

**SHORT COMMUNICATION****What drives 'first-time testers' to test for HIV at community-based HIV testing services?**S-A. Meehan,<sup>1</sup> H. R. Draper,<sup>1</sup> R. Burger,<sup>2</sup> N. Beyers<sup>1</sup><http://dx.doi.org/10.5588/pha.17.0064>

Drivers of and barriers to testing are not well understood for those who have never been tested previously and now self-initiate at a community-based human immunodeficiency virus (HIV) testing service (CB-HTS). This descriptive study enrolled 229 first-time testers. Participants completed an electronic questionnaire. The majority reported fear and (non) accessibility of HTS as barriers to testing (40% and 24%, respectively). Wanting 'to know my status' and the immediate opportunity to test were reported as drivers of testing (41% and 35%, respectively). Addressing fear of testing and providing an easily accessible opportunity to test may go some way to encouraging those previously untested individuals to test.

The Joint United Nations Programme on HIV and AIDS (UNAIDS) 90–90–90 target aims to bring the global human immunodeficiency virus (HIV) epidemic under control.<sup>1</sup> HIV testing is essential for reaching the first '90' target of having 90% of HIV-infected people aware of their status and increasing access to HIV testing services (HTS), specifically for those who have never been tested and remain unaware of their HIV status. South Africa has a large burden of HIV;<sup>2</sup> although an estimated 7.6 million South Africans were tested for HIV for the first time during a national HIV testing campaign (2010–2011),<sup>3</sup> mathematical modelling estimates that 23% of HIV positive adults remain undiagnosed.<sup>4</sup>

The drivers of and barriers to testing are not well understood for those who are tested for the first time at community-based HTS. There is a paucity of data from first-time testers, specifically around what prevented them from testing previously and what has driven them to test now. This is important to understand, as community-based HTS have a significant role to play in expanding HTS, especially for those who do not typically utilise public health facilities, such as males.<sup>5,6</sup>

The present study describes self-reported drivers of and barriers to testing for first-time testers tested for HIV at a community-based HTS.

**METHODS****Design and setting**

This cross-sectional descriptive study was embedded within routine community-based HTS provided by non-governmental organisations (NGOs) in five un-

der-developed, densely populated communities with high HIV prevalence<sup>7</sup> in Cape Town City, Western Cape, South Africa. Within each community, NGO-led HIV testing was available at a stand-alone centre (fixed site) and on a mobile basis (using pop-up tents and a mobile van). All rapid HIV testing was done in accordance with provincial algorithms and guidelines. Clients diagnosed with HIV were referred for HIV care and treatment at public health facilities.

**Study population and enrolment**

Adults (aged  $\geq 18$  years) who self-initiated an HIV test (voluntarily decided to learn their HIV status) at either of the NGO-led HTS within one of the five study communities, who reported being first-time testers and provided written informed consent, were eligible for inclusion in the study. As participants were enrolled sequentially after undergoing HIV testing and while waiting for their test result, HIV status did not bias participant responses to the questionnaire.

**Data collection and analysis**

An electronic questionnaire was administered by trained research assistants (RAs) using a hand-held device. The questionnaire took  $\leq 10$  min to complete and consisted of simple closed-ended questions. Participants chose a pre-determined answer from a drop-down menu. If none of the pre-determined choices were applicable, they chose 'other' and the RAs captured the participant's answer.

Data were downloaded from the hand-held devices into a specifically designed database (Microsoft Access 2013, Microsoft Corp, Redmond, WA, USA). Data collection took place in all five communities between April and December 2015. For drivers of and barriers to testing, the first author grouped similar reasons (from the drop-down menu and 'other') together to form broad categories (Table 1). These categories are displayed using frequencies and percentages.

**Ethical considerations**

The study protocol was approved by the Health Research Ethics Committee at Stellenbosch University (S12/02/059). All participants provided written informed consent; they could withdraw from the study at any time and did not receive any incentive to take part in the study.

**RESULTS**

The analysis included data from 229 first-time testers with a median age of 24 years (interquartile range

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[IQR] 20–42), of whom the majority (66%) were male (Table 2). The participants' reasons for never having tested previously (barriers) were grouped into five categories, with the majority reporting either fear (40%) or non-accessibility of HTS (24%).

Participants' reasons for deciding to undergo HIV testing for the first time (drivers) were grouped into four categories. The majority reported that they simply wanted to know their HIV status (41%) and that there was an opportunity to test (35%) (Table 3).

## DISCUSSION

It is encouraging that the majority of participants in the study were male, as it is well-known that men are less likely to visit a health facility for HTS<sup>8</sup> and that they have a higher proportion of undiagnosed HIV than women.<sup>4</sup>

The reporting of fear as a major barrier to testing may indicate the presence of stigma.<sup>9,10</sup> To reduce HIV-associated stigma and encourage earlier testing, it may be beneficial to position HIV as a chronic illness. Using chronic illness clubs to dispense treatment to stable HIV patients may be one intervention that can help normalise HIV in communities. Further studies could test this.

Participants decided to test because they wanted to know their status. The phrase 'know your status' is used in awareness campaigns in South Africa. Participants citing this driver may be masking actual underlying reasons, such as a perceived risk for HIV. This may also indicate awareness around the importance of knowing one's HIV status and provide evidence that the awareness campaigns are working.

While (non) accessibility of HTS was noted as a barrier to testing, the opportunity to test was noted as a driver. Participants were able to take advantage of the immediate opportunity to test as they walked past the NGO-led HTS. This highlights proximity to a testing service as a driver for HIV testing.

The present study is relevant as it relates to the first 90 in the UNAIDS 90–90–90 target. Its strength is that it describes self-reported reasons from first-time testers as to why they had never previously been tested and why they chose to test for the first time at a community-based HTS.

The study has some limitations. First, it did not collect data on those who refused to participate. Second, it was conducted in peri-urban communities; barriers to and drivers of testing may be different in rural areas, which could be an opportunity for future research. Future studies could also compare differences between first-time testers, and repeat testers and individuals who have never tested for HIV.

This study indicates that people who self-initiate HIV testing for the first time want to know their HIV status. It also suggests that addressing fear of testing and providing individuals with an easily accessible opportunity to test could go some way to help previously untested individuals to test for HIV and to attain the first '90' of the UNAIDS target. It would be important, however, to confirm these hypotheses via conversations with those who have never been tested. While public health services will remain indisputably core to the provision of HIV testing, community-based HTS can reach 'opportunistic' testers.

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**TABLE 1** Barriers to and drivers for HIV testing as reported by first-time testers

Barriers to HIV testing				
Fear	(Non) accessibility	Low risk/low perceived risk for HIV	Lack of awareness	Health system issues
Fear of being seen	Health facility opening hours	I was not sexually active	Ignorance around HIV or HIV testing	Disrespectful health professionals
Fear of testing HIV-positive	I could never take time off work	I trust my partner/s	Never heard of HCT before	Poorly trained health professionals
General fear	Long queues in health facilities	I am in a faithful relationship	HIV testing is not important	Accuracy of HIV tests untrustworthy
	Too far to travel	I take precautions		
	I have been too busy			
Drivers for HIV testing				
I wanted to know my status	Opportunity to test	Perceived risk of HIV	Knew someone with HIV	Other
	Was just passing	Unfaithful partner	Knew someone living with HIV	Feeling ill/signs of illness
	Offered a test when at another service	Multiple partners	Knew someone who died from AIDS	Pregnant/planning a baby
		Don't use condoms consistently		To protect my partner
		Had unsafe sex		Medical male circumcision
		Window period		To show my mother
		Partner is HIV-infected		Try to find a partner
		Raped		Never tested before
		Sexually active		

HIV = human immunodeficiency virus; HCT = HIV counselling and testing; AIDS = acquired immune-deficiency syndrome.

**TABLE 2** Age and barriers to HIV testing reported by first-time testers

	Total (n = 229) n (%)	Males (n = 152) n (%)	Females (n = 77) n (%)
Age, years, median [IQR]	24 [20–42]	24 [20–38]	27 [19–49]
Reasons for not testing previously			
Fear (Non) accessibility	91 (40)	54 (36)	37 (48)
Low risk/low perceived risk for HIV	54 (24)	41 (27)	13 (17)
Lack of awareness	37 (16)	22 (14)	15 (19)
Health system issues	32 (14)	26 (17)	6 (8)
	15 (6)	9 (6)	6 (8)

HIV = human immunodeficiency virus; IQR = interquartile range.

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Les facteurs qui amènent à réaliser un test et ceux qui les entravent ne sont pas bien compris pour ceux qui n'ont jamais été testés auparavant et en prennent l'initiative dans un service de test pour le virus de l'immunodéficience humaine (VIH) basé en communauté (CB-HTS). Cette étude descriptive a enrôlé 229 patients testés pour la première fois. Les participants ont rempli un questionnaire électronique. La majorité a déclaré que la crainte et la (non)

No se conocen plenamente los impulsores y los obstáculos a la práctica de las pruebas diagnósticas de la infección por el virus de la inmunodeficiencia humana (VIH), en las personas que nunca han recibido la prueba y que ahora, por iniciativa propia, acuden a los servicios comunitarios que la ofrecen. En el presente estudio descriptivo se incorporaron 229 personas que recibían la prueba diagnóstica por primera vez. Los participantes completaron un cuestionario en formato electrónico. La mayoría refirió como

**TABLE 3** Drivers for HIV testing reported by first-time testers

Drivers	First-time testers		
	Total (n = 229) n (%)	Male (n = 152) n (%)	Female (n = 77) n (%)
Wanted to know my status	93 (41)	62 (41)	31 (40)
Opportunity to test	81 (35)	55 (36)	26 (34)
Perceived risk of HIV	32 (14)	23 (15)	9 (12)
Knew someone with HIV/AIDS	12 (5)	4 (3)	8 (10)
Other	10 (4)	7 (4)	3 (4)
Missing*	1 (1)	1 (1)	0 (0)

\*No reason given.

HIV = human immunodeficiency virus; AIDS = acquired immune-deficiency syndrome.

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accessibilité du HTS étaient des entraves au test (40% et 24%, respectivement). Vouloir « connaître son statut » et l'opportunité de faire le test immédiatement ont été les moteurs de la réalisation du test (41% et 35%, respectivement). Répondre aux craintes individuelles de se faire tester et offrir une opportunité facilement accessible de le réaliser contribueraient à amener au test ceux qui ne l'ont jamais fait.

obstáculos a la práctica de la prueba el temor (40%) y la (falta de) accesibilidad de los servicios que la ofrecen (24%). Los factores referidos como impulsores de la búsqueda de la prueba fueron el hecho de 'querer conocer su estado' (41%) y la oportunidad inmediata de hacerla (35%). Abordar el temor de las personas y ofrecer una oportunidad fácilmente accesible de realizar la prueba diagnóstica del VIH puede contribuir a que las personas que nunca han realizado la prueba, la acepten.

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