and over, were HIV negative, had one or more sexual partner in the last 12 months and had a reasonable command of English. Ethics required that men recruited from MSHC could not be new clients.

Men were recruited and interviewed between January and February 2011. Men attending MSHC, who were eligible for the study, were opportunistically invited to take

part by a clinician or nurse during their consultation. At this time, the study was briefly explained and men were invited to be interviewed following their consultation or at a later date.

All interviews were conducted face-to-face by JB and SW. After obtaining informed consent men were asked 11 structured questions including their demographics, frequency of past HIV testing and recent sexual contacts. Participants were shown a sample of the OraQuick[®] *ADVANCE* Rapid HIV-1/2 Antibody Test and instructed on its use, reliability and availability. At the time of the interview the test was not approved for home use in the US. Men were also informed that the test had a longer window period - approximately six to eight weeks - in which HIV infection could not be detected compared to four to six weeks with conventional 3rd generation blood tests (8, 9). Men were not tested using the OraQuick[®] *ADVANCE* Rapid HIV-1/2 Antibody Test.

After being shown the test, men were asked a series of semi-structured, open ended questions about: their past knowledge of rapid tests; potential advantages and disadvantages of rapid testing; their likely use of rapid tests; the potential for rapid tests to change their or other men's sexual practices; potential supports and resources for users of rapid tests and cost and availability of rapid tests. The interview guide was informed by the expert knowledge of clinical and research staff and designed to target key areas of interest about rapid self-testing. Men were not reimbursed for their participation in the study

All interviews were digitally recorded, transcribed verbatim and imported into N-Vivo 9. All data were de-identified to protect confidentiality. A descriptive thematic analysis was undertaken. All interviews were read by JB and participant's responses coded. Items relating to similar topics were categorised and meanings with the data

explored. All manuscripts were re-read for further information and data within each theme re-examined to allow for reworking and refinement. Themes were named and defined and narratives capturing the meaning of each theme identified. A subset of transcripts was reviewed independently by SW to cross check coding and themes. Any differences were discussed between JB and SW and if consensus could not be reached a third researcher was consulted. Men were classified as low risk if they had no unprotected anal intercourse with casual partners in the last six months and high risk if they had any unprotected anal intercourse with casual partner/s in the last six months. Ethical approval for this study was granted by the Alfred Hospital Ethics Committee, Application Number 345/10.

Results

A total of 58 men agreed to be contacted to participate in an interview of which 31 completed an interview. Interviews took between 15 to 45 minutes to complete, depending on the depth of responses from participants. Table One outlines the characteristics of study participants

Barriers to testing

The main reasons men reported not getting tested more often for HIV were because: they perceived themselves to be at low risk, particularly if they were in a regular relationship; it was inconvenient and impractical to visit health services for testing during working hours, particularly given lengthy waiting times and repeat visits for results; or due to laziness or procrastination.

Prior knowledge of rapid oral HIV tests

The majority of men had never seen, heard or read anything about rapid tests. Of the 31 men, only six had previously heard of rapid tests, two of whom had previously tested for HIV using rapid tests overseas.

Benefits of rapid oral tests for home use

The majority of participants supported the introduction of rapid tests for home use and viewed them as a positive additional tool for HIV testing. Men felt there would be a number of advantages to having rapid tests available for home use, including: that they would be quick, easy to use and convenient, painless, offer privacy and discretion, provide immediacy of results therefore reducing stress and anxiety and eliminating waiting times to see a clinician and return for results, and be less resource intensive thereby reducing demands on health services.

Yes, I think there would be benefits. I think more people would be more likely to do something like this, where it is quick, easy, painless and you know straight away what is going on, as opposed to going in, having to get a blood test and waiting for a whole week before you find out. It just seems easier this way.... (<30yrs, high risk)

A number of men felt that the option to test oneself in the privacy of their own home would be particularly beneficial for young, married or rural and regional based MSM who do not have access to, or are not comfortable or embarrassed attending sexual health services or their local GP. They also felt they may be of benefit to men who are concerned about seeing someone they know at a sexual health service or who have a fear of testing and are put off by long waiting times when attending health services and receiving test results.

...there are people out there that are afraid to go to a clinic for maybe they're not 'out' or they're not feeling like they're, it's quite daunting to kind of walk into a sexual health clinic, people walking past... But maybe it would be good to do in a

home kind of environment for people that are not confident in coming or speaking to their GP about anything they've done because it is quite confronting coming here being asked how many partners have you slept with in the last three months, how many has been unprotected, are you top or bottom? (30⁺ yrs, high risk)

Concerns about rapid tests for home use

The two main concerns men raised about the availability of rapid tests for home use were that users would not have professional support immediately at hand in the event they tested positive for HIV, and that rapid HIV tests did not test for other STI's.

...one of the obvious benefits if you are tested and you have to come in [to a health service] and get your results, you have that immediate counselling if you need it. (<30 yrs, low risk)

One thing is I guess it doesn't test for all the other sexually transmitted diseases so you still have to come in and have the test... (<30yrs, low risk).

While most men felt confident that they personally, would cope with receiving a positive test result without professional support immediately at hand, they did note others may not be able to cope.

...if you're at home and you're like 'I've got AIDS', you'd sort of freak out a little bit perhaps, me personally I'm quite level headed so I think I could deal with it, being in the house on my own, but I can see how other people being alone could quite easily freak out. ... (<30yrs, low risk)

Concern was also raised by a few men around the longer window period, particularly in instances where there had been a high number of recent sexual partners and/or a high risk sexual episode where they would want to be tested as soon as possible afterwards.

Yeah well I guess if I found out that I had been in contact or if I'd been silly in the past, I'd want to know within four weeks as opposed to waiting six to eight weeks for an answer, that's just prolonged stress. It is very stressful to kind of wait the whole window period as it is... So to do it, if it was, I'd come and do a blood test over four weeks opposed to waiting six to eight weeks, definitely. (30⁺ yrs, high risk)

Most men however, reported that the longer window period would not change their views on the test as it was not a substantially longer period to wait. A number of men mentioned that many men still think the window period for HIV testing is three months.

No, I think by the time the incident has happened, the time has elapsed between when I'm worried, and then you get [to] wait six weeks and get, you've done the whole six weeks of waiting, to wait another few days is not... And you've done a fair bit of adjusting in that time as well, in that six week period. So the other four or five days is not such a huge issue. (30⁺ yrs, high risk)

A number of men also felt that they, and others, may be inclined to question the accuracy and reliability of the test given its simplicity and the use of saliva rather than a blood sample.

Basically to me it's just a bit too simple, just a plastic stick. How reliable is it? It's not say, that I'm a specialist but we already know that a proper test is to withdraw blood, go to the labs, wear a coat, everything, ting, ting, ting, shake, shake, shake, then you can get a result, negative, so you can go back here again. But this is plastic and a little bit of solution so it look a bit like toys to me ... I can confess I will have a doubt how accurate the result is... (30⁺ yrs, low risk).

Use of rapid tests if available

Overall, most men felt that they would be likely to, or would use, rapid tests if they were available for self-testing in Australia. Men felt they would be useful as an additional HIV testing tool and would most likely use them in the interim between having blood tests done, rather than as a replacement for blood testing at health services.

Yeah, the way I imagine it is [as a] supplementary test to use in between clinic visits.

(<30yrs, low risk)

Most men still considered blood tests to be the ‘gold standard’ in testing and would be inclined to have a blood test instead of rapid tests if they felt they were at risk of HIV or wanted to be tested for all STIs.

...if I had a higher suspicion that I may have contracted something then I would probably also go to a doctor and get tested just to be certain (<30yrs, low risk)

Some men thought rapid tests would be useful to use with regular partners, particularly if and when they decided to begin having unprotected anal intercourse in their relationship.

[I would use rapid tests] with one of my regular partners, cos we normally go out, you know, you eat and have dinner and drinks and then get into it, so you could do it right when I got there, we could both do it and then you wouldn't have to worry, 20 minutes later, fantastic, so fantastic...[if] we both got together and we both did this and 20 minutes later we were both negative... yeah I would [have UPAI]. (30⁺yrs, low risk)

A number of men also reported that they would be likely to use them with casual partners, either before sex, following a risky sexual episode, or in the event they met someone and had casual sex.

...I think it would be very helpful if something did happen and you could, you know, a casual partner or yourself could test and get some kind of indication that there was something to really worry about or not. (<30 yrs, low risk)

Other men however, reported that they would not use rapid tests with casual partners because it would be: inconvenient, too uncomfortable, a ‘mood killer’, not practical, or they would rather just use condoms and play it safe.

Yeah, considering that window [period] where the test results would show negative, yeah, I would just I think rather than play that game, just use a condom and not enter into that. But it is part awkwardness as well, definitely. (<30yrs, low risk)

Do not support rapid HIV self-testing

Overall, seven men (all low risk) reported that they would not or be unlikely to use rapid tests for self-testing. Only two of the seven men were strongly against rapid self-testing because of the lack of professional support available in the event of a positive test result. Other reasons men felt they would be unlikely to use the tests were because: they would prefer to be tested at a health service or by their GP; they would prefer a blood test and to be tested for all STIs at the one time or; they have no use for them as they are in a regular relationship.

I don't think I would ever use it. Not because I didn't think it was a great idea. I mean it is great. It is fantastic, but maybe for syphilis and chlamydia and gonorrhoea, but not for something like HIV... to think that there is a test that you could go and have freely by just popping into a pharmacy without the pre and post counselling and all that kind of stuff really scares me. (30⁺yrs, low risk)

A number of these men would prefer to see rapid tests only available at health services where tests would be administered and results interpreted by experienced clinicians, and professional support immediately available if required. One participant

noted that while personally he would use the test himself, his concerns about access to the tests by young MSM and how they might react in the event of a positive test result meant he would only support clinic based rapid testing.

...I'm not so sure about it being used for home only because you don't know how people react to something like that, it's not like a pregnancy test where you're happy. It's something that HIV is quite life altering so it would be very, I would want to do this more in a controlled environment like a clinic or a GP. (30⁺ yrs, high risk)

Changes in sexual practices

The majority of men felt that the availability of rapid tests would not change their current protected anal intercourse practices, that is, they would not use rapid tests to practice sero-sorting (select partners who have the same HIV sero-status as themselves) or have unprotected anal intercourse. Men raised concerns about possible exposure to other STI's and the 'window period' in which HIV could not be detected.

...there's still a lot of other STIs you can catch, and I wouldn't want to risk myself for that, so no....Not to mention also that period in which someone could have HIV and tests not pick up on it as well. (<30yrs, high risk)

Six men did however state that they may have unprotected anal intercourse if both they and their partner tested negative for HIV using rapid tests. The decision to have unprotected anal intercourse however would not be based solely on the test results; rather the test results would give them more confidence in making a decision alongside their own risk assessment of the situation and/or partner.

Yes. Not on its own, that on its own would not be the whole basis of that judgement to discard condoms, it would be through the rapport with the person, having discussed lifestyle, their history, the things that you discuss when you start talking with a sexual partner... It's a way of being more confident about my judgement and decision of

managing the [risk], having an idea about the amount of risk I am prepared to accept and live with and share and so on... Whether it would mean I had more unprotected sex, I think potentially yes. (30⁺ yrs, high risk)

While most men reported that their current safe sex practices would not change, a number could see the potential for it to change other men's sexual practices, although most felt that was only likely among men who already had unprotected anal intercourse.

I think it would falsely reassure people that they are safe right now, therefore let's not use condoms, in that setting... (30⁺ yrs, low risk).

Cost and availability of rapid tests

In general, men reported that the frequency with which they would use rapid tests would ultimately depend on the cost. The average price men were willing to pay for the test was A\$10-\$20, although most men said that they would expect it to be around the same cost as a pregnancy test.

Probably about the same price that I would expect to pay for a birth control test because the process seems similar and everything. I can sort of see the two of them are relatively similar products. If it was two or three times more expensive, I personally wouldn't understand why and would be less inclined to buy it, even thought it might be more expensive chemicals or whatever. (<30yrs, high risk)

The price men nominated depended on their current financial situation and the circumstances in which they would be most likely to use it. Many men felt they would be likely to test for HIV more often if rapid tests were available, however, if they were too expensive, they would be unlikely to buy them or attend a health service instead.

If it was going to cost quite a bit then I would probably just come to the clinic.

(30⁺yrs, high risk)

Places men would like to see rapid tests available included: chemists, supermarkets, sex on premises venues, vending machines, adult sex shops, nightclubs and online.

Information and resources

If rapid tests were available for home use, men felt that a number of test kit resources and information could be useful including: access to a 24 hour helpline staffed by health professionals (preferably medical practitioners), detailed information about the accuracy and reliability of the test and the window period, an information website on the tests and a list of contact numbers for state and/or national HIV support organizations and help lines.

Discussion

Overall, the majority of gay and bisexual men interviewed felt that home based rapid tests would be useful as an additional HIV testing tool, and most likely used to test in the interim between conventional blood testing at health services. Most men reported they would not use rapid tests to replace conventional blood tests as they could not detect other STI's or provide the professional expertise and support provided at health services. Men felt that rapid HIV self-testing would be quick, easy, painless, convenient, private and discrete, provide immediacy of results, and eliminate waiting times to see a clinician and receive results. The majority of men were relatively low risk and reported that they would not use rapid tests to practice sero-sorting (select partners who have the same HIV serostatus as themselves) or have unprotected anal intercourse. A few felt that other men may however change their sexual practices if rapid tests were available. Men would be willing to pay between A\$10-20 for a rapid

test, with frequency of testing dependant on cost. Men felt that a variety of resources and information should be provided for the user in test kits.

Strengths and Limitations

A limitation of our study is that individuals were only recruited from two services frequented by higher risk MSM therefore our findings may not be generalisable to other gay and bisexual populations. A community based study would have allowed for a broader sample including non-gay identified MSM and MSM who have never or rarely test for HIV, however this was not within the scope of this study due to time and resource limitations. The views of men were also only hypothetical - while the men were shown and instructed on the use of the OraQuick[®] ADVANCE Rapid HIV-1/2 Antibody Test prior to being interviewed, they did not actually experience being tested themselves. It is possible men's views may have differed if they had experienced testing and also if the test becomes available for home use. Also, as men volunteered to be interviewed, it is possible their views may be biased in favour of home based rapid testing. It is also possible that there is scope for inaccuracy in men's responses due to social desirability bias, particularly around sensitive questions pertaining to sexual practices. The strength of this study is that it is the first Australian study to examine in-depth, gay and bisexual men's views on rapid self-testing for HIV. Importantly, it has also shown that gay and bisexual men would be unlikely to use rapid tests to replace conventional blood tests or full STI testing. Internationally, there have been few published studies that have asked MSM in-depth about rapid tests for home use. In a recent study in New York City, 60 gay and bisexual men were interviewed in-depth on their potential use of OTC rapid tests: participants had the choice of testing themselves using the OraQuick rapid HIV test. The majority of men reported that it would be advantageous to have OTC rapid tests

available and would use them either to test themselves or sexual partners (10). A randomised control trial is currently underway in Seattle examining the ease of use and acceptability of using the OraQuick[®] *ADVANCE* Rapid HIV-1/2 Antibody Test among MSM. Interim results have been published in abstract form (11). Men were randomised to either receive or not receive access to home self-testing using the OraQuick[®] *ADVANCE* Rapid HIV-1/2 Antibody Test. Similar results to our study were found, with men reporting the availability of rapid tests would increase how often they tested for HIV, however frequency of testing would depend on the cost of the test: the lower the cost the more often they would be likely to test. Men randomised to home self-testing reported the test was easy to use and required little support or counselling (11). Given the recent FDA decision to approve the first OTC rapid HIV test for home use in the US, and that rapid testing is not currently available in Australia, this study provides timely insight into the acceptability, potential use and limitations of rapid testing among a high risk group for HIV and is hoped will inform further discussion around rapid HIV testing in Australia. Determining the benefit of rapid HIV testing on HIV transmission in the Australian setting would depend on changes in the frequency of HIV testing, condom use among those that receive a false negative from the longer window period and changes in sexual practices among those testing negative. At this time, our data suggest HIV testing would increase with the availability of home based rapid testing which is likely to provide a significant community benefit. Mathematical modelling has shown that using home based rapid testing to screen partners in populations with a higher HIV prevalence is advantageous and can result in lower rates of transmission than inconsistent or no condom use (12). Further studies on the effect of rapid HIV self-testing and possible associated risk behaviours are required.

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Table One: Characteristics of study participants (n=31)

	N%*
Age	
<30 years and under	15 (48)
30+ years	16 (52)
Sexual Identity	
Gay/homosexual	28 (90)
Bisexual/Other (pansexual)	3 (10)
Frequency of HIV testing	
Every 3 or 6 months	14 (45)
Once a year	9 (29)
Less than once a year/ Other ^{>}	8 (26)

Currently has sex with casual[^] partners	
Yes	23 (74)
No	8 (26)
Currently has sex with regular[^] partners	
Yes	23 (74)
No	8 (26)
Number of sexual partners <6 months	
10 or less	19 (61)
11 or more	12 (39)
Unprotected anal intercourse with <u>any</u> casual partner <6 months	
Yes (<i>high risk</i>)	10 (32)
- 10 or less sexual partners	3 (30)
- 11 or more sexual partners	7 (70)
No (<i>low risk</i>)	18 (58)
- 10 or less sexual partners	13 (72)
- 11 or more sexual partners	5 (28)
- NA (have not had a casual partner <6 months)	3 (10)
Unprotected anal intercourse with regular partners <6 months	
Yes	17 (55)
No	7 (23)
NA (have not had a regular partner <6 months)	7 (23)

* Percentages may not total 100% due to rounding up.

> First time been tested, tested twice previously only, testing frequency depends on relationship.

[^] Participants self-defined 'regular partner' and 'casual partner'.