

# NSW HIV Strategy 2021 – 2025

## Quarter 4 & Annual Data Report 2021



## The NSW HIV Strategy 2021–2025

New ways to prevent, test and treat mean that the virtual elimination of HIV transmission in NSW, once inconceivable, is now a realistic and achievable goal. The HIV Strategy is a plan for the virtual elimination of HIV transmission in NSW for all. The goals of the strategy are to prevent transmission, normalise testing, start and maintain treatment soon after diagnosis and reduce stigma.

### Communique

NSW made further progress towards the virtual elimination of HIV transmission in Q4 2021, though influenced by the effects of the COVID-19 pandemic. The decline in HIV transmission is also driven by the effects of COVID-19 restrictions, altered health-seeking behaviour, lower levels of casual sex activity and testing, as well as altered service provision and access. HIV Testing and PrEP increased in Q4 2021, but is still lower than before the pandemic. NSW Health is urging people at risk to re-engage with health services and get an HIV test and use PrEP for HIV prevention.

### Executive summary

#### **NSW made further progress towards the virtual elimination of HIV transmission, though influenced by the effects of the COVID-19 pandemic**

- In Q4 2021, 36 NSW residents were newly diagnosed with HIV, a 51% drop compared to the Q4 average for the last five years.
- Almost a third of new diagnoses had evidence their infection occurred within the last 12 months, 60% less than the Q4 average for the last five years.
- This decline in diagnoses is encouraging but is also driven by the effects of COVID-19, including restricted movement, altered health-seeking behaviour, lower levels of casual sex activity and testing, as well as altered service provision and access.

#### **HIV Testing and PrEP increased in Q4 2021, but is still lower than before the pandemic**

- HIV testing in public and private laboratories in Q4 2021 was lower than 2020 and before the pandemic, but appeared to be recovering to pre-pandemic averages during November and December, which is promising considering the strain placed on the system by COVID-19 testing at that time.
- Testing in public sexual health clinics increased by 43% in Q4 2021 compared to Q3. This result is 15% lower than Q4 2020 and 42% lower than Q4 2019, before the pandemic.
- Peer-led community based rapid testing at [aTest Oxford Street](#) remained high and well targeted in Q4 2021.
- Home testing via [Dried Blood Spot](#) decreased by 50% to 72 tests in Q4 2021 compared to Q3.
- The number of people dispensed PrEP increased by 17% in Q4 compared to Q3 2021 and is similar to Q4 2019, before the pandemic.
- PrEP initiations increased by 61% in Q4 compared to Q3 2021, but the number of people initiating PrEP is still 17% lower than Q4 2019, before the pandemic.

#### **The progress made to increase testing and PrEP in Q4 is supported by strong community messaging to re-engage with PrEP and testing now**

- Communication materials and a short [video](#) were released by ACON on 8 October 2021 with messages about re-engaging with health services after COVID-19 lockdown for screening and PrEP before re-engaging in casual sex. Key messages:
  - [Testing for HIV and STIs post-lockdown](#)
  - [Getting back on PrEP post-lockdown](#)

The video targets GBMSM and is promoted on hook-up apps (Grindr, Hornet and Scruff).

- A social media toolkit for HIV Awareness Week 2021 (24 – 30 Nov) targeted health professionals and community members who may be at risk of HIV. Local Health Districts applied the toolkit assets to their local context and activities including social media posts, website banners and newsletters.

*Activity in 2022:*

- The Ministry of Health will re-run ‘Discreet Life’ HIV testing campaign targeting MSM who don’t identify as gay in beats between February and May and on Grindr between March and July 2022.
- ACON will run a HIV/STI testing campaign for Sydney Mardi Gras Festival 2022, to be in market from 14 February until 31 March. The campaign encourages GBMSM to TEST NOW via their local sexual health clinic, GP or using home testing options: DBS or the HIV Self-test. Testing campaign: [video](#) and [Blog](#).
- ACON will also run promotional activity during this period on social media and hook-up applications encouraging GBMSM to reengage with PrEP services. PrEP campaign [Blog](#).
- People at risk of HIV can [get tested](#) confidentially and easily at their local GP or sexual health service. Online services such as [you\[TEST\]](#) provide peer support to choose an ATOMO self-test or [Dried Blood Spot test](#).
- NSW Health is working with partners to expand peer led testing models in outer Sydney suburban and regional NSW.
- The [International Students Hub](#) provides information on sexual and reproductive health with links to services to assist students navigate the health system in NSW.

**The time from HIV diagnosis to treatment initiation remains stable**

- Almost half of the NSW residents diagnosed with HIV in January to June 2021 initiated treatment within two weeks of diagnosis.
- The median number of days from diagnosis to treatment was 15 days.
- Of those on treatment, 90% had an undetectable viral load by the six-month follow-up.

## Key data – Q4, 2021

HIV INFECTIONS			
	Target group	Jan-Dec 2021	Compared with Jan-Dec 2016-2020 average
All NSW residents	All new diagnoses	178	36% less (av. n = 279)
	MSM	135	38% less (av. n = 216.8)
	Australian-born MSM	57	43% less (av. n = 99.6)
	Overseas-born MSM	78	33% less (av. n = 117.2)
	HET	35	33% less (av. n = 52.6)
NSW residents with evidence of early stage infection	All new diagnoses	46	55% less (av. n = 102.4)
	MSM	42	54% less (av. n = 92.2)
	Australian-born MSM	23	53% less (av. n = 49)
	Overseas-born MSM	19	56% less (av. n = 43.2)
	HET	4	58% less (av. n = 9.6)
NSW residents with evidence of late diagnosis	All new diagnoses	82	17% less (av. n = 98.8)
	MSM	57	18% less (av. n = 69.6)
	Australian-born MSM	17	34% less (av. n = 25.6)
	Overseas-born MSM	40	9% less (av. n = 44)
	HET	20	19% less (av. n = 24.8)
PREVENT			
	Target group	Apr 2018 – December 2021	
People dispensed PrEP through PBS at least once	People at risk	21,824	
TEST			
	Target group	Jan-Dec 2021	Compared with Jan-Dec 2020
HIV serology tests performed in NSW	All	541,800	1% less (n = 547,287)
HIV tests performed in NSW public sexual health clinics.	All	34,349	12% decrease* (n=38,964)
	MSM	21,214	12% decrease* (n=24,160)
HIV DBS tests (Nov 2016 – Dec 2021)		302 (Oct-Dec 2021) (0 HIV positive)	
TREAT			
	Target group	2021	Target
Patients with diagnosed HIV infection in care, who were on treatment	Sexual Health and HIV Clinic attendees	99%	95%
	Select high caseload general practices	99%	95%
New diagnoses who initiated ART within two weeks of diagnosis	Newly diagnosed Jan-Jun 2021 (n=109)	47%	90%
New diagnoses reporting viral suppression at 6-month follow-up	Newly diagnosed Jan-Jun 2021 (n=109)	86%	100%

## Annual Targets

HIV INFECTIONS	Target group	Baseline 2008-12	2021	Target	Next update due
<b>1.i 90% reduction in the rate of HIV infection preventable in NSW</b>	Australian-born; Overseas-born in Australia > 4 years; Overseas-born in Australia for 4 years or less, and not late HIV diagnosis.	3.8 / 100000	1.8 / 100000	0.38 / 100000	Q4 2022
PREVENT	Target group	2021	Target		
<b>1.ii MSM who have sex with male casual partners report at least one form of prevention for safe sex</b>	MSM at risk in the Sydney Gay Community Periodic Survey	76%	90%		Q2, 2022
<b>1.iii HIV negative MSM who have sex with male casual partners without a condom, take PrEP</b>	MSM at risk in the Sydney Gay Community Periodic Survey	61%	90%		Q2, 2022
TEST	Target group	2020	Target		Next update due
<b>2.i People living with HIV in NSW are diagnosed (2020)<sup>1</sup></b>	People at risk	92%	95%		Q4, 2022
TREAT	Target group	2021	Target		
<b>3.i New diagnoses who initiated ART within two weeks of diagnosis</b>	Newly diagnosed Jan-Jun 2021 (n=109)	47% (2021)	90%		Q2, 2022
<b>3.ii Patients with diagnosed HIV in care, who were on treatment</b>	Sexual Health and HIV Clinic attendees	99%	95%		Q4, 2021
	Select high caseload general practices	99%	95%		Q1, 2022
<b>3.ii NSW residents on treatment have an undetectable viral load<sup>1</sup></b>	People on treatment	96% (2020)	95%		Q4, 2022
<b>3.iii People living with HIV in NSW report good quality of life<sup>2</sup></b>	All	61% (2019)	75%		Q3, 2022
STIGMA	Target group		Target		
<b>4.i Experience of stigma by people at risk and living with HIV in NSW healthcare settings</b>	People at risk and living with HIV	TBC	75% (Reduction)		
<b>4.ii Discriminatory attitudes held towards people at risk and living with HIV</b>	People at risk and living with HIV	TBC	75% (Reduction)		

<sup>1</sup> Unpublished analysis using data to December 2020 by the Kirby Institute, UNSW<sup>2</sup> Norman, T and Power, J (2021) HIV Futures 9: Brief report on NSW Participants. Melbourne, La Trobe University, unpublished

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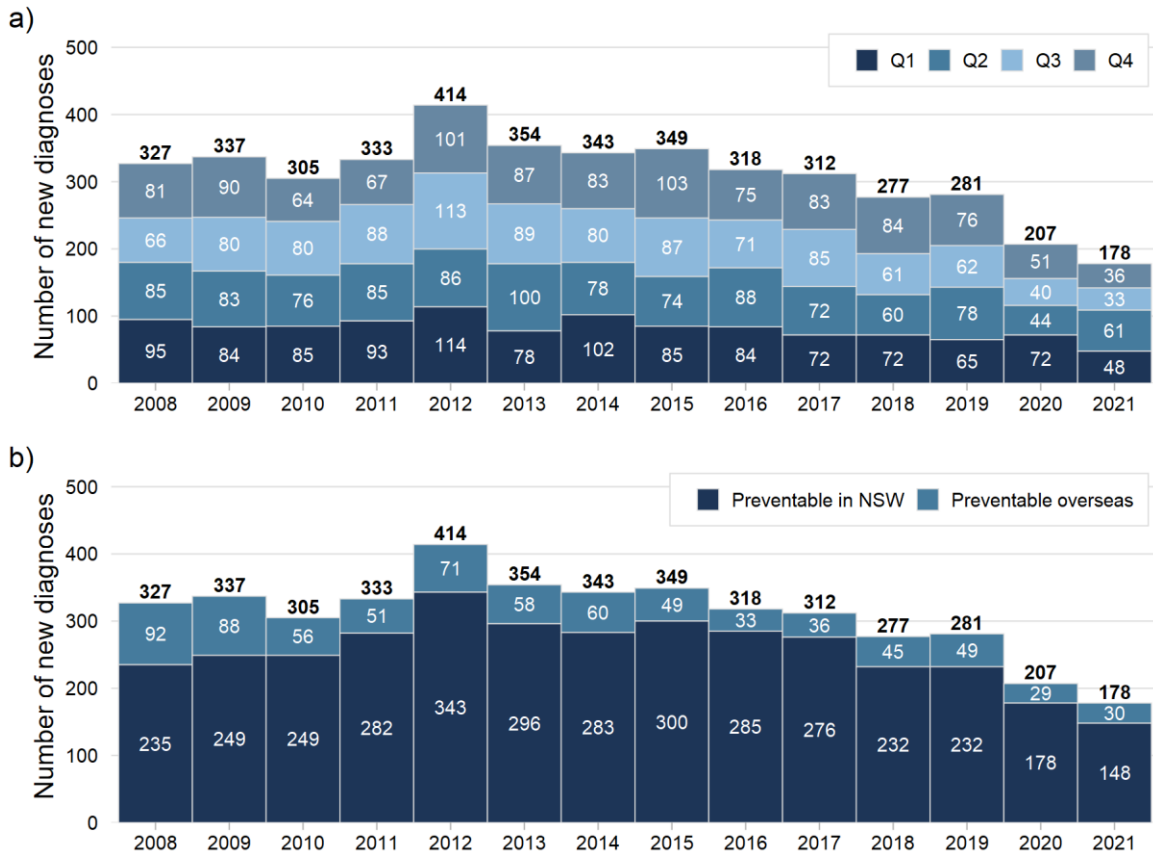
## Glossary of Terms

ART	Antiretroviral therapy
CAIC	Condomless anal intercourse with casual partners
CTG	Closing the Gap
GBM	Gay and bisexual men
HIV	Human Immunodeficiency Virus
LHD	Local Health District
MSM	Men who have sex with men
HET	People with heterosexual risk exposure
NSP	Needle and syringe program
NSW	New South Wales
PBS	Pharmaceutical Benefits Scheme
PFSHC	Publicly Funded Sexual Health Clinic
PrEP	Pre-exposure prophylaxis
PWID	People who inject drugs
Quarter 1 / Q1	1 January – 30 March
Quarter 2 / Q2	1 April – 30 June
Quarter 3 / Q3	1 July – 30 September
Quarter 4 / Q4	1 October – 31 December
SVHN	St Vincent's Health Network

# 1. Reduce HIV transmission

## 1.1 How many cases are notified?

Figure 1: Number of NSW residents with newly diagnosed HIV infection, 2008 to 2021



Source: Notifiable Conditions Information Management System, Health Protection NSW, 16 February 2022

In October to December (Q4) 2021:

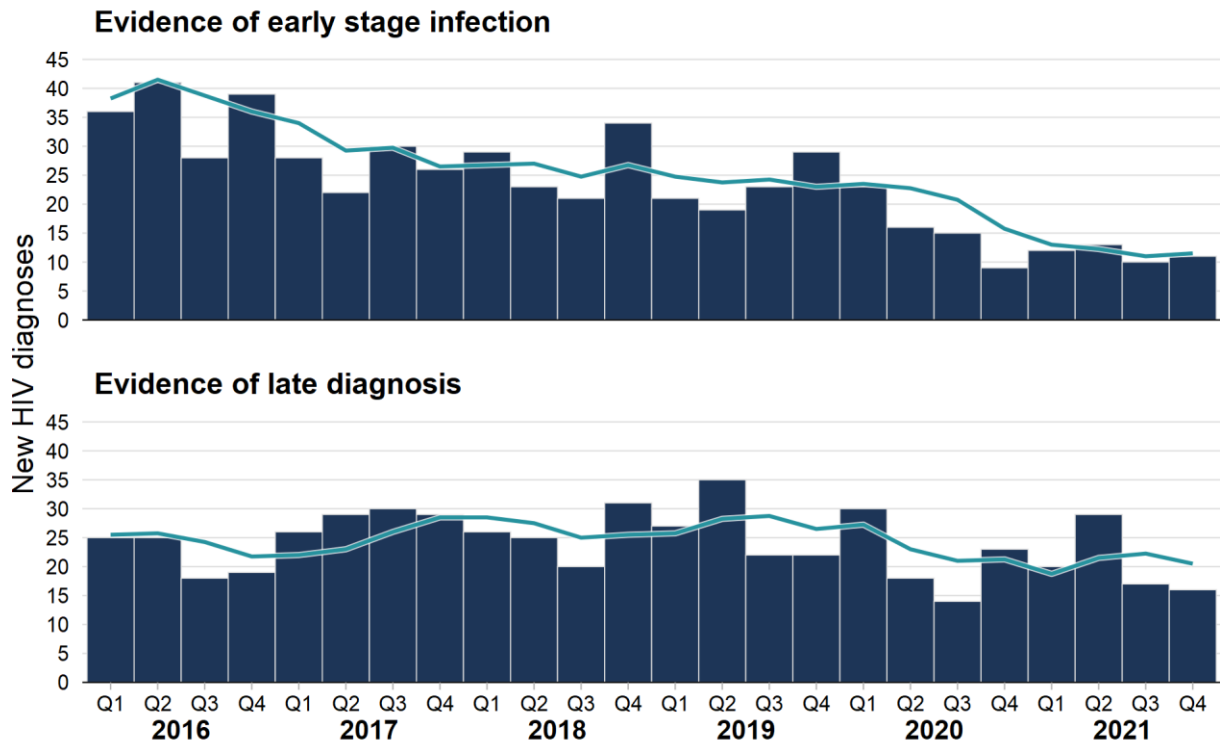
- Thirty-six NSW residents were notified to NSW Health with a newly diagnosed HIV infection, 51% less than the Q4 2016-2020 average of 73.8 (Figure 1a).
- Of 36, 28 (78%) HIV diagnoses were preventable in NSW, 56% less than the comparison period average of 63.2 (Figure 1b).
- Of 36, 11 (31%) had evidence their infection was acquired within one year of diagnosis (early stage infection), 60% less than the Q4 2016-2020 average of 27.4 (Figure 2).
- Of 36, 16 (44%) had evidence of late diagnosis, 35% less than the Q4 2016-2020 average of 24.8 (Figure 2).

In 2021:

- One hundred and seventy-eight NSW residents were notified to NSW Health with a newly diagnosed HIV infection, 36% less than the 2016-2020 average of 279.0 (Figure 1a).
- Of 178, 148 (83%) HIV diagnoses were preventable in NSW, 38% less than the comparison period average of 240.6 (Figure 1b).
- Of 178, 46 (26%) had evidence of early stage infection, 55% less than the 2016-2020 average of 102.4 (Figure 2).
- Of 178, 82 (46%) had evidence of late diagnosis, 12% less than the 2016-2020 average of 74.0 (Figure 2).

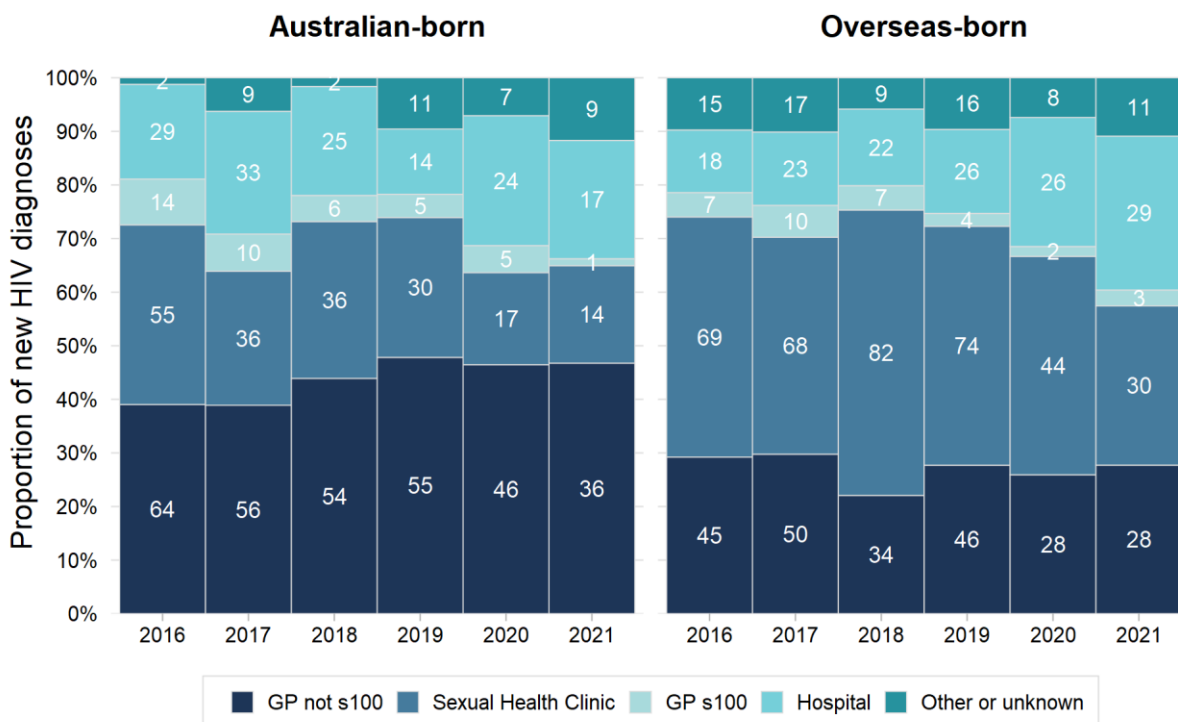


Figure 2: New HIV diagnoses by evidence of early stage infection or late diagnosis, 2016 to 2021



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses  
 Early stage infection: a sero-conversion like illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or presentation with an AIDS defining illness at diagnosis. Late diagnosis: a CD4 count of less than 350 or an AIDS defining illness at the time or within three months of diagnosis, in the absence of 'early' criteria.

Figure 3: Type of diagnosing doctor for new HIV diagnoses, 2016 to 2021



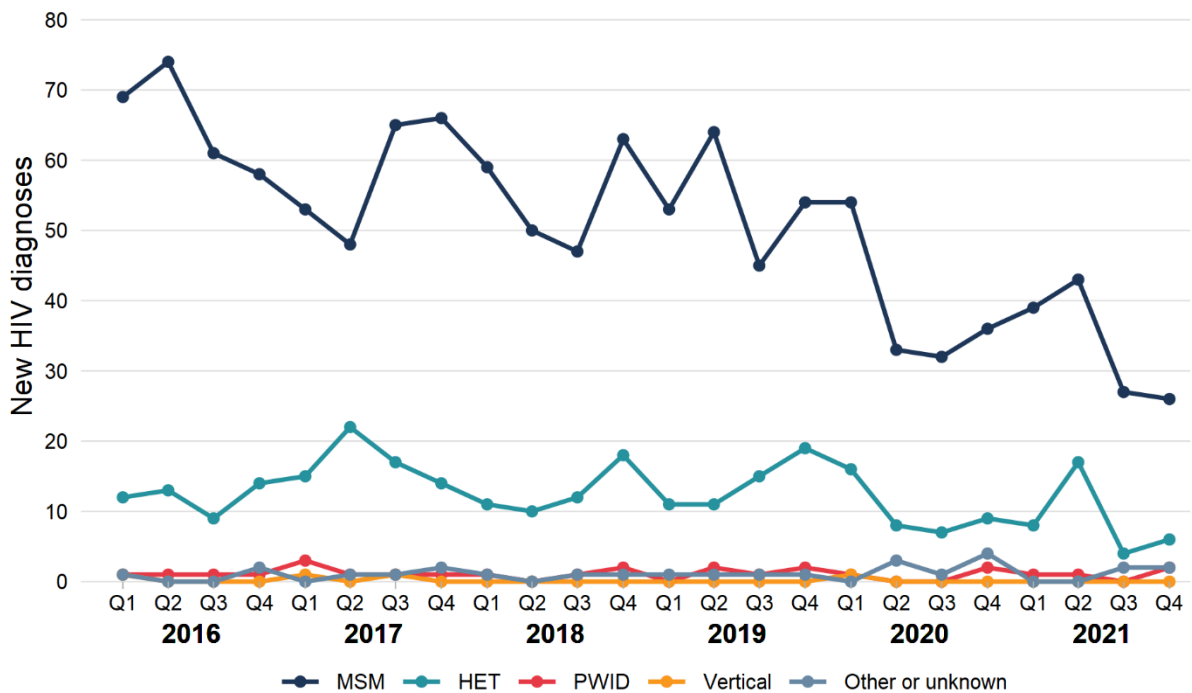
Of 77 Australian-born NSW residents with newly diagnosed HIV infection in 2021 (Figure 3):

- Thirty-six (47%) were diagnosed by general practitioners (GPs) not accredited to prescribe antiretroviral therapy, 35% less than the comparison period (av. n=55.0);
- Fourteen (18%) were diagnosed by sexual health centres including community testing sites, 60% less than the 2016-2020 average (av. n=34.8);
- Seventeen (22%) were diagnosed by hospital doctors, 32% less than the comparison period (av.n=25);
- One (1%) was diagnosed by a GP s100 doctor, 88% less than 8.0, the average for 2016-2020,
- Nine (12%) were diagnosed by other doctor types, 45% more than the average for 2016-2020 (av. n=6.2).

Of 101 overseas-born NSW residents with newly diagnosed HIV infection in 2021 (Figure 3):

- Twenty-eight (27.7%) were diagnosed by general practitioners (GPs) not accredited to prescribe antiretroviral therapy, 31% less than the comparison period (av. n=40.6);
- Thirty (29.7%) were diagnosed by sexual health centres including community testing sites, 55% less than the 2016-2020 average (av. n=67.4);
- Twenty nine (28.7%) were diagnosed by hospital doctors, 26% more than the comparison period (av.n=23);
- Three (3%) were diagnosed by GP s100 doctors, 50% less than 6, the average for 2016-2020;
- Eleven (10.9%) were diagnosed by other doctor types, 15% less than the average for 2016-2020 (av. n=13).

Figure 4: New HIV diagnoses by reported risk exposure, 2016 to 2021



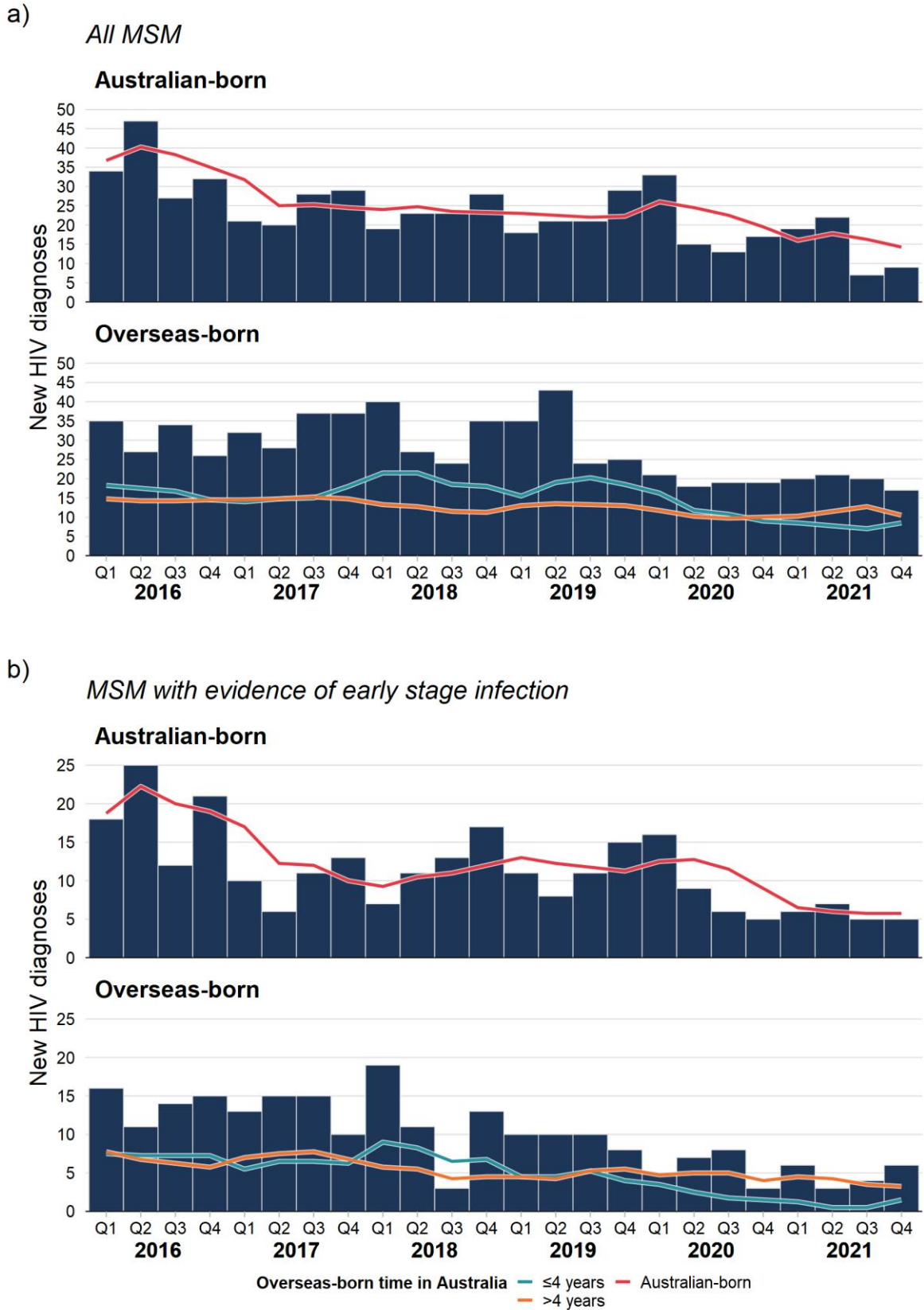
In October to December (Q4) 2021:

- Twenty-six (72%) were men who have sex with men (MSM) and six (17%) were people with heterosexual exposure only (HET). This is 53% fewer MSM, and 59% fewer HET compared with the new diagnosis averages of Q4 2016-2020 (av. n MSM = 55.4; av. n HET = 14.8).
- Of six HET, all were male. This is 30% fewer males when compared to the new diagnosis average of Q4 2016-2020 (av. n female = 6.2; av. n male = 8.6)

In 2021:

- Of 178, 135 (76%) were MSM, 35 (20%) were HET, four (2%) likely acquired HIV via injecting drugs, and four (2%) via another exposure (Figure 4). This is 38% fewer MSM and 33% fewer HET compared with the new diagnosis averages for 2016-2020 (av. n MSM = 216.8; av. n HET = 52.6) (Figure 4).
- Of 35 HET, 12 were female and 23 were male. This is 38% fewer females and 31% fewer males when compared to the new diagnosis averages for 2016-2020 (av. n female = 19.2; av. n male = 33.4)

Figure 5: New HIV diagnoses in MSM by place of birth, with overseas-born by years living in Australia, 2016 to 2021



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

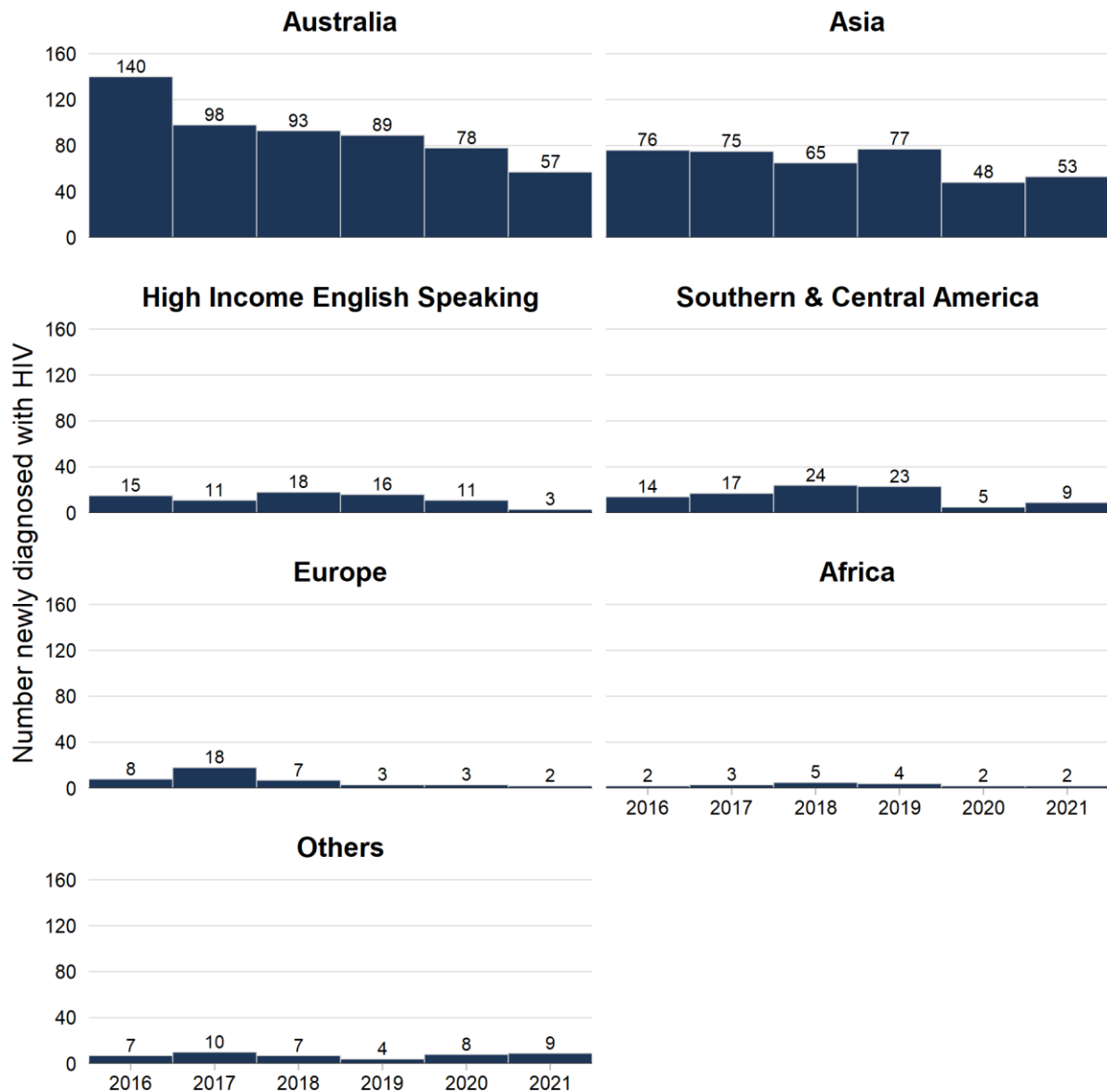
In October to December (Q4) 2021:

- Nine of the 26 (35%) newly diagnosed MSM were Australian-born, 67% less than the average for Q4 2016-2020 (av. n=27.0). Five of nine (56%) Australian-born newly diagnosed MSM had evidence their infection was acquired within one year of diagnosis (early stage infection), 65% less than the Q4 2016-2020 average of 14.2.
- Seventeen of the 26 (65%) newly diagnosed MSM were overseas-born, 40% less than the average for Q4 2016-2020 (av. n=28.4). Twelve of these MSM had lived in Australia for four years or less at the time of HIV diagnosis, 15% less than the Q4 2016-2020 average of 14.2, four had lived in Australia for more than four years, 71% less than the comparison period average of 13.6 and one for an unknown length of time. Six of 17 (35%) overseas-born newly diagnosed MSM had evidence of early stage infection, 39% less than the Q4 2016-2020 average of 9.8.

In 2021:

- Fifty-seven of 135 (42%) MSM newly diagnosed were Australian-born, 43% less than the average for 2016-2020 (av. n=99.6) (Figure 5). These people ranged from 21-67 years old with a median age of 37. Twenty-three of 57 (40%) Australian-born newly diagnosed MSM had evidence of early stage infection, 53% less than the 2016-2020 average (av. n=49.0) (Figure 5).
- Seventy-eight of 135 (58%) MSM newly diagnosed were overseas-born, 33% less than the 2016-2020 average (av. n=117.2) (Figure 5). These people ranged from 21-71 years old with a median age of 32.5. Thirty-four of these MSM had lived in Australia for four years or less at the time of their HIV diagnosis, 46% less than the 2016-2020 average of 62.4, 42 lived in Australia for more than four years, 17% less than the comparison period average of 50.8 and three for an unknown length of time. Nineteen of 78 (24%) overseas-born newly diagnosed MSM had evidence of early stage infection, a 56% reduction compared to the 2016-2020 average (av. n=43.2) (Figure 5). Of these 19 with early stage infection, six had been in NSW for four years or less, while 13 lived in Australia for more than four years.
- One overseas-born trans-woman was included in the broader MSM exposure category due to current limitations in data collection and overall exposure classification. However, work is progressing to update how gender is collected and recorded for new HIV diagnoses.

Figure 6: New HIV diagnoses in MSM by world area of birth, 2016 to 2021

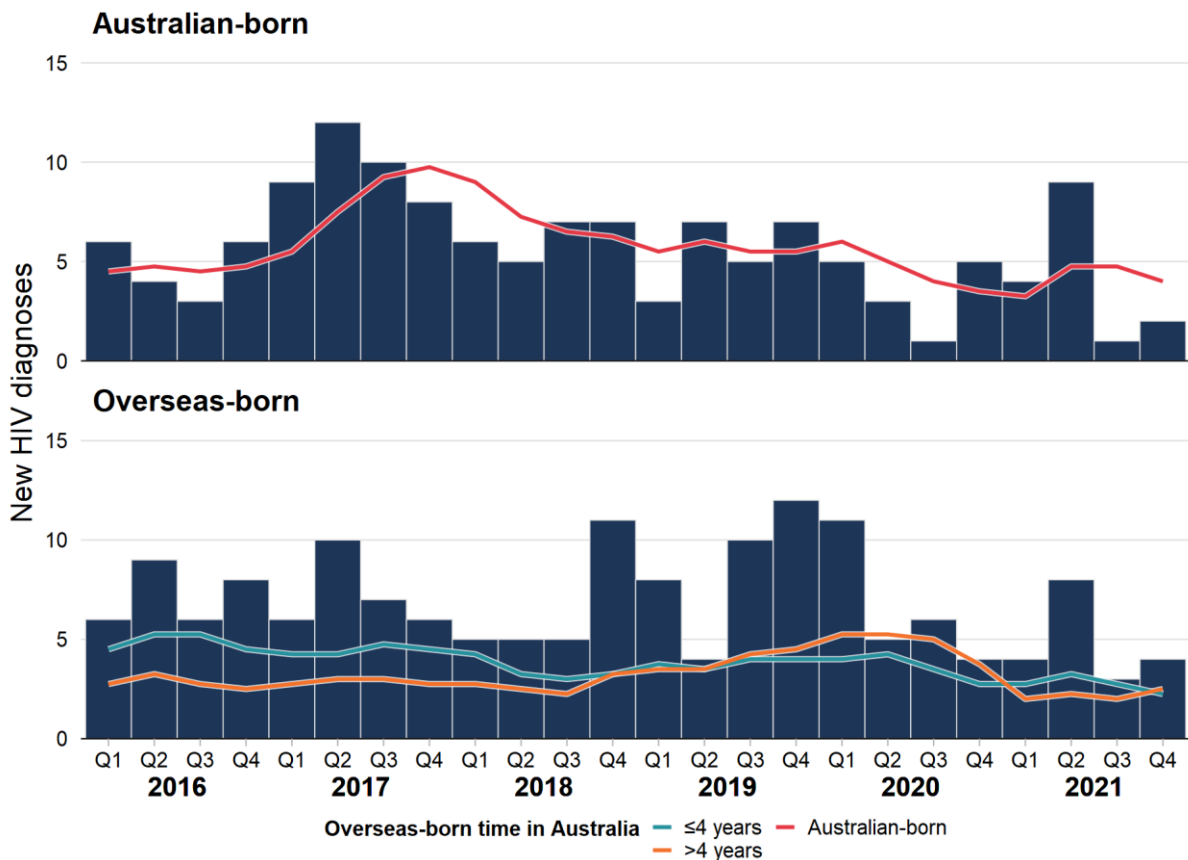


High-Income English-Speaking countries include Canada, USA, United Kingdom, Ireland and New Zealand

Comments on Figure 6

- Of 135 MSM newly diagnosed in NSW during 2021, 42% were born in Australia, 28% in South-East Asia, 7% in each of Southern & Central America and North-East Asia, 6% in Oceania, and less than 5% in Southern & Central Asia, North Africa & the Middle East, Southern & Eastern Europe and Sub-Saharan Africa.

Figure 7: New HIV diagnoses in HET by place of birth, with overseas-born by years living in Australia, 2016 to 2021



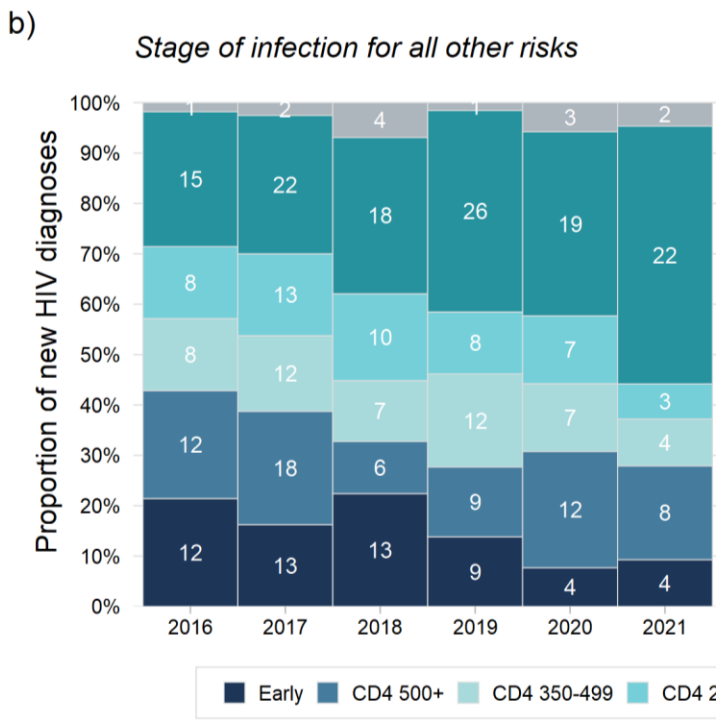
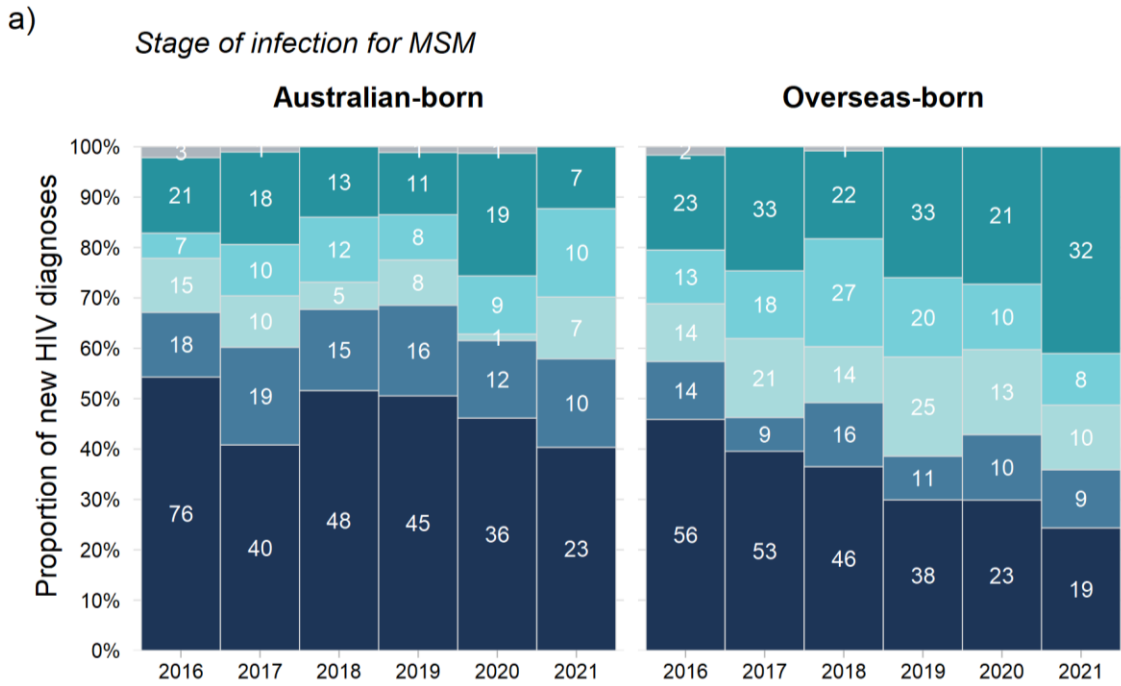
In 2021:

- Sixteen of 35 (46%) HET newly diagnosed were Australian-born, 33% less than the average for 2016-2020 (av. n=23.8) (Figure 7). These people ranged from 25-71 years old with a median age of 48.5. Three of 16 (19%) Australian-born newly diagnosed HET had evidence of early stage infection, 42% less than 2016-2020 average (av. n=5.2).
- Nineteen of 35 (54%) HET newly diagnosed were overseas-born, 34% less than the 2016-2020 average (av. n=28.8) (Figure 7). These people ranged from 24-76 years old with a median age of 40. Nine of these HET had lived in Australia for four years or less at the time of their HIV diagnosis, 41% less than the 2016-2020 average of 15.2, ten lived in Australia for more than four years, 25% less than the comparison period average of 13.4. One of 16 (6%) overseas-born newly diagnosed HET had evidence of early stage infection, a 77% reduction compared to the 2016-2020 average (av. n=4.4).

### 1.2 What is the stage of infection at diagnosis?

**Early stage** infection is evidence of HIV infection acquired within 12 months of diagnosis, such as a sero-conversion illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or an AIDS defining illness at diagnosis. **Advanced stage** is a CD4 count less than 200 or an AIDS defining illness in absence of ‘Early’ criteria. Categories of **CD4 500+**, **350-499**, **200-349** exclude early and advanced stage cases. Cases with a CD4 count less than 350 or are advanced stage are considered to have evidence of **late diagnosis**.

**Figure 8: Stage of infection in newly diagnosed NSW residents, 2016 to 2021**

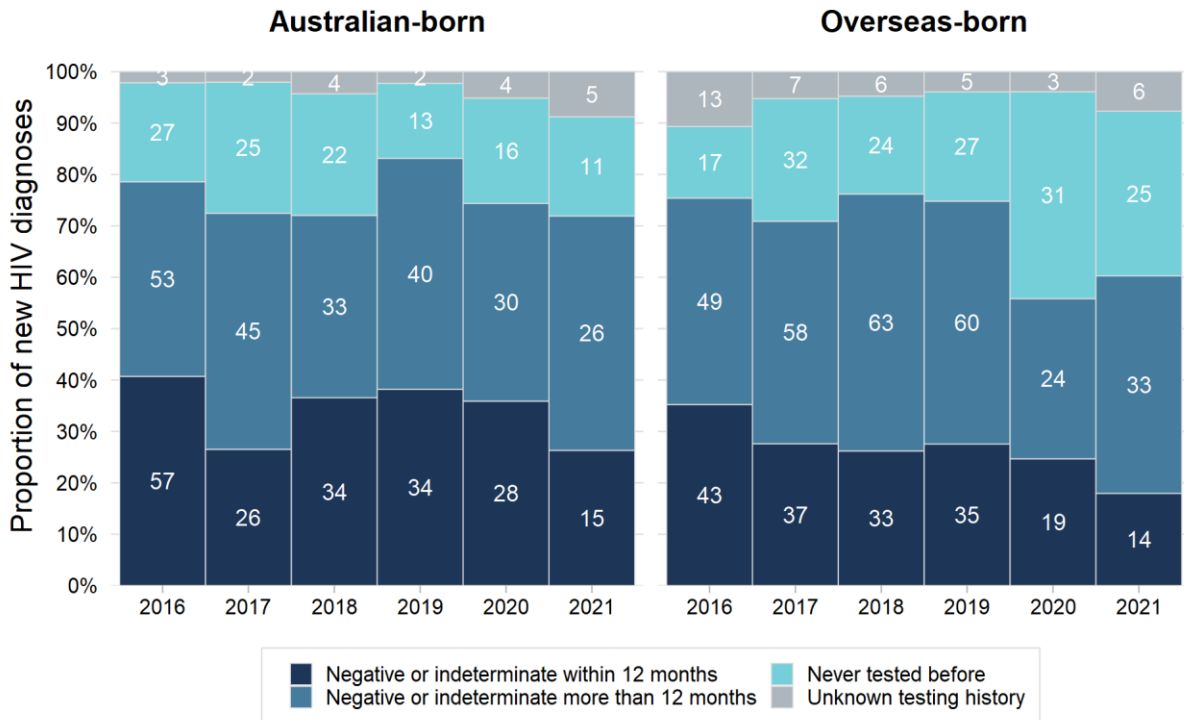




Comment on Figure 8

- Of 57 Australian-born MSM newly diagnosed in 2021, 23 (40%) had evidence of early stage infection, 53% less than the 2016-2020 average of 49.0. Seventeen (30%) had evidence of late diagnosis, 34% less than the comparison period average (av. n=25.6) (Figure 8a).
- Of 78 overseas-born MSM newly diagnosed in 2021, 19 (24%) had evidence of early stage infection, 56% less than the comparison period average of 43.2. Forty (51%) had evidence of late diagnosis, 9% less than the comparison period average of 44.0 (Figure 8a).
- The number of new diagnoses in NSW residents who were not MSM was 31% lower in 2021 (n=43) compared to the five-year average for the same period (n=62.2). There were 25 with evidence of late diagnosis, 14% less than the 2016-2020 average of 29.2 (Figure 8b).

Figure 9: HIV testing history in newly diagnosed MSM, 2016 to 2021



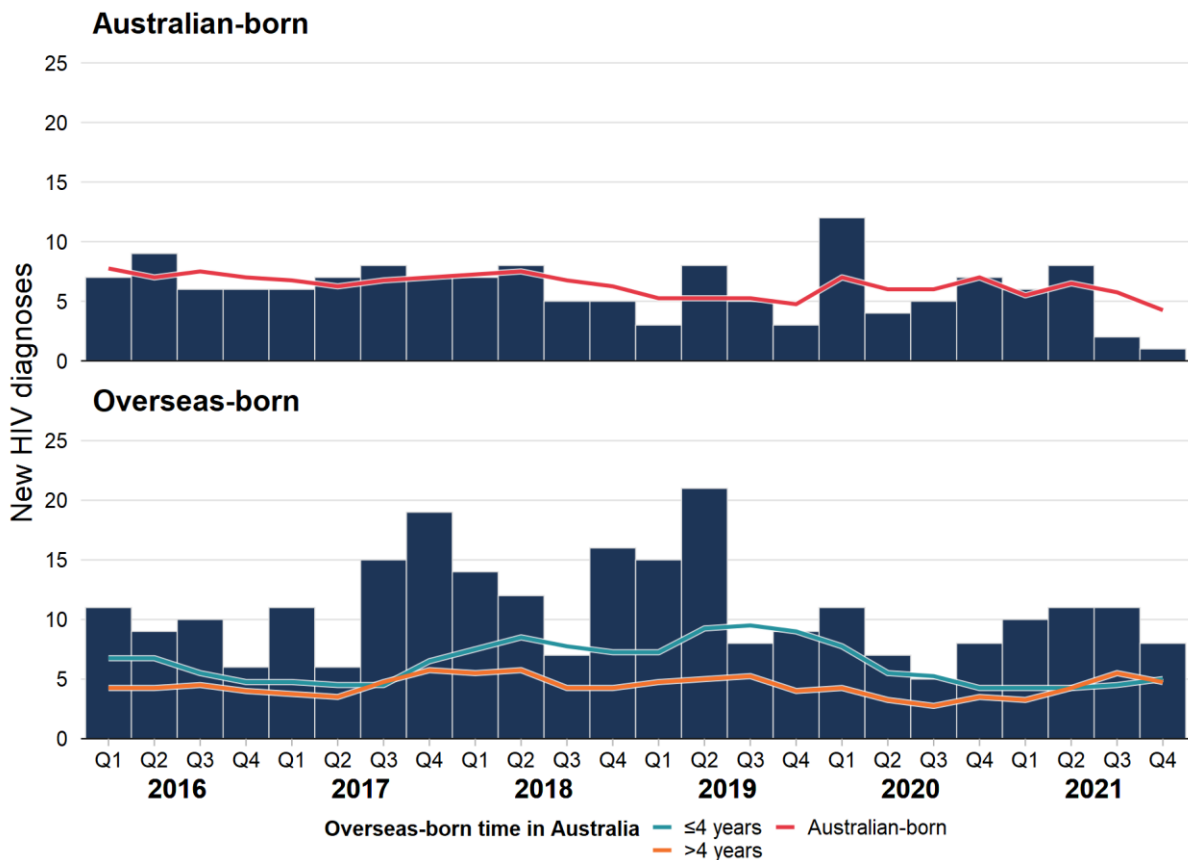
Of 57 Australian-born MSM newly diagnosed during 2021:

- Fifteen (26%) were reported (by a laboratory, a doctor, or the patient) to have had a negative or indeterminate HIV test within 12 months of diagnosis.
- Twenty-six (46%) were reported to have had a negative or indeterminate HIV test sometime in the past, but not within 12 months of diagnosis.
- Eleven (19%) reported not ever having had an HIV test prior to diagnosis.
- Almost two thirds had not been testing according to guidelines.
- Seventeen (30%) had evidence of late diagnosis.

Of 78 overseas-born MSM newly diagnosed during 2021:

- Fourteen (18%) were reported (by a laboratory, a doctor, or the patient) to have had a negative or indeterminate HIV test within 12 months of diagnosis.
- Thirty-three (42%) were reported to have had a negative or indeterminate HIV test sometime in the past, but not within 12 months of diagnosis.
- Twenty-five (32%) reported not ever having had an HIV test prior to diagnosis.
- Almost three quarters had not been testing according to guidelines.
- Forty (51%) had evidence of late diagnosis.

Figure 10: New HIV diagnoses with evidence of late diagnosis in MSM by place of birth, with overseas-born by years living in Australia, 2016 to 2021

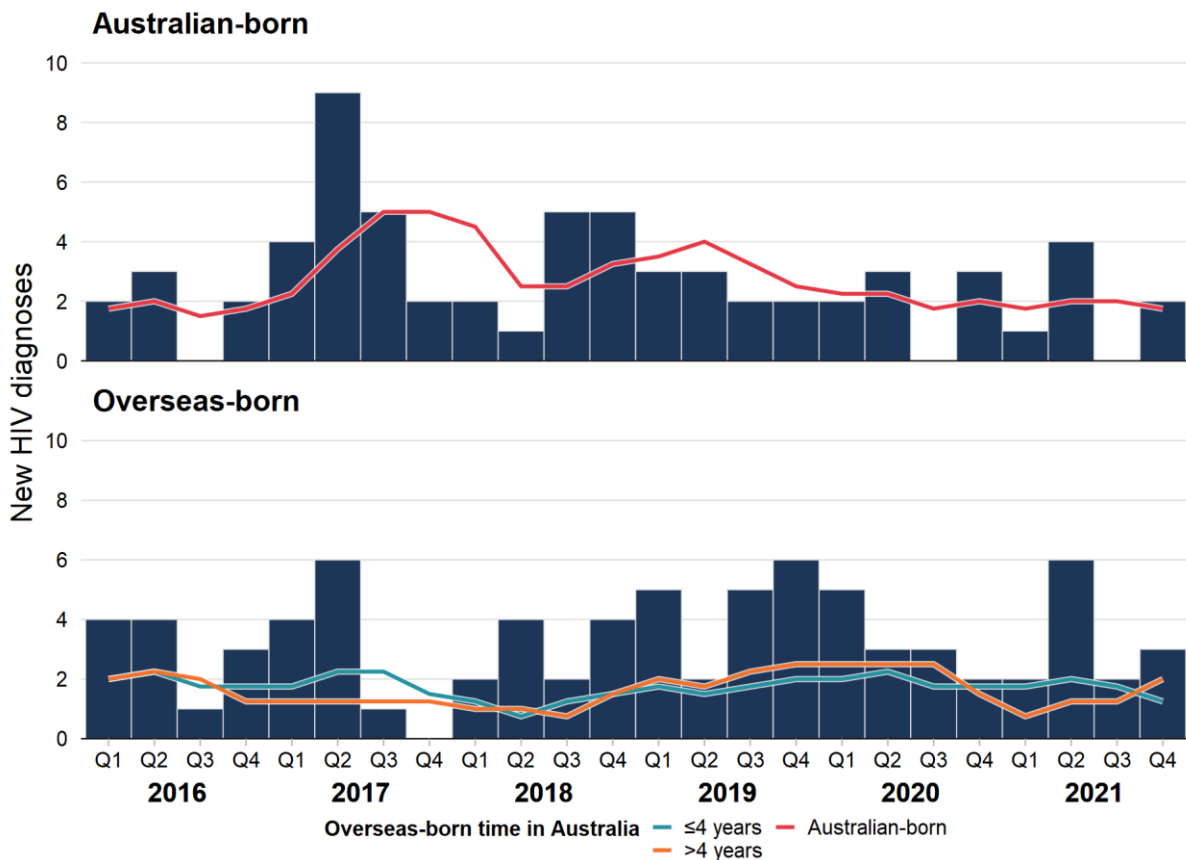


Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

In 2021:

- Of 82 NSW residents with evidence of late HIV diagnosis, 57 (70%) were MSM, 18% less than the 2016-2020 average count of 69.6.
- Seventeen (30%) of the 57 MSM with evidence of late diagnosis were Australian-born, 34% less than the 2016-2020 average count of 25.6 (Figure 10).
- Forty (70%) of the 57 MSM with evidence of late diagnosis were overseas-born, a 9% decrease relative to the 2016-2020 average count of 44.0 (Figure 10). Twenty of these 40 MSM had lived in Australia for four years or less at the time of their HIV diagnosis, 21% less than the 2016-2020 average of 25.4, while 19 had lived in Australia for more than four years, 10% more than the comparison period average of 17.2 and one was unknown.

Figure 11: New HIV diagnoses with evidence of late diagnosis in HET by place of birth, with overseas-born by years living in Australia, 2016 to 2021



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

In 2021:

- Of 82 NSW residents with evidence of late HIV diagnosis, 20 (24%) were HET, 19% less than the 2016-2020 average count of 24.8.
- Seven (35%) of the 20 HET with evidence of late diagnosis were Australian-born, 40% less than the 2016-2020 average count of 11.6 (Figure 11).
- Thirteen (65%) of the 20 HET with evidence of late diagnosis were overseas-born, similar to the 2016-2020 average count of 13.2 (Figure 11). Five of these 20 HET had lived in Australia for four years or less at the time of their HIV diagnosis, 26% less than the, 2016-2020 average of 6.8, while eight had lived in Australia for more than four years, 25% more than the comparison period average of 6.4.

### 1.3 What are some of the characteristics of people newly diagnosed?

**Table 1: Characteristics of Australian-born and overseas-born MSM newly diagnosed in 2021 vs the 2016-2020 average count, and the count difference**

Case characteristics	Australian-born MSM			Overseas-born MSM		
	2016-2020 average	2021	Count (%) diff.	2016-2020 average	2021	Count (%) diff.
<b>Number</b>	<b>99.6</b>	<b>57</b>	<b>-42.6 (-43%)</b>	<b>117.2</b>	<b>77</b>	<b>-40.2 (-34%)</b>
<b>Gender</b>						
<i>Male</i>	98.6	57	-41.6 (-42%)	113.8	76	-37.8 (-33%)
<i>Transgender<sup>1</sup></i>	1	0	-1 (-100%)	3.4	1	-2.4 (-71%)
<b>Age at diagnosis</b>						
<i>0 to 19</i>	1.6	0	-1.6 (-100%)	1.6	0	-1.6 (-100%)
<i>20 to 29</i>	28.2	14	-14.2 (-50%)	45.4	28	-17.4 (-38%)
<i>30 to 39</i>	28.8	17	-11.8 (-41%)	43.4	26	-17.4 (-40%)
<i>40 to 49</i>	19.8	13	-6.8 (-34%)	16.6	15	-1.6 (-10%)
<i>50 and over</i>	21.2	13	-8.2 (-39%)	10.2	8	-2.2 (-22%)
<b>Evidence of early stage infection<sup>2</sup></b>						
<i>Yes</i>	49	23	-26 (-53%)	43.2	19	-24.2 (-56%)
<i>No</i>	50.6	34	-16.6 (-33%)	74	58	-16 (-22%)
<b>Evidence of late diagnosis<sup>3</sup></b>						
<i>Yes</i>	25.6	17	-8.6 (-34%)	44	39	-5 (-11%)
<i>No</i>	72.8	40	-32.8 (-45%)	72.6	38	-34.6 (-48%)
<i>Unknown</i>	1.2	0	-1.2 (-100%)	0.6	0	-0.6 (-100%)
<b>Area of residence<sup>4</sup></b>						
<i>≥20%</i>	15	2	-13 (-87%)	21.4	11	-10.4 (-49%)
<i>5-19.99%</i>	16.2	8	-8.2 (-51%)	31.6	22	-9.6 (-30%)
<i>&lt;5%</i>	68.4	47	-21.4 (-31%)	64.2	44	-20.2 (-31%)
<b>Place most likely acquired HIV</b>						
<i>Australia</i>	84	54	-30 (-36%)	61.6	43	-18.6 (-30%)
<i>Overseas</i>	13.4	2	-11.4 (-85%)	51	29	-22 (-43%)
<i>Unknown</i>	2.2	1	-1.2 (-55%)	4.6	5	+0.4 (+9%)
<b>Reported HIV risks</b>						
<i>MSM</i>	83.4	47	-36.4 (-44%)	110.8	73	-37.8 (-34%)
<i>MSM and IDU</i>	16.2	10	-6.2 (-38%)	6.4	4	-2.4 (-38%)

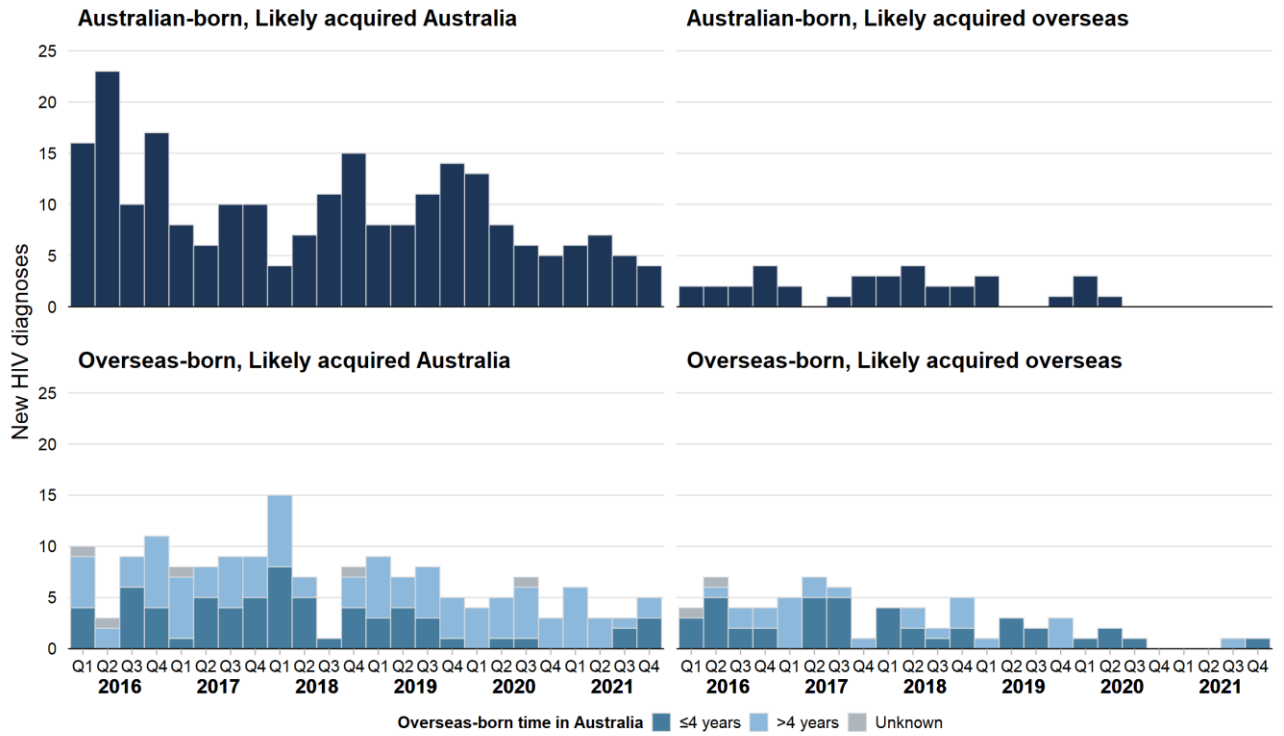
<sup>1</sup>This case was a trans-woman whose most likely risk exposure was sex with cisgender men. This was confirmed by case review, as further detail is not yet routinely collected.

<sup>2</sup>Evidence of early stage infection/being infected in the 12 months prior to diagnosis: a sero-conversion illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or an AIDS defining illness at diagnosis.

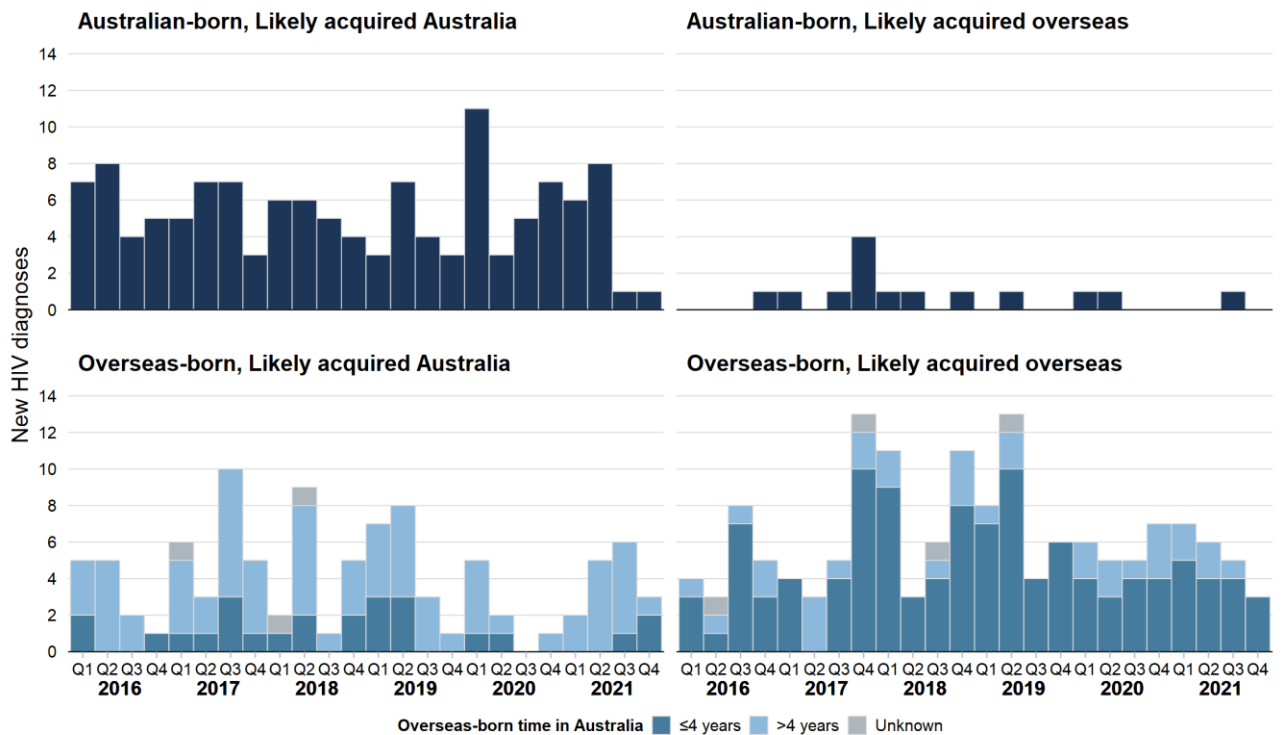
<sup>3</sup>Evidence of a late diagnosis: a CD4 count less than 350 or an AIDS defining illness or AIDS death within three months of diagnosis, in the absence of sero-conversion illness and/or a negative or indeterminate HIV test in the 12 months prior to diagnosis.

<sup>4</sup>Areas grouped based on the estimated proportion of adult males who identify as gay in each postcode in NSW. A summary of postcodes in each area is in Appendix E.

**Figure 12a: New HIV diagnoses with evidence of early stage infection in MSM by place of birth and place of likely HIV acquisition, with overseas-born by years living in Australia, 2016 to 2021**



**Figure 12b: New HIV diagnoses with late diagnosis in MSM by place of birth and place of likely HIV acquisition, with overseas-born by years living in Australia, 2016 to 2021**



Of 57 Australian-born MSM newly diagnosed in 2021:

- Fifty-four (95%) likely acquired HIV in Australia, 36% less than the 2016-2020 average of 84.0, and two (4%) likely acquired HIV overseas, 85% less than in the comparison period (av. n=13.4). One was unknown.
- Of 54 who acquired HIV in Australia, 22 (41%) had evidence of early stage infection, 48% less than the 2016-2020 average of 42.0 (Figure 12a). Sixteen (30%) had evidence of late diagnosis, 27% less than the 2016-2020 average of 22.0 (Figure 12b).
- Of 2 who likely acquired HIV overseas neither had evidence of early stage infection (Figure 12a). One had evidence of late diagnosis, 62% less than the 2016-2020 average of 2.6 (Figure 12b).

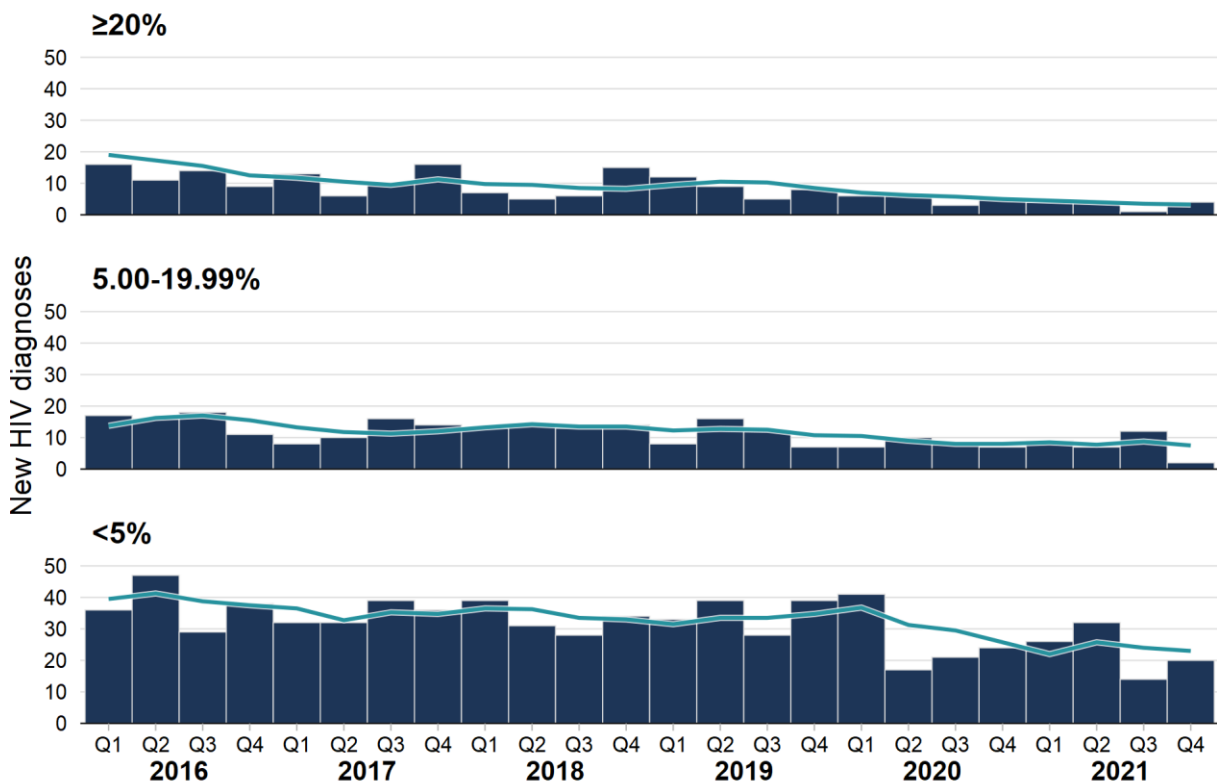
Of 78 overseas-born MSM newly diagnosed in 2021:

- Forty-four (56%) likely acquired HIV in Australia, 29% less than the average for 2016-2020 (av. n=61.6), and 29 (37%) likely acquired HIV overseas, 43% less than the comparison period (av. n=51.0). Five were unknown.
- Of 44 who acquired HIV in Australia, 17 (39%) had evidence of early stage infection, 42% less than the 2016-2020 average of 29.2 (Figure 12a). Sixteen (36%) had evidence of late diagnosis similar to the 2016-2020 average of 16.2 (Figure 12b).
- Of 29 who acquired HIV overseas two (7%) had evidence of early stage infection (Figure 12a), 85% less than the comparison period average of 13.2. Twenty-one (72%) had evidence of late diagnosis, 19% less than the 2016-2020 average of 26.0 (Figure 12b).
- For those diagnosed late, the majority who likely acquired HIV in Australia had lived here for more than four years, while most of those who likely acquired HIV overseas had lived here for four years or less (Figure 12b).

### Area of residence for people newly diagnosed

These areas have been grouped together based on recent estimates<sup>3</sup> for the proportion of adult males who identify as gay and reside in each postcode in NSW. These estimates per postcode are based on Australian Census data for co-habiting male couples and survey data on the proportion of gay males who cohabit<sup>4</sup>. The grouped postcodes are defined as those with  $\geq 20\%$ , 5-19.9% and  $< 5\%$  of adult males estimated to be gay. Overall, 23% of gay men in NSW were estimated to live in the  $\geq 20\%$  area, 24% in the 5-19.9% area and 53% in the  $< 5\%$  area. A summary of recent trends among HIV diagnoses in these areas can be found in the [Trends in HIV and HIV prevention indicators in gay, bisexual and other men who have sex with men in NSW, 2015-2019](#) report, published by the Kirby Institute in partnership with NSW Health. A summary of postcodes in each area can be found in Appendix E.

**Figure 13: New HIV diagnoses in MSM by area of residence, 2016 to 2021**



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

In October to December (Q4) 2021:

- Four of 26 (15%) MSM newly diagnosed resided in the  $\geq 20\%$  area, 62% less than the average for Q4 2016-2020 (av. n=10.6) (Figure 13). Two of four (50%) MSM residing in the  $\geq 20\%$  area had evidence of early stage infection, 64% less than the Q4 2016-2020 average (av. n=5.6) (Figure 14a). One of four (25%) MSM in the  $\geq 20\%$  area had evidence of late diagnosis, 55% less than the Q4 2016-2020 average (av. n=2.2) (Figure 14b).
- Two of 26 (8%) MSM newly diagnosed resided in the 5-19% area, 81% less than the average for Q4 2016-2020 (av. n=10.6) (Figure 13). None residing in the 5-19% area had evidence of

<sup>3</sup> Callander D, Mooney-Somers J, Keen P, Guy R, Duck T, Bavinton BR, et al. Australian 'gayborhoods' and 'lesborhoods': a new method for estimating the number and prevalence of adult gay men and lesbian women living in each Australian postcode. *International Journal of Geographical Information Science*. 2020:1-17.

<sup>4</sup> Van de Ven P, Rawstorne P, Crawford J, Kippax S. Increasing proportions of Australian gay and homosexually active men engage in unprotected anal intercourse with regular and with casual partners. *AIDS Care*. 2002;14(3):335-41.



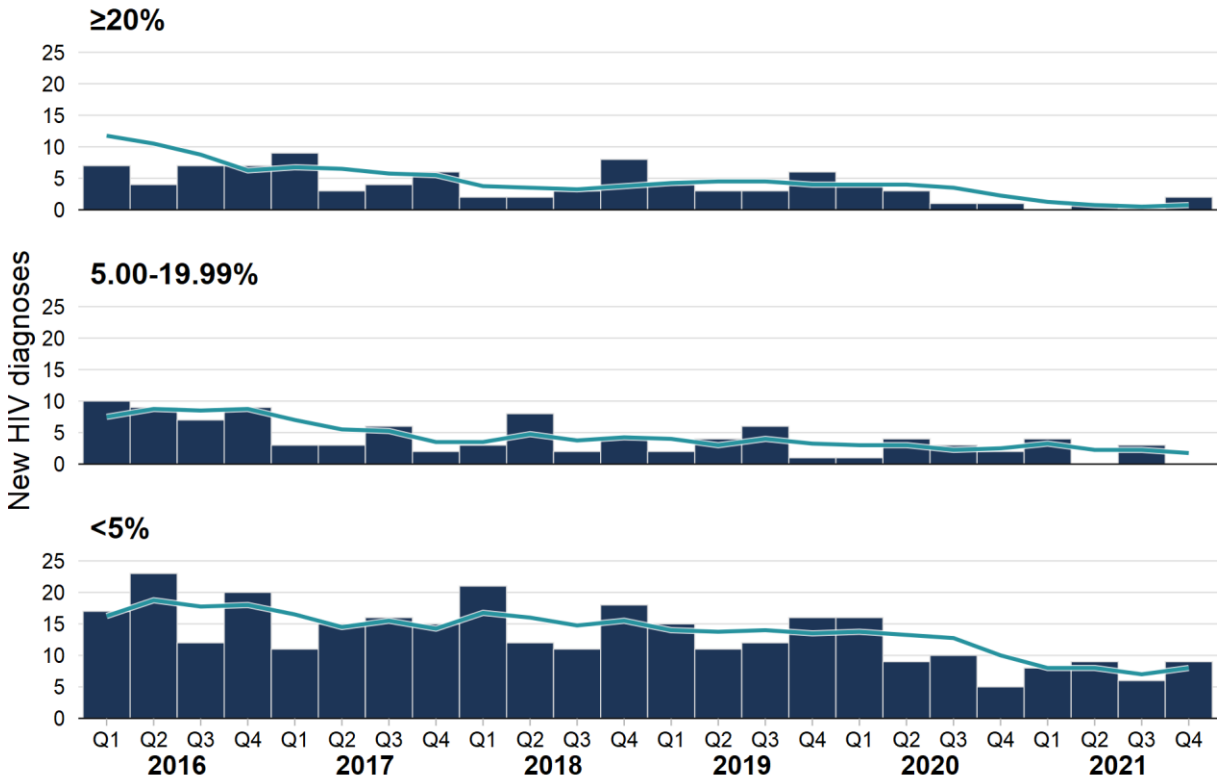
early stage infection, compared to the Q4 2016-2020 average (av. n=3.6) (Figure 14a). One of two (50%) MSM residing in the 5-19% area had evidence of late diagnosis, 81% less than the comparison period average (av. n=5.2) (Figure 14b).

- Twenty of 26 (77%) MSM newly diagnosed resided in the <5% area, 42% less than the average for Q4 2016-2020 (av. n=34.2) (Figure 13). Nine of 20 (45%) MSM residing in the <5% area had evidence of early stage infection, 39% less than the Q4 2016-2020 average (av. n=14.8) (Figure 14a). Seven of 20 (35%) MSM residing in the <5% area had evidence of late diagnosis, 29% less than the Q4 2016-2020 average (av. n=9.8) (Figure 14b).

In 2021:

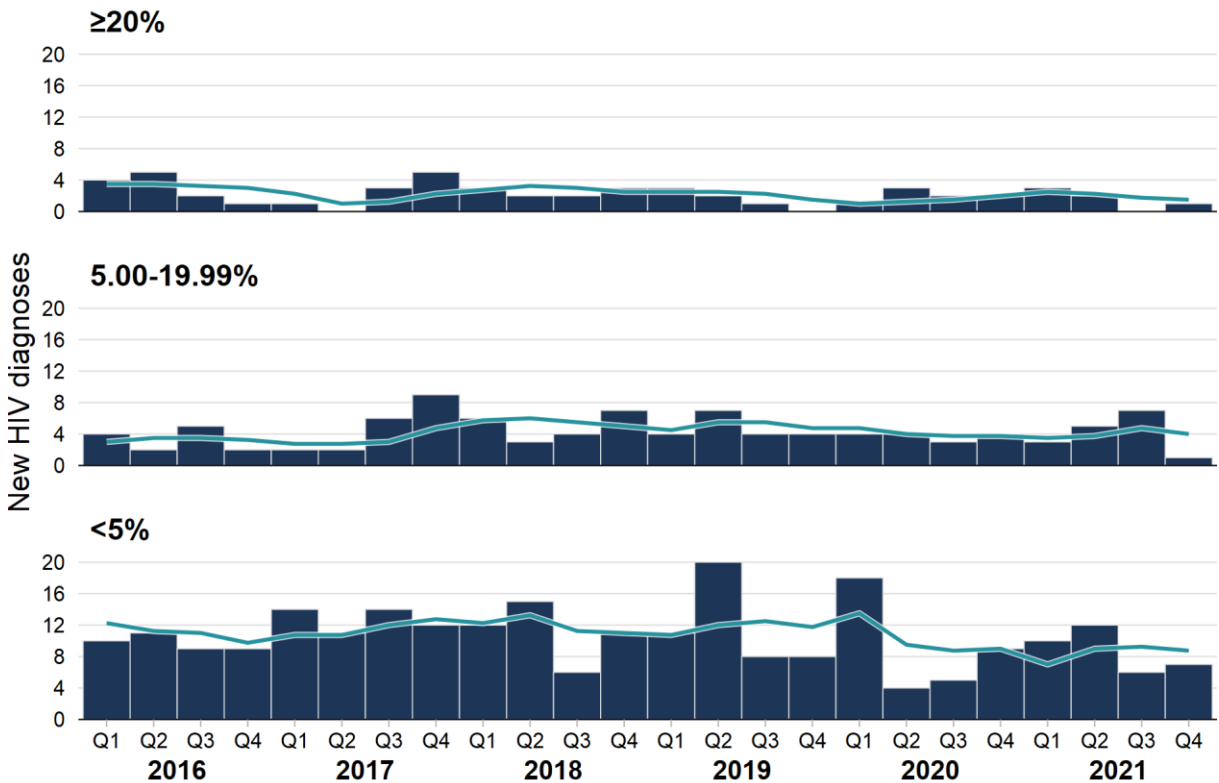
- Thirteen of 135 (10%) MSM newly diagnosed resided in the  $\geq 20\%$  area, 64% less than the average for 2016-2020 (av. n=36.4) (Figure 13). Three of 13 (23%) MSM residing in the  $\geq 20\%$  area had evidence of early stage infection, 83% less than the 2016-2020 average (av. n=17.4) (Figure 14a). Six of 13 (46%) MSM residing in the  $\geq 20\%$  area had evidence of late diagnosis, 33% less than the 2016-2020 average (av. n=9.0) (Figure 14b).
- Thirty of 135 (22%) MSM newly diagnosed resided in the 5-19% area, 37% less than the average for 2016-2020 (av. n=47.8) (Figure 14). Seven of 30 (23%) MSM residing in the 5-19% area had evidence of early stage infection, 61% less than the 2016-2020 average (av. n=17.8) (Figure 15a). Sixteen of 30 (53%) MSM residing in the 5-19% area had evidence of late diagnosis, 7% less than the 2016-2020 average (av. n=17.2) (Figure 14b).
- Ninety-two of 135 (68%) MSM newly diagnosed resided in the <5% area, 31% less than the average for 2016-2020 (av. n=132.6) (Figure 13). Thirty-two of 92 (35%) MSM residing in the <5% area had evidence of early stage infection, 44% less than the 2016-2020 average (av. n=57.0) (Figure 14a). Thirty-five of 92 (38%) MSM residing in the <5% area had evidence of late diagnosis, 19% less than the 2016-2020 average (av. n=43.4) (Figure 14b).

Figure 14a: New HIV diagnoses with evidence of early stage infection in MSM by area of residence, 2016 to 2021



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

Figure 14b: New HIV diagnoses with evidence of late diagnosis in MSM by area of residence, 2016 to 2021



Note: Bars represent diagnoses per quarter and lines represent a rolling four quarter average of diagnoses.

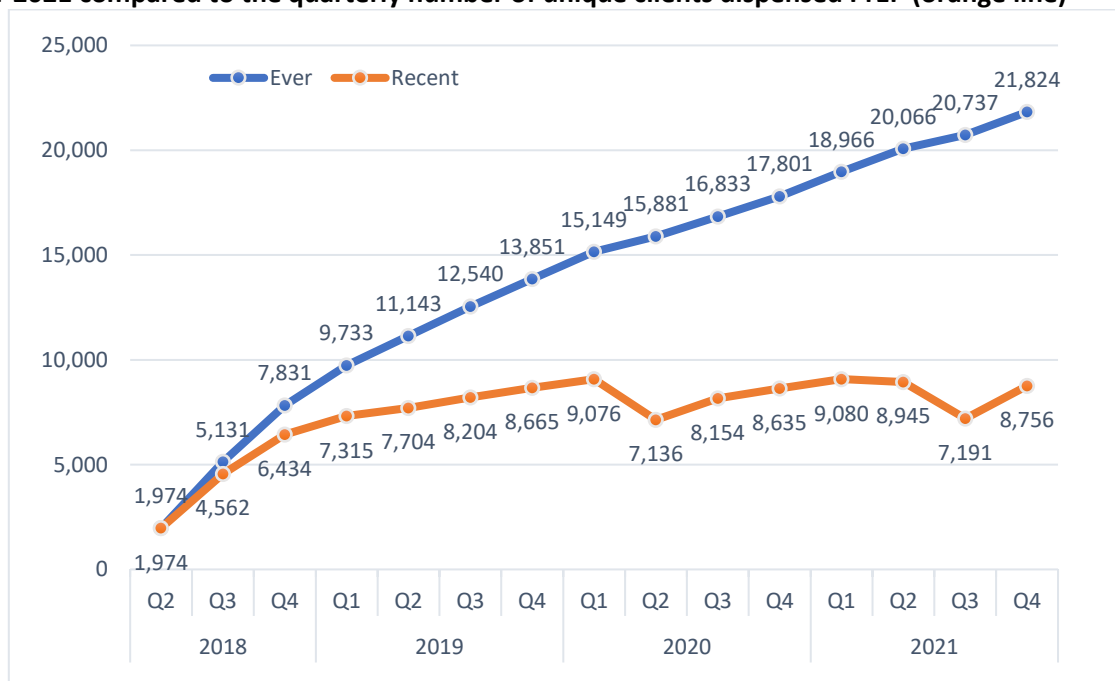
## 2. Expand HIV Prevention

### 2.1 How many people were prescribed PrEP on the Pharmaceutical Benefits Scheme (PBS)?

Between 1 April 2018 and 31 December 2021:

- A total of 21,824 (unique number) NSW residents were dispensed PrEP at least once under the PBS for HIV prevention.
- Of the 21,824 residents on PrEP, 98% were male.
- Among those who initiated PrEP, 78% were prescribed by GP; 98% were dispensed by a community pharmacy.
- A total of 318 (1.5%) NSW residents were eligible and prescribed under the Closing the Gap (CTG) program.

**Figure 15: Total number of unique clients dispensed PrEP between April 2018 (blue line) to December 2021 compared to the quarterly number of unique clients dispensed PrEP (orange line)**



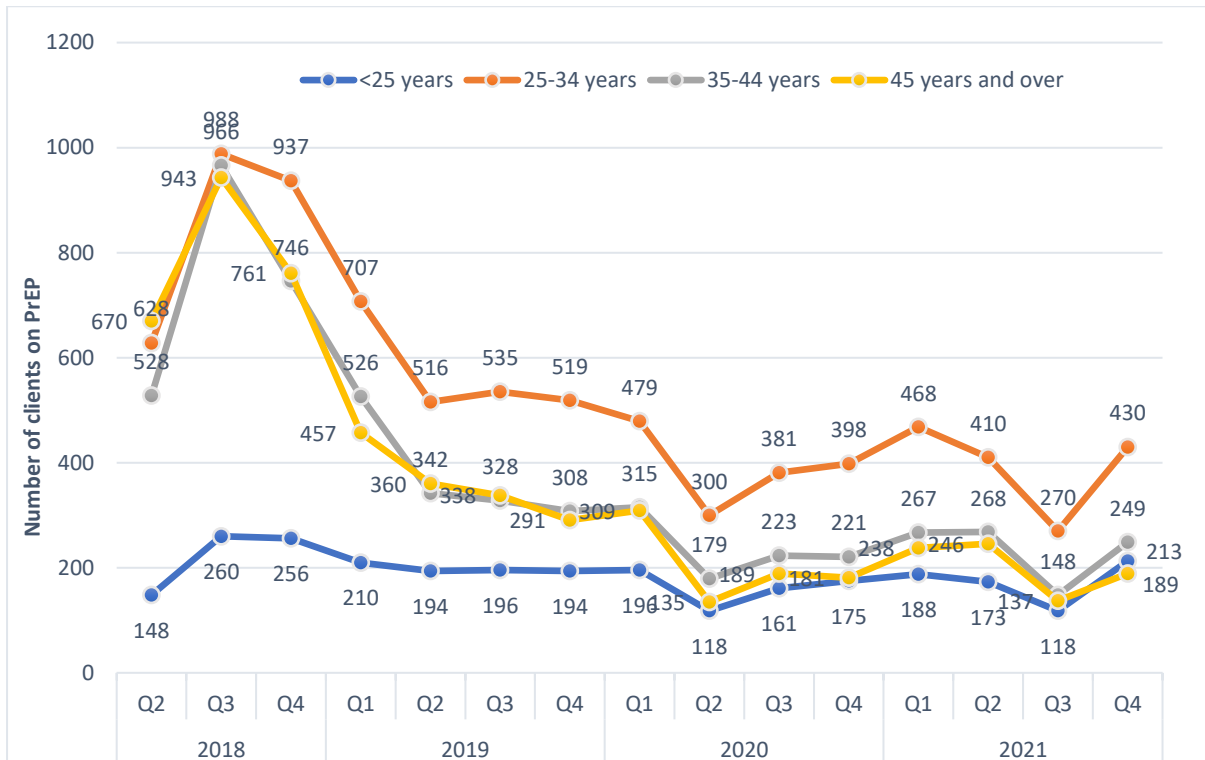
Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme (PBS) data from April 2018 to December 2021.

Note: Based on the quantity and date dispensed, it is estimated that 8,756 unique residents were taking PrEP between October and December 2021. The quarterly number of unique residents (orange line) is lower than the total number of unique clients (blue line). The reasons for this could include: people discontinuing PrEP; moving interstate or internationally; accessing PrEP from other sources including self-importation; or changes to dosing regimens such as on-demand use.

#### Comment on Figure 15

- Between April 2018 and December 2021, the total number of unique NSW residents ever prescribed PrEP under the PBS for HIV prevention increased steadily overtime to 21,824 people (blue line).
- Between October and December 2021, the quarterly number of unique NSW residents prescribed PrEP under the PBS for HIV prevention increased by 17% from 7,191 in Q3 2021 to 8,756 people in Q4 2021 (orange line).

**Figure 16: Number of people in each age group dispensed PrEP for the first time between April 2018 to December 2021**

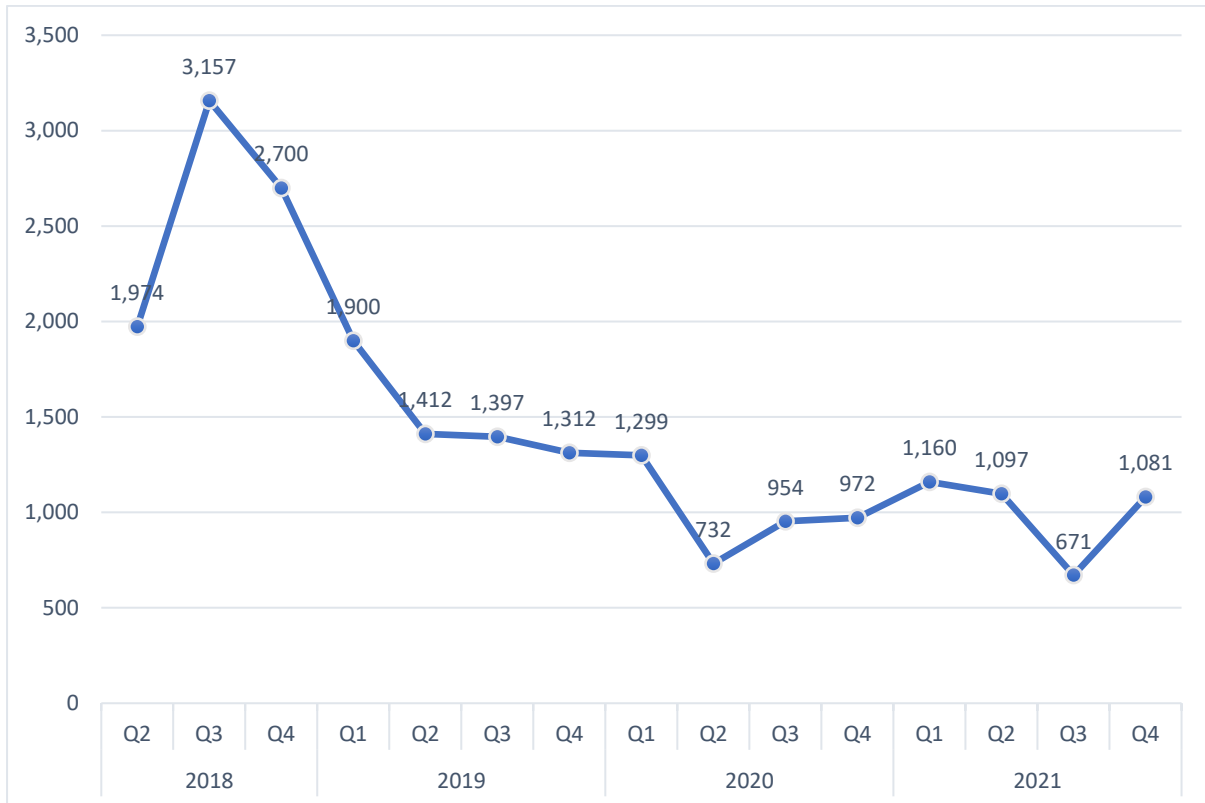


Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme (PBS) data from April 2018 to December 2021.

Comments on Figure 16

- Since April 2018, 2,800 (12.8%) unique clients dispensed PrEP were aged under 25 years, 7,966 (36.5%) were between the ages of 25 and 34 years, 5,614 (25.7%) were between 35 and 44 years and 5,444 (24.95%) aged 45 years and older.
- PrEP initiation was highest among those aged between 25 and 34 years, followed by aged 35 and 44 years, 45 years and older and aged under 25 years.
- PrEP initiation observed a significant increase among all age groups from July to December 2021 most likely due to the eased COVID restrictions from November 2021.

**Figure 17: Number of people dispensed PrEP under the PBS for the first time by quarter between April 2018 to December 2021**

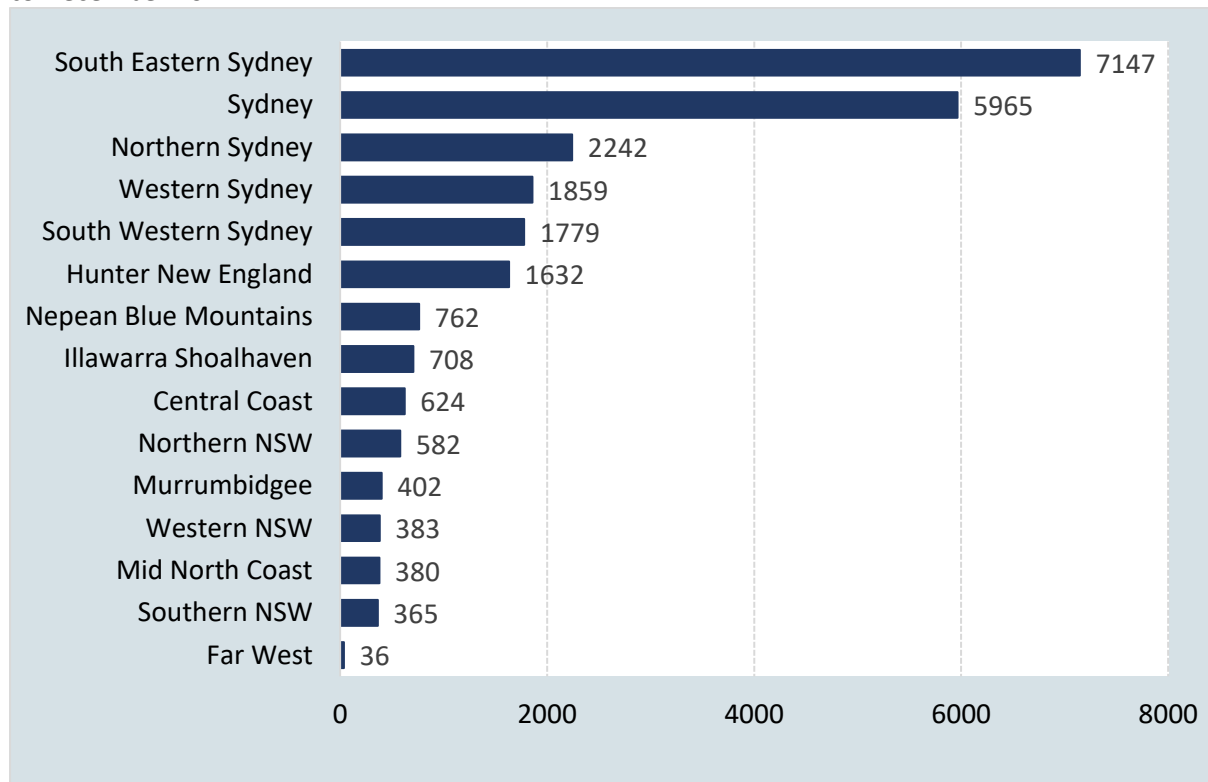


Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme (PBS) data from April 2018 to December 2021.

**Comments on Figure 17**

- The number of people dispensed PrEP under the PBS for the first time increased significantly between July-September 2018. This was partly due to people transitioning from the EPIC-NSW study to the PBS.
- The number of new people dispensed PrEP under the PBS has declined gradually over time. PrEP use decreased by 44% in April to June 2020 during heavier COVID restrictions, with 732 people initiating PrEP. The number of people initiating PrEP each quarter increased steadily between July 2020 and June 2021.
- Between October to December 2021, 1,081 people initiated PrEP, which is a significant increase of 61% compared July to September 2021 (n=671). This quarter is 11% higher than Q4 2020 but 17% lower than Q4 2019, before the pandemic.

**Figure 18: Number of NSW residents dispensed PrEP by LHDs of patient residence from April 2018 to December 2021<sup>5</sup>**



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme (PBS) data from April 2018 to December 2021.

Note: The number of patients dispensed via community and public hospital pharmacies may add to a figure greater than the overall unique patients as some patients receive treatment from more than one LHDs within a year. Due to boundary changes or movements in and out of NSW, the overall unique number of individuals presented in the above graph may differ slightly from previous reports.

**Comments on Figure 18**

Between April 2018 to December 2021:

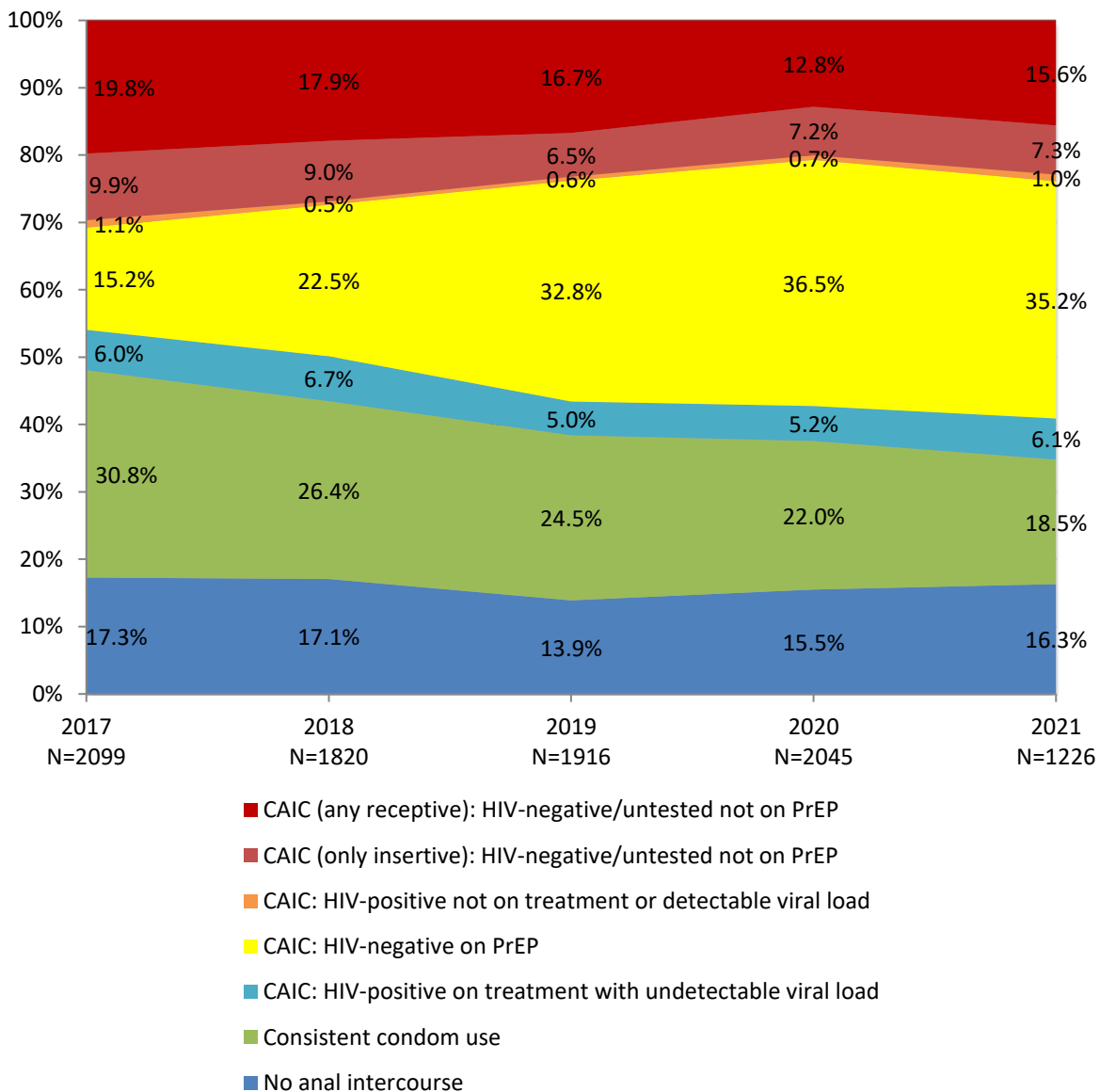
- Almost 83% of people dispensed PrEP under the PBS in NSW were residents of South Eastern Sydney (29%) and Sydney LHDs (24%), followed by Northern Sydney (9%), Western Sydney (7.5%), South Western Sydney (7.2%), and Hunter New England (6.6%).

<sup>5</sup> PrEP was available under the PBS from April 2018.

## 2.2 How many men who have sex with men use condoms and other HIV risk reduction practices?

The use of condoms, PrEP and undetectable viral load by gay and bisexual men are measured through the annual Sydney Gay Community Periodic Survey (SGCPS), conducted each year during February/March. Normally, approximately 80% of participants are recruited face-to-face at venues and events. Due to COVID-19, the 2021 round was largely conducted online. This affected the sample profile and should be borne in mind when interpreting the results.

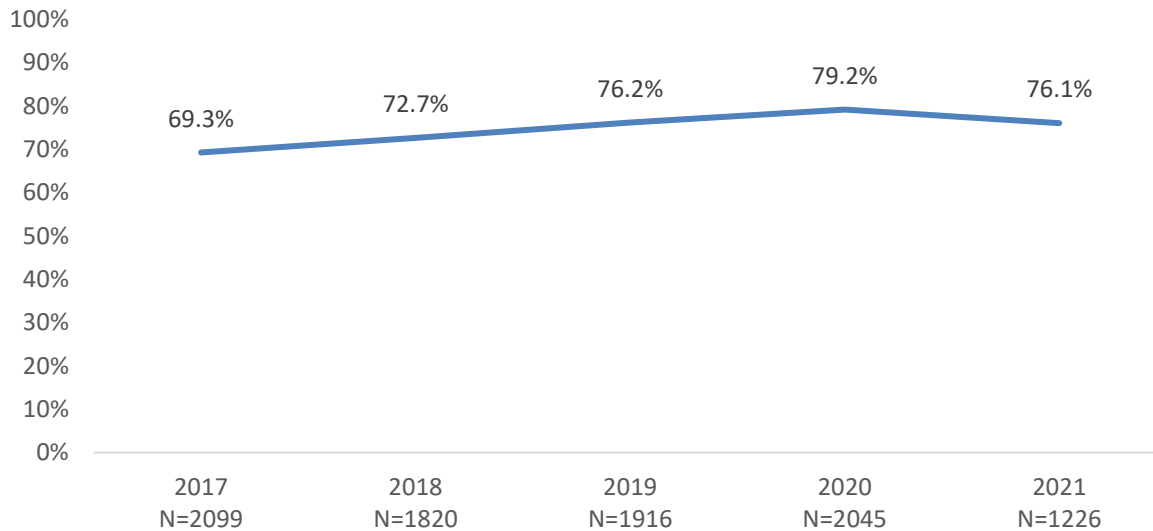
**Figure 19: Proportion of gay and bisexual men with casual partners reporting condom use, biomedical prevention and any condomless anal intercourse in the previous six months, 2017 to 2021**



Data source: Sydney Gay Community Periodic Survey, Centre for Social Research in Health, UNSW Sydney.

Note: CAIC = condomless anal intercourse with casual male partners. Consistent condom use includes men who report condom use for anal sex with casual male partners in the 6 months prior to survey and no condomless anal intercourse with those partners.

**Figure 20: Proportion of gay and bisexual men with casual partners reporting safe sex in the previous six months (net prevention coverage)**



Data source: Sydney Gay Community Periodic Survey, Centre for Social Research in Health, UNSW Sydney.

#### Comment on Figure 19 and Figure 20

The SGCPs data show a rapid increase in PrEP use over time. PrEP became the most commonly used HIV prevention strategy by gay and bisexual men with casual partners in 2019. The proportion of gay men with casual male partners who reported PrEP use and condomless anal intercourse was 35.2% in 2021, compared to 15.2% in 2017.

- As PrEP use has increased, consistent condom use has fallen. In 2021, 18.5% of gay men with casual partners reported consistent condom use, compared to 30.8% in 2017.
- The proportion of gay men with casual partners who reported being HIV-positive, having an undetectable viral load and condomless anal intercourse has remained stable between 2017 and 2021 at 5-7%.
- The proportion of gay men with casual partners who reported being HIV-positive, not on treatment or having a detectable viral load and who reported CAIC is also stable and was 1.0% in 2021, compared to 1.1% in 2017.
- In 2021, the proportion of gay men with casual partners who were HIV-negative or untested, not on PrEP and who reported any CAIC (insertive or receptive) was 22.9%, compared to 29.7% in 2017. The proportion of gay men who are susceptible to HIV infection has decreased in Sydney as PrEP use has increased, although there was a slight increase in the relative size of this 'at risk' group between 2020 and 2021 (from 20.0% to 22.9%).
- 'Net prevention coverage', i.e. the proportion of gay men with casual partners who report any form of safe sex, such as avoiding anal intercourse, condom use, PrEP use or undetectable viral load, has increased from 69.3% in 2017 to 76.1% in 2021, although there was a slight fall between 2020 and 2021 (from 79.2% to 76.1%).

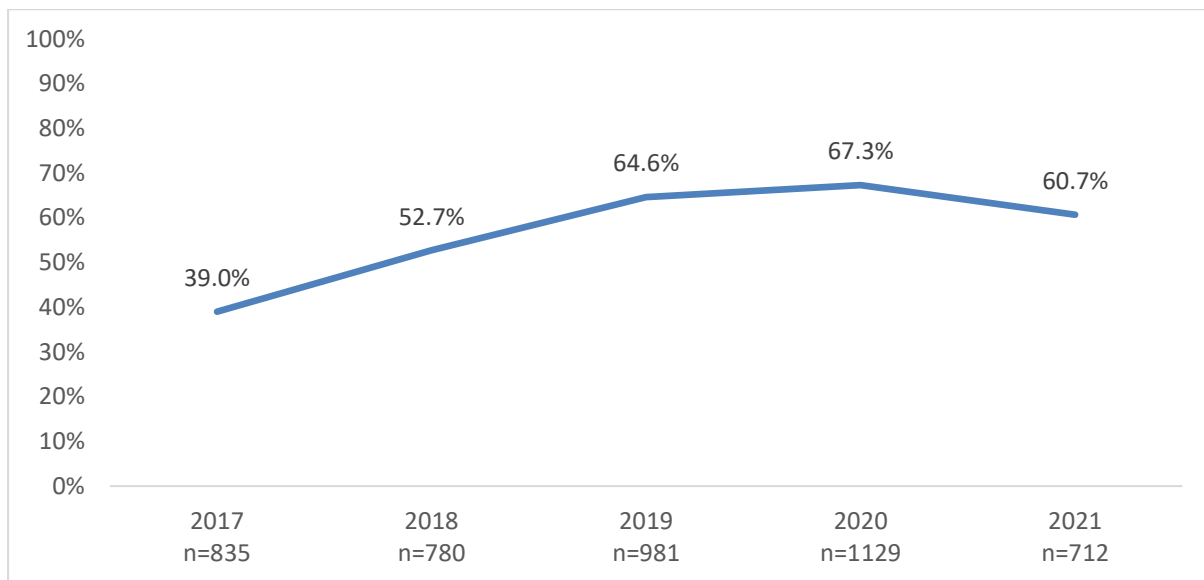


- It should be noted that, due to COVID-19, 51.5% of participants reported a reduced number of sex partners in the previous six months. Among current and former PrEP users, 57.7% said they had reduced their use and 8.6% said they had stopped due to COVID-19.

### Sydney Gay Community Periodic Survey – PrEP coverage among gay and bisexual men reporting condomless sex with casual partners

The NSW HIV Strategy includes a target to increase the proportion of PrEP use by gay and bisexual men who have condomless sex with casual partners to 90%. We assess sex with casual male partners and PrEP use in the Sydney Gay Community Periodic Survey.

**Figure 21: Proportion of non-HIV-positive men gay and bisexual men who had condomless sex with casual male partners and were using PrEP in the previous six months, 2017 to 2021**



Data source: Sydney Gay Community Periodic Survey, Centre for Social Research in Health, UNSW Sydney.

#### Comment on Figure 21

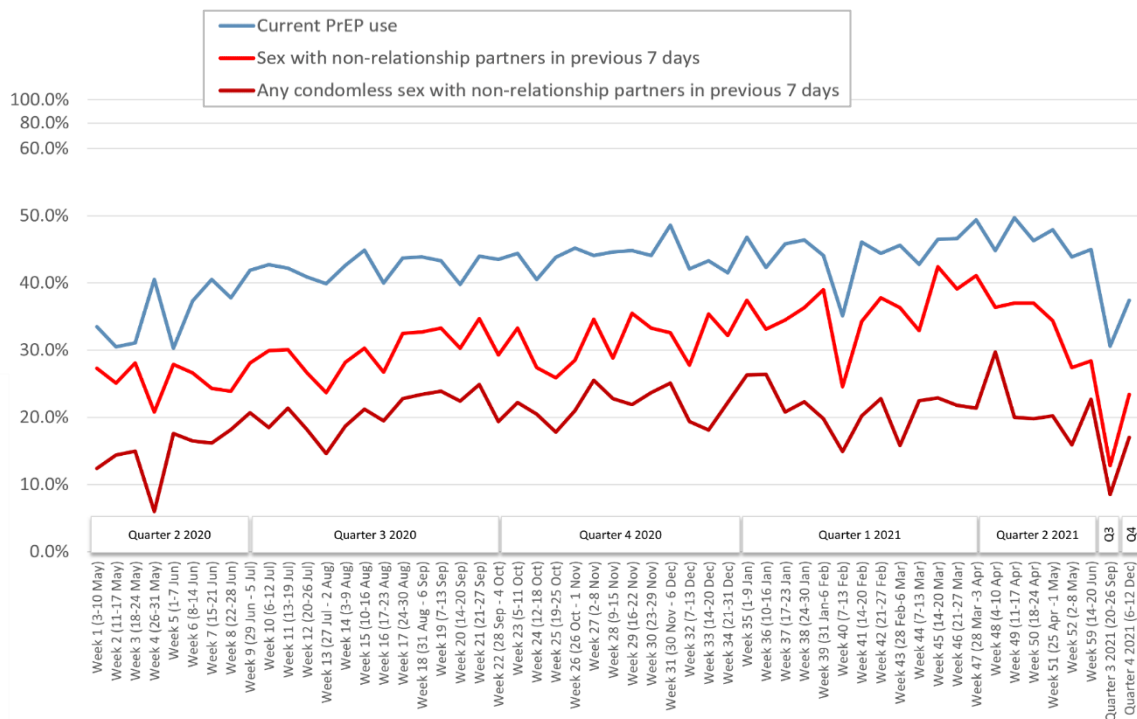
- PrEP use by gay and bisexual men who had condomless sex with casual male partners has increased from 39.0% in 2017 to 60.7% in 2021.
- There was a slight fall in PrEP coverage between 2020 and 2021 (from 67.3% to 60.7%) although this is in the context of COVID-19, with over half the participants in the surveys (57.1%) reporting fewer sex partners and most PrEP users (57.7%) reducing PrEP use due to COVID-19.

### 2.3 Effect of COVID-19 on ongoing trends in sexual behaviour, PrEP use, and HIV/STI testing among gay and bisexual men

The Following Lives Undergoing Change (Flux) cohort study of gay and bisexual men has collected data on sexual behaviour, PrEP use, and HIV testing during the COVID-19 pandemic commencing in early May 2020. Beginning in late June 2020, new participants commenced being enrolled into the study each week to supplement the continuing cohort. Weekly data collection continued between 3rd May 2020 and 8th May 2021, after which data collection occurs quarterly, but individual questions refer to the same time periods (previous 7 days, or previous 4 weeks).

Figure 22a shows the weekly and quarterly results for sexual behaviour and PrEP use since 3rd May 2020 among NSW respondents.

**Figure 22a: Sex with non-relationship partners and PrEP use (3rd May 2020 – 12<sup>th</sup> December 2021)**



Data source: [Following Lives Undergoing Change Study](#), Kirby Institute, UNSW Sydney. Note: Data are reported for non HIV-positive respondents in NSW. Sex with non-relationship male partners refers to any sexual contacts with casual partners or other partners with whom respondents were not in a relationship, as reported for the previous seven days, i.e. during the specified reporting week. PrEP use was for current use at the time of survey and is recorded for all participants who did not report being HIV-positive.

Since March 2020, 379 non-HIV-positive participants living in New South Wales took part in Flux, of which 171 responded in Quarter 4 of 2021. Similar numbers responded on each previous round.

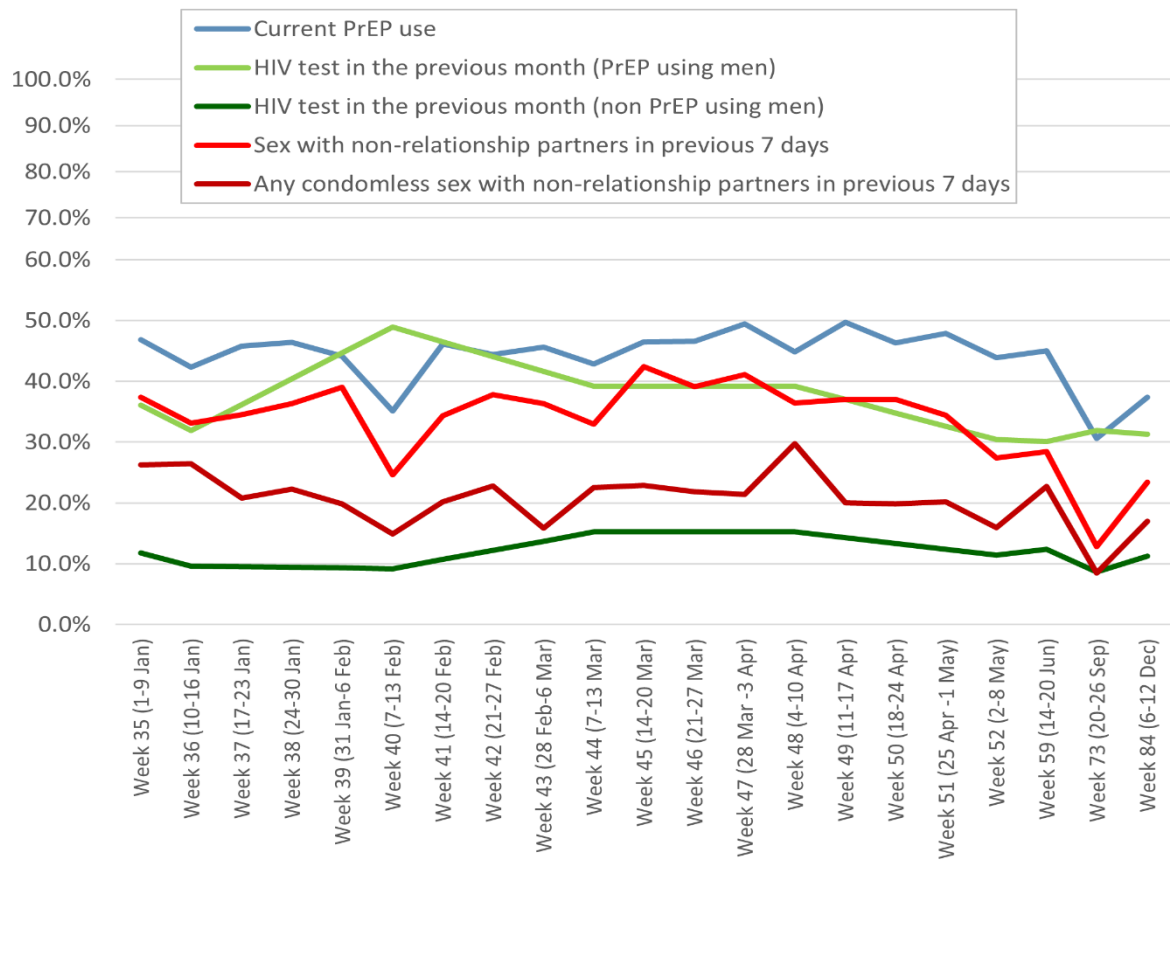
#### Comment on Figure 22a

- Since May 2020, current PrEP use steadily increased to pre-pandemic levels. Fluctuating trends in prevalence of PrEP use since May 2020 correspond with trends in new COVID-19 cases and government-imposed restrictions.

- Similar trends were observed for men reporting sex with non-relationship partners and trends in condomless sex with non-relationship partners.

Figure 22b shows the weekly and quarterly results for sexual behaviour, PrEP use, and HIV testing between 1<sup>st</sup> January 2021 and 12<sup>th</sup> December 2021 among NSW respondents.

**Figure 22b: Sex with non-relationship partners, PrEP use and HIV testing by week (1<sup>st</sup> January 2021 – 12<sup>th</sup> December 2021)**



Data source: [Following Lives Undergoing Change Study](#), Kirby Institute, UNSW Sydney. Note: Data are reported for non HIV-positive respondents in NSW. Sex with non-relationship male partners refers to any sexual contacts with casual partners or other partners with whom respondents were not in a relationship, as reported for the previous seven days, i.e. during the specified reporting week. PrEP use was for current use at the time of survey and is recorded for all participants who did not report being HIV-positive. Testing in previous four weeks is reported for non HIV-positive men according to their current use of PrEP at the time of survey in each of Weeks 36, 40, 44, 48, 52, 59, 73, and 84. Since March 2020, 379 non-HIV-positive participants living in New South Wales took part in Flux, of which 171 responded in Quarter 4 of 2021. Similar numbers responded on each previous round.

### Comment on Figure 22b

- Current PrEP use decreased from 45.0% in Quarter 2 of 2021 to 30.6% in Quarter 3 of 2021 representing a 32.0% reduction. Following this decrease in PrEP use in Quarter 3 of 2021, prevalence of PrEP use increased in Quarter 4 of 2021 to 37.4%, representing a 22.2% increase from Quarter 3 in 2021.
- Similar trends were observed for men reporting sex with non-relationship partners. Prevalence of sex with non-relationship partners increased from 12.8% in Quarter 3 of 2021 to 23.4% in Quarter 4 of 2021, representing an 82.8% increase from Quarter 3 of 2021. These increases were accompanied by an increase in condomless anal intercourse with non-relationship partners from 8.5% in Quarter 3 of 2021 to 17% in Quarter 4 of 2021.
- Among non-HIV-positive men not using PrEP, there was a 30.2% increase in rates of HIV testing between Quarters 3 and 4 of 2021. Rates in HIV testing among non-HIV-positive men using PrEP remained stable between Quarters 3 and 4 of 2021.

### **2.4 Community mobilisation “Ending HIV”**

Since 2013, ACON has monitored the knowledge and attitudes of gay men in regards to key messages in the NSW ‘Ending HIV’ campaign. Key findings and a description of the evaluation is provided in Appendix B.

### **2.5 How accessible is the Needle and Syringe Program in NSW?**

From July 2021 to December 2021,

- 6,816,442 units of injecting equipment were distributed in NSW.
  - The LHDs with the highest number of units of injecting equipment distributed were Hunter New England, Sydney, South Western Sydney, Western Sydney and South Eastern Sydney.

### **2.6 What proportion of people re-use other people’s needles and syringes (receptive syringe sharing) in NSW?**

- In 2021, 18% of respondents reported receptive syringe sharing in the previous month (NSW Needle and Syringe Program Enhanced Data Collection, 2021)<sup>6</sup>.

<sup>6</sup> Geddes, L, Iversen J, and Maher L. NSW Needle and Syringe Program Enhanced Data Collection Report 2017-2021, The Kirby Institute, UNSW Australia, Sydney 2021.

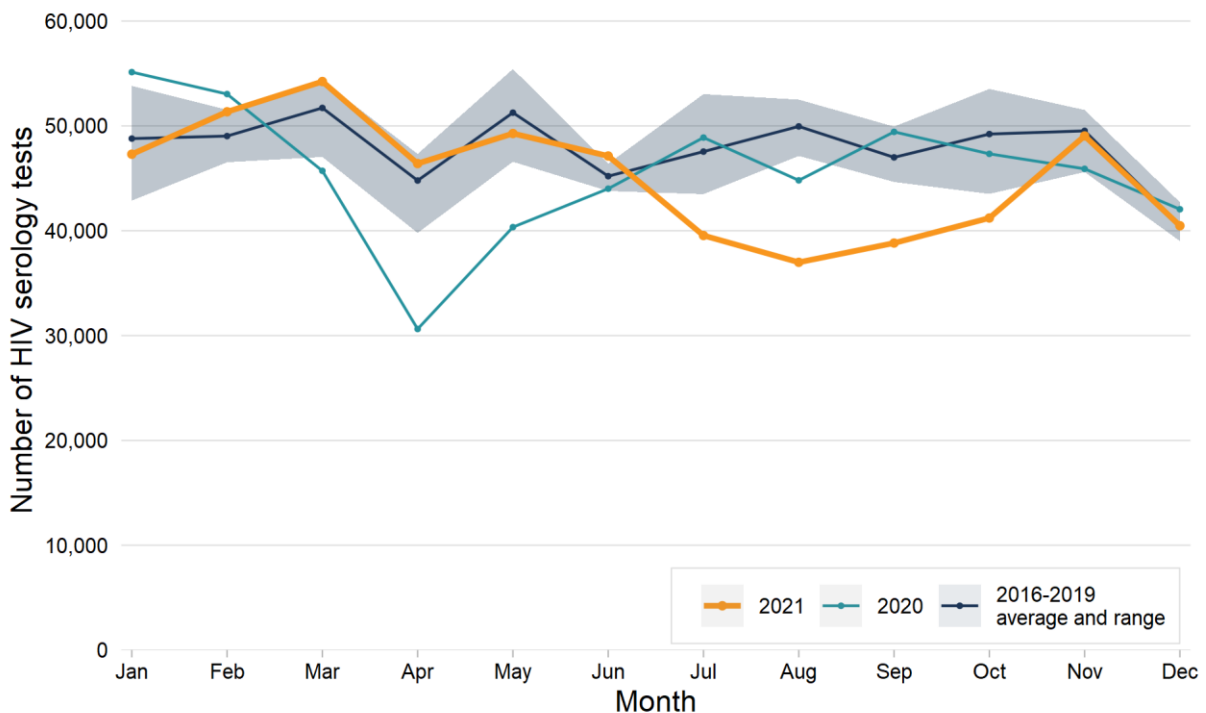
### 3. Increase HIV testing frequency

#### 3.1 Is HIV testing increasing in NSW?

##### NSW overall

In 2012, NSW Health commenced collection of testing data for selected notifiable conditions, including HIV, from 15 NSW laboratories. These laboratories represent about 95% of the laboratory testing for HIV in NSW residents. Information from laboratories does not provide any indication on the purpose of testing (screening of high-risk individuals, routine antenatal, post-exposure testing), nor whether there are repeat tests on the same individual.

**Figure 23: Number of HIV serology tests performed in 15 NSW laboratories, 2016 to 2021**



Data source: NSW Health denominator data project, out 14 February 2022.

##### Comments on Figure 23

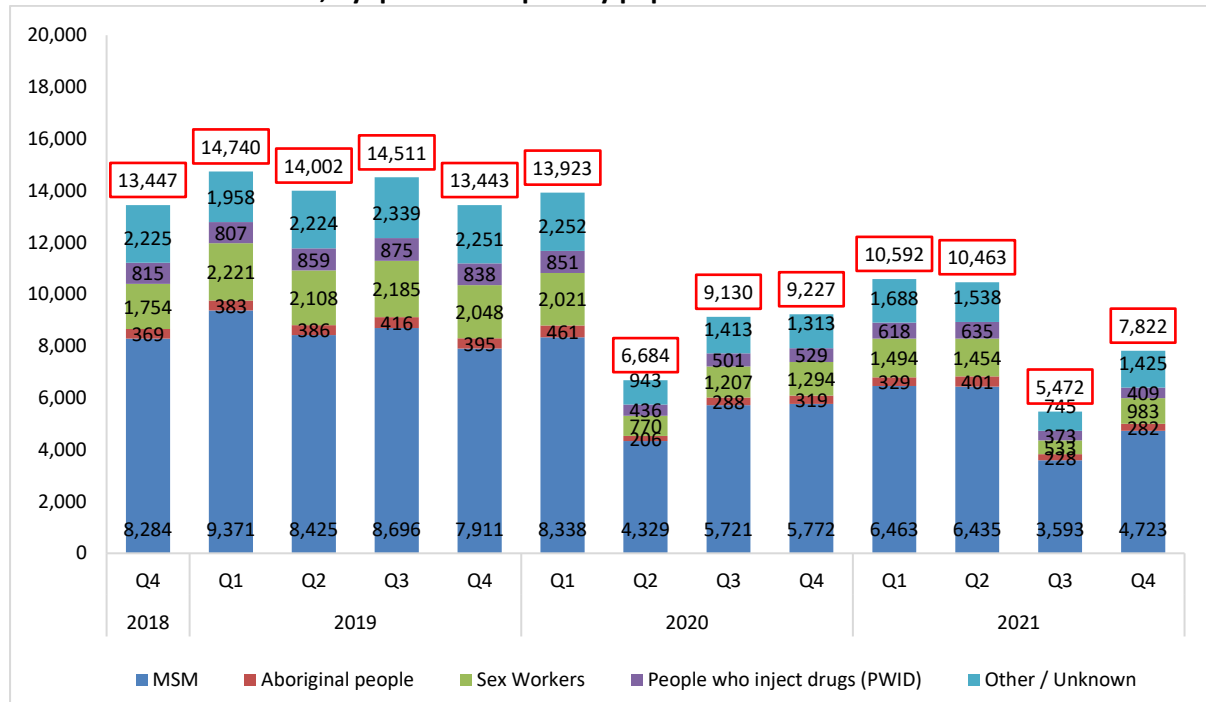
In October to December (Q4) 2021:

- 130,737 HIV serology tests were performed in 15 laboratories in NSW, which was 3% less than Q4 2020 (n=135,290), 12% less than Q4 2019 (n=147,769), 10% less than Q4 2018 (n=144,460), 5% less than Q4 2017 (n=136,848), and 2% more than Q4 2016 (n=128,140).

In 2021:

- 541,800 HIV serology tests were performed in 15 laboratories in NSW, which was 1% less than 2020 (n=547,287), 12% less than 2019 (n=612,013), 9% less than 2018 (n=592,318), 3% less than 2017 (n=559,010), and 1% more than 2016 (n=535,096).

**Figure 24: Number of HIV tests performed in public sexual health clinics in NSW between October 2018 and December 2021, by quarter and priority population**



Data source: NSW Health HIV Strategy Monitoring Database

Note: Patients have been classified as other/unknown where priority population data is not available, including St Vincent’s Hospital. Testing recovered a bit in October to December 2021 compared to July to September when COVID restrictions were in place. Data reported in this Figure does not include Central Coast due to data system issues.

Note: Testing data from Central Coast LHD has been excluded since Q2 2020, due to data system issues.

Comments on Figure 24

In Oct to December 2021:

- The number of HIV tests in PFSHCs (n=7,822) increased by 43% compared to Q3 2021 (n=5,472). This result is 15% less than the number of tests in Q4 2020 (n=9227).
- Testing remained targeted with 4,723 of 7,822 (60%) HIV tests in PFSHCs done by MSM.
- Of 7,152 tests in PFSHCs where country of birth was recorded, 53% (3,774) were Australian-born, 47% (3,356) overseas-born and 0.3% (22) unknown.
- The number of HIV tests performed in other public health settings not included in the Figure above includes:
  - 1,454 in Emergency Department;
  - 611 in Mental Health;
  - 441 in Drug and Alcohol;
  - 10 in Needle and Syringe Program, Youth Block, Immunology, Infectious diseases, Liver Clinic, Chest Clinic and Psychiatry Clinic.

**Dried Blood Spot testing**

[Dried Blood Spot](#) (DBS) is an innovative finger stick test for HIV and hepatitis C that is accessed by eligible people online (home-testing) or via a settings-based approach. The NSW DBS Self-Sampling HIV Testing Pilot Program aims to increase testing among high-risk populations who experience barriers to testing through conventional services.

In September 2019, the pilot was updated to expand access to at-risk populations. As part of the update, participants can be tested for hepatitis C without an HIV test. People eligible for a hepatitis C test can still opt-in for an HIV test.

**Table 2: Recruitment data for the NSW DBS Self-Sampling HIV and HCV Testing Pilot, November 2016 to December 2021**

Recruitment indicators	Q4 2021 (Oct - Dec)	Total (Nov 2016 - Dec 2021)
Number of registrations for DBS test (including Hepatitis C)	409	12,930
Number of registrations for DBS requesting HIV testing	385/409 (94%)	12,208/12,930 (94%)
Number (%) of people who registered for a HIV DBS kit who had never tested before or had tested over 2 years ago**	162/385 (42%)	5,591/12,208 (46%)
Proportion of returned HIV DBS kits	302/385 (79%)	10,341/12,208 (85%)
Number of HIV DBS tests performed	302	10,341
Number (%) of reactive HIV tests*	0	13

Data Source: NSW Dried Blood Spot Research database.

\* Reactive HIV tests were confirmed positive by venous testing and linked into care. Participants with known HIV positive status when accessing DBS testing removed from total.

\*\* Based on registrations for DBS requesting HIV testing (excludes registrations for hepatitis C DBS test only)

Comments on Table 2

In October to December 2021:

- There was a total of 302 HIV DBS tests performed in NSW.
- 42% of people who registered for a HIV DBS test had never previously tested for HIV or had been tested more than 2 years ago.
  - Of these, 111 (69%) were Australian born and 51 (31%) were overseas born.
- 75% of registrations for DBS requesting HIV testing between April and June 2021 were returned for testing.

In November 2016 to December 2021 (over the entire pilot):

- 46% people who registered for a HIV DBS test had never previously tested for HIV or had tested more than 2 years ago.
  - Of these 4,084 (73%) were Australian-born and 1,507 (27%) were overseas-born.
- 85% of registrations for DBS requesting HIV testing were returned.

**Table 3: Number of HIV tests done per eligibility criteria\* for the NSW DBS Self-Sampling HIV and HCV Testing Pilot, November 2016 to December 2021**

Target population	Q4 2021 (Oct - December) Total number of HIV tests n = 302	(Nov 2016 – December 2021) Total number of HIV tests n = 10,341
MSM ****	66 (22%)	2,398 (23%)
From high prevalence country***	37 (12%)	1,166 (11%)
Partners from Asia/Africa	29 (10%)	1,684 (16%)
Aboriginal people**	64 (21%)	2,759 (27%)
Ever injected drugs**	204 (68%)	5,476 (53%)

Data Source: NSW DBS Research Database

\*Participants can have profile for more than one target population.

\*\*Aboriginal people and people who have ever injected drugs included from September 2017. Hepatitis C RNA testing included from September 2017.

\*\*\*High prevalence countries include countries within Africa or Asia and the following specific countries: Belize, Haiti, Bahamas, Jamaica, Guyana, Barbados, Suriname, Djibouti, Russian Federation, Trinidad and Tobago and Panama.

\*\*\*\* MSM include trans-men who have sex with (cis- or trans-) men and cis-men who have sex with trans-men

### **Comment on Table 3**

Between October to December 2021:

- Of 302 HIV DBS tests, 22% were done by MSM (n=66), which is lower than Q3 2021, when 32% of tests were done by MSM.
  - Of 66 MSM tested, 71% were Australian-born, and 29% were overseas-born MSM.
- 12% of HIV DBS tests were done by people from high prevalence countries.
- 10% of HIV DBS tests were done by people who had partners from Asia/Africa.
- 21% of HIV DBS tests were done by Aboriginal people.
- 68% of tests were done by people who had ever injected drugs.

Of non-Justice Health HIV DBS tests (n=297) in Q4 2021:

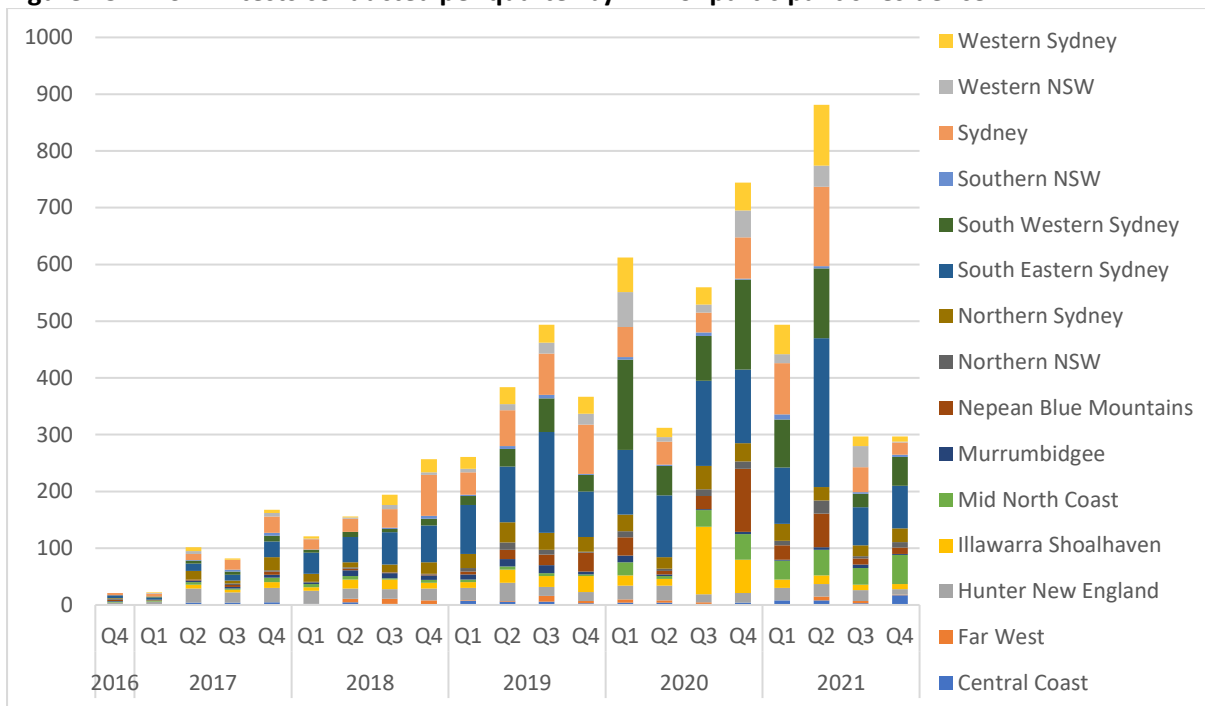
- 23% were overseas-born (n=67)
- 22% were MSM (n=66)
- 10% had a partner from Asia or Africa (n=29)
- 12% were from a high prevalent country (n=37)
- 21% were by Aboriginal people (n=61)
- 67% were people who have ever injected drugs (n=199)

In November 2016 to Q4 2021 (over the entire pilot):

- Of 10,341 HIV DBS tests, 23% were done by MSM (n=2,398)
  - Of 2,398 MSM tested, 70% were Australian-born MSM and 30% were overseas-born MSM.
- 11% of DBS tests were done by people from high prevalence countries.
- 16% of DBS tests were done by people who had partners from Asia/Africa.
- 27% of HIV DBS tests were done by Aboriginal people.
- 53% of tests were done by people who had ever injected drugs.



Figure 25: DBS HIV tests conducted per quarter by LHD of participant’s residence



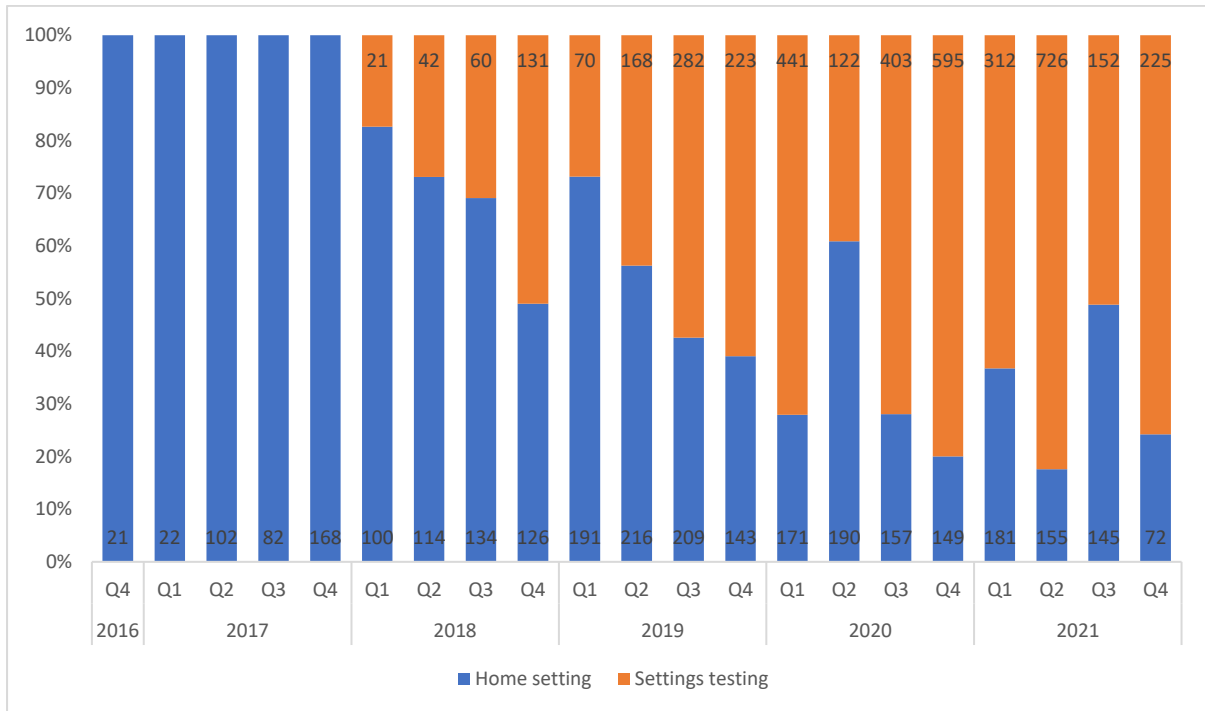
Data Source: NSW DBS Research Database

Comments on Figure 25

In October to December 2021:

- There was a total of 302 HIV DBS tests in NSW, which remained steady compared to Q3 2021 (n=304), but this is 73% less than Q4 2020 (n=1,135).

**Figure 26: HIV DBS tests done at home (ordered online) and settings-based tests per quarter, November 2016 to December 2021**



Note: Justice Health is excluded from the figure. Settings include drug and alcohol, sexual health services, and needle and syringe programs

**Comments on Figure 26**

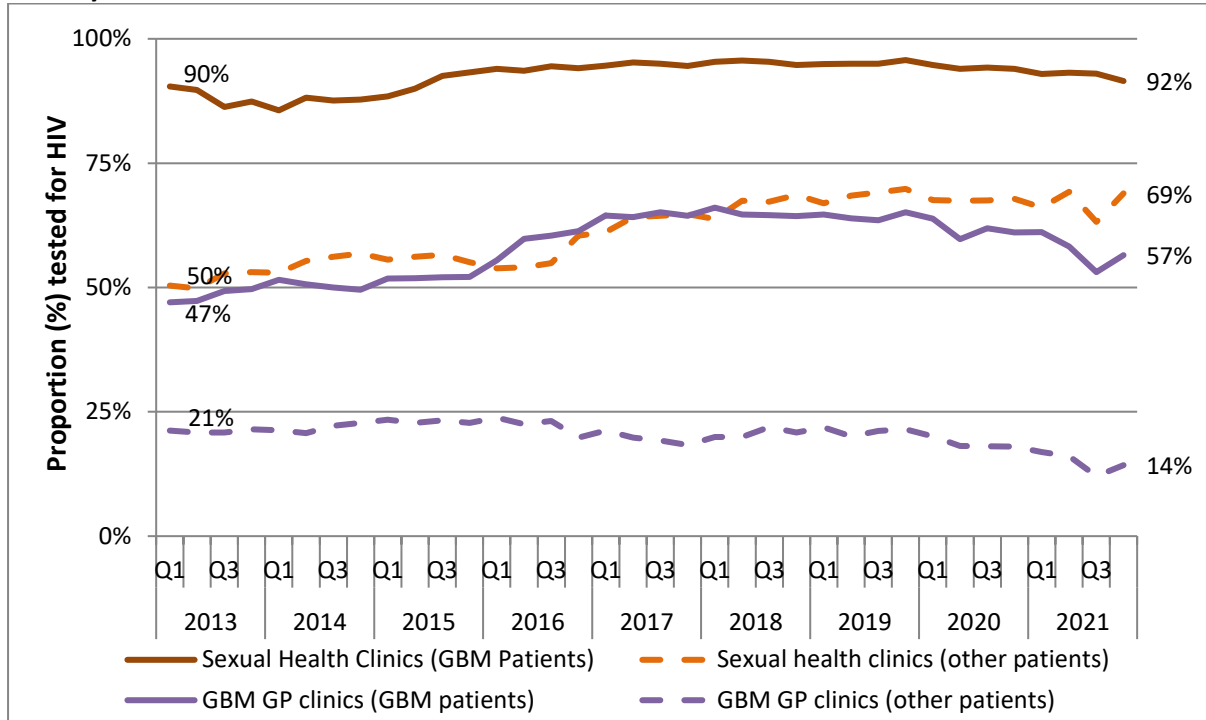
In October to December 2021:

- Home testing decreased by 50% to 72 HIV DBS tests compared to Q3 2021.
- Settings-based testing increased by 48% to 225 HIV DBS tests (excluding Justice Health) compared to Q3 2021, which is likely due to COVID restrictions eased starting in early November. In 2021, settings-based HIV DBS testing (excluding Justice Health) marked a slight decrease to 1,415 compared to the same period in 2020 (1,561).

### 3.2 What are the HIV testing patterns in NSW?

HIV testing takes place in a range of clinical and community settings, including general practice, PFSHCs and community HIV testing sites.

**Figure 27: Proportion of patients<sup>7</sup> attending PFSHCs and GBM GP clinics<sup>8</sup> tested at least once for HIV at any clinic in the ACCESS network in the previous year, by quarter and service type, 1 January 2013 to 31 December 2021<sup>9</sup>**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

#### Comments on Figure 27

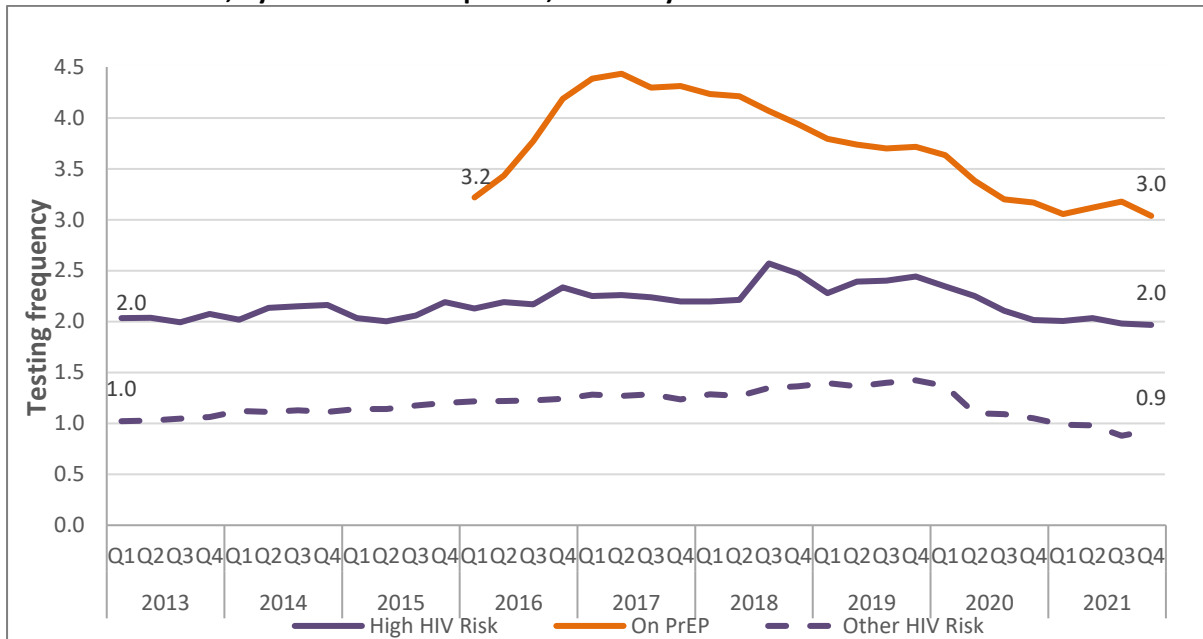
- HIV testing uptake among GBM attending PFSHCs remained consistently high in the fourth quarter of 2021 (92%). Testing uptake increased over time among other patients attending PFSHCs, rising from 50% in Q1 of 2013 to 69% in Q4 of 2021.
- Testing uptake also increased among GBM attending GBM GP clinics (from 47% in Q1 of 2013 to 57% in Q4 of 2021).
- Testing amongst other patients attending GBM GP clinics stayed relatively consistent from 2013 to end of Q1 of 2020. Testing declined in this group from 20% in Q1 2021 to 14% in Q4 2021.

<sup>7</sup> Excludes patients known to be HIV positive

<sup>8</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually;

<sup>9</sup> The testing period is retrospective; the proportion represents those who attended in a quarter and had at least one HIV test in the previous 12 months

**Figure 28: Average number of annual HIV tests among GBM patients<sup>10</sup> attending any clinic in the ACCESS network<sup>11</sup>, by HIV risk<sup>12</sup> and quarter, 1 January 2013 to 31 December 2021**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

**Comment on Figure 28**

In this report, the definition of risk relative to HIV has been adapted to reflect a more nuanced assessment of clinical data that explicitly excludes men accessing PrEP. The updated categories for risk are defined as follows:

**High risk:** assigned to men not on PrEP who, on the basis of a hierarchical decision tree, had a history of a rectal STI in the 24 months prior, evidence of inconsistent condom use, 20 or more partners, or evidence of injecting drug use over the past 12 months

**Other risk:** Any man not on PrEP not otherwise meeting the criteria of ‘high risk’

This change to the definition of ‘high risk’ means that the frequency of HIV testing among this group is lower than in previous reports because it excludes men accessing PrEP.

Men identified within ACCESS as having a reason for visit as “PrEP” and/or a PrEP script were considered as on PrEP.

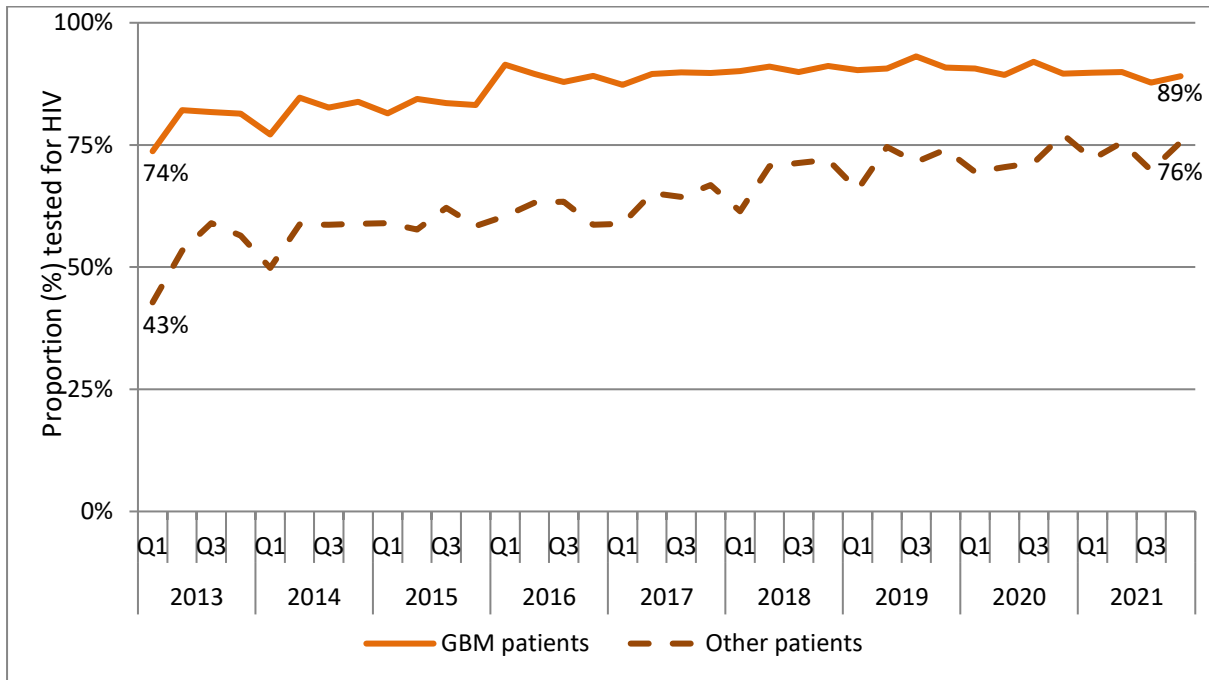
The average number of HIV tests among high risk GBM stayed fairly consistent from Q1 2013-Q2 2018, followed by an increase to 2.6 tests on average at the end of Q3 2018. In this group, testing frequency decreased to 2.0 at the end of Q4 2021. Drops in testing frequency likely occurred due to various restrictions due to the COVID-19 pandemic over the Q2 2020-Q4 2021 period. Testing stayed relatively consistent among men of other risk profiles from Q1 2013 to Q4 2021.

<sup>10</sup>Excludes patients known to be HIV positive

<sup>11</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

<sup>12</sup> High risk defined by GBM patients who are not on PrEP and reported injecting drug use in the last year, more than 12 partners/year and inconsistent condom use or history of a rectal STI in the past two years. Hospital data were not included in analysis

**Figure 29: Proportion of patients<sup>13</sup> attending PFSHCs and GBM GP clinics<sup>14</sup> combined who received an HIV test at any clinic in the ACCESS network in conjunction with an STI diagnosis<sup>15</sup>, by GBM status and quarter, 1 January 2013 to 31 December 2021**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

**Comment on Figure 29**

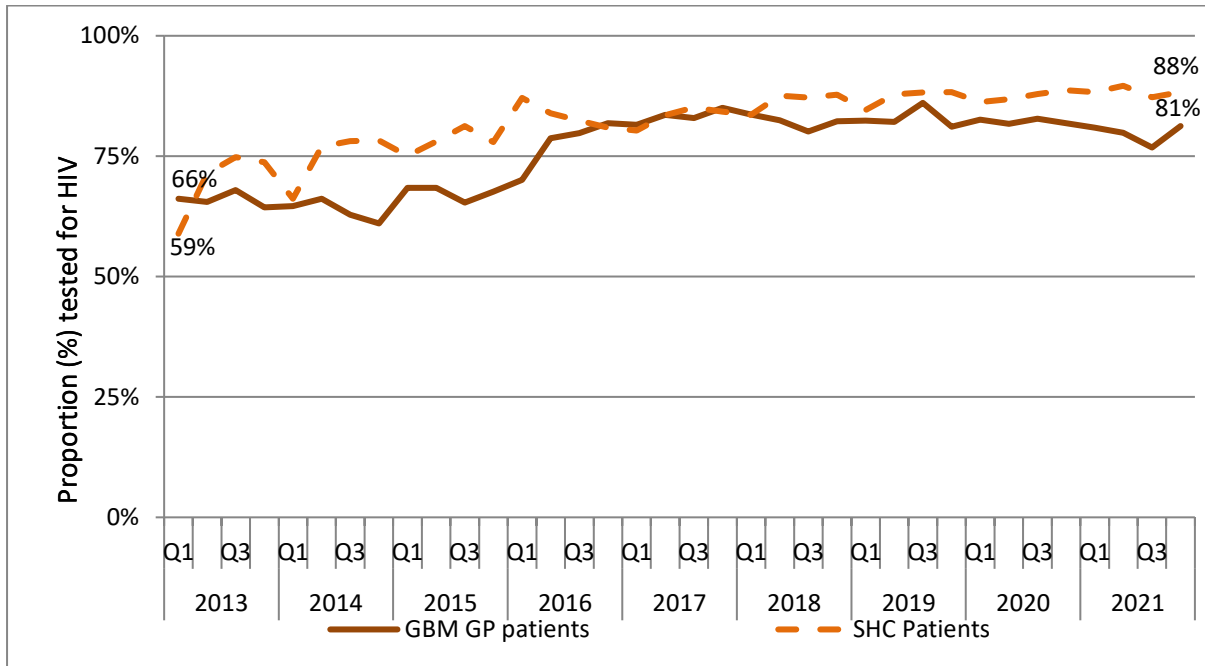
- The proportion of GBM who received an HIV test in conjunction with an STI diagnosis increased over time from 74% in Q1 2013 to 89% in Q4 of 2021.
- Testing in conjunction with STI diagnoses was less common overall among other patients but also increased during this period (43% to 76%).

<sup>13</sup> Excludes patients known to be HIV positive

<sup>14</sup> GBM GP clinics defined as general practice clinics serving at least 50 GBM patients annually

<sup>15</sup> Diagnosis for chlamydia, gonorrhoea and/or infectious syphilis; any HIV test conducted at least 60 days before or at most 30 days after a diagnosis was recorded

**Figure 30: Proportion of patients<sup>16</sup> attending PFSHCs and GBM GP clinics<sup>17</sup> who received an HIV test at any clinic in the ACCESS network in conjunction with an STI diagnosis<sup>18</sup>, by service type and quarter, 1 January 2013 to 31 December 2021**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comment on Figure 30

Testing in conjunction with STI diagnosis was highest in PFSHCs, increasing from 59% in Q1 2013 to 88% at the end of Q4 2021.

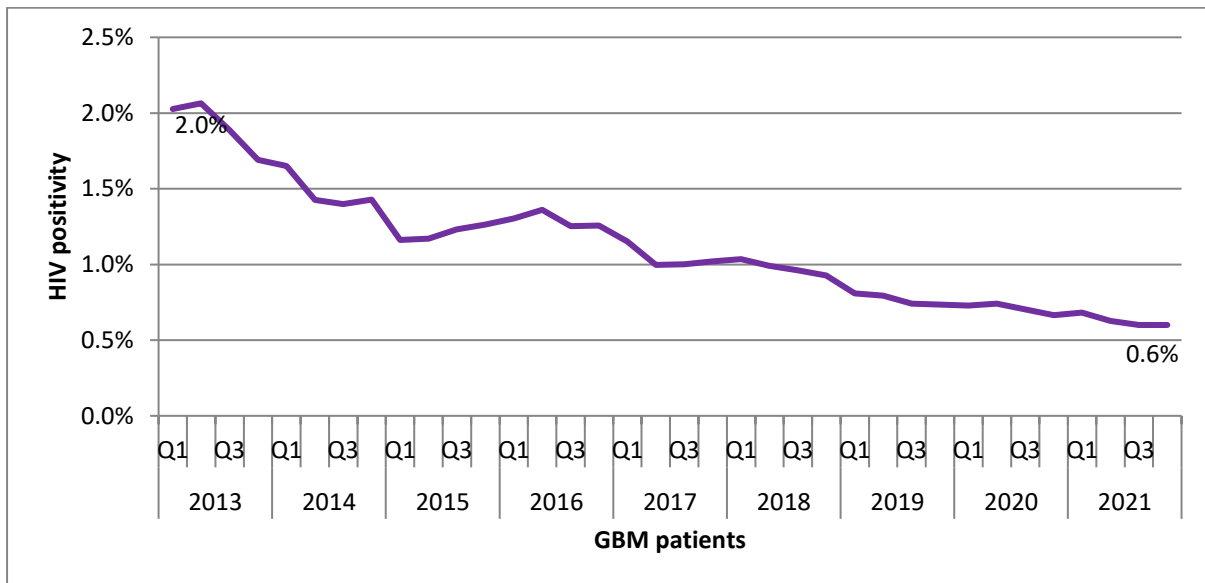
GBM GP clinics also saw an increase in the proportion of patients tested from 66% in Q1 of 2013 to 81% at the end of Q4 2021.

<sup>16</sup> Excludes patients known to be HIV positive

<sup>17</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

<sup>18</sup> Diagnosis for chlamydia, gonorrhoea and/or infectious syphilis; any HIV test conducted at least 60 days before or at most 30 days after a diagnosis was recorded

**Figure 31: Proportion of individual GBM patients<sup>19</sup> tested for HIV with a positive result (HIV positivity<sup>20</sup>) at any clinic in the ACCESS network, by quarter, 1 January 2013 to 31 December 2021**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

**Comment on Figure 31**

Over time, HIV positivity among GBM attending PFSHCs and GBM GP clinics has decreased from 2.0% in Q1 2013 to 0.6% in Q4 2021.

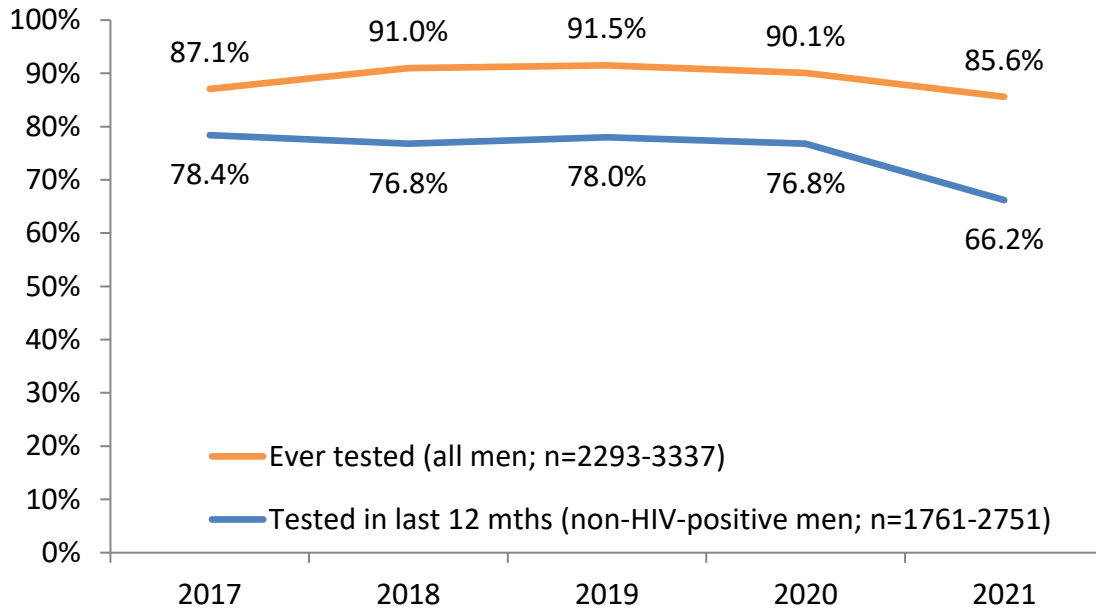
<sup>19</sup> Excludes patients known to be HIV positive

<sup>20</sup> HIV positivity is calculated as the proportion of individuals tested in a retrospective year period (discounting repeat tests among individuals) with an HIV diagnosis or confirmed pathology (positive p24 antigen or western blot test)

**Sydney Gay Community Periodic Survey - HIV testing**

HIV testing history is assessed in the annual Sydney Gay Community Periodic Survey (SGCPS), conducted each year during February/March. In recent years, frequency of testing has been added to the survey alongside lifetime testing and recent testing.

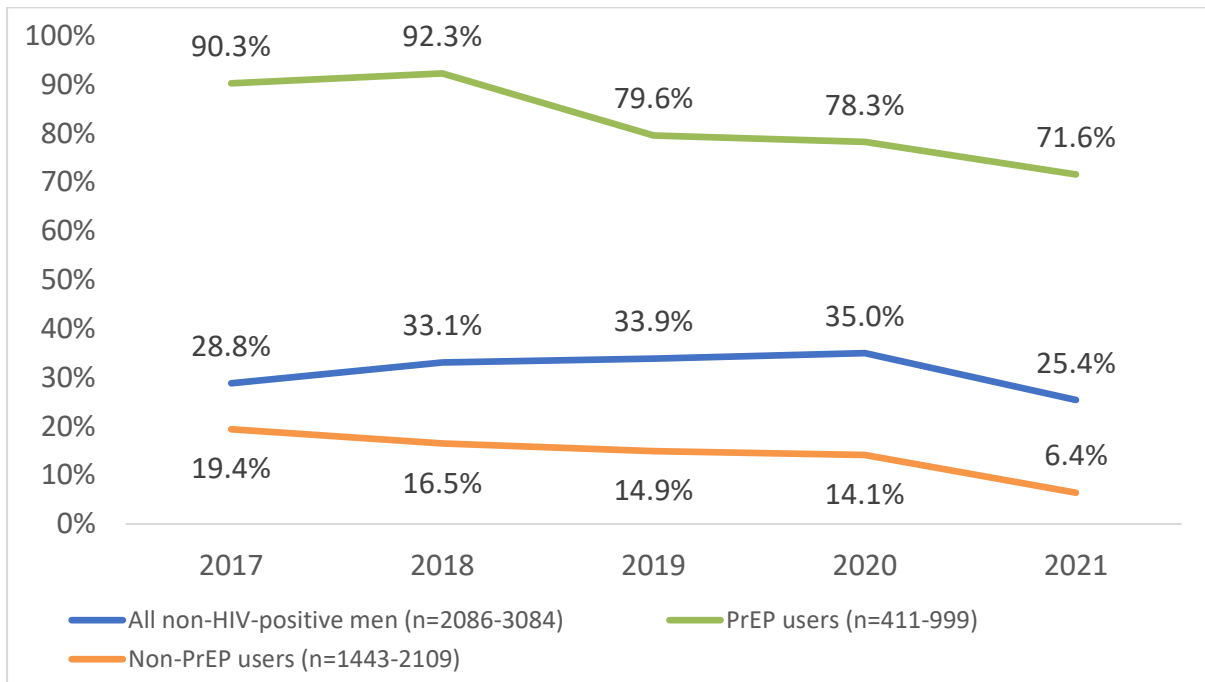
**Figure 32: Lifetime HIV testing and testing in the previous 12 months; Sydney Gay Community Periodic Survey, 2017 to 2021**



Data source: Sydney Gay Community Periodic Survey, Centre for Social Research in Health, UNSW Sydney.



**Figure 33: Non-HIV-positive gay and bisexual men reporting three or more HIV tests in the previous 12 months, stratified by PrEP use; Sydney Gay Community Periodic Survey, 2017 to 2021**



Data source: Sydney Gay Community Periodic Survey, Centre for Social Research in Health, UNSW Sydney.

**Comment on Figure 32 and Figure 33**

- The SGPCS data show that lifetime testing (ever having been tested for HIV) is relatively stable, and was 85.6% in 2021 (compared with 87.1% in 2017).
- Testing in the previous 12 months by non-HIV-positive men was stable between 2017 and 2020 (at 77-78%) but decreased to 66.2% in 2021. This is likely to be due to COVID-19.
- Higher frequency testing (three or more HIV tests per year) by non-HIV-positive men had increased from 28.8% in 2017 to 35.0% in 2020, then decreased to 25.4% in 2021.
- Higher frequency testing remains far more common among PrEP users than non-users. Higher frequency testing by PrEP users has decreased over time from 90.3% in 2017 to 71.6% in 2021. Higher frequency testing has become less common among non-HIV-positive men not on PrEP (from 18.9% in 2017 to 6.4% in 2021).

### 3.3 How is testing being made more accessible?

**Table 4: Number of rapid HIV tests in community based sites and proportion of clients with high risk behaviour and infrequent testing history in October-December 2021**

Non-traditional Settings	Number of RHT	Number of HIV antibody tests	% Unique Positive	% never previously tested	% tested more than 12 months ago <sup>#</sup>	% with > 5 sexual partners in last 3 months*	% overseas-born
<b>Community-based</b>							
aTEST Surry Hills	Not operating due to COVID-19						
aTEST Oxford ST	531	1,041	0.19%	5.20%	16.59%	14.09%	57%
aTEST Kings Cross	Not operating due to COVID-19						
aTEST Newtown	Not operating due to COVID-19						

Data sources: NSW Health HIV Strategy Monitoring Database<sup>17</sup>

Note: In Oct-Dec 2021, aTest Surry Hills and aTest Kings Cross were not operating due to COVID-19. The total number of unique patients at aTest Oxford St is 1,121. Some patients at this site have an HIV antibody test without a rapid test, which accounts for the additional HIV antibody tests above.

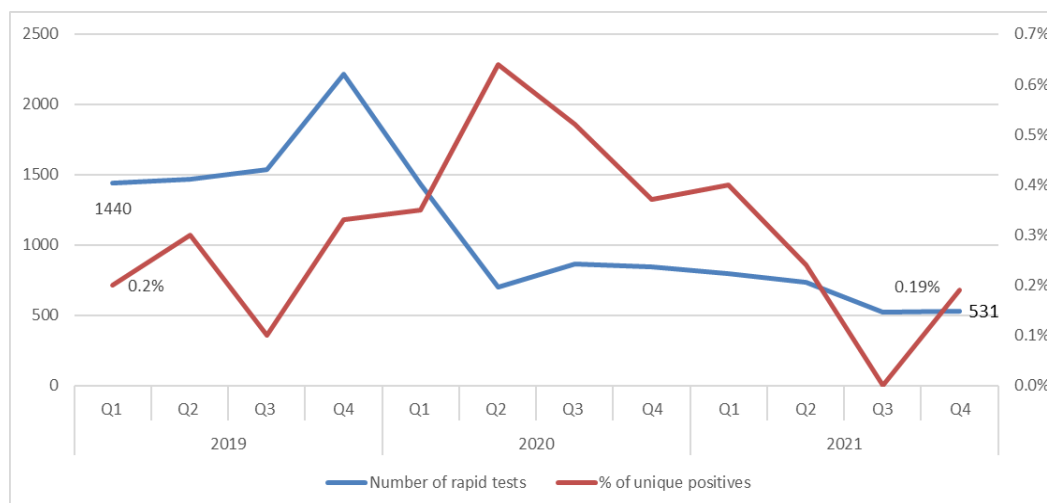
Note: Unique positive is for HIV antibody tests, and incorporates positive results for HIV tests done without a rapid test at Oxford St aTest sites.

Note: Clients' risk behaviour and infrequent testing history is calculated by: total occasions of service at Oxford St (n=1,164); and patients having a rapid test attending Kings Cross and Newtown.

#Does not include 'never tested'; \*Only patients who provide information on this characteristic is included.

Note: The proportion of overseas-born clients is calculated amongst unique clients

**Figure 34: The number of unique patients who had a rapid HIV test at a community based site between January 2019 and December 2021 and the proportion of antibody tests that were positive**



Data sources: NSW Health HIV Strategy Monitoring Database<sup>21</sup>

Note: Positivity is based on the result of the confirmatory HIV antibody test for rapid tests; and incorporates positive results for HIV tests done without a rapid test at Oxford St aTest site.

Note: aTest data was not reported by Surry Hills and Newtown sites since 2020 because they were not operating due to COVID-19

<sup>21</sup> Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

Comments on Table 4 and Figure 34

In October to December 2021 at a[TEST] Oxford St:

- Peer-led community based testing at [aTest Oxford Street](#) remained high and well targeted in Q4 2021 with 520 rapid tests and 969 antibody tests conducted.
- 17% of clients tested more than 12 months ago and 14% of clients were classified as high risk, with more than 5 sexual partners in the last 3 months.

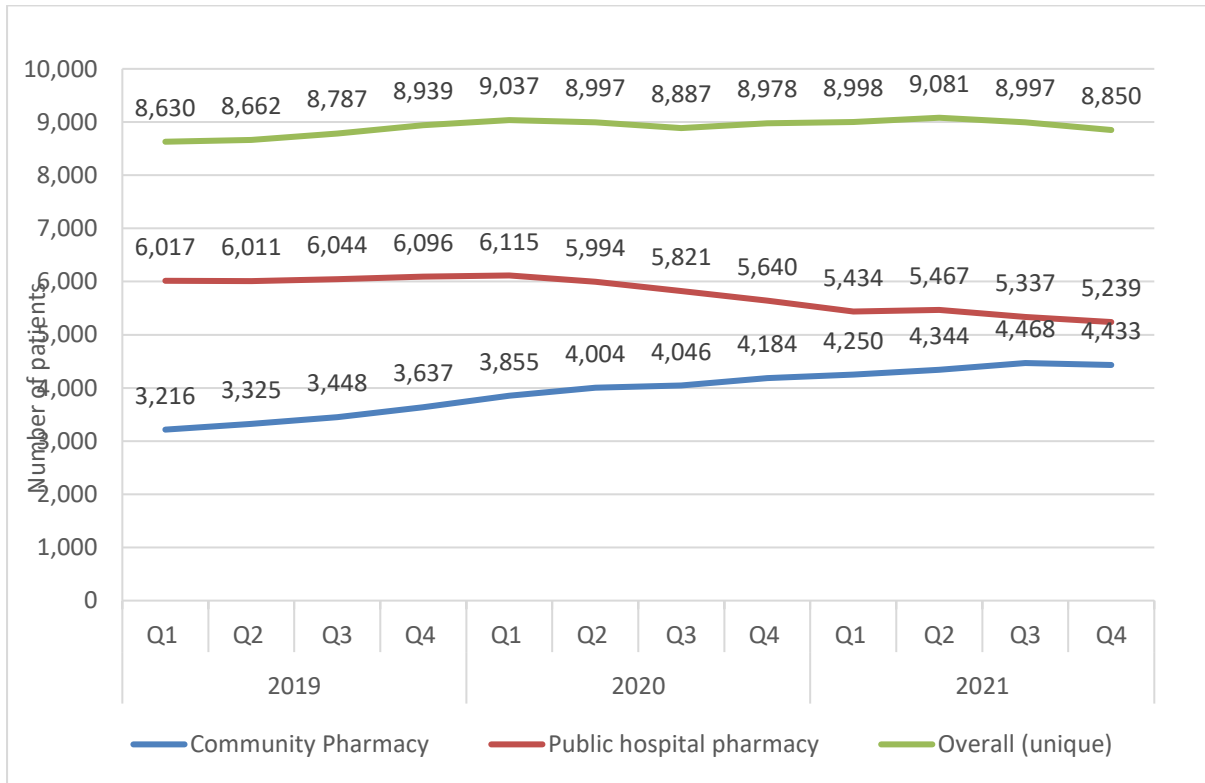
Of 1,121 unique clients:

- 57% were born overseas
- 45% were from SESLHD, 34% from Sydney LHD, 8% from Northern Sydney LHD, 4% from Western Sydney LHD and 4% from South Western Sydney LHD.
- NSW data suggests community-based testing sites are an effective testing model for engaging GBM with high risk behaviour and infrequent testing history.

## 4. Increase HIV Treatment

### 4.1 How many people in NSW are on antiretroviral therapy?

**Figure 35: The number of NSW residents who have been dispensed ART for HIV, by pharmacy type and by quarter, in the previous 12 months from 1 January 2021 to 31 December 2021**

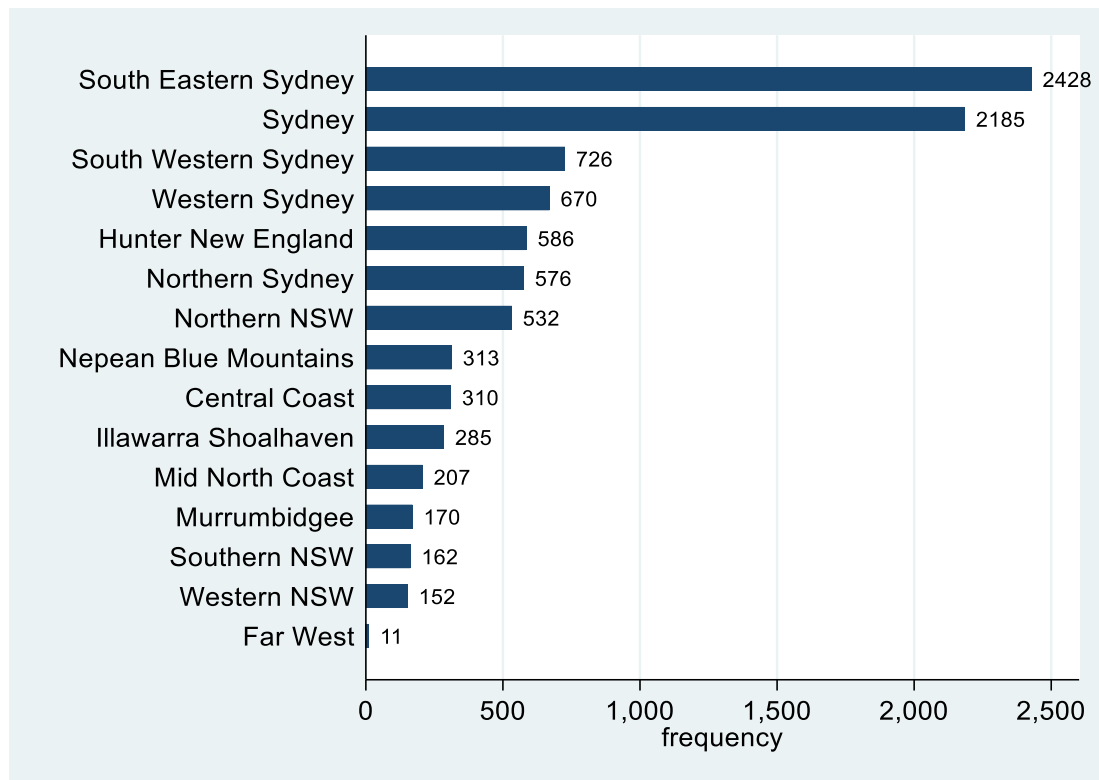


Data source: PBS Highly Specialised Drugs Programme data from 1 January 2019 to 31 December 2021 prepared for NSW Health. Note: The number of patients dispensed via community and public hospital pharmacies may add to a figure greater than the overall unique patients as some patients receive treatment from more than one pharmacy type within a year. Due to boundary changes or movements in and out of NSW, the overall unique number of individuals presented in the above graph may differ slightly from previous reports.

#### Comments on Figure 35

- Between 1 January and 31 December 2021, a total of 8,850 (unique number) NSW residents were dispensed PBS-subsidised ART for HIV at least once within the previous 12 months. Of the 8,850 residents, 44.0% of ART treatment for HIV were dispensed by GP.
- Of the 8,850 residents dispensed ART, 91% were male. The majority (61%) were 50 years or older, 22% were aged 40-49 years, and about 17% aged 39 years or younger.

**Figure 36: The number of NSW residents dispensed ART for HIV, by the LHD of patient residence, from 1 January to 31 December 2021<sup>22</sup>**



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data from 1 January to 31 December 2021

Data in figure 36 was updated on 16.12.22

Comments on Figure 36

- About three-quarters (77%) of the PBS-subsidised ART dispensed in the 12 months ending December 2021 was to patients residing in the following six LHDs: South Eastern Sydney, Sydney, South Western Sydney, Western Sydney, Northern Sydney and Hunter New England LHDs.

<sup>22</sup> The sum of the numbers displayed in the graph is higher than the total of 8,850 patients as some patients resided in more than one LHD.

#### 4.2 Is the proportion of people on antiretroviral treatment coverage increasing in NSW?

Data on the treatment status of clients who received HIV care in NSW public sexual health and HIV services between January 2021 and December 2021 is summarised at Table 5<sup>23</sup>.

**Table 5: Clients who received HIV care in NSW public sexual health and HIV services from 1 January 2021 and 31 December 2021**

Number (%) of patients for whom treatment information was available	4,819
Number (%) on ART	4,756 (99%)

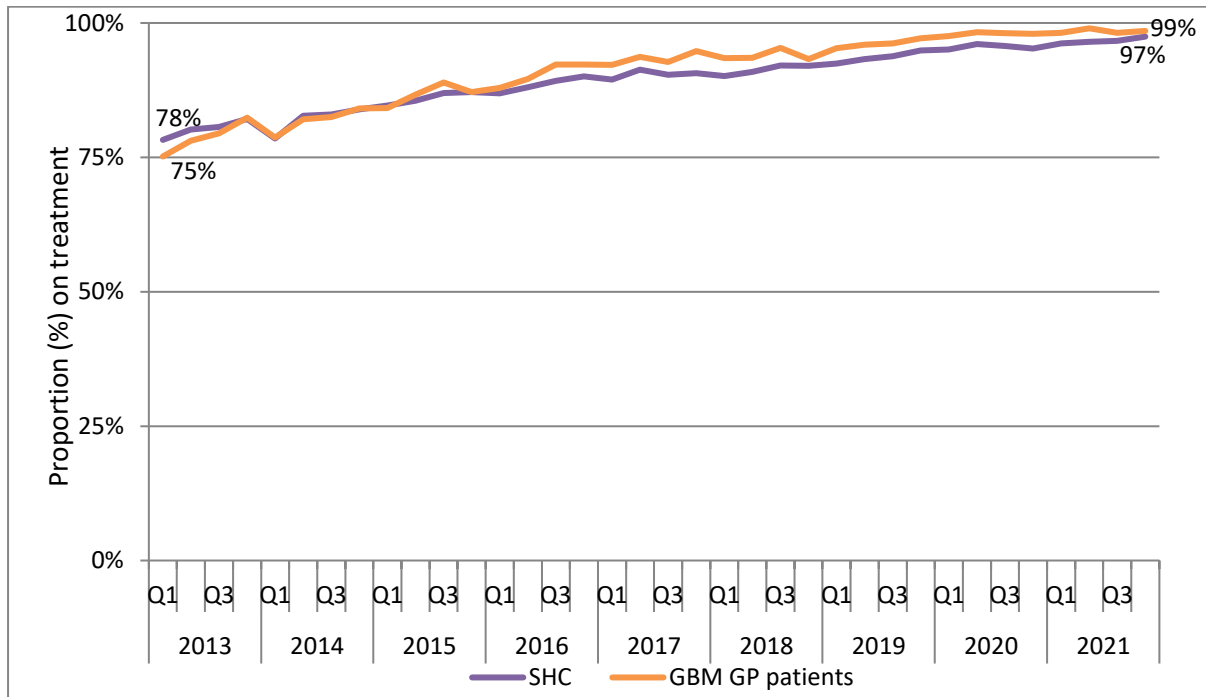
Data sources: NSW Health HIV Strategy Monitoring Database<sup>24</sup>

Note: Data presents here does not include Central Coast and Northern Sydney LHD.

##### Comment on Table 5

- Between January 2021 and December 2021, treatment information was available for 4,819 clients with HIV who received care in public HIV and sexual health clinics in NSW. The available data indicates treatment coverage in NSW PFSHCs is high at 99%.

**Figure 37: Proportion of HIV positive patients<sup>25</sup> attending any clinic in the ACCESS network<sup>26</sup> who received antiretroviral treatment or were recorded as on treatment in the previous year at any clinic in the ACCESS network, by service type and quarter, 1 January 2013 to 31 December 2021**



<sup>23</sup> Data is representative of all clients who has received HIV care in NSW public HIV and sexual health services in the last 12 months where treatment information is available.

<sup>24</sup> Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

<sup>25</sup> Excludes patients for whom HIV care was recorded as managed elsewhere

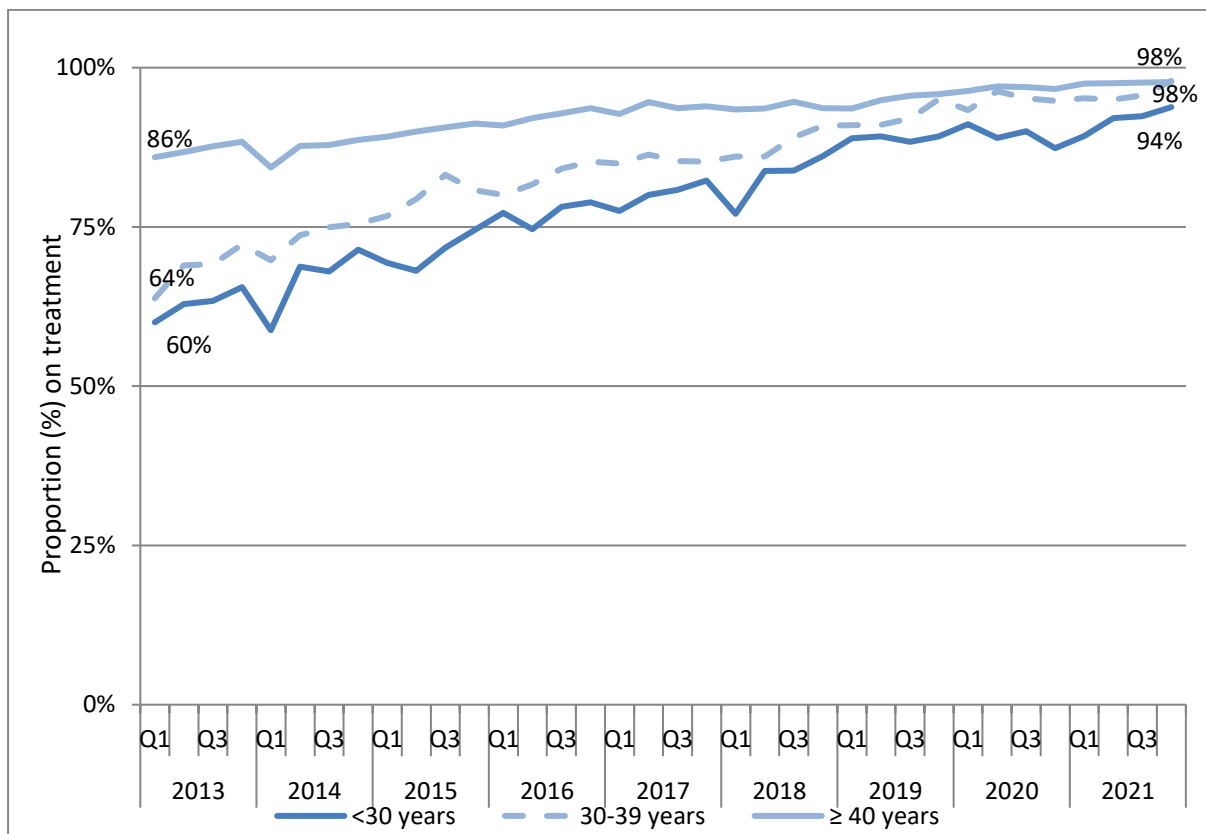
<sup>26</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually  
Hospital data were not included in analysis

Data source: ACCESS Database, The Kirby Institute and the Burnet Institute; Hospital data were not included in analysis for this report.

Comments on Figure 37

Over time, treatment uptake for people living with HIV increased across service types. Between Q1 2013 and Q4 2021, treatment uptake increased from 78% to 97% and 75% to 99% in PFSHCs and GBM GP clinics, respectively.

**Figure 38: Proportion of HIV positive patients attending any clinic in the ACCESS network<sup>27</sup> who received antiretroviral treatment or were recorded as on treatment in the previous year at any clinic in the ACCESS network, by age group and quarter, 1 January 2013 to 31 December 2021**



Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

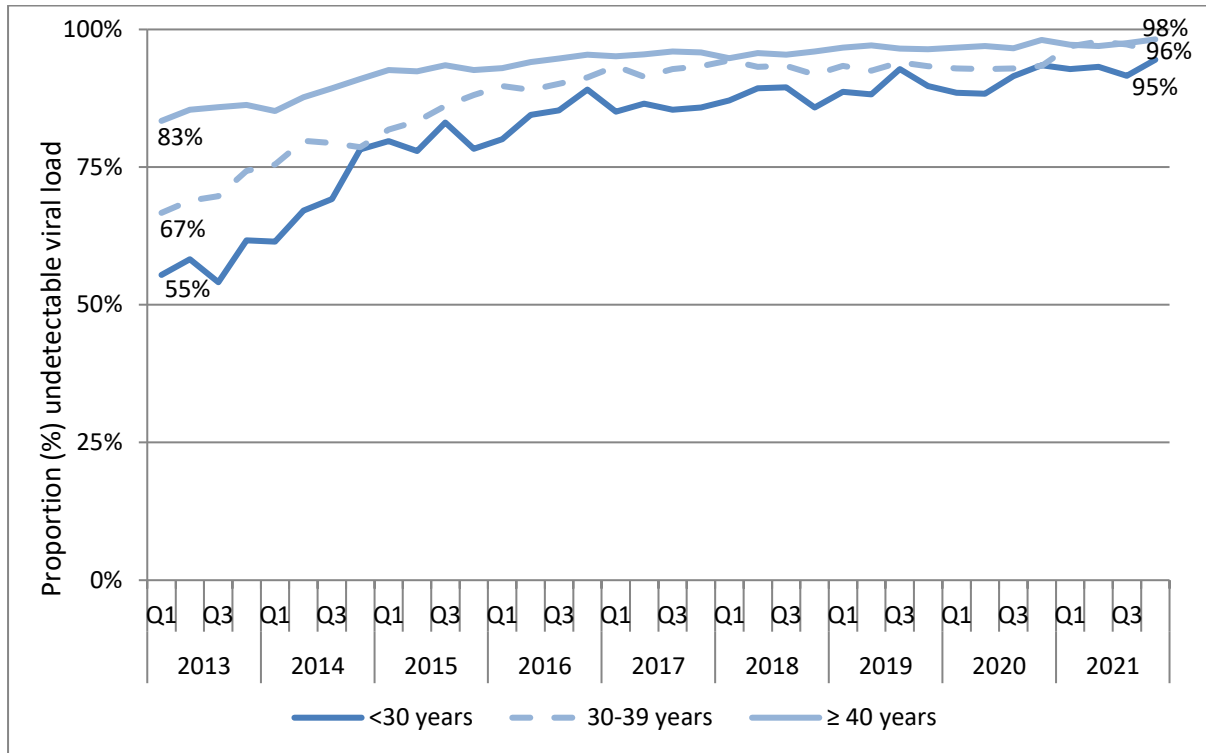
Comments on Figure 38

Uptake of treatment for HIV was highest among patients aged 30 years and older and lowest among those 30 years and younger.

Uptake increased amongst all age groups from Q1 2013-Q4 2021.

<sup>27</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually  
Hospital data were not included in analysis

**Figure 39: Proportion of HIV positive patients on treatment at any clinic in the ACCESS network<sup>28</sup> with an 'undetectable'<sup>29</sup> viral load at their most recent test in the previous 12-month period at any clinic in the ACCESS network<sup>30</sup>, by age group and quarter, 1 January 2013 to 31 December 2021**



Comments on Figure 39

The proportion of HIV positive patients with an undetectable viral load was consistently highest among older patients: 98% of patients 40 years and older had undetectable viral loads in Q4 of 2021.

Overall, the proportion of patients with an undetectable viral load increased from Q1 2013-Q4 2021.

<sup>28</sup> GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

<sup>29</sup> 'Undetectable' defined as <200 RNA copies/mm<sup>3</sup> of blood

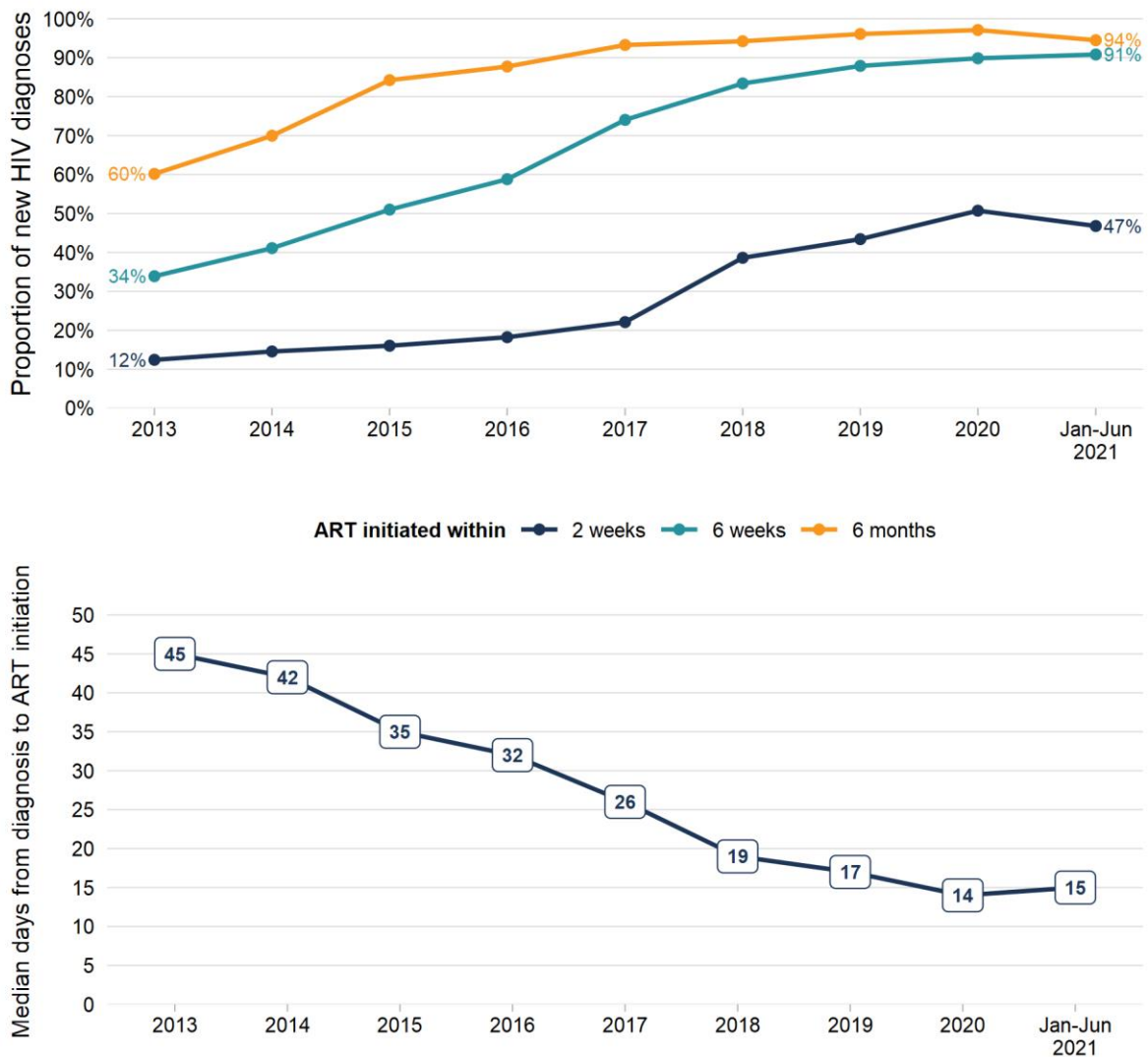
<sup>30</sup> Excludes patients for whom viral load test information was not available  
Hospital data were not included in analysis



### 4.3 How quickly are people newly diagnosed with HIV commencing antiretroviral therapy and achieving undetectable viral load in NSW?

The 2021-2025 HIV Strategy now aims to ensure that at least 90% of people newly diagnosed with HIV are on ART within 2 weeks of diagnosis. Data on ART initiation was drawn from the six-month follow up and initial HIV notification form. At the time of preparing this Q4 2021 report, the six-month post diagnosis follow-up had been done on NSW residents newly diagnosed from 1 January 2013 to 30 June 2021 (n=2,550). All new diagnoses were included irrespective of whether eligible for follow up and of care outcome.

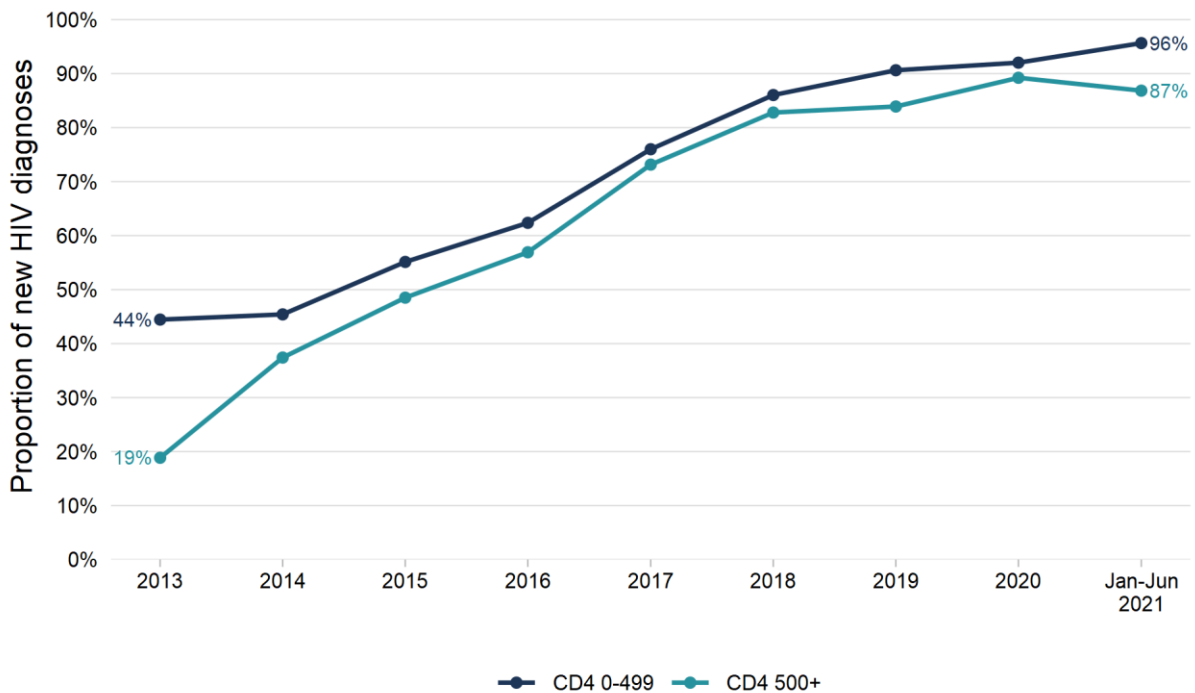
**Figure 40: Time to ART for NSW residents newly diagnosed in January 2013 to June 2021**



**Comment on Figure 40**

- Of the 109 people newly diagnosed during January to June 2021 and followed up six months post diagnosis, 47% initiated ART within two weeks, 91% within six weeks and 94% within six months of diagnosis. The median time to ART initiation was 15 days. Of the 103 on ART within six months of diagnosis, 93 (90%) were already virally suppressed (VL < 200 copies/mL) at six months follow up.

**Figure 41: CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection from January 2013 to June 2021 and % on ART within six weeks of diagnosis**

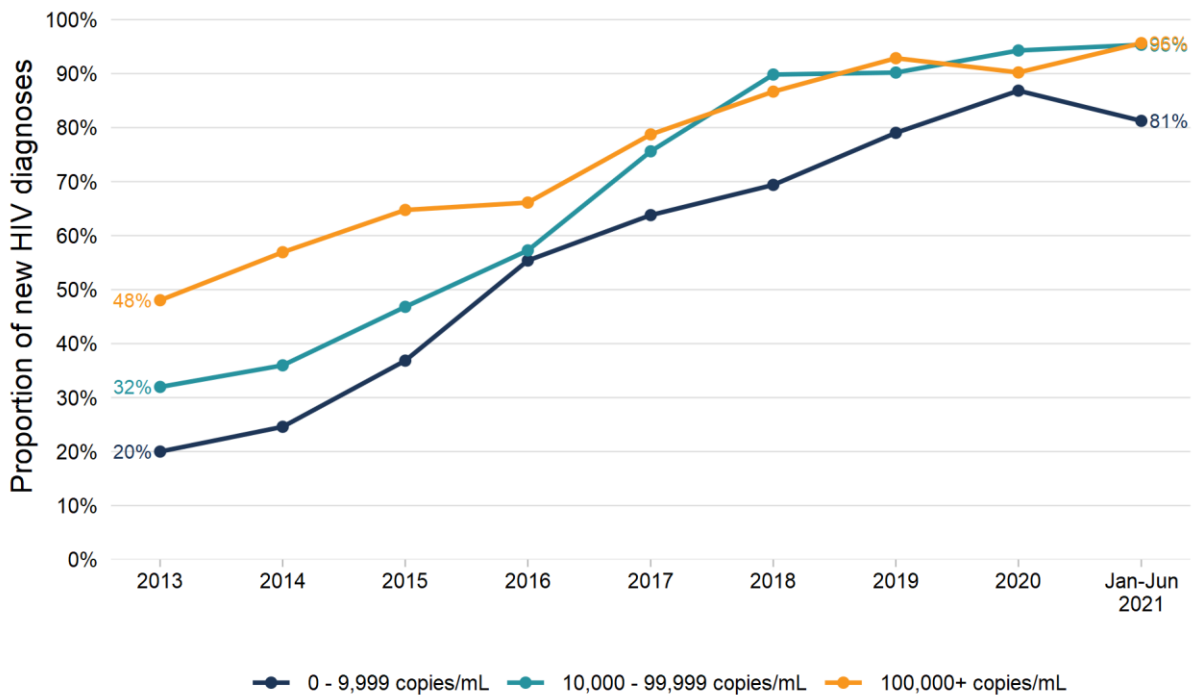


Note: excludes 60 new diagnoses with missing CD4 at diagnosis, some of whom had commenced ART within 6 months.

Comments on Figure 41

- The proportion of people newly diagnosed with a CD4 count of 0-499 cells/μL who commenced ART within six weeks of diagnosis was 44% of the 2013, 45% of the 2014, 55% of the 2015, 62% of the 2016, 76% of the 2017, 86% of the 2018, 91% of the 2019, 92% of the 2020 and 96% of the January to June 2021 new diagnoses.
- The proportion of people newly diagnosed with a CD4 count of 500 or over who commenced ART within six weeks of diagnosis was 19% of the 2013, 37% of the 2014, 49% of the 2015, 57% of the 2016, 73% of the 2017, 83% of the 2018, 84% of the 2019, 89% of the 2020 and 87% of the January to June 2021 new diagnoses.

**Figure 42: HIV viral load at diagnosis of NSW residents notified with newly diagnosed HIV infection from January 2013 to June 2021 and % on ART within six weeks of diagnosis**



Note: excludes 66 new diagnoses with missing HIV VL at diagnosis, some of whom had commenced ART within 6 months.

Comments on Figure 42

- Of people with a HIV VL of 0-9,999 copies/mL, 20% of the 2013, 25% of the 2014, 37% of the 2015, 55% of the 2016, 64% of the 2017, 69% of the 2018, 79% of the 2019, 87% of the 2020 and 81% of the January to June 2021 new diagnoses had commenced ART within six weeks of diagnosis.
- Of people with a HIV VL of 10,000-99,999 copies/mL, 32% of the 2013, 36% of the 2014, 47% of the 2015, 57% of the 2016, 76% of the 2017, 90% of the 2018, 90% of the 2019, 94% of the 2020 and 95% of the January to June 2021 new diagnoses had commenced ART within six weeks of diagnosis.
- Of people with a HIV VL of 100,000 or over, 48% of the 2013, 57% of the 2014, 65% of the 2015, 66% of the 2016, 79% of the 2017, 87% of the 2018, 93% of the 2019, 90% of the 2020 and 96% of the January to June 2021 new diagnoses had commenced ART within six weeks of diagnosis.

#### 4.4 How is transmitted drug resistance and HIV transmission monitored in NSW?

As part of the NSW HIV Prevention Revolution Partnership HIV sequences from routinely performed genotypic antiretroviral resistance testing are de-identified and linked to new HIV diagnoses. This enables the level of HIV drug resistance mutations from newly diagnosed people to be monitored over time, giving an estimate of the level of drug resistance that is being transmitted in the population. It is particularly important to monitor the level of transmitted resistance to each of the two antiretroviral drugs that are in PrEP (tenofovir (TDF) and emtricitabine (FTC)), as a virus with these drug mutations may result in PrEP failure.

Analysis of NSW HIV sequence data from 2004 to 2018 shows that transmitted drug resistance for all antiretroviral drugs has decreased during this time period from a peak of 19.7% in 2006 to 9.4% in 2018. Between 2015 – 2018 the most common were K103N (3.3%), T215S (2.0%), M41L (0.8%), and M184V (0.8%). For all sequences from newly diagnosed people in this time period (n=995), only one sequence was identified with high level resistance to TDF (K65R). In contrast eight sequences contained mutations conferring high level resistance to FTC (M184V/I), which represents an increase of 0.36% to 0.80% between 2012 to 2018.

Molecular epidemiological analysis of de-identified HIV sequences from newly diagnosed people is also undertaken to provide valuable information about HIV transmission in NSW to inform the public health response. When interpreting such analyses, it should be noted that detection of related infections is dependent on sequencing of virus soon after infection, as HIV is a virus that changes rapidly. Earlier diagnosis of HIV over time may increase the number of viruses found to be closely related. Data from 2013 to 2018 shows that almost two thirds of viruses from newly diagnosed people were part of a cluster. Such clusters of more than three sequences were not uncommon and have been increase in time and frequency (Di Giallonardo et al. J Int AIDS Soc 24:e25655; 2021).

## 5. Appendix A: Data Sources

### Notifications Data Sources

Name	Custodian	Availability	Details
Notifiable Conditions Information Management System (NCIMS)	Health Protection NSW, NSW Health	Quarterly	State wide coverage of HIV notifications received by NSW Health and their follow-up six months post diagnosis. Quarterly report restricted to notifications on NSW residents who are newly diagnosed with HIV. NCIMS contains de-identified epidemiological information including on: basic demographic data, diagnosis date, reasons for testing, CD4 count, HIV viral load (HIV VL), past testing history, risk exposure, retention in care and ART status six months post diagnosis. HIV surveillance forms available at: <a href="http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx">http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx</a>

### Prevention Data Sources

Name	Custodian	Availability	Details
EPIC-NSW Enrolment and Behavioural survey databases	The Kirby Institute, UNSW Australia	Quarterly	Demographic data on all EPIC-NSW participants. Data fields include: site, age, sex, sexuality, residence, country of birth.
ACCESS study database and EPIC-NSW Temporary Data Collection	The Kirby Institute, UNSW Australia, and Burnet Institute	Quarterly	Deidentified clinical data patients attending sexual health clinics, high caseload general practice clinics and hospital outpatients clinics, which includes details on patient consultations, demographics, behaviour, testing, diagnoses and treatment/prescriptions. ACCESS is a live and real-time database, which means that data are not always available from every service and it is possible for services to be introduced and discontinued over time. These changes may introduce slight variations from one reporting period to the next.
Sydney Gay Community Periodic Survey	Centre for Social Research in Health	Annually	Repeat cross-sectional survey of gay and bisexual men recruited at a range of gay community sites in Sydney, with online recruitment across NSW. Data fields include sexual, drug use and testing practices related to the transmission of HIV and other STIs among gay men in Sydney. Data is self-reported. Data is collected in February-March annually and published in the following quarter.
ACON Ending HIV online survey database	ACON	Ad-hoc	Survey respondents are self-selected gay identifying men, recruited mainly through advertisements undertaken by ACON on Facebook. Contains data knowledge and attitudes of respondents towards testing, prevention and treatment.

NSW Health NSP Minimum Data Set	Centre for Population Health, NSW Health	Quarterly	Units of injecting equipment distributed in NSW by pharmacies participating in the Pharmacy NSP Fitpack® scheme and by the Public NSP
NSW NSP Data Collection	Centre for Population Health, NSW Health	6-monthly	Number of public NSP outlets by type in NSW by LHD
NSW Needle and Syringe Program Enhanced Data Collection	The Kirby Institute, UNSW Australia	Annual	Annual Survey of NSP attendees. Provides NSP client demographic, behavioural and drug use data to strengthen the state-wide prevention approach, and inform LHDs in planning for NSP service delivery at the local level. Data is self-reported. Data is collected over a two week period in late Feb/early March. The reports are circulated to CEs and key stakeholders in August. (The report may be published for the first time in 2017 TBC)
Flux Study	The Kirby Institute, UNSW Australia	Quarterly	Online prospective observational study of gay and bisexual men recruited via social media and community organisations. Data fields include age, state of residence, sexuality, sexual behaviours, HIV risk behaviours, use of pre-exposure prophylaxis (PrEP), and HIV and STI testing. Data is self-reported. Between May 2020 and May 2021, data was collected weekly. From April 2021, data are collected at the end of each quarter.

### Testing Data Sources

Name	Custodian	Availability	Coverage
NSW Health denominator data project	Health Protection NSW, NSW Health	Quarterly	Number of tests in NSW
NSW Health HIV Strategy Monitoring Database	NSW Ministry of Health, NSW Health	Quarterly	Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy, includes aggregate testing data by priority population for relevant tests conducted within the LHD and community sites.
ACCESS Database	The Kirby Institute, UNSW Australia, and Burnet Institute	Quarterly	Deidentified clinical data patients attending sexual health clinics, high caseload general practice clinics and hospital outpatients clinics, which includes details on patient consultations, demographics, behaviour, testing, diagnoses and treatment/prescriptions. ACCESS is a live and real-time database, which means that data are not always available from every service and it is possible for services to be introduced and discontinued over time. These changes may introduce slight variations from one reporting period to the next.

Sydney Gay Community Periodic Survey	Centre for Social Research in Health	Annually Note: collected February-March	Repeated cross-sectional survey of gay and bisexual men recruited at a range of gay community sites in Sydney, with online recruitment across NSW. Data fields include sexual, drug use and testing practices related to the transmission of HIV and other STIs among gay men in Sydney. Data is self-reported. Data is collected in February-March annually and published in the following quarter.
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### Treatment Data Sources

Name	Custodian	Availability	Coverage
Pharmaceutical Benefits Schedule (PBS) Highly Specialised Drugs Programme data	Centre for Population Health, NSW Health	Quarterly Note: 6-week lag in data being provided to NSW Health.	PBS dispensing data for HIV treatments for all NSW residents from July 2014. This data is prepared by the Commonwealth Government for NSW Health and captures all HIV treatment dispensing in NSW through the PBS from a public hospital, private hospital or community pharmacies.
NSW Health HIV Strategy Monitoring Database	NSW Ministry of Health, NSW Health	Quarterly	Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy, includes summarised data on treatment coverage among patients diagnosed with HIV who are 'in care'.
ACCESS Database	The Kirby Institute, UNSW Australia, and Burnet Institute	6-month	Deidentified clinical data patients attending sexual health clinics, high caseload general practice clinics and hospital outpatients clinics, which includes details on patient consultations, demographics, behaviour, testing, diagnoses and treatment/prescriptions. ACCESS is a live and real-time database, which means that data are not always available from every service and it is possible for services to be introduced and discontinued over time. These changes may introduce slight variations from one reporting period to the next.
Notifiable Conditions Information Management System (NCIMS)	Health Protection NSW, NSW Health	Quarterly	State wide coverage/representation of HIV notifications received by NSW Health under public health legislation and of their follow up six months post diagnosis. Quarterly report restricted to notifications on people who are NSW residents and who are newly diagnosed with HIV. NCIMS contains de-identified epidemiological information on people notified with HIV infection including on: basic demographic data, diagnosis date, reasons for testing, CD4 count, HIV viral load (HIV VL), past testing history, risk exposure, retention in care and ART status six months post diagnosis. HIV surveillance forms available at: <a href="http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx">http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx</a>

## 6. Appendix B: Characteristics of NSW residents notified with newly diagnosed HIV infection 1981 to 2021 (continues over page); data extracted from NCIMS, HPNSW, 16 February 2022.

Case characteristics	2011 N (%)	2012 N (%)	2013 N (%)	2014 N (%)	2015 N (%)	2016 N (%)	2017 N (%)	2018 N (%)	2019 N (%)	2020 N (%)	2021 N (%)	1981- 2021 N (%)
<b>Total (ALL)</b>	<b>333</b>	<b>414</b>	<b>354</b>	<b>343</b>	<b>349</b>	<b>318</b>	<b>312</b>	<b>277</b>	<b>281</b>	<b>207</b>	<b>178</b>	<b>19227</b>
<b>Gender</b>												
Male	312 (93.7%)	377 (91.1%)	324 (91.5%)	317 (92.4%)	320 (91.7%)	292 (91.8%)	282 (90.4%)	254 (91.7%)	252 (89.7%)	182 (87.9%)	165 (92.7%)	17662 (91.9%)
Female	21 (6.3%)	36 (8.7%)	27 (7.6%)	25 (7.3%)	28 (8.0%)	22 (6.9%)	24 (7.7%)	20 (7.2%)	23 (8.2%)	21 (10.1%)	12 (6.7%)	1254 (6.5%)
Transgender	0 (0.0%)	1 (0.2%)	3 (0.8%)	1 (0.3%)	1 (0.3%)	4 (1.3%)	6 (1.9%)	3 (1.1%)	6 (2.1%)	4 (1.9%)	1 (0.6%)	63 (0.3%)
Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	248 (1.3%)
<b>Aboriginal or Torres Strait Islander person status</b>												
Aboriginal person	5 (1.5%)	13 (3.1%)	8 (2.3%)	7 (2.0%)	7 (2.0%)	9 (2.8%)	8 (2.6%)	11 (4.0%)	6 (2.1%)	5 (2.4%)	1 (0.6%)	222 (1.2%)
Torres Strait Islander	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	1 (0.4%)	0 (0.0%)	0 (0.0%)	2 (0.0%)
Non-Aboriginal person	325 (97.6%)	394 (95.2%)	344 (97.2%)	331 (96.5%)	339 (97.1%)	308 (96.9%)	304 (97.4%)	266 (96.0%)	274 (97.5%)	200 (96.6%)	176 (98.9%)	12122 (63.0%)
Not stated	3 (0.9%)	7 (1.7%)	2 (0.6%)	5 (1.5%)	3 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (1.0%)	1 (0.6%)	6881 (35.8%)
<b>Age in years at diagnosis</b>												
0-4	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40 (0.2%)
5-9	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	25 (0.1%)
10-14	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	36 (0.2%)
15-19	6 (1.8%)	9 (2.2%)	8 (2.3%)	2 (0.6%)	6 (1.7%)	3 (0.9%)	5 (1.6%)	4 (1.4%)	4 (1.4%)	5 (2.4%)	0 (0.0%)	332 (1.7%)
20-24	35 (10.5%)	44 (10.6%)	37 (10.5%)	41 (12.0%)	45 (12.9%)	39 (12.3%)	29 (9.3%)	36 (13.0%)	29 (10.3%)	17 (8.2%)	10 (5.6%)	2310 (12.0%)
25-29	55 (16.5%)	78 (18.8%)	65 (18.4%)	51 (14.9%)	63 (18.1%)	61 (19.2%)	58 (18.6%)	60 (21.7%)	43 (15.3%)	46 (22.2%)	43 (24.2%)	3793 (19.7%)
30-34	65 (19.5%)	71 (17.1%)	48 (13.6%)	64 (18.7%)	62 (17.8%)	63 (19.8%)	57 (18.3%)	50 (18.1%)	67 (23.8%)	44 (21.3%)	36 (20.2%)	3831 (19.9%)
35-39	59 (17.7%)	64 (15.5%)	42 (11.9%)	45 (13.1%)	45 (12.9%)	48 (15.1%)	36 (11.5%)	29 (10.5%)	41 (14.6%)	22 (10.6%)	19 (10.7%)	3129 (16.3%)
40-44	46 (13.8%)	47 (11.4%)	45 (12.7%)	45 (13.1%)	32 (9.2%)	30 (9.4%)	38 (12.2%)	27 (9.7%)	30 (10.7%)	21 (10.1%)	18 (10.1%)	2311 (12.0%)
45-49	26 (7.8%)	38 (9.2%)	45 (12.7%)	30 (8.7%)	27 (7.7%)	32 (10.1%)	21 (6.7%)	23 (8.3%)	19 (6.8%)	16 (7.7%)	16 (9.0%)	1395 (7.3%)
50-54	25 (7.5%)	28 (6.8%)	24 (6.8%)	25 (7.3%)	28 (8.0%)	18 (5.7%)	19 (6.1%)	18 (6.5%)	19 (6.8%)	14 (6.8%)	8 (4.5%)	871 (4.5%)
55-59	10 (3.0%)	14 (3.4%)	22 (6.2%)	15 (4.4%)	13 (3.7%)	13 (4.1%)	16 (5.1%)	15 (5.4%)	13 (4.6%)	10 (4.8%)	14 (7.9%)	518 (2.7%)
60-64	2 (0.6%)	14 (3.4%)	6 (1.7%)	14 (4.1%)	15 (4.3%)	6 (1.9%)	17 (5.4%)	7 (2.5%)	4 (1.4%)	6 (2.9%)	6 (3.4%)	283 (1.5%)
65-69	2 (0.6%)	4 (1.0%)	9 (2.5%)	7 (2.0%)	7 (2.0%)	4 (1.3%)	5 (1.6%)	4 (1.4%)	7 (2.5%)	6 (2.9%)	5 (2.8%)	162 (0.8%)
70 or over	2 (0.6%)	3 (0.7%)	2 (0.6%)	3 (0.9%)	6 (1.7%)	0 (0.0%)	10 (3.2%)	4 (1.4%)	5 (1.8%)	0 (0.0%)	3 (1.7%)	103 (0.5%)
Unknown	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	88 (0.5%)



Case characteristics	2011 N (%)	2012 N (%)	2013 N (%)	2014 N (%)	2015 N (%)	2016 N (%)	2017 N (%)	2018 N (%)	2019 N (%)	2020 N (%)	2021 N (%)	1981- 2021 N (%)
<b>Total (ALL)</b>	<b>333</b>	<b>414</b>	<b>354</b>	<b>343</b>	<b>349</b>	<b>318</b>	<b>312</b>	<b>277</b>	<b>281</b>	<b>207</b>	<b>178</b>	<b>19227</b>
<b>Reported HIV risk exposure</b>												
<i>MSM</i>	270 (81.1%)	322 (77.8%)	265 (74.9%)	254 (74.1%)	264 (75.6%)	237 (74.5%)	215 (68.9%)	194 (70.0%)	190 (67.6%)	135 (65.2%)	121 (68.0%)	12216 (63.5%)
<i>MSM who injects drugs</i>	11 (3.3%)	15 (3.6%)	16 (4.5%)	20 (5.8%)	21 (6.0%)	25 (7.9%)	17 (5.4%)	25 (9.0%)	26 (9.3%)	20 (9.7%)	14 (7.9%)	655 (3.4%)
<i>HET</i>	41 (12.3%)	59 (14.3%)	61 (17.2%)	50 (14.6%)	52 (14.9%)	48 (15.1%)	68 (21.8%)	51 (18.4%)	56 (19.9%)	40 (19.3%)	35 (19.7%)	1898 (9.9%)
<i>PWID</i>	8 (2.4%)	9 (2.2%)	7 (2.0%)	8 (2.3%)	4 (1.1%)	4 (1.3%)	6 (1.9%)	4 (1.4%)	5 (1.8%)	3 (1.4%)	4 (2.2%)	590 (3.1%)
<i>Blood disorder, blood or tissue recipient</i>	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	0 (0.0%)	278 (1.4%)
<i>Vertical transmission</i>	0 (0.0%)	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	1 (0.3%)	2 (0.6%)	0 (0.0%)	0 (0.0%)	1 (0.5%)	0 (0.0%)	55 (0.3%)
<i>Other</i>	1 (0.3%)	2 (0.5%)	1 (0.3%)	4 (1.2%)	3 (0.9%)	1 (0.3%)	1 (0.3%)	1 (0.4%)	3 (1.1%)	2 (1.0%)	1 (0.6%)	57 (0.3%)
<i>Unknown</i>	2 (0.6%)	7 (1.7%)	3 (0.8%)	6 (1.7%)	4 (1.1%)	2 (0.6%)	3 (1.0%)	2 (0.7%)	1 (0.4%)	5 (2.4%)	3 (1.7%)	3478 (18.1%)
<b>LHD of residence</b>												
<i>South Eastern Sydney</i>	124 (37.2%)	150 (36.2%)	126 (35.6%)	112 (32.7%)	129 (37.0%)	84 (26.4%)	92 (29.5%)	85 (30.7%)	73 (26.0%)	50 (24.2%)	53 (29.8%)	5951 (31.0%)
<i>Sydney</i>	89 (26.7%)	113 (27.3%)	92 (26.0%)	84 (24.5%)	86 (24.6%)	95 (29.9%)	71 (22.8%)	63 (22.7%)	61 (21.7%)	36 (17.4%)	33 (18.5%)	3334 (17.3%)
<i>Northern Sydney</i>	24 (7.2%)	24 (5.8%)	25 (7.1%)	17 (5.0%)	24 (6.9%)	20 (6.3%)	29 (9.3%)	23 (8.3%)	23 (8.2%)	19 (9.2%)	13 (7.3%)	1108 (5.8%)
<i>Western Sydney</i>	31 (9.3%)	25 (6.0%)	27 (7.6%)	26 (7.6%)	20 (5.7%)	24 (7.5%)	27 (8.7%)	24 (8.7%)	30 (10.7%)	25 (12.1%)	21 (11.8%)	874 (4.5%)
<i>South Western Sydney</i>	18 (5.4%)	30 (7.2%)	28 (7.9%)	30 (8.7%)	31 (8.9%)	31 (9.7%)	25 (8.0%)	21 (7.6%)	34 (12.1%)	28 (13.5%)	22 (12.4%)	817 (4.2%)
<i>Hunter New England</i>	11 (3.3%)	14 (3.4%)	17 (4.8%)	27 (7.9%)	17 (4.9%)	15 (4.7%)	7 (2.2%)	17 (6.1%)	23 (8.2%)	19 (9.2%)	7 (3.9%)	574 (3.0%)
<i>Nepean Blue Mountains</i>	4 (1.2%)	5 (1.2%)	3 (0.8%)	6 (1.7%)	6 (1.7%)	2 (0.6%)	6 (1.9%)	5 (1.8%)	4 (1.4%)	5 (2.4%)	8 (4.5%)	290 (1.5%)
<i>Illawarra Shoalhaven</i>	5 (1.5%)	9 (2.2%)	7 (2.0%)	6 (1.7%)	7 (2.0%)	8 (2.5%)	10 (3.2%)	7 (2.5%)	6 (2.1%)	4 (1.9%)	2 (1.1%)	262 (1.4%)
<i>Northern NSW</i>	11 (3.3%)	5 (1.2%)	5 (1.4%)	7 (2.0%)	8 (2.3%)	5 (1.6%)	10 (3.2%)	9 (3.2%)	10 (3.6%)	2 (1.0%)	7 (3.9%)	246 (1.3%)
<i>Central Coast</i>	4 (1.2%)	10 (2.4%)	5 (1.4%)	8 (2.3%)	5 (1.4%)	11 (3.5%)	12 (3.8%)	5 (1.8%)	2 (0.7%)	5 (2.4%)	2 (1.1%)	234 (1.2%)
<i>Mid North Coast</i>	4 (1.2%)	3 (0.7%)	6 (1.7%)	7 (2.0%)	6 (1.7%)	2 (0.6%)	4 (1.3%)	3 (1.1%)	2 (0.7%)	4 (1.9%)	1 (0.6%)	163 (0.8%)
<i>Western NSW</i>	3 (0.9%)	7 (1.7%)	5 (1.4%)	2 (0.6%)	2 (0.6%)	5 (1.6%)	5 (1.6%)	3 (1.1%)	3 (1.1%)	4 (1.9%)	3 (1.7%)	143 (0.7%)
<i>Murrumbidgee-Albury</i>	2 (0.6%)	5 (1.2%)	3 (0.8%)	3 (0.9%)	4 (1.1%)	9 (2.8%)	6 (1.9%)	4 (1.4%)	2 (0.7%)	4 (1.9%)	0 (0.0%)	117 (0.6%)
<i>Southern NSW</i>	2 (0.6%)	8 (1.9%)	4 (1.1%)	4 (1.2%)	2 (0.6%)	6 (1.9%)	3 (1.0%)	3 (1.1%)	2 (0.7%)	1 (0.5%)	2 (1.1%)	78 (0.4%)
<i>Far West</i>	0 (0.0%)	2 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.4%)	2 (0.7%)	0 (0.0%)	1 (0.6%)	12 (0.1%)
<i>Unknown or other</i>	1 (0.3%)	4 (1.0%)	1 (0.3%)	4 (1.2%)	2 (0.6%)	1 (0.3%)	5 (1.6%)	4 (1.4%)	4 (1.4%)	1 (0.5%)	3 (1.7%)	5024 (26.1%)

## 7. Appendix C: Ending HIV Seven Statements Evaluation, ACON 2013-2021

Percentage of respondents who **strongly agree** or **agree** with the statements below.

	Feb 2013	May 2013	Nov 2013	Apr 2014	Dec 2014	Apr 2015	Mar 2016	Sep 2016	Apr 2017	Mar 2018	Mar 2019	Dec 2019	Mar 2020	Mar 2021 <sup>4</sup>
Everything has changed, we can now dramatically reduce HIV transmission	48%	59%	59%	67%	61%	71%	77%	86%	77%	87%	85%	87%	89%	80%
Now more than ever, gay men need to know their HIV status	81%	85%	86%	90%	89%	91%	92%	92%	91%	92%	92%	92%	92%	89%
Sexually active gay men should take an HIV test four times a year <sup>1</sup>	88%	87%	92%	93%	89%	92%	93%	96%	94%	95%	94%	85%	88%	85%
HIV treatments now offer increased health benefits and fewer side effects	65%	66%	67%	73%	69%	75%	77%	78%	71%	77%	74%	73%	72%	78%
HIV treatments significantly reduce the risk of passing on HIV	33%	42%	50%	64%	59%	69%	73%	83%	78%	84%	83%	85%	87%	83%
Early HIV treatment is better for your health and can help protect your sex partners <sup>2</sup>	74%	80%	89%	91%	92%	93%	93%	95%	93%	95%	93%	-	-	-
Condoms continue to be an effective way of preventing HIV transmission <sup>3</sup>	95%	92%	92%	91%	91%	85%	94%	94%	94%	94%	90%	90%	93%	91%
PrEP, if taken as prescribed, is an effective way of preventing HIV transmission	-	-	-	-	-	-	66%	78%	74%	83%	81%	78%	80%	85%

\* In March 2016 this statement was changed to reflect advances in bio-medical prevention. On all prior surveys the statement was 'condoms continue to be the most effective way of preventing HIV transmission'.

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**Survey methodology:**

Each of the five online evaluation surveys was developed and analysed by an independent consultant using the Survey Monkey online tool. Each survey was run over a one to three week period. In addition to 30 to 40 mainly multiple choice questions, with a few opportunities for respondents to provide comments, respondents were provided with a set of seven statements and asked to indicate whether they agree or disagree with the statements (using a five point scale)

**Recruitment methodology:**

Respondents were mainly recruited through the placement of survey advertisements on Facebook undertaken by ACON.

**Survey objectives:**

The online evaluation survey focussed on measuring a) advertisement awareness, b) engagement with campaign components, and c) self-reported impact and getting answers to seven statements.

**8. Appendix D: NSW HIV Data Advisory Group members**

Meredith Claremont	Advisory Group Chair, Centre for Population Health, NSW Ministry of Health
Carolyn Murray	Centre for Population Health, NSW Ministry of Health
Matthew Craig	Centre for Population Health, NSW Ministry of Health
Cherie Power	Advisory Group Secretariat, Centre for Population Health, NSW Ministry of Health
Shawn Clackett	Centre for Population Health, NSW Ministry of Health
Yanni Sun	Centre for Population Health, NSW Ministry of Health
Jeremy McAnulty	Health Protection NSW, NSW Health
Christine Selvey	Health Protection NSW, NSW Health
Steven Nigro	Health Protection NSW, NSW Health
Christopher Bourne	STIPU, Centre for Population Health, NSW Ministry of Health
Bill Whittaker	HIV policy and strategy advisor
Andrew Grulich	The Kirby Institute, University of NSW
Rebecca Guy	The Kirby Institute, University of NSW
Phillip Keen	The Kirby Institute, University of NSW
Prital Patel	The Kirby Institute, University of NSW
Benjamin Bavinton	The Kirby Institute, University of NSW
Garrett Prestage	The Kirby Institute, University of NSW
Mohamed A. Hammoud	The Kirby Institute, University of NSW
Martin Holt	Centre for Social Research in Health, University of NSW
Nicolas Parkhill	ACON
Barbara Luisi	Multicultural HIV and Hepatitis Service (MHAHS)
Jane Costello	Positive Life
Neil Fraser	Positive Life
Mary Harrod	The NSW Users and AIDS Association (NUAA)

## 9. Appendix E: Postcodes in each area by proportion of male population estimated to be gay

Estimated proportion of adult male population that is gay	Postcode	Suburb(s)
≥20%	2010	Darlinghurst, Surry Hills
	2043	Erskineville
	2015	Beaconsfield, Eveleigh, Alexandria
	2011	Rushcutters Bay, Woolloomooloo, Elizabeth Bay, Potts Point
	2016	Redfern
	2042	Newtown, Enmore
5-19%	2050	Missenden Road, Camperdown
	2017	Waterloo, Zetland
	2044	Tempe, St Peters, Sydenham
	2021	Paddington, Moore Park, Centennial Park
	2008	Chippendale, Darlington
	2797	Garland, Lyndhurst
	2048	Stanmore, Westgate
	2049	Petersham, Lewisham
	2009	Pymont
	2027	Darling Point, Edgecliff, Point Piper
	2205	Wolli Creek, Turrella, Arncliffe
	2037	Forest Lodge, Glebe
	2025	Woollahra
	2204	Marrickville, Marrickville South
	2203	Dulwich Hill
	2028	Double Bay
	2038	Annandale
	2020	Mascot
	2040	Leichhardt, Lilyfield
	2000	The Rocks, Sydney, Millers Point, Haymarket, Barangaroo
	2130	Summer Hill
	2296	Islington
	2007	Ultimo, Broadway
2039	Rozelle	
2022	Queens Park, Bondi Junction	
2060	Waverton, North Sydney, McMahon's Point, Lavender Bay	
<5%	All others	All other postcodes