LA TROBE UNIVERSITY

HIV FUTURES 8

HIV exposure and testing

Australian Research Centre in Sex, Health and Society

2016

INTRODUCTION

HIV Futures 8 is a survey about the health and wellbeing of people living with HIV (PLHIV) in Australia. The study forms part of a series of cross-sectional surveys that have been run every two to three years since 1997. Funded by the Australian Government Department of Health, the aims of the study are to provide information about factors that support physical and emotional wellbeing among PLHIV. The study is designed to inform the Australian National HIV Strategy and guide community and clinical service provision for PLHIV.

In order to explore the complexity of factors that support health and wellbeing among PLHIV, HIV Futures 8 is a broad survey covering issues such as financial security, housing status, antiretroviral treatment use, general health issues, stigma and discrimination, clinical and support service use, aging, drug and alcohol use, sexual health, relationships, and social connectedness.

HIV Futures is run by the Australian Research Centre in Sex, Health and Society (ARCSHS) at La Trobe University. Findings from HIV Futures 8 are presented as a series of short reports. These, along with more information about the study and copies of reports from previous HIV Futures surveys, can be found on the ARCSHS website: **latrobe.edu.au/arcshs**

METHODS

HIV Futures 8 is a cross-sectional survey of PLHIV. The survey was open to people aged 18 years or older who were currently living in Australia. Data were collected using a self-complete survey that could be filled in online or using a booklet that was supplied to prospective participants with a reply-paid envelope. Participants were recruited through electronic advertising in a range of forums including: advertisements sent through the email lists of HIV community organisations; advertising on relevant websites; social media advertising, particularly Facebook including targeted posts to Facebook groups for PLHIV; advertisements on 'dating apps' used by gay men and other men who have sex with men and; flyers and posters displayed in HIV clinics. Hard copies of the survey were distributed through the mailing lists of HIV community organisations and made available in the waiting rooms of HIV clinics and community services. Data were collected between July 2015 and June 2016.

Full details of the study protocol and method have been published elsewhere and are available on the ARCSHS website: **latrobe.edu.au/arcshs**

SAMPLE

HIV Futures 8 was completed by 895 people living with HIV in Australia. Of these, 90.5% (n=804) were men, 8.3% (n=74) were women, six people identified as transgender and four people described their gender in other terms.

The majority of the sample were men who identified as gay (78.7%, n=697), 5.6% (n=50) identified as bisexual and 4.3% (n=38) as heterosexual.

There were 21 participants (2.3%) who identified as Aboriginal or Torres Strait Islander.

The age of participants ranged from 19 to 86 years. The average age was 51 years. Over half (56.3%, n=485) were aged 50 years or older.

The majority of participants were born in Australia (74.7%, n=649) and spoke English as their first language (91.2%, n=792).

Participants came from all states and territories in Australia as detailed in Table i.

The majority of participants were working (53.8%, n=474) either full-time (38.6%, n=341) or part-time (15.2%, n=134). There were 18.1% (n=160) who were retired/no longer working.

There were 234 (26.7%) participants who had tested positive to HIV within the five years prior to the survey (from 2010 onward). Of these, the majority (77.0%) were under 50 years of age. However, there were 51 participants (23.0%) aged 50 or older who had been diagnosed in 2010 or more recently.

There were 844 participants (96.6%) currently using antiretroviral therapy. Of these, 756 (91.0%) reported they had an undetectable viral load as of their most recent test. (Note, these figures exclude missing data).

Full details of the study sample are available on the ARCSHS website **latrobe.edu.au/arcshs**

Table i. States and territories in which participants currently live

	n	%
ACT	20	2.3
NSW	306	34.5
NT	6	0.7
QLD	136	15.3
SA	65	7.3
TAS	10	1.1
VIC	265	29.9
WA	78	8.8

*Nine participants did not identify their state/territory

BACKGROUND

In 2014, it was estimated that there were 27,150 Australians living with HIV. Approximately 1,000 new cases are diagnosed in Australia each year. The HIV epidemic in Australia is predominantly among gay men and other men who have sex with men (GMSM). In 2014, 70% of new HIV diagnoses occurred through male-to-male sexual transmission. This figure has remained consistent over time in Australia. However, there is evidence that the Australian epidemic is diversifying. For instance, there are increasing cases of HIV transmitted via heterosexual sex among people from South East Asian or African countries (The Kirby Institute, 2015).

Of the 27,150 people living with HIV in Australia in 2014, it was estimated that 12% were undiagnosed. Furthermore, of the 1081 new HIV diagnoses in 2014, 28% were classified as a 'late diagnosis'. A 'late diagnosis' is determined by an individual's CD4 count at the time of diagnosis. A count of less than 350 cells/µl is considered a late diagnosis. This is a point at which HIV is likely to have caused damage to the immune system. People who are diagnosed late may have been living with HIV for several years or more without being tested. In 2014, the proportion with a late diagnosis was highest among people born in South East Asia or sub-Saharan Africa and more common among people who acquired HIV through heterosexual sex. However, each year more than half of all late diagnoses are among GMSM (The Kirby Institute, 2015; Wilcock and Frommer, 2014).

A significant proportion of HIV sexual transmissions come from people who are unaware they are HIV positive. There are a number of reasons why people may not present for HIV testing. Many people simply do not feel that they are at risk of acquiring HIV, or they do not test unless they have had a particular risk episode. Fear of a positive diagnosis can also be a barrier to testing, as can stress associated with having to wait for results or return to the clinic for a follow up to obtain results (Conway et al., 2015; Wilcock and Frommer, 2014).

The Seventh National HIV Strategy 2014 – 2017, includes the objective of decreasing the number of people with undiagnosed HIV infection, with a focus on increasing testing among gay men and injecting drug users (Australian Government Department of Health, 2014). In recent years, a range of new testing initiatives have been introduced in Australia to ensure HIV testing is easy and accessible. This includes community-based HIV and STI screening clinics with extended opening hours, rapid point of care testing sites located in community settings and lifting of the previous ban on home testing (Conway et al., 2015; Wilcock and Frommer, 2014).

This short report looks at findings from the HIV Futures 8 survey related to HIV exposure and testing for HIV and STIs.

FINDINGS

HIV infection

Mode of HIV acquisition

The majority of participants (80.2%) acquired HIV through male-to-male sex. For women, sex with a man was the most common mode of acquisition (85.1% of women). Overall, 9.6% (n=84) indicated heterosexual sexual transmission was the mode by which they acquired HIV (see Table 1).

Table 1. Mode of HIV exposure by gender

Mode of transmission, % (n)	Men	Women	Transgender	Other gender	Total
Sex with a man	88.7 (705)	85.1 (63)	83.3 (5)	75.0 (3)	88.3 (776)
Sex with a woman	2.6 (21)	0	0	0	2.4 (21)
Injecting drugs	2.0 (16)	5.4 (4)	0	25.0 (1)	2.4 (21)
Blood products	<1 (6)	1.4 (1)	0	0	<1 (7)
Sex with a man or injecting drugs	<1 (3)	1.4 (1)	0	0	<1 (4)
Other	3.4 (27)	4.1 (3)	16.7 (1)	0	3.5 (31)
Don't know	2.1 (17)	2.7 (2)	0	0	2.2 (19)
Total	**795**	**74**	**6**	**4**	**879**

Excludes missing cases

Acquisition of HIV outside Australia

There were 156 participants (17.8%) who reported they acquired HIV in a country other than Australia. As expected, people not born in Australia were significantly more likely to have acquired HIV outside of Australia (see Table 2). The regions in which people reported they acquired HIV are shown in Table 3. Women were significantly more likely than men to have acquired HIV outside of Australia (see Table 4).

Table 2. Acquired HIV in Australia by country of birth

	Born in Australia, % (n)	Born outside Australia, % (n)	Total, % (n)
Acquired HIV in Australia	86.8 (551)	67.9 (148)	81.9 (699)
Acquired HIV outside of Australia	13.2 (84)	32.1 (70)	18.1 (154)
Total	**635**	**218**	**853**

Excludes missing data, χ^2 (1) = 39.1, p<0.001

Table 3. Regions in which participants contracted HIV if outside of Australia	
Region	% (n)
South East Asia	30.2 (45)
United Kingdom, New Zealand	21.5 (32)
United States of America, Canada	19.5 (29)
Africa (including South Africa)	10.7 (15)
Other	10.1 (15)
Europe	8.7 (13)
Total	**149**
Excludes missing data	

Table 4. Acquired HIV in or outside of Australia by gender			
Country in which acquired HIV	Men, % (n)	Women, % (n)	Total, % (n)
Australia	83.6 (657)	65.8 (48)	82.1 (705)
Overseas (other country)	16.4 (129)	34.2 (25)	17.9 (154)
Total	**786**	**73**	**859**
Excludes missing data, χ^2 (1) = 14.4, p<0.001, excludes transgender and other categories due to small numbers			

HIV acquisition and travel

Travelling has been identified as a time at which some people may be more vulnerable to HIV exposure due to changes in routine, a more relaxed attitudes toward safe sex due to a sense of freedom or anonymity, less familiarity with the local area or higher HIV prevalence in the area to which they have travelled (Australian Government Department of Health, 2014; Murphy, 2001).

There were 145 participants (16.7%) who indicated they were travelling interstate or internationally for work or leisure at the time they acquired HIV. Of these, 49 (5.6%) were travelling within Australia while 96 (11.0%) were travelling overseas. The most commonly cited overseas regions in which people were travelling when they contracted HIV were South East Asia (n=34) or North America/Canada (n=21). People born outside of Australia were not more likely than people born in Australia to indicate they had been traveling when they contracted HIV. Among people diagnosed with HIV within the past five years (2010 onward), 24.9% (n=57) indicated that had been traveling when they contracted HIV (see Table 5).

Table 5. Acquired HIV while travelling by year of HIV diagnosis			
Travelling at time of HIV acquisition	Year of HIV diagnosis, % (n)		
	Up to 2009	2010 onward	Total, % (n)
Not travelling	85.4 (537)	75.1 (172)	82.6 (709)
Travelling interstate or overseas	14.6 (92)	24.9 (57)	17.4 (149)
Total	**629**	**229**	**858**
Excludes missing data, χ^2 (1) = 12.3, p<0.001			

Use of PEP and PrEP prior to HIV diagnosis

There were 70 participants (8.0%) who indicated they had used post-exposure prophylaxis at least once prior to their HIV diagnosis. There were 10 people (1.1%) who had used pre-exposure prophylaxis prior to their HIV diagnosis.

There were 82 participants (9.4%) who indicated they did not know what PEP was and 86 (9.9%) who did not know what PrEP was.

There were 239 participants who had a current sexual partner who was HIV negative. Of these, 37 (15.5%) indicated their partner had used PEP at least one time, while 16 (6.7%) indicated their partner had, or was currently, using PrEP.

HIV DIAGNOSIS AND TESTING

Year of diagnosis

Table 6 shows the years in which participants were diagnosed with HIV. The numbers of years since participants had been diagnosed with HIV (as of 2016) ranged from less than one year to 34 years, with an average of 15 years.

Table 6. Year in which participants were diagnosed with HIV	
Year of HIV diagnosis	% (n)
1985 or earlier	8.7 (76)
1986-1995	25.6 (225)
1996-2005	24.4 (214)
2006-2015	41.3 (363)
Total	**878**
Excludes missing data	

There were 234 (26.7%) participants who had tested positive to HIV within the five years prior to the survey (from 2010 onward). Of these, the majority (77.0%) were under 50 years of age. However, there were 51 participants aged 50 or older who had been diagnosed in 2010 or more recently (see Table 7). Of these, 42 were men who identified as gay or bisexual, seven were heterosexually identified men and there was one woman.

Table 7. Year of HIV diagnosis by age			
Age, % (n)	up to 2009	2010 onward	Total
Under 35	2.7 (17)	37.8 (84)	12.0 (101)
35-49	29.2 (182)	39.2 (87)	31.8 (269)
50-64	50.2 (313)	19.4 (43)	42.1 (356)
65+	17.8 (111)	3.6 (8)	14.1 (119)
Total	**623**	**222**	**845**
Excludes missing data			

Time between HIV exposure and HIV diagnosis

We asked participants to report the year they believe they were infected with HIV. We then compared this with the year in which they were diagnosed with HIV as a crude measure of the lag time between participants' exposure to HIV and their diagnosis. Overall, 51.1% (n=425) indicated they had been diagnosed less than one year after their presumed (or known) exposure to HIV. This figure was higher among people diagnosed after 2009 (see Table 8). These figures should be regarded with caution, however, as responses were grouped by year of diagnosis and did not account for the month of diagnosis.

Table 8. Time between presumed HIV exposure and HIV diagnosis			
Time between exposure and diagnosis	Year of HIV diagnosis, % (n)		
	Up to 2009	2010 onward	Total, % (n)
Less than 1 year	46.6 (285)	63.6 (140)	51.1 (425)
1-2 years	31.7 (194)	28.2 (62)	30.8 (256)
3-5 years	14.4 (88)	6.4 (14)	12.3 (102)
More than 5 years	7.4 (45)	1.8 (4)	5.9 (49)
Total	**612**	**220**	**832**
Excludes missing data, data should be interpreted with caution due to small numbers in some cells.			

Reasons for testing

We asked participants to tell us the main reason they took an HIV test at the time they were diagnosed with HIV. The most common reason for taking an HIV test was becoming ill or experiencing symptoms of seroconversion illness or other HIV-related illnesses (see Table 9). Men were more likely than women to have been diagnosed as part of routine sexual health screening. By contrast, women were more likely to be tested after a sexual partner had tested positive.

Table 9. Reason for taking HIV test when first diagnosed

Reason	% (n)
I became ill/showed symptoms	30.4 (270)
As part of routine sexual health screening	11.7 (104)
A sexual partner tested positive	9.7 (86)
My doctor suggested it	9.5 (84)
I was a member of a risk group	8.5 (75)
As part of routine general health screening	8.5 (75)
I had a particular risk episode or event	8.2 (73)
Other reason	4.7 (42)
Starting a new relationship	2.9 (26)
I was tested without my knowledge	1.8 (16)
Required for visa application/immigration	1.5 (13)
A contact tracer or other health care worker suggested it	1.1 (10)
Insurance	<1 (5)
Availability of rapid testing	<1 (3)
I was tested during pregnancy	<1 (3)
Availability of new treatments	<1 (2)
Total	**887**

Excludes missing data

Prior testing history

For 34.1% (n=301) of participants, the test at which they received their HIV positive diagnosis was the first HIV test they had ever taken (see Table 10). This figure was higher for women at 53.7%. Women were also less likely than men to have been tested within the 12 months prior to their positive HIV test (see Table 11).

Table 10. Most recent test prior to testing positive for HIV

Timing of most recent test	% (n)
Never, I had my first HIV test when I first tested positive	34.1 (301)
Less than 6-months prior	24.1 (213)
Less than a year prior	15.4 (136)
Less than two-years prior	9.1 (80)
Two or more years prior	13.6 (120)
Can't recall	3.6 (32)
Total	**882**

Excludes missing data

Table 11. Most recent test prior to testing positive for HIV by gender

Timing of most recent test, % (n)	Men	Women	Total
Never tested previously	33.8 (259)	53.7 (36)	35.4 (295)
Last test within 12 months prior	43.1 (330)	20.9 (14)	41.3 (344)
Last test more than 12 months prior	23.1 (177)	25.4 (17)	23.3 (194)
Total	**766**	**67**	**833**

Excludes missing data, χ^2 (1) = 14.4, p<0.001, excludes 'can't recall' option and 'transgender'/'other' due to small numbers.

Prior testing history among people recently diagnosed

Table 12 shows the prior HIV test history of participants diagnosed before and after 2010. Those diagnosed after 2009 were significantly more likely to have been tested for HIV at least once prior to their positive diagnosis, including within the 12 months prior to their diagnosis.

Among people diagnosed after 2009, people aged over 50 years were significantly more likely than younger people to have never previously been tested for HIV. They were also less likely to have been tested for HIV within the 12 months prior to their HIV positive diagnosis (see Table 13).

Table 12. Most recent test prior to testing positive for HIV according to year of diagnosis

Timing of most recent test, % (n)	Up to 2009	2010 onward	Total
Never tested previously	44.0 (269)	12.2 (27)	35.5 (296)
Last test within 12 months prior	35.1 (215)	56.6 (125)	40.8 (340)
Last test more than 12 months prior	20.9 (128)	31.2 (69)	23.6 (197)
Total	**612**	**221**	**833**

Excludes missing data, χ^2 (2)= 71.6, p<0.001, excludes 'can't recall' option.

Table 13. Most recent test prior to testing positive for HIV among people diagnosed since 2009 by age

Timing of most recent test, % (n)	Under 50	50+	Total
Never tested previously	8.5 (14)	22.9 (11)	11.7 (25)
Last test within 12 months prior	60.0 (99)	45.8 (22)	56.8 (121)
Last test more than 12 months prior	31.5 (52)	31.3 (15)	31.5 (67)
Total	**165**	**48**	**213**

Excludes missing data, χ^2 (2)= 7.9, p=0.019, excludes 'can't recall' option

Reasons for not testing

We asked the 301 participants who had never taken a HIV test prior to their HIV positive diagnosis to indicate the main reason why they had not tested previously. Nearly half (49.5%, n=149) responded that they did not think they were at risk. There were a range of other reasons reported including tests not being available at the time, not wanting to know the diagnosis and fear.

Location of testing

We asked participants the type of clinic or venue at which they had been tested when they received their HIV positive diagnosis. The most common testing locations were the participant's regular doctor or a sexual health clinic. A small number indicated they had used rapid testing or community-based testing facilities (see Table 14).

Table 14. Location of testing at time of HIV diagnosis

Testing location	% (n)
My regular doctor	44.6 (396)
Sexual health clinic	25.9 (230)
First available doctor	12.0 (106)
Hospital	9.1 (81)
Other location	2.3 (20)
RAPID test at a community organisation	2.0 (18)
Specialist doctor	1.2 (11)
RAPID test at a GP clinic	<1 (5)
Bar, nightclub, sauna	<1 (4)
I did it myself, at home	<1 (3)
Unsure	<1 (3)
Visa/immigration clinic	<1 (3)
Blood bank	<1 (3)
Community event	<1 (2)
RAPID test at a sex-on-premises venue	<1 (2)
Total	**887**

Excludes missing data

Contact tracing

We asked participants a series of questions about their experiences with contract tracing, or notifying previous sexual partners of their HIV diagnosis. Overall, 417 (48.3%) indicated they had notified previous partners of their HIV diagnosis. There were 501 (56.0%) who indicated they received no assistance with contact tracing. Of those who did receive contract tracing assistance, the most common source of this was an HIV specialist (16.9%, n=151) or GP (15.1%, n=135).

Testing for other sexually transmissible infections

The majority of participants (77.7%, n=684) indicated they had been tested for other sexually transmissible infections within the past 12 months. There were 534 participants (60.5%) who had been tested for syphilis when they presented for their most recent (HIV) viral load test.

There were 89 participants who had been diagnosed with syphilis in the past 12 months. We asked these people the reason they had presented for syphilis testing at the time of their diagnosis. The majority (58.0%, n=51) indicated they had been screened as part of routine sexual health screening, while 31.8% (n=28) had be tested because they had symptoms. Of those diagnosed with syphilis, 67.4% (n=60) reported that they notified their previous sexual partners of their diagnosis, while 10.1% (n=9) allowed a contract tracing service to notify previous sexual partners.

SUMMARY AND CONCLUSIONS

Consistent with the general pattern of the HIV epidemic in Australia, the most common mode of HIV acquisition among participants in HIV Futures 8 was male-to-male sex. Among women, heterosexual sex was the most common mode of HIV acquisition, with a small number attributable to injecting drug use. Again, this is consistent with broader patterns of HIV acquisition among women in Australia (The Kirby Institute, 2015).

Just over 16% of participants indicated they had acquired HIV while travelling, most commonly to overseas destinations in South East Asia or North America. Among people diagnosed since 2010, this figure was even higher. This supports research that suggests travelling may be a time in which people are more vulnerable to HIV exposure.

The majority of people diagnosed within the past five years (2010 onwards) had been tested for HIV at least once in the 12 months prior to their HIV positive diagnosis and were diagnosed within 12 months of their exposure to HIV (based on self-reports of known or presumed exposure). This is encouraging with respect to initiatives that aim to reduce the average time between HIV exposure and diagnosis in Australia.

These findings suggest that people aged over 50, including GMSM, may be less likely to present for regular HIV testing and therefore may be more likely to receive a 'late diagnosis' of HIV. Women of all ages are also less likely to have been tested for HIV within the 12 months prior to their diagnosis.

Among participants in HIV Futures 8, the number of people who reported being screened for STIs in the past 12 months was high, there was also a high proportion who had integrated their HIV care with STI testing, reporting that they had been tested for syphilis alongside their most recent (HIV) viral load test.

THOUGHTS AND COMMENTARY

HIV Futures 8 HIV exposure and testing data is consistent with what we see at RAPID, Queensland Positive People's community based testing program.

The majority of people presenting for testing at RAPID identify as Men who have sex with Men (MSM) with the majority aged below 49 (40% under 28), which supports the Futures 8 conclusion that those MSM aged over 50 are less likely to present for HIV testing and maybe more likely to receive a late diagnosis of HIV. The primary mode of HIV transmission in QLD remains sexual contact between men, so RAPID is a targeted program to increase testing amongst MSM.

We have observed an increasing trend for those at risk of HIV to normalise the testing experience with a majority of people testing within a 12 month time frame. This is consistent with the Futures 8 findings which concludes that the majority of people diagnosed in the past five years had tested for HIV at least once in the 12 months prior to diagnosis.

At RAPID, I have taken on a role as an HIV/STI Test Facilitator and I am also a Peer Navigator. When I was diagnosed at a general clinic I did not have the support in place to help me feel safe and to help me manage and navigate my diagnosis.

Two weeks ago, at RAPID I diagnosed a male in his 40s and he was terrified because of his circumstances and the potential of passing HIV onto his wife. When I told him of the reactive result, the fear in his eyes was something that I really related too. I then went on to disclose my status and shared my story with him, you could see him relax because the connection was there. HIV was normalised instantly.

As part of a seamless continuum of care, from diagnosis to support for treatment and care, I now work with him as a Peer Navigator to provide information and peer support to him around his HIV diagnosis. He can contact me at any stage to discuss his journey of living with HIV.

It is a beautiful thing sharing the experience of HIV with someone who is HIV positive and also newly diagnosed. Now two weeks on, he is linked with an amazing doctor that is right for him and he is also looking to engage with the Treatment Support Facilitators (case managers) at Queensland Positive People for counselling support. Not only is the client now aware of his status but he has the supports he needs to develop the skills to build resilience and normalise the experience of living a healthy life with HIV.

Chris Hallam, Peer Navigator and RAPID HIV/STI Test Facilitator, Queensland Positive People

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