NSW HIV Strategy 2016 – 2020

Quarter 4 & Annual 2018

Data Report

The NSW HIV Strategy 2016-2020

The *NSW HIV Strategy 2016-2020* continues the NSW Government's commitment to achieving the virtual elimination of HIV transmission in NSW by 2020, and sustaining the virtual elimination of HIV transmission in people who inject drugs, sex workers and from mother to child. The Strategy refines our efforts across prevention, testing and treatment, building on the actions that have proven successful in implementing the *NSW HIV Strategy 2012-2015* and prioritising the additional activities needed to end HIV transmission in NSW, including expanding access to PrEP for people at a high risk of HIV and the rapid initiation of HIV treatment.

To achieve this goal the Strategy focuses on:

- Sustaining the central role of condoms in preventing the transmission of HIV
- Reducing sharing of injecting equipment among people who inject drugs by 25%
- Assessing all people attending public sexual health services and high caseload general practices for PrEP eligibility
- Facilitating testing of all recent sexual and injecting partners of people newly diagnosed with HIV
- Increasing the frequency of HIV testing in priority populations in accordance with risk
- Strengthening service integration and models of care to deliver HIV testing in our priority settings
- Strengthening systems and service integration for HIV prevention, diagnosis and management for Aboriginal people at risk
- Increasing the proportion of people with diagnosed HIV on ART to 95%
- Ensuring 90% of people newly diagnosed with HIV are on ART within 6 weeks of diagnosis in 2016 and to further reduce this timeframe over the life of the Strategy
- Further strengthening systems for timely collection and reporting of data to monitor progress, report outcomes and determine additional focus

The Strategy identifies the range of key settings needed for action including publicly funded sexual health services, general practice and primary care, Aboriginal Community Controlled Health Services, NSW needles and syringe program outlets, antenatal care services, drug and alcohol services, mental health services and emergency departments.

A range of data sources are monitored and reported against via this quarterly data report, to monitor progress against the Strategy goals and targets

Key messages

New HIV diagnoses decreased in NSW in 2018

In 2018, 17% fewer NSW residents were diagnosed with HIV than the average of the previous five years. The number of notifications with evidence that infection occurred in the year prior to diagnosis decreased by 25% compared to the average of the previous five years. The decline in early stage HIV infections, in a setting of high testing, suggests a decrease in HIV transmissions in 2018.

However, there were 86 new HIV diagnoses in the last quarter of 2018. This is an increase compared to recent quarters, and similar to the average of the same period for the previous five years. The increase was in both Australian and overseas-born men, particularly Australian-born men with evidence of early stage infection. More data from up-coming quarters are needed to determine whether or not the increases in quarter 4 2018 are sustained, or whether the HIV notifications revert to the levels seen earlier in 2018.

Notifications in Australian born men who have sex with men (MSM) fell in 2018, but not in overseas born MSM

The number of new HIV diagnoses in Australian born MSM in 2018 (95) was 33% less than the average of the previous five years. However, the number of new notifications (121) in overseas-born MSM in 2018 was just 3% less than the average of the previous five years. Thirty-nine per cent (47) of overseas born MSM diagnosed with HIV in 2018 had late or advanced stage disease, a 33% increase compared to the previous five year average. This may reflect better detection of long-standing infections due to increased screening of this population group.

NSW continues to demonstrate success in treatment uptake

The linear trend of decreases in the time from HIV diagnosis to treatment initiation continued in the first six months of 2018. The proportion of people diagnosed with HIV in January to June 2018 who commenced treatment within six weeks of diagnosis was 83%. Anti-retrorviral treatment (ART) uptake within 2 weeks of diagnosis increased to 33% among people diagnosed in this period from 22% among those diagnosed in 2017. The median number of days to ART uptake among those diagnosed between January and June 2018 was 21 days, a significant decline from the median of 45 days in 2013.

NSW Health continues to focus on PrEP uptake

NSW Health continues to ensure that PrEP uptake by those at high risk of HIV infection remains high to sustain and further reduce HIV transmission.

Between 1 April and 30 September 2018, 4,771 NSW residents accessed HIV pre-exposure prophylaxis (PrEP) through the PBS. This number is consistent with the estimate of how many EPIC-NSW participants would have needed PrEP by 30 September 2018 as they ceased accessing PrEP via the EPIC-NSW trial.

Following the PBS listing of PrEP in April 2018, the EPIC-NSW PrEP trial is gradually closing. The last EPIC-NSW participants received their final three months supply of study PrEP in November 2018, and will be transitioning off the study in quarter 1 2019.

When the main source of PrEP in NSW was the EPIC-NSW trial, NSW Health had reliable and comprehensive information on PrEP access across the state. Pharmaceutical Benefits Scheme data on PrEP prescriptions is reliable, but not comprehensive, as an unknown number of men are importing PrEP online from overseas. NSW Health is working with partners to identify new methods of measuring PrEP use.

NSW Health continues to strengthen efforts in HIV prevention

NSW continues to focus on reducing HIV infections in overseas-born MSM. As part of this response, NSW Health is coordinating state-wide activities in HIV prevention and testing for international students. Focused on university and English language school students, this work links diverse stakeholders, including health services providers, local councils, university health services, researchers, non-government advocacy and health organisations, and student health insurance providers to identify gaps, and coordinate appropriate responses.

Key data

HIV INFECTIONS	Target group	Oct-Dec 2018	Compared with Oct-Dec 2013-2017 average
Number of NSW residents newly diagnosed	All new diagnoses	86	Similar (av. n=86.2)
	MSM	62	6% less (av. n=66.0)
	Australian-born MSM	30	18% less (av. n=36.8)
	Overseas-born MSM	32	10% more (av. n=29.2)
	Heterosexuals	19	23% more (av. n=15.4)
Number of new diagnoses with evidence of early stage infection	All new diagnoses	33	9% less (av. n=36.2)
	MSM	29	9% less (av. n=32.0)
	Australian-born MSM	18	6% less (av. n=19.2)
	Overseas-born MSM	11	14% less (av. n=12.8)
Number all new diagnoses with evidence of late diagnosis	All new diagnoses	34	5% more (av. n=32.4)
PREVENT	**Target group**	**Apr 2018 –Sep 2018**	
Number of people receiving PrEP through PBS	People in NSW at high risk of HIV infection	4,771	
TEST	**Target group**	**Oct–Dec 2018**	**Compared with Oct–Dec 2017**
Number of HIV serology tests performed in NSW	All	144,460	6% more (n=136,848)
Number of HIV tests performed in NSW public sexual health clinics.	All	13,447	1.2% more (n=13,286)
	Identifying as MSM	8,284	10.5% less (n=9,259)
Number of DBS tests (Nov 2016 - Dec 2018)		1343 (6 HIV positive)	
TREAT	**Target group**	**Jul–Sep 2018**	**Target**
Proportion of patients with diagnosed HIV infection in care, who were on treatment	Sexual Health and HIV Clinic attendees	98%	95%
	Select high and medium caseload general practices	98%	95%
Proportion of NSW residents newly diagnosed with HIV who initiated ART within four and six weeks of diagnosis	Newly diagnosed Jan-Jun 2018 (n=131)	64% < 4 weeks 83% < 6 weeks	>90%
Proportion of NSW residents newly diagnosed who were reported to be virally supressed (VL < 200 copies/mL) at 6-month follow-up	NSW residents Jan-Jun 2018 (n=131)	88%	100%

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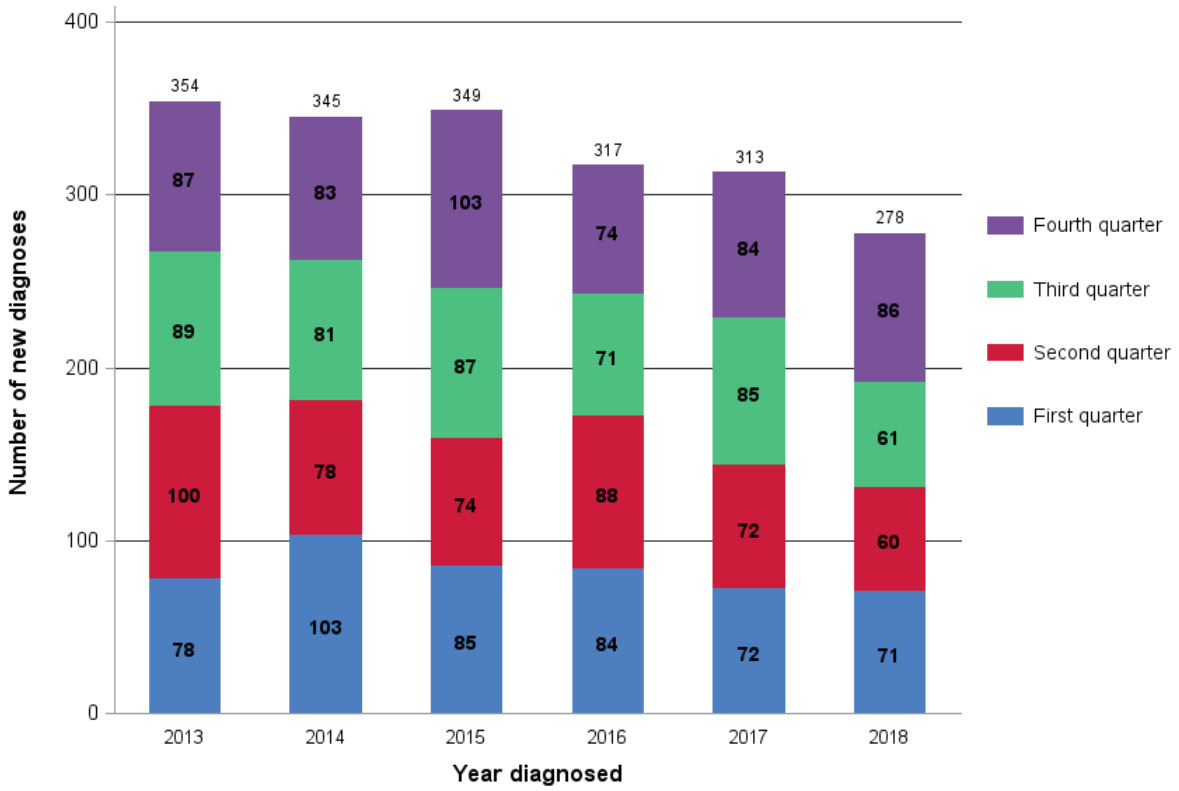
Glossary of Terms

ART	Antiretroviral therapy
CAIC	Condomless anal intercourse with casual partners
GBM	Gay and bisexual men
HIV	Human Immunodeficiency Virus
LHD	Local Health District
MSM	Men who have sex with men
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
SGCPS	Sydney Gay Community Periodic Survey
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 in 2013 to 2018



Source: Notifiable Conditions Information Management System, Health Protection NSW, out 8 February 2019

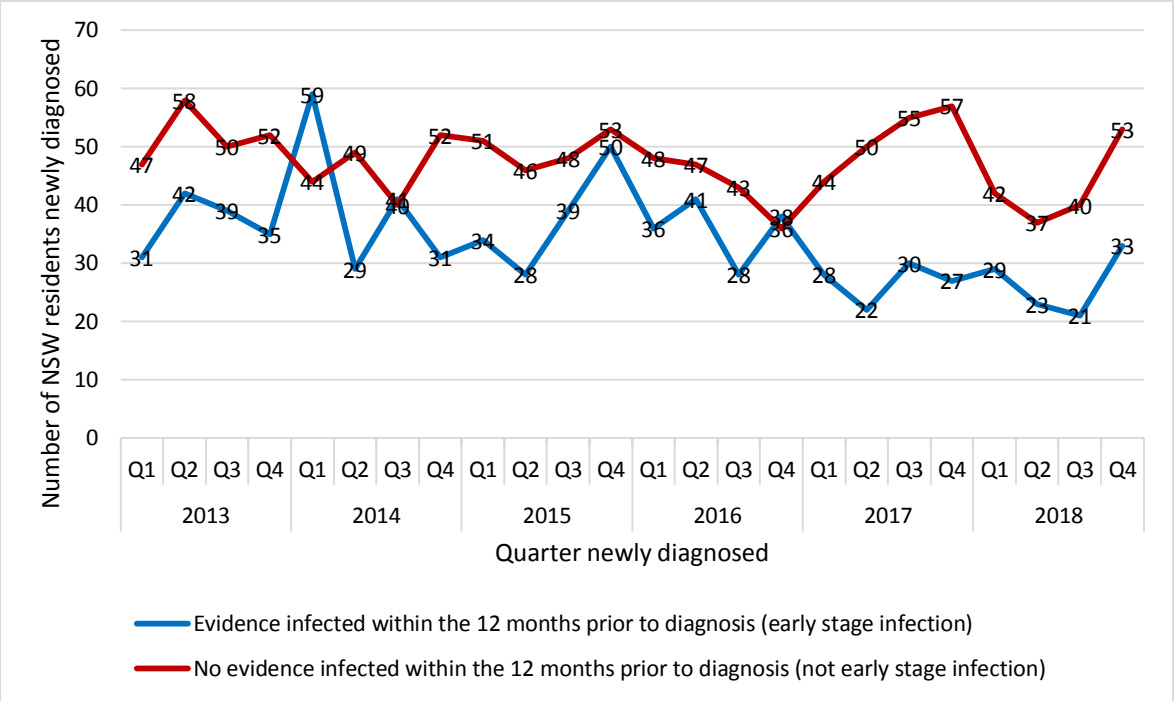
In October to December (Q4) 2018:

- Eighty-six NSW residents were notified to NSW Health with a newly diagnosed HIV infection, similar to the Q4 2013-2017 average of 86.2 (Figure 1).
- Of 86, 33 (38%) had evidence their infection was acquired within one year of diagnosis (early stage infection), 9% less than the Q4 2013-2017 average of 36.2 (Figure 2).
- Sixty-two (72%) were men who have sex with men (MSM) and nineteen (22%) acquired HIV via hetero-sex (Figure 3). This is 6% fewer MSM, but 23% more heterosexuals compared with the new diagnoses averages of Q4 2013-2017 (av. n MSM = 66.0; av. n heterosexuals = 15.4).

In 2018:

- Two hundred and seventy-eight NSW residents were notified to NSW Health with a newly diagnosed HIV infection, 17% fewer than the 2013-2017 average of 335.6 (Figure 1).
- Of 278, 106 (38%) had evidence of early stage infection, 25% less than the 2013-2017 average of 141.6 (Figure 2).
- Of 278, 216 (78%) were MSM, 52 (19%) acquired HIV via hetero-sex, five (<2%) via injecting drugs and five (<2%) via another exposure. This is 19% fewer MSM and 6% fewer heterosexuals compared with the new diagnoses averages of 2013-2017 (av. n MSM = 267.0; av. n heterosexuals = 55.6) (Figure 3).

Figure 2: New diagnoses 2013 to 2018 by evidence infected within 12 months of diagnosis



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

Figure 3: New diagnoses 2013 to 2018 by reported HIV risk exposure

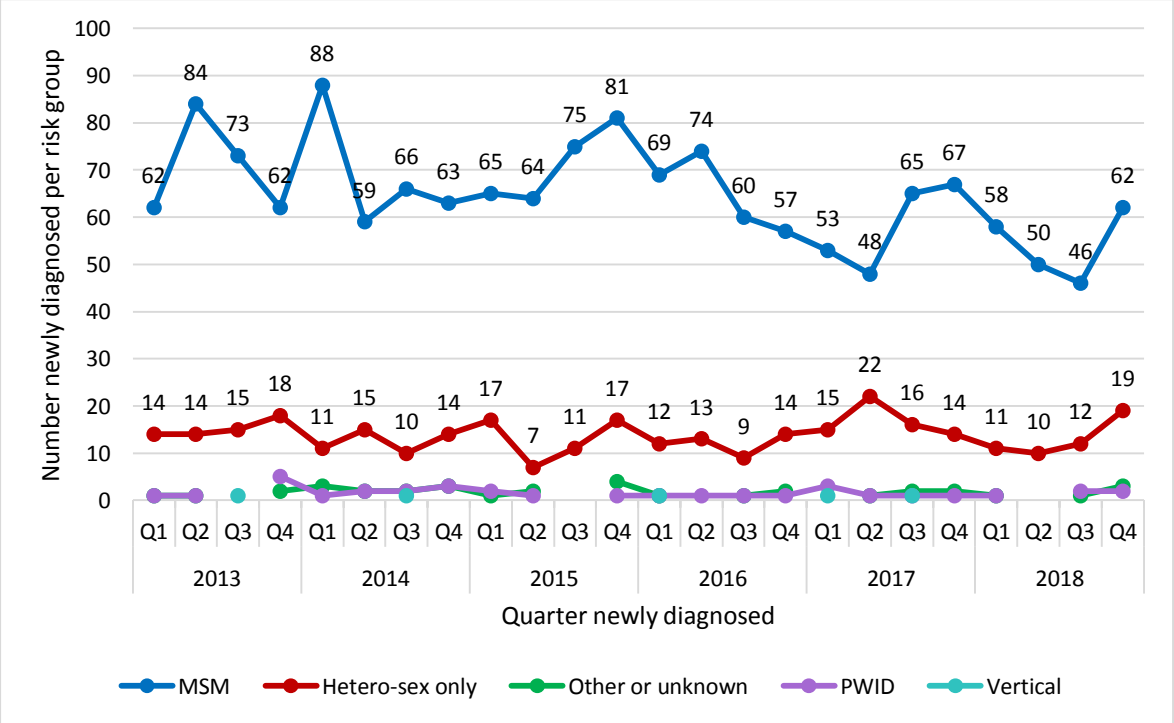
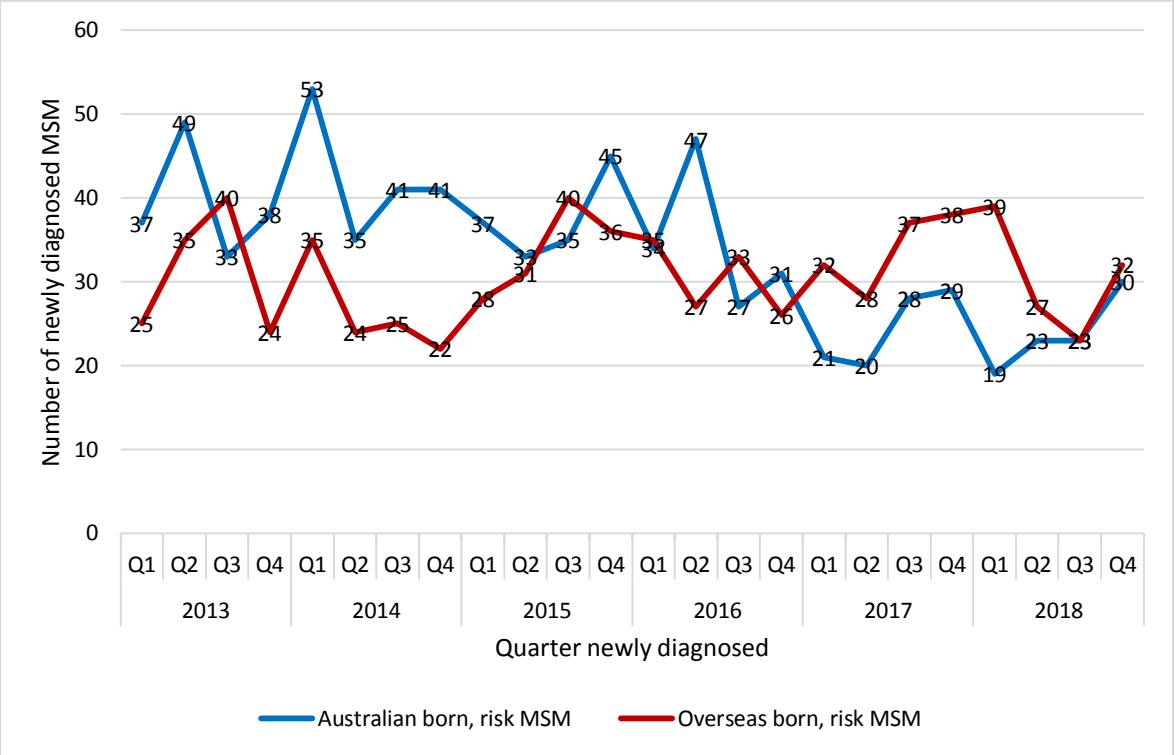


Figure 4: New diagnoses 2013 to 2018 in Australian versus overseas-born MSM



In October to December (Q4) 2018:

- Thirty of the 62 (48%) newly diagnosed MSM were Australian-born, which was 18% less than the average for Q4 2013-2017 (av. n=36.8) (Figure 4). Eighteen of 30 (60%) Australian-born newly diagnosed MSM had evidence their infection was acquired within one year of diagnosis (early stage infection), 6% less than the Q4 2013-2017 average of 19.2 (Figure 5).

- Thirty-two of the 62 (52%) newly diagnosed MSM were overseas-born, which was 10% more than the average for Q4 2013-2017 (av. n=29.2). Eleven of 32 (34%) overseas-born newly diagnosed MSM had evidence of early stage infection, 14% less than the Q4 2013-2017 average of 12.8 (Figure 6).

In 2018:

- Ninety-five of 216 (44%) newly diagnosed MSM were Australian-born, which was 33% less than the average for 2013-2017 (av. n=142.8) (Figure 4). Forty-nine of 95 (52%) Australian-born newly diagnosed MSM had evidence of early stage infection, 33% fewer than the 2013-2017 average (av. n=72.6) (Figure 5).

- One hundred and twenty-one of 216 (56%) MSM newly diagnosed were overseas-born, which was 3% less than the 2013-2017 average (av. n=124.2). Forty-four of 121 (36%) overseas-born newly diagnosed MSM had evidence of early stage infection, a 22% reduction when compared to the 2013-2017 average (av. n=56.6) (Figure 6). Of 44 overseas-born MSM newly diagnosed with early stage infection, 30 (68%) most likely acquired their infection in Australia.

Figure 5: New diagnoses 2013 to 2018 of Australian-born MSM by evidence infected within 12 months of diagnosis

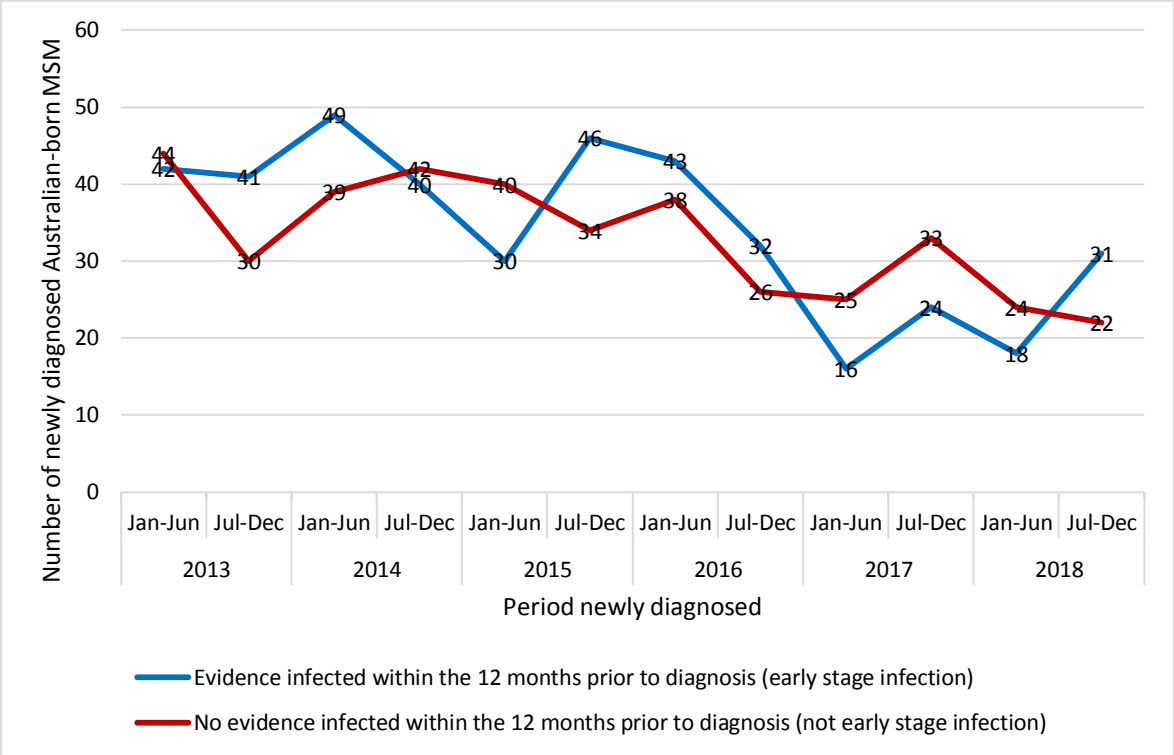


Figure 6: New diagnoses 2013 to 2018 of overseas-born MSM by evidence infected within 12 months of diagnosis

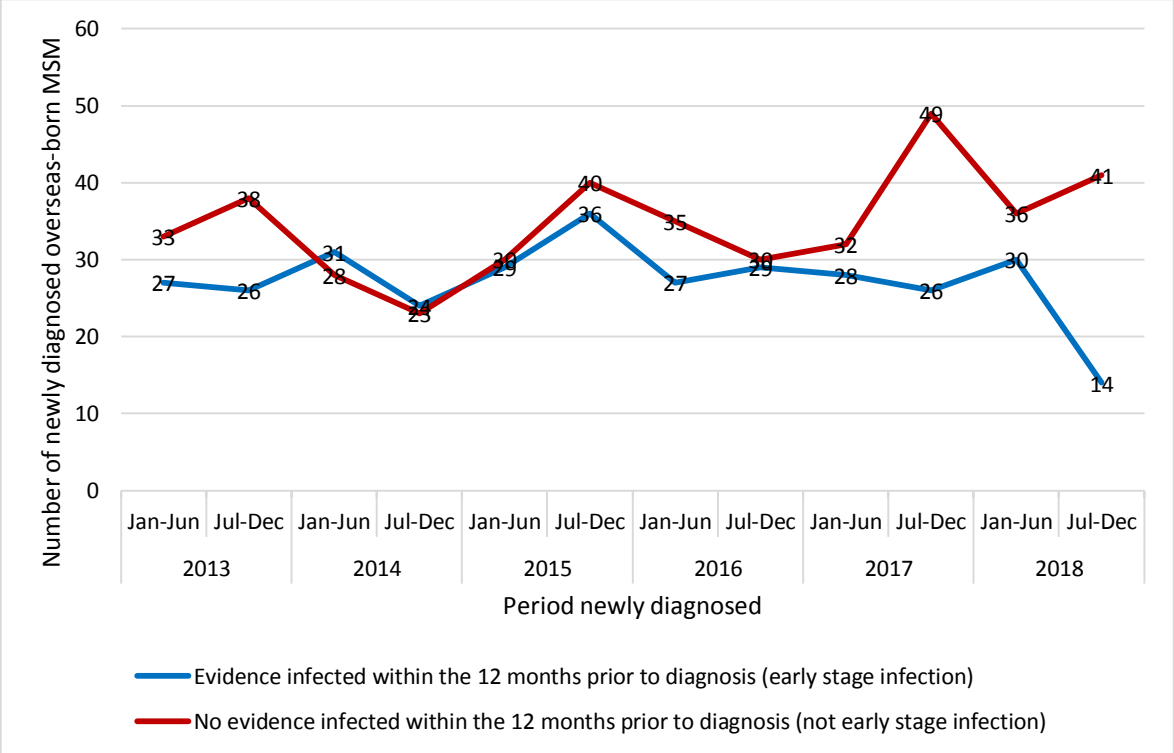
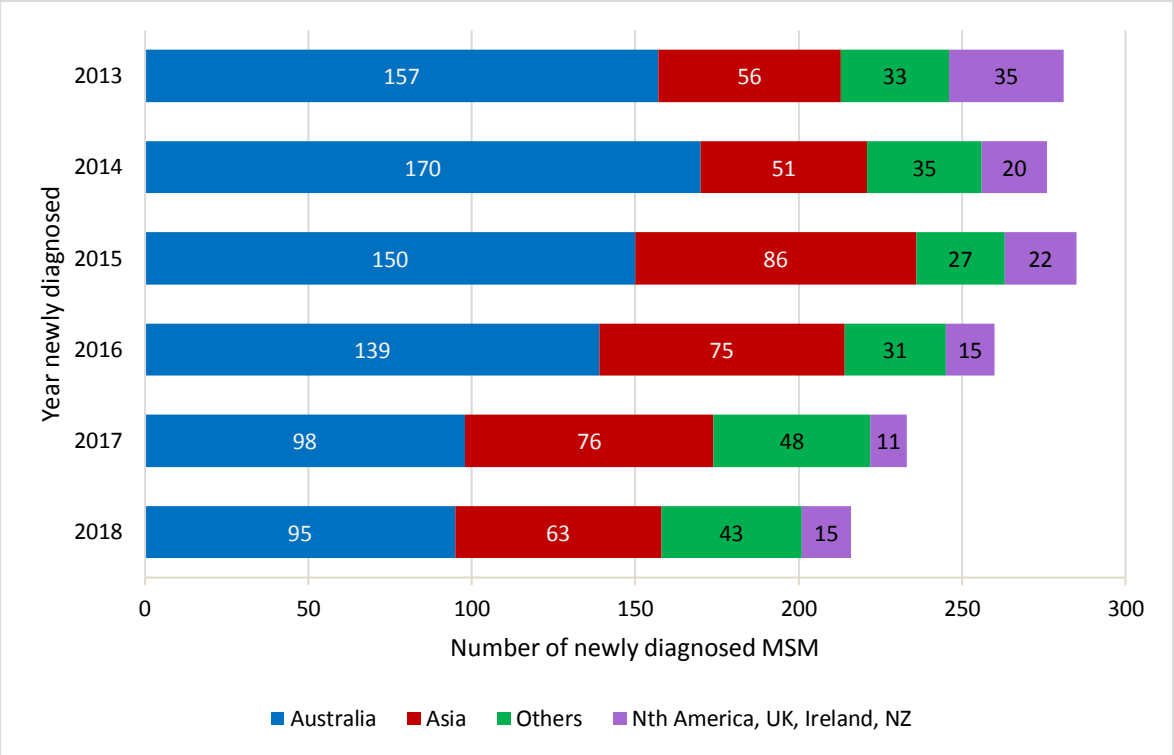


Figure 7: New diagnoses 2013 to 2018 of MSM by world area of birth



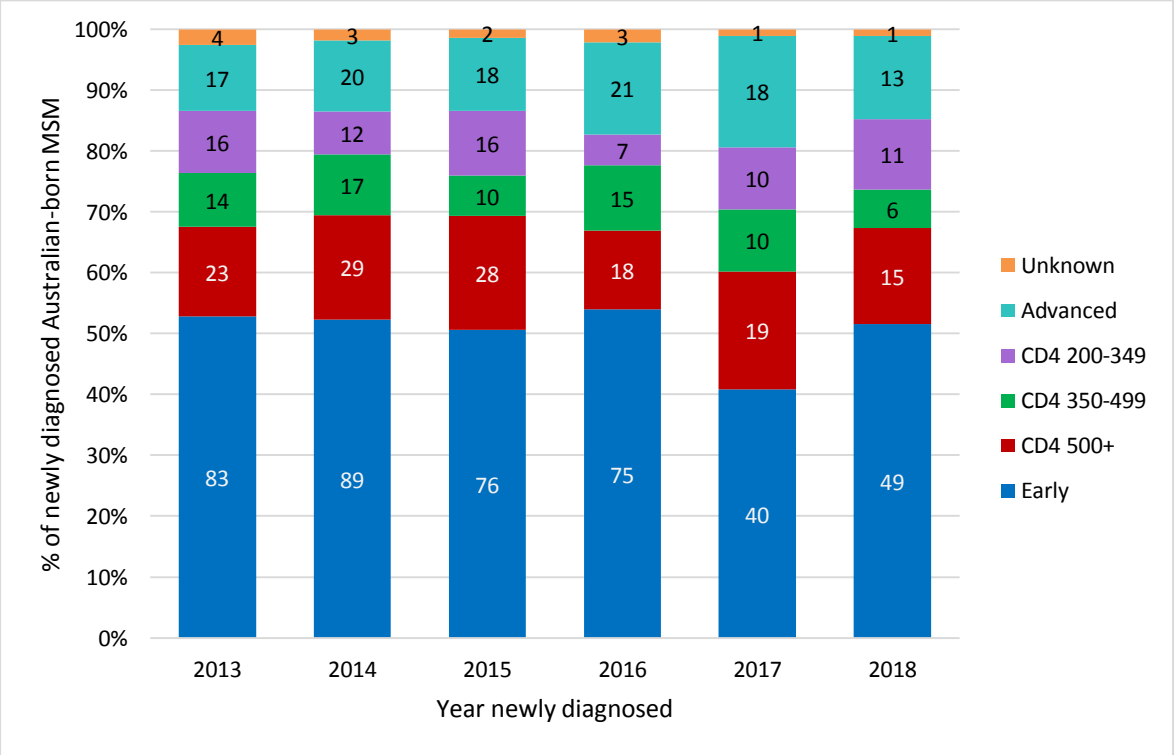
Comments on Figure 7

- Of 216 MSM newly diagnosed in NSW during 2018, 44% were born in Australia, 19% in South-East Asia, 11% in Southern & Central America, 7% each in North-East Asia and North-West Europe, and less than 5% in each of North Africa & Middle East, Oceania, Southern & Central Asia, Southern & Eastern Europe and Sub-Saharan Africa (Figure 7).

1.2 What is the stage of infection at diagnosis?

Stage of infection is reported here among Australian-born MSM (8a), overseas-born MSM (8b), and among all other groups other than MSM (8c). **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. Categories of **CD4 of 500+, 350-499, 200-349** exclude early and advanced stage categories. **Advanced stage** is a CD4 count less than 200 or an AIDS defining illness in absence of 'Early' criteria.

Figure 8a: Stage of infection among Australian-born MSM newly diagnosed during 2013 to 2018



Comment on Figures 8a-c

- Of 95 Australian-born newly diagnosed MSM in 2018, 49 (52%) had evidence of early stage infection, 33% less compared to the 2013-2017 average of 72.6 (Figure 8a). Twenty-four (25%) had late or advanced stage infection, 23% less than the comparison period (av. n=31.0) (Figure 8a).
- Of 121 overseas-born MSM newly diagnosed during 2018, 44 (36%) had evidence of early stage infection, 22% less compared to the 2013-2017 average of 56.6. Of these 44 early stage infections, 14 had been in NSW for less than 3 years, 11 for 3-4 years, two for 5-10 years, 15 for 11 or more years and two were unknown. Forty-seven (39%) had late or advanced stage disease, 33% greater than the comparison period average of 35.4 (Figure 8b). Of these 47, 24 had been here for less than 3 years, six for 3-4 years, five for 5-10 years, ten for 11 or more years and two were unknown.
- The number of new diagnoses in NSW residents who were not MSM was 9% lower in 2018 (n=62) compared to the 2013-2017 average (n=68.4). There were 31 with late and advanced stage infection at diagnosis, similar to the 2013-2017 average of 31.8 (Figure 8c).

Figure 8b: Stage of infection among overseas-born MSM newly diagnosed during 2013 to 2018

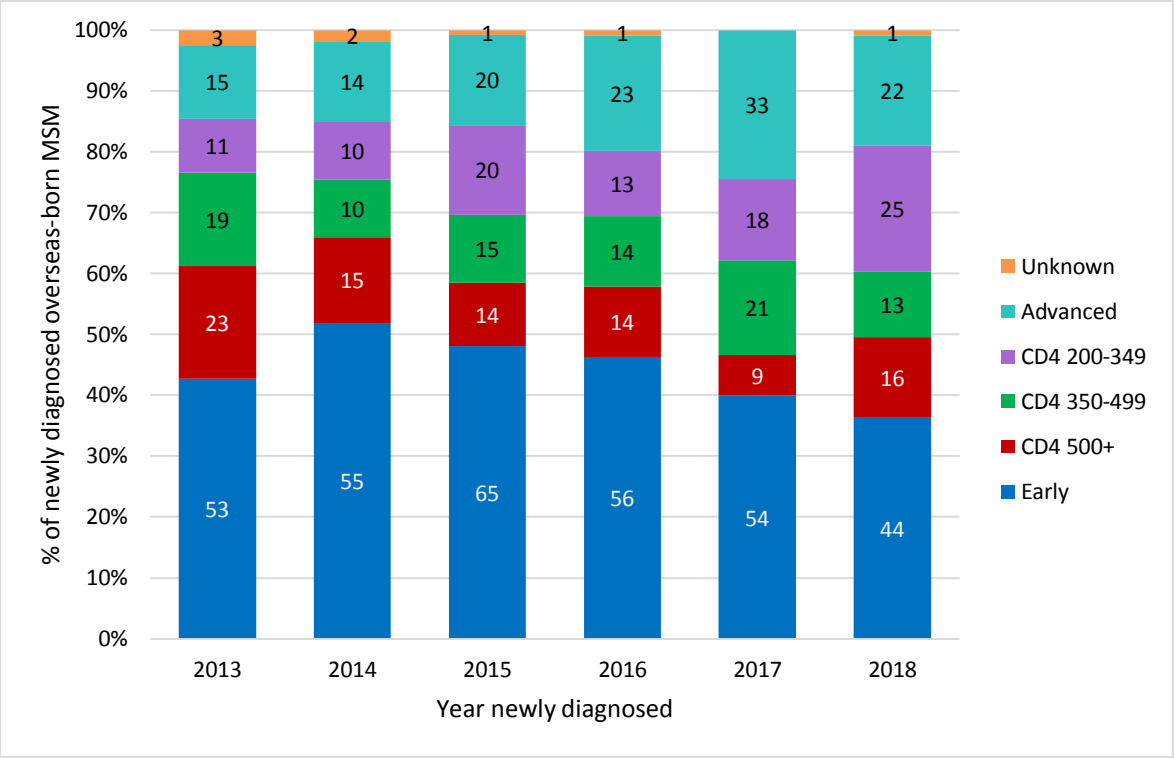


Figure 8c: Stage of infection among new diagnoses during 2013 to 2018 with a risk other than MSM

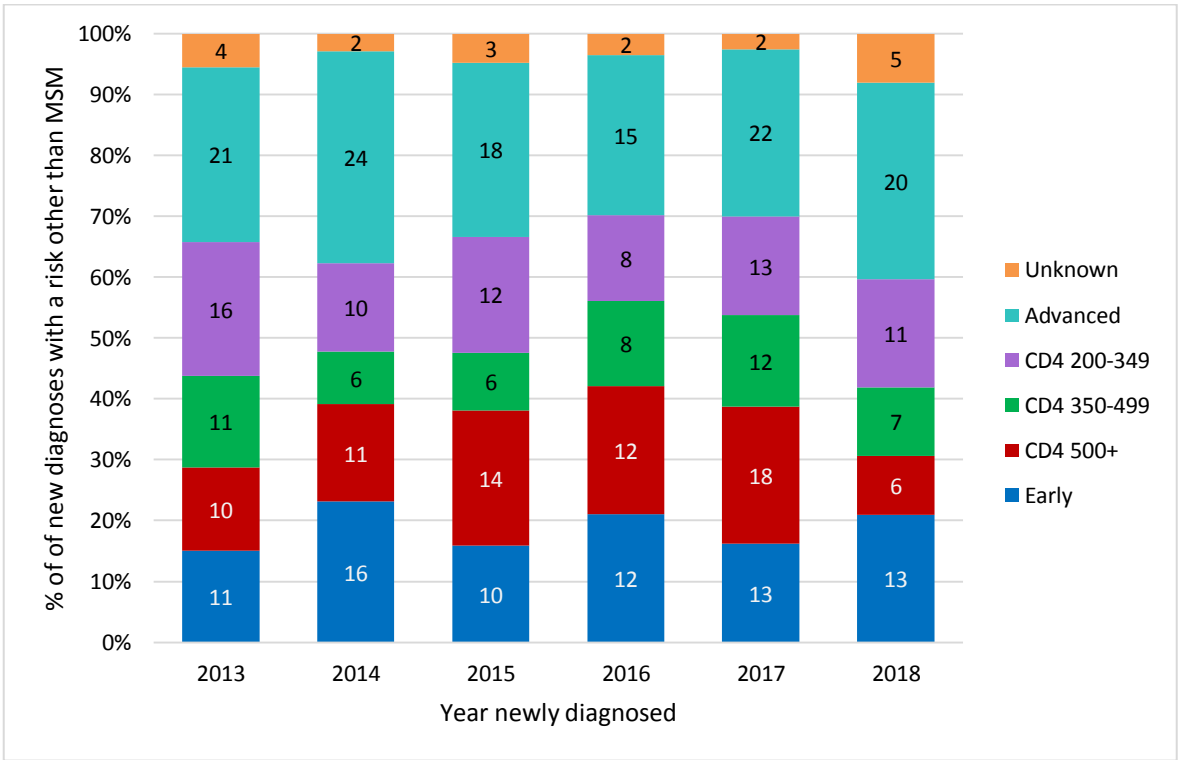
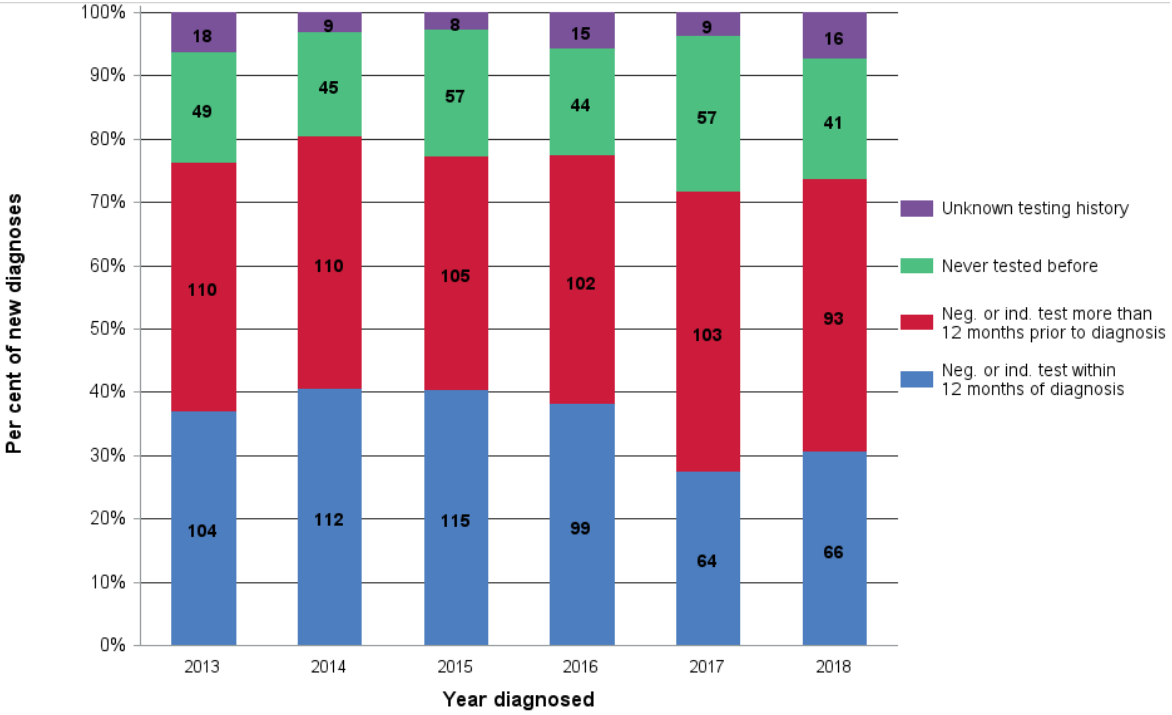


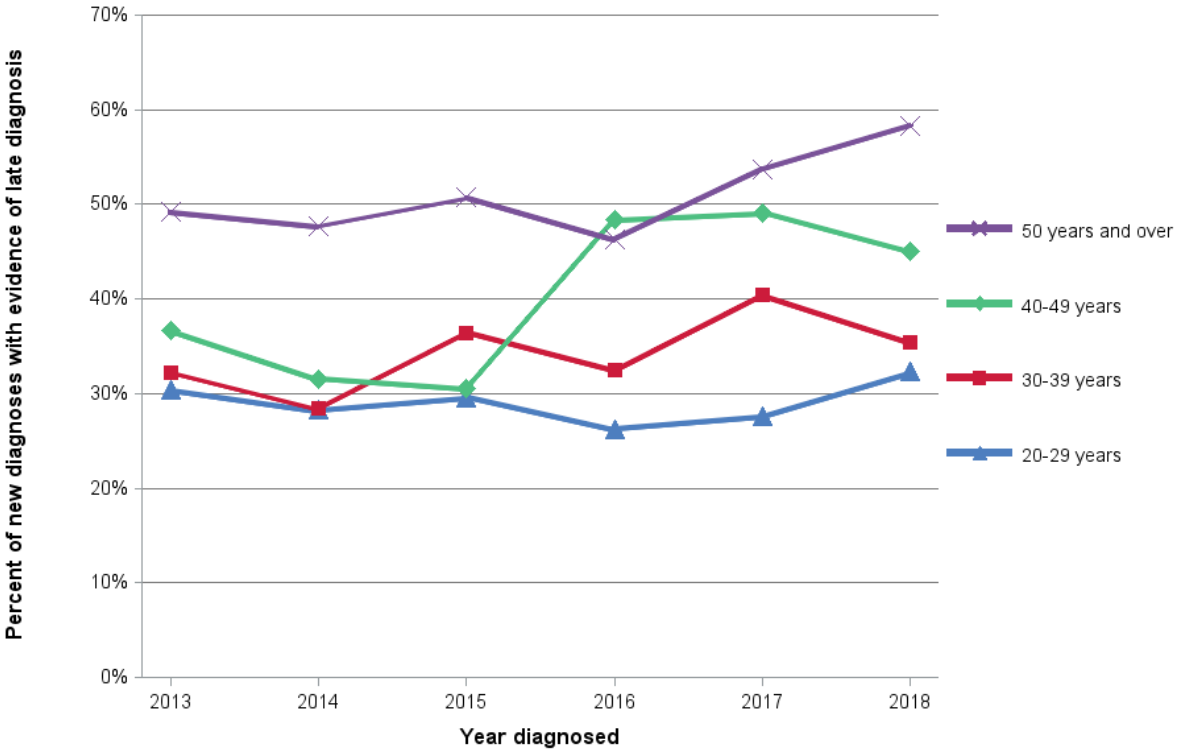
Figure 9: Per cent of MSM newly diagnosed during 2013 to 2018, by their HIV testing history



Of 216 MSM newly diagnosed during 2018:

- Sixty-six (31%) were reported (by a laboratory, a doctor, or the patient) to have had a negative or indeterminate HIV test within 12 months of diagnosis.
- Ninety-three (43%) were reported to have had a negative or indeterminate HIV test sometime in the past, but not within 12 months of diagnosis.
- Forty-one (19%) reported not ever having had an HIV test prior to diagnosis.
- Almost two-thirds had not been testing according to guidelines.
- Seventy-seven (36%) had evidence of late diagnosis.

Figure 10: Per cent of new diagnoses from 2013 to 2018 in each age group category with evidence of late diagnosis



- Evidence of late diagnosis was defined as a CD4 count less than 350 or an AIDS defining illness or AIDS death within three months of diagnosis, in the absence of a laboratory confirmed negative HIV test in the 12 months prior to diagnosis.
- Of 86 people newly diagnosed in quarter 4 2018, 34 (40%) had evidence of late diagnosis, an increase of 5% compared with the 2013-2017 Q4 average count of 32.4.
- Of 278 new diagnoses in 2018, 111 (40%) had evidence of late diagnosis, an 8% reduction when compared to the 2013-2017 average count of 121.2. When separated into age groups:
    - 25% (1/4) of those aged 0-19 years (not shown in Figure 10)
    - 32% (31/96) of those aged 20 to 29 years
    - 35% (28/79) of those aged 30 to 39 years
    - 45% (23/51) of those aged 40 to 49 years
    - 58% (28/48) of those who were aged 50 years or over
- The previously noted upswing in late diagnosis in 20 to 29 year olds is still present. In the 20 to 29 age group, 27 people with evidence of late diagnosis were MSM, and 23 of these 27 MSM were born overseas.

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 2018 vs the 2013-2017 average count, and the count difference

	Australian-born MSM			Overseas-born MSM		
Case characteristics	**2013-2017 average**	**2018**	**Count (%) diff.**	**2013-2017 average**	**2018**	**Count (%) diff.**
Number	**142.8**	**95**	**-47.8 (-33%)**	**124.2**	**121**	**-3.2 (-3%)**
Gender						
Male	141.4	95	-46.4 (-33%)	122.8	118	-4.8 (-4%)
Transgender	1.4	0	-1.4 (-100%)	1.4	3	+1.6 (+114%)
Age at diagnosis						
0 to 19	1.4	2	+0.6 (+43%)	2.2	2	-0.2 (-9%)
20 to 29	41.2	31	-10.2 (-25%)	44.4	52	+7.6 (+17%)
30 to 39	38.2	22	-16.2 (-42%)	44.2	40	-4.2 (-10%)
40 to 49	32	18	-14 (-44%)	21.2	17	-4.2 (-20%)
50 and over	30	22	-8 (-27%)	12.2	10	-2.2 (-18%)
Evidence of early stage infection[1]						
Yes	72.6	49	-23.6 (-33%)	56.6	44	-12.6 (-22%)
No	70.2	46	-24.2 (-34%)	67.6	77	+9.4 (+14%)
Evidence of late diagnosis[2]						
Yes	41	26	-15 (-37%)	45.8	51	+5.2 (+11%)
No	98.4	67	-31.4 (-32%)	76.6	69	-7.6 (-10%)
Unknown	3.4	2	-1.4 (-41%)	1.8	1	-0.8 (-44%)
Place most likely acquired HIV						
Australia	116.2	73	-43.2 (-37%)	71	62	-9 (-13%)
Overseas	15.8	17	+1.2 (+8%)	41.8	54	+12.2 (+29%)
Unknown	10.8	5	-5.8 (-54%)	11.4	5	-6.4 (-56%)
Reported HIV risks						
MSM	127.6	82	-45.6 (-36%)	119.8	116	-3.8 (-3%)
MSM and IDU	15.2	13	-2.2 (-14%)	4.4	5	+0.6 (+14%)

[1]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.

[2]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 a laboratory confirmed negative HIV test in the 12 months prior to diagnosis.

Table 2: Characteristics of Aboriginal and Torres Strait Islander people newly diagnosed in 2018 vs the 2013-2017 average count, and the count difference

Case characteristics	2013-2017 average	2018	Count diff.
Number[1]	**8**	**11**	**+3**
Gender			
Male	6	10	+4
Female	1.4	1	-0.4
Transgender	0.6	0	-0.6
Age at diagnosis			
0-29	2.2	5	+2.8
30 and over	5.8	6	+0.2
Reported HIV risks			
Heterosexual sex only	1.8	2	+0.2
MSM	3.6	4	+0.4
MSM and IDU	1.4	3	+1.6
PWID	0.8	1	+0.2
Other	0.2	0	-0.2
Unknown	0.2	1	+0.8
Stage of infection[2]			
Advanced	1.8	3	+1.2
CD4 200-349	0.2	0	-0.2
CD4 350-499	0.8	1	+0.2
CD4 500+	0.8	5	+4.2
Early	3.6	2	-1.6
Unknown	0.8	0	-0.8
Testing history			
Negative or indeterminate within 12 months before diagnosis	3.2	1	-2.2
Negative or indeterminate more than 12 months before diagnosis	2	2	0
Never tested before	2.2	6	+3.8
Unknown testing history	0.6	2	+1.4
Place most likely acquired HIV			
Australia	7.4	9	+1.6
Overseas	0.2	2	+1.8
Unknown	0.4	0	-0.4
Treatment			
On ART within two weeks	1.4	5	+3.6
On ART within four weeks	3.2	8	+4.8
On ART at any time	6.6	11	+4.4

[1]Full counts by year are presented in Appendix B.
[2]The definitions of stage of infection are the same as those used in Figures 8a-c.

Figure 11a: Per cent of men who have sex with men newly diagnosed from 2013 to 2018 by place born and place most likely acquired HIV

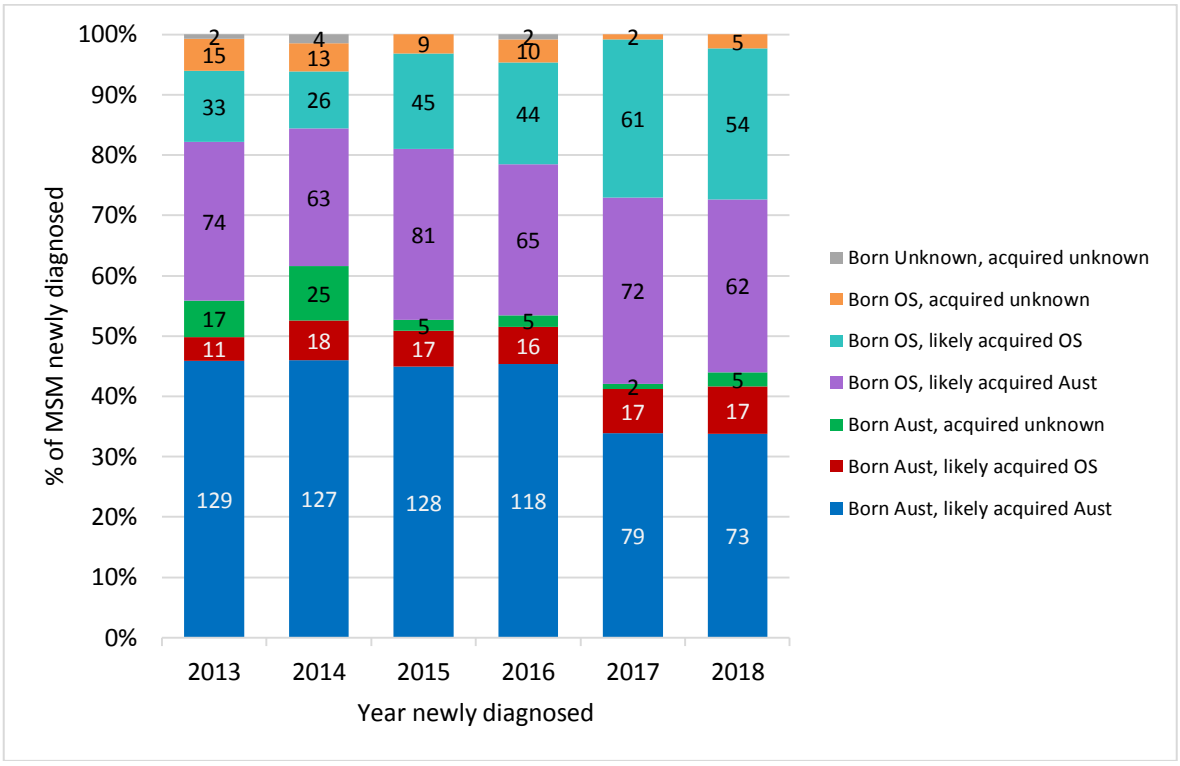
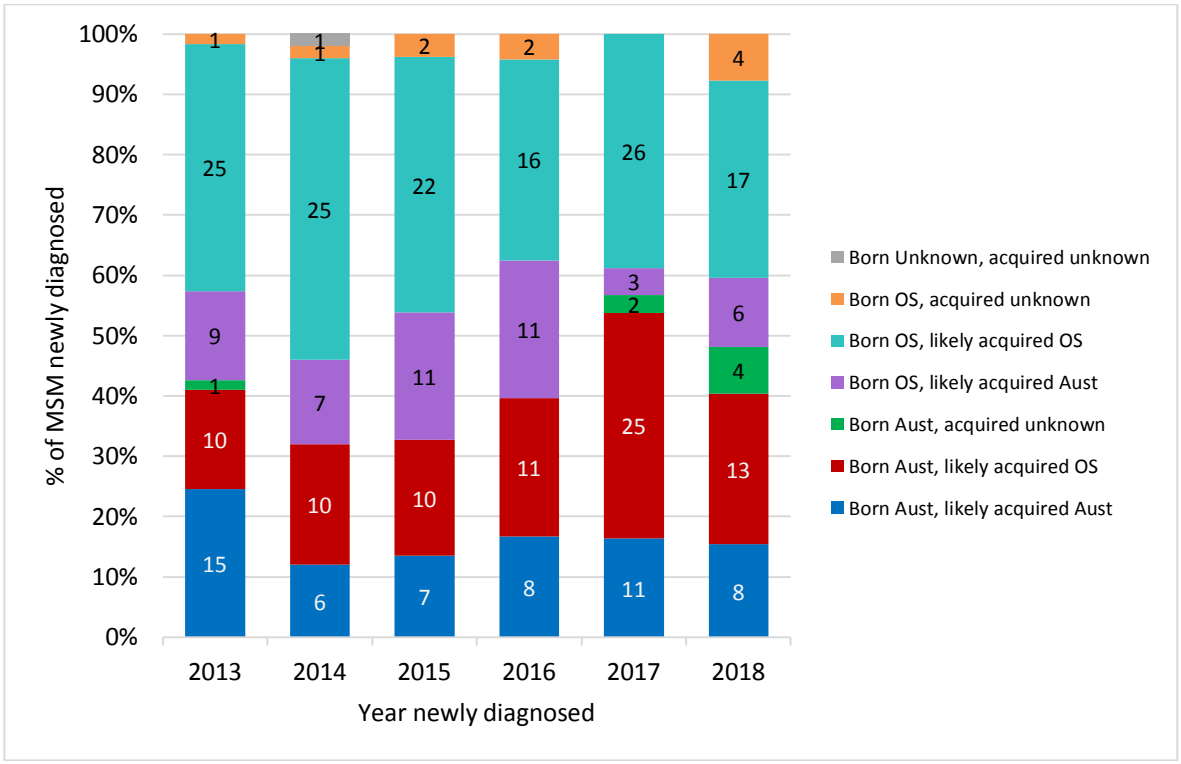


Figure 11b: Per cent of heterosexual people newly diagnosed from 2013 to 2018 by place born and place most likely acquired HIV



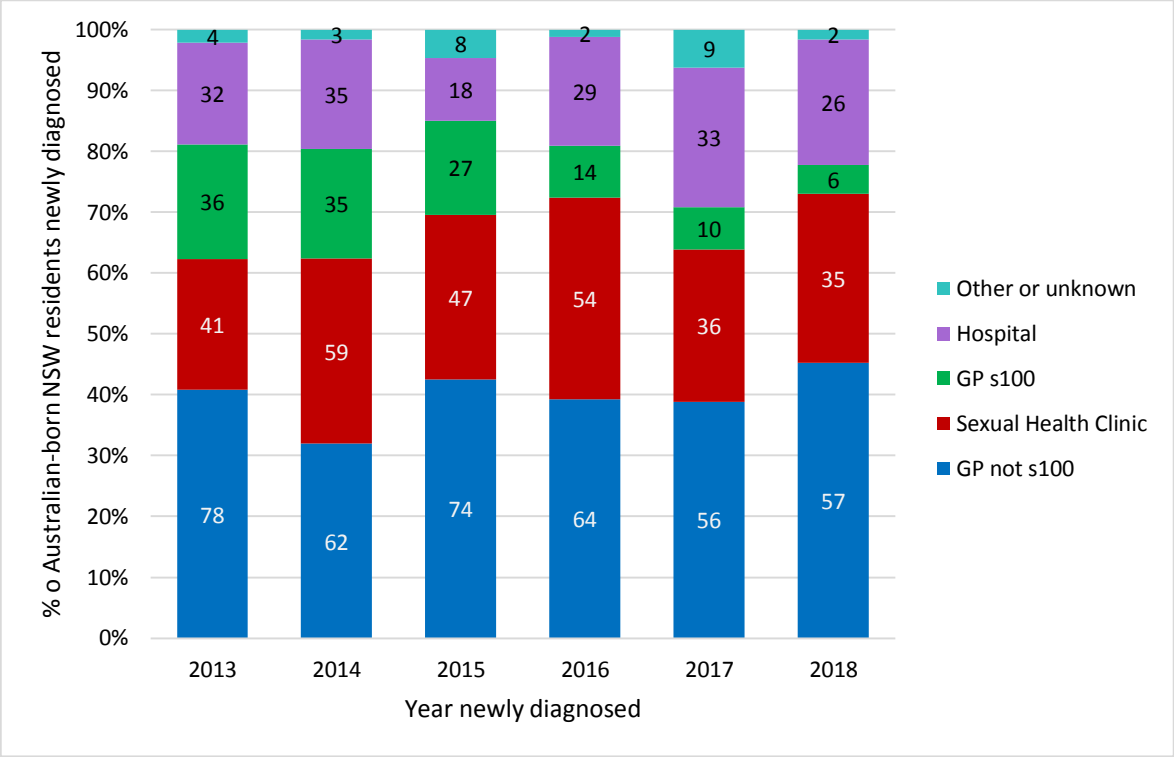
Of 216 MSM newly diagnosed in 2018 (Figure 11a):

- Ninety-five (44%) were Australian-born, 33% less than the average of 142.8 for 2013-2017. Seventy-three of these Australian-born MSM likely acquired HIV in Australia, 37% less than the 2013-2017 average of 116.2, and 17 likely acquired HIV overseas, 8% more than in the comparison period (av. n=15.8).
- One hundred and twenty-one (56%) were born overseas, 3% less than the average of 124.2 for 2013-2017. Sixty-two of these overseas-born MSM likely acquired HIV in Australia, 13% less than the average for 2013-2017 (av. n=71.0), and 54 likely acquired HIV overseas, 29% more than the comparison period (av. n=41.8).

Of 52 heterosexual people newly diagnosed in 2018 (Figure 11b):

- Twenty-five were Australian-born, an 8% increase compared to the average of 23.2 for 2013-2017.
- Twenty-seven were born overseas, 17% less than the average of 32.4 for 2013-2017.

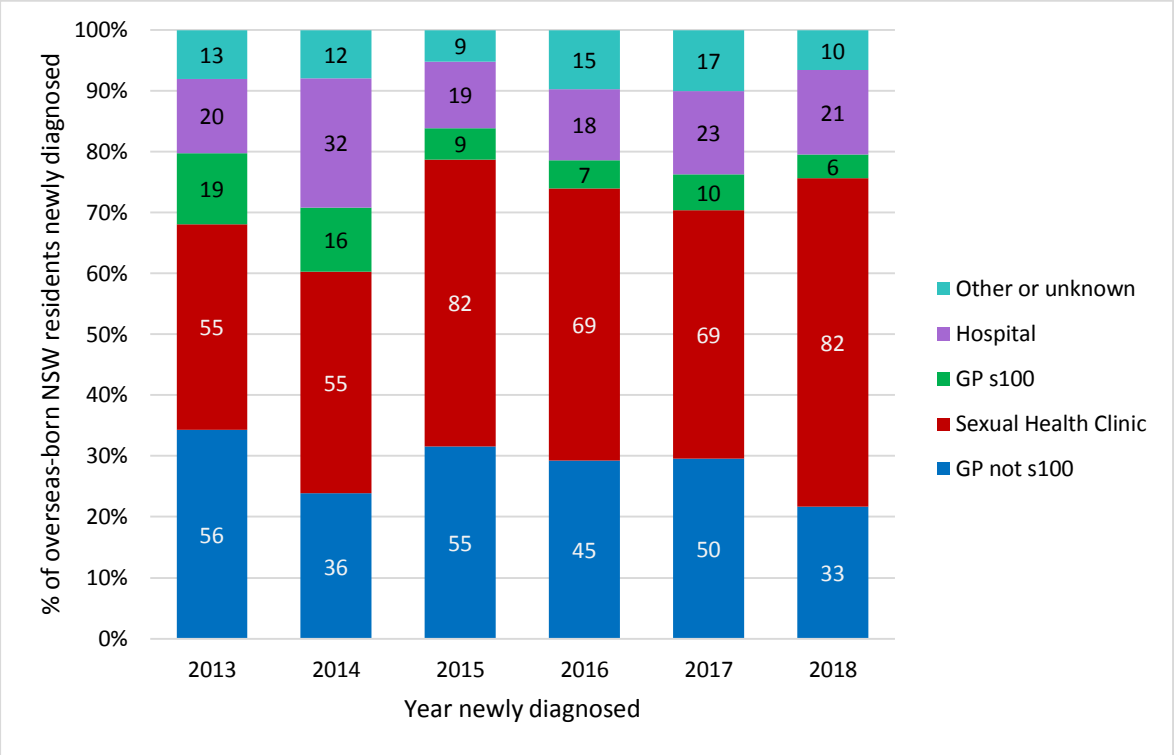
Figure 12a: Per cent of Australian-born new diagnoses during 2013 to 2018 by type of diagnosing doctor



Of 126 Australian-born NSW residents with newly diagnosed HIV infection in 2018 (Figure 12a):

- Fifty-seven (45%) were diagnosed by general practitioners (GPs) not accredited to prescribe antiretroviral therapy (GP not-s100), 15% less than the comparison period (av. n=66.8);
- Thirty-five (28%) were diagnosed by sexual health centres including community testing sites, 26% less than the 2013-2017 average (av. n=47.4);
- Twenty-six (21%) were diagnosed by hospital doctors, 12% less than the comparison period (av. n=29.4);
- Six (5%) were diagnosed by GP s100 doctors (HIV specialised and accredited to prescribe ART), 75% less than 24.4, the average for 2013-2017, and;
- Two (2%) were diagnosed by other doctor types, 62% less than the average in 2013-2017 (av. n=5.2).

Figure 12b: Per cent of overseas-born new diagnoses during 2013 to 2018 by type of diagnosing doctor



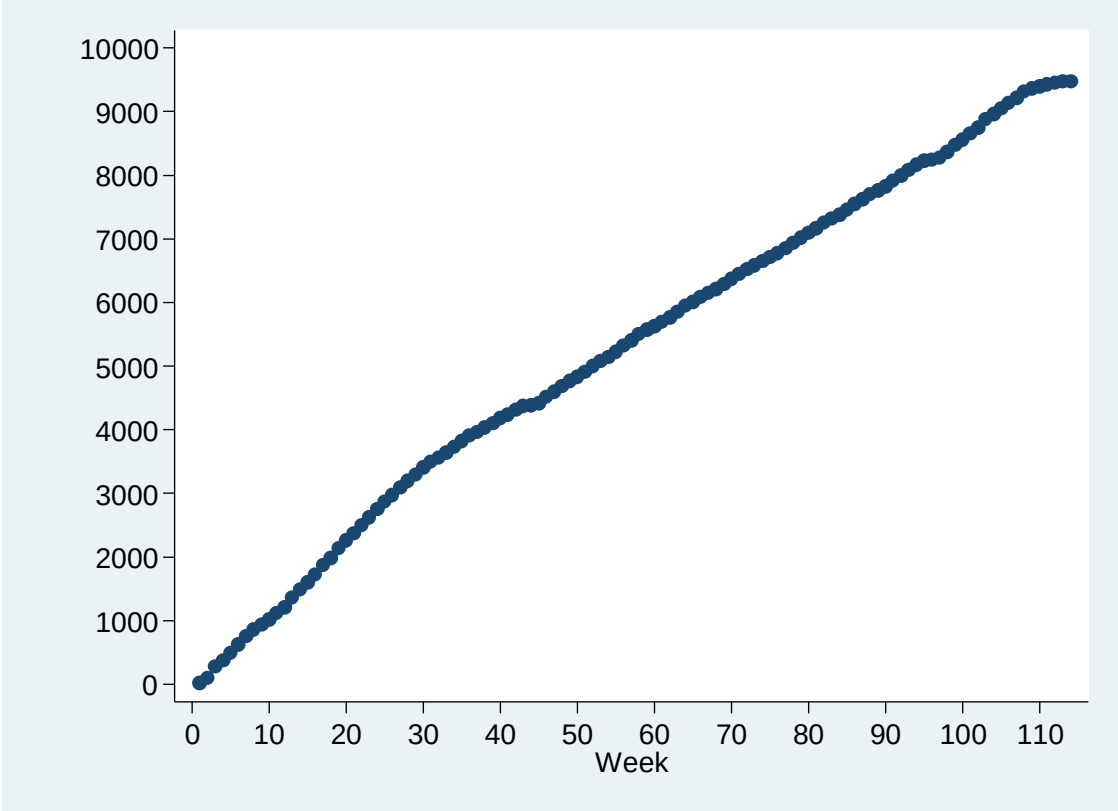
Of 152 overseas-born NSW residents with newly diagnosed HIV infection in 2018 (Figure 12b):

- Thirty-three (22%) were diagnosed by non s100 GPs, 32% less than the comparison period (av. n=48.4);
- Eighty-two (54%) were diagnosed by sexual health centres including community testing sites, 24% more than the 2013-2017 average (av. n=66.0);
- Twenty-one (14%) were diagnosed by hospital doctors, 6% less than the comparison period (av. n=22.4);
- Six (4%) were diagnosed by GP s100 doctors, 51% less than 12.2, the average for 2013-2017;
- Ten (7%) were diagnosed by other doctor types, 24% less than the average in 2013-2017 (av. n=13.2).

2. Expand HIV Prevention

2.1 Who is accessing PrEP through EPIC-NSW?

Figure 13: Enrolment of participants in EPIC-NSW, by study week, from 1 March 2016 to 30 April 2018



Comments on Figure 13:

- A total of 9, 477 participants enrolled in EPIC-NSW between 1 March 2016 and 30 April 2018.
- No new HIV diagnoses have been made in EPIC-NSW participants who continued to take PrEP as directed throughout the trial
- Participating clinics were: The Albion Centre (SESLHD), Albury Sexual Health (MLHD), Brookong Centre Wagga (MLHD), Clinic 16 (NSLHD), Coffs Harbour Sexual Health (MNCLHD), Dubbo Sexual Health (WNSW LHD), Dr Doong's Surgery, East Sydney Doctors, Holdsworth House, Hunter New England Sexual Health (HNE LHD), Holden Street Clinic (CCLHD), Illawarra Shoalhaven Sexual Health (ISLHD), Kirketon Road Centre (SESLHD), Lismore Sexual Health Clinic (NNSW LHD), Liverpool Sexual Health (SWSLHD), MacCleay Street Medical Practice, Nepean Sexual Health and HIV Clinics (NBMLHD), Orange Sexual Health (WNSW LHD), RPA Sexual Health (SLHD), Short Street Clinic (SESLHD), St Vincent's Hospital (SVHN), Sydney Sexual Health Centre (SESLHD), Taylor Square Private Clinic, Western Sydney Sexual Health (WSLHD).

Table 3: Demographic data for EPIC-NSW participants enrolled between 1 March 2016 – 30 April 2018 (not including screen fails and duplicates. N=9,415)

	N	%
Gender		
Male	9,281	98.8
Female	13	0.2
Transgender, male-to-female	78	0.8
Transgender, female-to-male	11	0.1
Other	12	0.1
Total	9,395	100.0
Sexual identity		
Gay/Homosexual	8,582	93.2
Bisexual	524	5.7
Heterosexual	47	0.5
Other*	54	0.6
Total	9,207	100.0
Age at enrolment (years)		
Median (Inter-quartile range)	34 (28 to 43)	
Age group		
< 20	100	1.1
20-29	2,817	30.6
30-39	3,204	34.8
40-49	1,887	20.5
≥50	1,208	13.1
Total	9,216	100.0
Aboriginal and/or Torres Strait Islander status		
Non-Indigenous	8,292	97.9
Aboriginal and/or Torres Strait Islander **	176	2.1
Total	8,468	100.0
Country/Region of birth		
Australia	4,704	59.5
Oceania	291	3.7
Asia	1,180	14.9
Northern America	208	2.6
South America, Central America & the Caribbean	355	4.5
Europe	895	11.3
Middle East	129	1.6
Africa	139	1.8
Total	7,901	100.0
Area of residence		
Major cities	8,727	94.1
Inner Regional	502	5.4
Outer Regional	38	0.4
Remote	8	0.1
Very Remote Australia	2	0.0
Total	9,277	100.0

Gender, age, Aboriginal and/or Torres Strait Islander status, country of birth, and area of residence (based on participant postcode) were obtained from enrolment, risk assessment, behavioural survey, and/or ACCESS databases, where available. Number of participants for whom data were available for is presented in **Appendix C**.

* Other sexual identity as indicated by participants, including queer, pansexual, gender fluid, sapio, transgender, gender neutral, men who have sex with men, non-specified and not sure.

** Of the 1,208 (12.9%) participants whose Indigenous status was not stated, 11 participants' country/region of birth was available and not Australia, so these people were counted as Non-Indigenous, as it was assumed that there would be very few Indigenous Australian or Torres Strait Islander people born outside Australia.

Comments on Table 3

- Almost 99% of participants were male. Around 93% identified as gay/homosexual
- More than 65% of the participants were between 20-39 years, and 21% were 40-49 years old
- Of the 7,901 participants who answered the question in the behavioural survey about place of birth, 60% were born in Australia, 15% were born in Asia and 11% were born in Europe
- A majority of participants (94%) resided in major cities. Only 5% of participants resided in an inner regional area and 0.5% resided in an outer regional or remote area
- Of 8,468 participants who answered the question in the behavioural survey about Aboriginality, 2.1% identified as Aboriginal or Torres Strait Islander

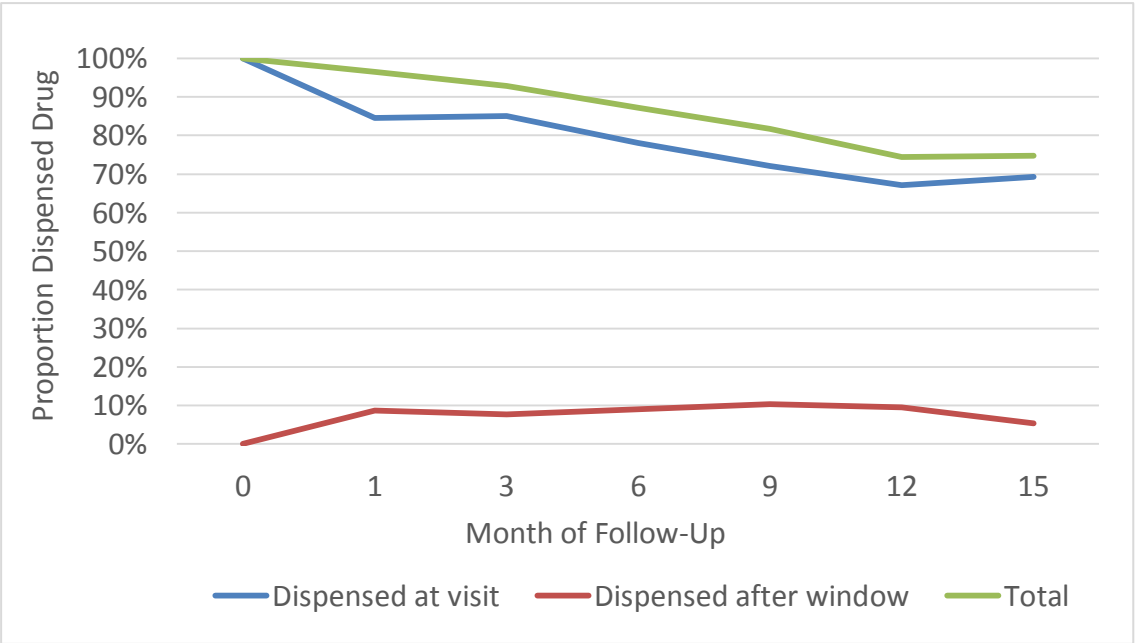
PrEP use over time by EPIC-NSW participants

Analysis of data from dispensing logs of the first 3700 EPIC-NSW participants (who enrolled prior to 31 October 2016) provides information on PrEP use in the first 15-months of follow-up.

The following dispensing patterns were observed:

1. Dispensed drug at a visit: defined as being dispensed drug at the relevant visit (within the pre-specified window period (±45 days))
2. Dispensed drug after window: defined as NOT being dispensed drug during the current visit window, but being dispensed drug within a later visit window.

Figure 14: PrEP dispensing in the first 15 months of follow-up, using dispensing log data



Comments on Figure 14

- Approximately 70% of the first 3,700 participants enrolled in EPIC-NSW presented for their clinic visit, and were dispensed PrEP within the window period (estimated date ±45 days).
- There was group of about 10% of study participants who did not collect their PrEP within their scheduled visit window, but return to collect it in a later window. It is likely that these 10% of participants were non-adherent to daily PrEP. This may be people who took intermittent PrEP, people who took breaks from PrEP ("periodic PrEP"), or people who were not–adherent to ongoing, daily PrEP.

2.2 What is the prevalence of STIs among EPIC-NSW participants?

Overall, 9,412 unique individuals were enrolled at the 29 NSW sites in EPIC-NSW between 1 March 2016 and 30 April 2018. This report contains only one additional month of baseline STI data and is the final quarterly report.

STI prevalence at enrolment

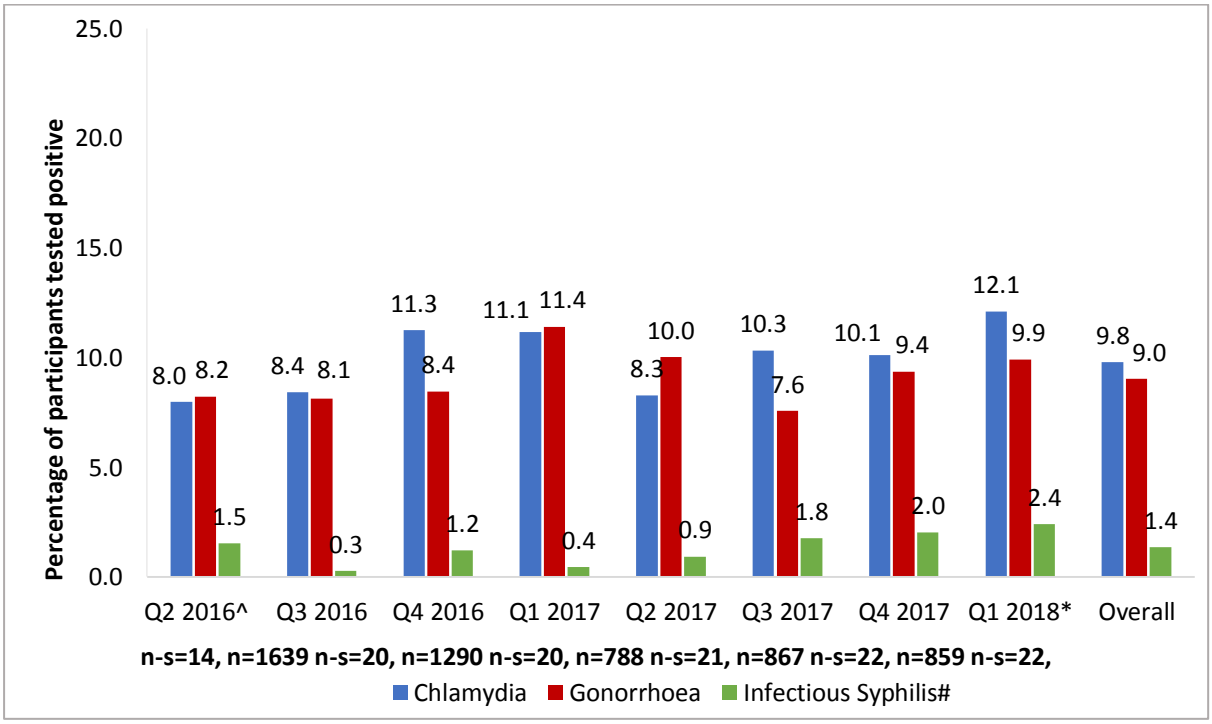
Monitoring the STI prevalence of EPIC-NSW participants when enrolled provides a marker of sexual risk, and how well the program is being targeted. STI prevalence is defined here as the proportion of individuals tested for an STI who had a positive result.

Of the 9,412 participants enrolled in the EPIC-NSW Study, STI testing data were available for 8,296 (88.1%) participants. The number of sites included in each quarter has increased over time - 14 in Q2 2016, 20 in Q3 and Q4 2016, 21 in Q1 2017, and 23 in Q2 2017. By the end of Quarter 1 2018 STI testing data were available from 28 of the 29 sites that had enrolled patients by 30 April 2018 (92.5% of participants at the available sites).

The 28 sites are: Albion Street, Albury Sexual Health, Brookong Centre Wagga Wagga, Clinic 16, Coffs Harbour Sexual Health, Dubbo Sexual Health, HNE Sexual Health, Holden St Clinic, Illawarra Shoalhaven Sexual Health, Kirketon Road Centre, Lismore Sexual Health, Liverpool Sexual Health, Nepean Sexual Health, Orange Sexual Health, RPA Sexual Health, Short Street Clinic, Site 203, Site 206, Site 215, Site 229, Site 266, Site 267, Site 269, Site 271, Site 272, Site 276, Sydney Sexual Health and Western Sydney Sexual Health.

STI tests are included in the analysis if they were conducted within 3 weeks of the enrolment date and recorded in the standard test result fields at the enrolment clinic or at another clinic within AC-CESS network (captured via data linkage between ACCESS sites).

Figure 15: Proportion of individuals tested for chlamydia, gonorrhoea and infectious syphilis# at baseline with a positive result, by quarter, 1 March 2016 to 30 April 2018



Note: CT, chlamydia; NG, gonorrhoea; SY, infectious syphilis. n-s, the number of sites.
^Q2 2016 data was from 1 March 2016 to 30 June 2016 (four months)
*Q1 2018 data was from 1 January 2018 to 30 April 2018 (four months)
#Infectious syphilis was based on pathology test results and clinical information available from public clinics only.

Comment on Figure 15

Overall, of the EPIC-NSW participants tested for STIs at baseline between 1 March 2016 and 30 April 2018:

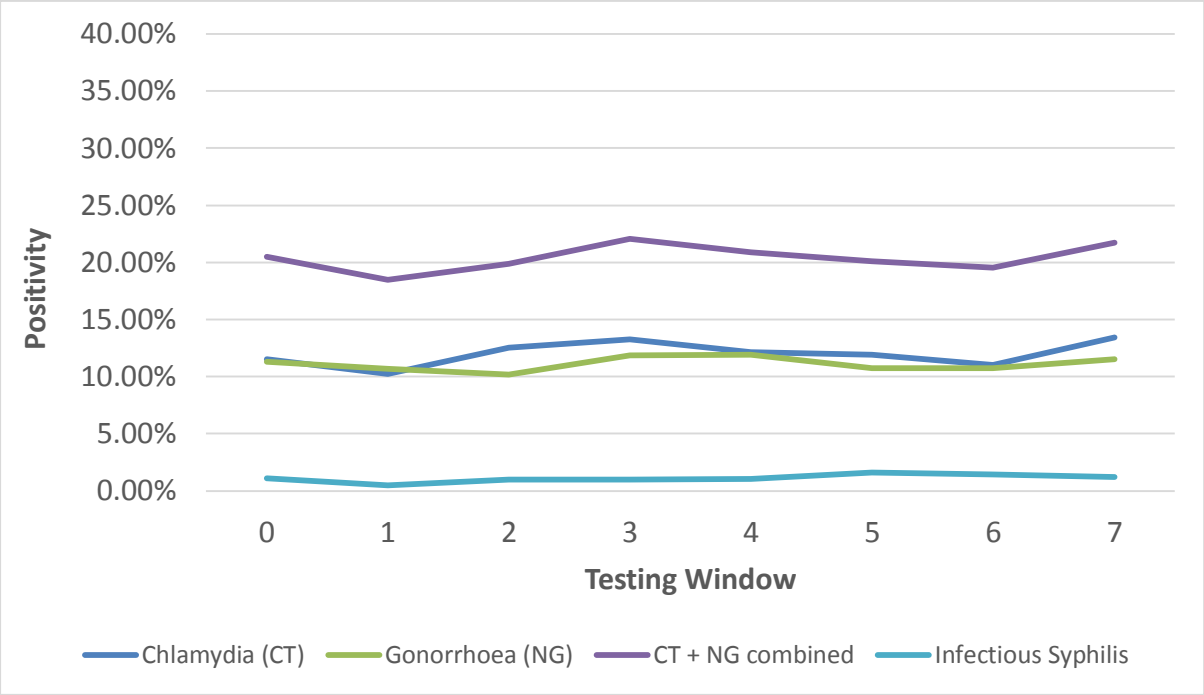
- 9.8% and 9.0% had a positive test result for chlamydia and gonorrhoea respectively
- The diagnosis rate for infectious syphilis in public clinics was 1.4%.

There was a statistically significant increase in chlamydia positivity and infectious syphilis positivity at baseline over time. This means the study continued to recruit higher-risk men throughout the enrolment period.

EPIC-NSW Report to NSW Health: STI positivity over 21 months of follow-up, January 2019

EPIC-NSW collected STI longitudinal trends in chlamydia, gonorrhoea, and infectious syphilis positivity among the first 3700 participants enrolled in EPIC-NSW during their first 18 months of study follow-up. Enrolment was completed by 31 October 2016, and follow-up data was included up until 30 September 2018. A total of 3477 (94.0%) of participants had a record of one or more STI tests and were included in this analysis. Not every participant had an STI test conducted at baseline, as this was not a study eligibility requirement.

Figure 16: STI positivity over 21 months of follow-up



Testing window 1 represents the first recommended STI test after enrolment, at 3 months after enrolment ±45 days, and each subsequent window covers a similar three-month period.

Comments on Figure 16

Chlamydia and gonorrhoea positivity were calculated as a positive test at any anatomical site (anorectal, pharyngeal, or urethral). The number of chlamydia/gonorrhoea tests conducted in each testing window declined over time; from 3318 in testing window 0, to 2224 in testing window 7. Data on infectious syphilis were only available from public clinics, with 1444 tests conducted in window 0 and 900 in window 7.

- Chlamydia positivity increased slightly from 10.2% in window 1 to 13.4% in window 7.
- Gonorrhoea positivity ranged from 10.7% in window 1 to 11.5% in window 7, and infectious syphilis from 0.5% in window 1 to 1.2% in testing window 7.
- In each 3-month testing window about 20% of participants who were tested were diagnosed with chlamydia and/or gonorrhoea, and over time the rate of detection remained fairly stable.

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

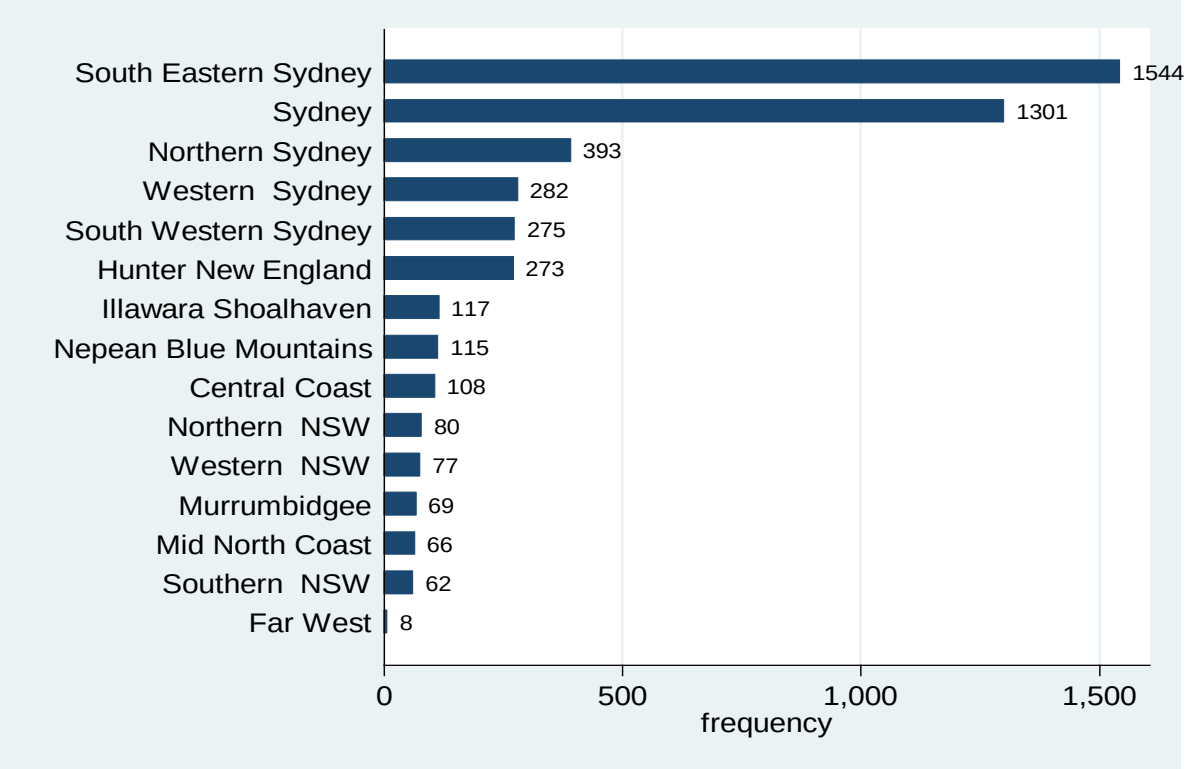
PrEP was listed on the PBS on 1 April 2018, making it accessible to people at high and medium risk of HIV infection through community pharmacies.

A PrEP transition plan has been implemented to support EPIC-NSW participant access to PBS PrEP, and to support expanded and ongoing access to PrEP throughout NSW.

Between 1 April and 30 September 2018:

- A total of 4,771 (unique number) NSW residents were dispensed PrEP for HIV prevention from April 2018.
- Of the 4,771 residents on PrEP, 99.3% were male. The distribution among age groups included: 45 (0.9%) between 0 and 19 years old, 1101 (23.1 %) between 20 and 29, 1614 (33.6%) between 30 and 39, 1115 (23.4%) between 40 and 49 and 896 (19.0%) aged older than 50 years old.
- Between 1 April and 30 September 2018, among those who initiated PrEP treatment, 76% were prescribed by GP; 99.0% were dispensed by a community pharmacy.

Figure 17: The Number of NSW residents dispensed PrEP by LHDs of patient residence from 1 April to 30 September 2018[1]



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme (PBS) data from April 2018 to September 2018.
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 or out of NSW, the overall unique number of individuals presented in the above graph may differ slightly from previous reports.

Comments on Figure 17

- About 80% of people dispensed PrEP under the PBS in NSW between 1 April and 30 September 2018 were residents of South Eastern Sydney (32.3%) and Sydney LHDs (27.3%), followed by Northern Sydney (8.2%), Hunter New England (5.9%), Western Sydney (5.9%) and South Western Sydney (5.8%).

[1] PrEP data become available from PBS since April 2018.

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

Condom use and other HIV risk reduction strategies used by gay and bisexual men are measured through the annual Sydney Gay Community Periodic Survey (SGCPS), conducted each year during February/March. With the introduction of pre-exposure prophylaxis (PrEP) in NSW and the focus on the preventative benefits of HIV treatment in the current NSW HIV Strategy, reporting of condomless anal intercourse with casual partners (CAIC) in the SGCPS has been modified, distinguishing between CAIC that is safe and unlikely to lead to HIV transmission (because of HIV treatment and viral suppression or PrEP use) or CAIC that is unprotected and poses a risk for transmission. The Survey will be completed in March 2019. Updates will be available in next quarter report.

2.5 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.

2.6 How accessible is the Needle and Syringe Program in NSW?

From October 2017 to September 2018,

- 14,349,746 injecting units were distributed in NSW.
- The LHDs with the highest number of units of injecting equipment distributed were Hunter New England, Sydney, South Eastern Sydney, South Western Sydney and Western Sydney.

2.7 What proportion of people re-use other people's needles and syringes (receptive syringe sharing) in NSW?

- In 2018, 20% of respondents reported receptive syringe sharing in the previous month (NSW Needle and Syringe Program Enhanced Data Collection, 2018)[2].

[2] Geddes, L, Iversen J, and Maher L. NSW Needle and Syringe Program Enhanced Data Collection Report 2018, The Kirby Institute, UNSW Australia, Sydney 2018.

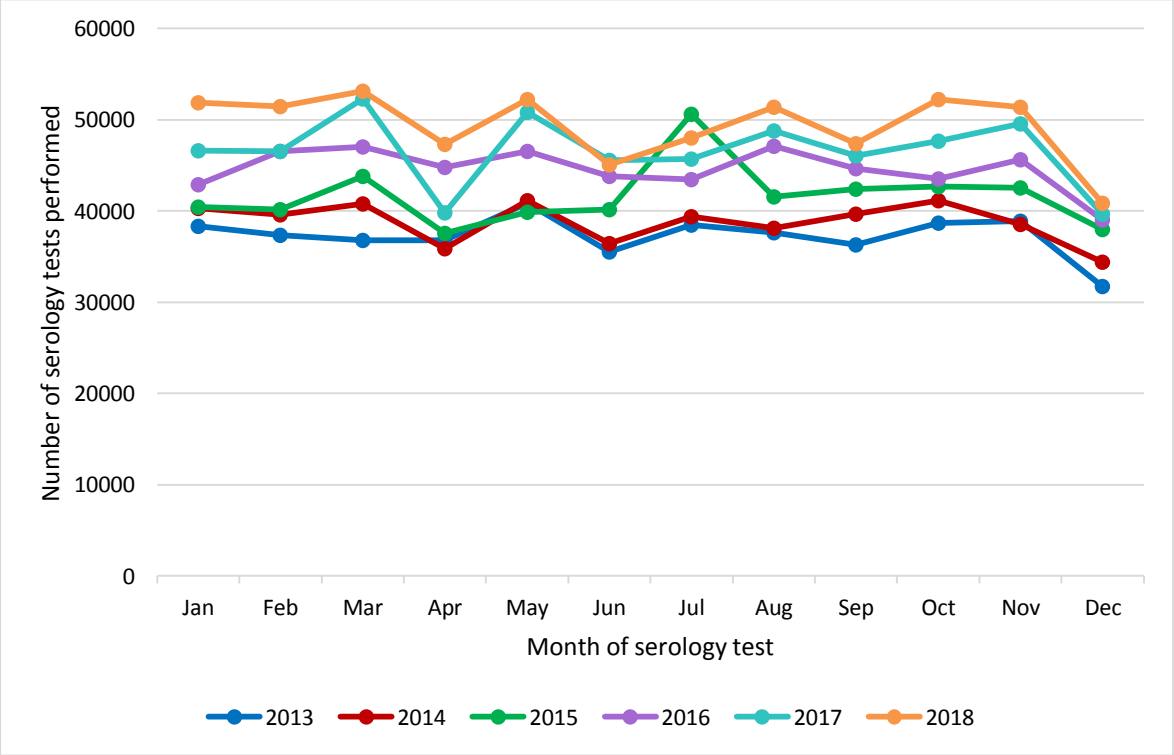
3. Increase HIV testing frequency

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 18: Number of HIV serology tests performed in 15 NSW laboratories, 2013 to 2018



Data source: NSW Health denominator data project, out 14 February 2019.

Comments on Figure 18

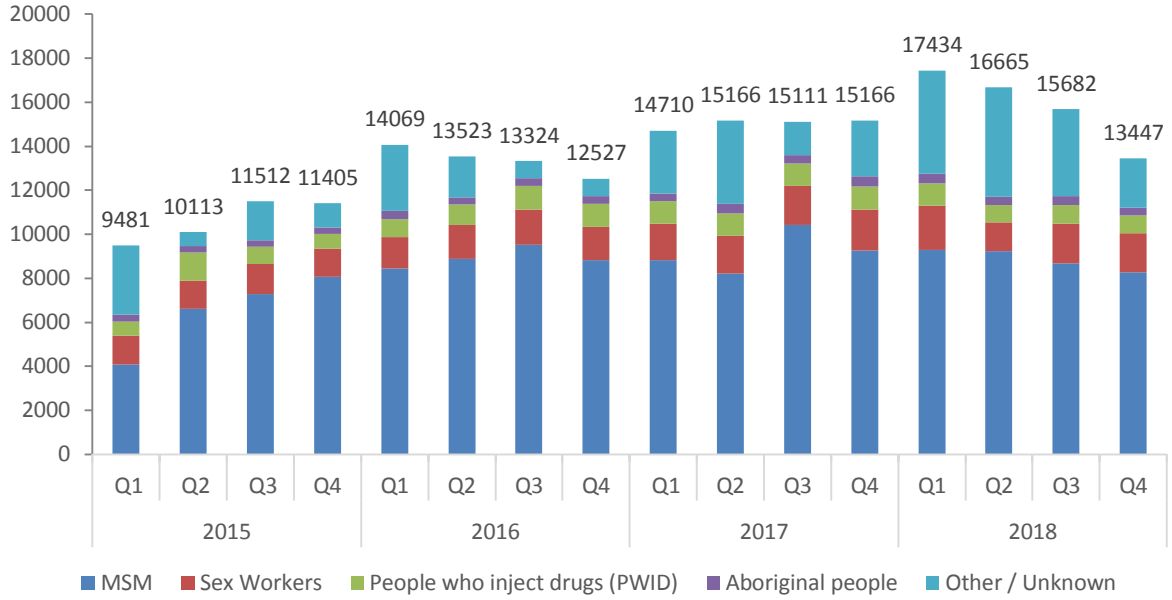
In October to December (Q4) 2018:

- 144,460 HIV serology tests were performed in 15 laboratories in NSW, which was 6% more than in Q4 2017 (n=136,848), 13% more than in Q4 2016 (n=128,140), 17% more than in Q4 2015 (n=123,295), 27% more than in Q4 2014 (n=114,100), and 32% more than in Q4 2013 (n=109,279).

In 2018:

- 592,318 HIV serology tests were performed in 15 laboratories in NSW, which was 6% more than in 2017 (n=559,010), 11% more than in 2016 (n=535,096), 18% more than in 2015 (n=499,966), 27% more than in 2014 (n=465,475), and 32% more than in 2013 (n=447,297).

Figure 19: Number of HIV tests performed in public sexual health clinics in NSW between 1 January 2015 and 31 December 2018, by quarter and priority population



Data source: NSW Health HIV Strategy Monitoring Database
Notes: Data for sex workers, PWID and Aboriginality not available in 2014; patients have been classified as other/unknown where priority population data is not available. Includes data from St Vincent's Hospital.

Comments on Figure 19

- In 2018 (Oct-Dec, 2018), 8,284 HIV tests were conducted in MSM in PFSHCs.

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 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.

Table 4: Recruitment data for the NSW DBS Self-Sampling HIV and HCV Testing Pilot, November 2016 to December 2018

Recruitment indicators	Q4 2018 (Oct - Dec)	Total (Nov 2016 - Dec 2018)
Number of registrations for HIV DBS test	528	1959
Number (%) of people who registered for a HIV DBS kit who had never tested before or had tested over 2 years ago	330/528 (63%)	1132/1959 (57%)
Return rate of DBS kits	-	1354/1959 (69%)
Number (%) of reactive HIV tests*	1	6/1354 (0.4%)

Data Source: NSW Dried Blood Spot Research database
*Participants with known HIV positive status when accessing DBS testing removed from total.

Comments on Table 4

- 57 per cent of people who registered for the test had never previously tested for HIV or had tested more than 2 years ago
- 1,959 test HIV test kits have been ordered, with a return rate of 69 per cent
- The positivity rate of returned HIV test kits is 0.4 per cent

Table 5: Number per target population who registered for the NSW DBS Self-Sampling HIV and HCV Testing Pilot, November 2016 to December 2018*

Target population	Q4 2018 (Oct - Dec)	Total (Nov 2016 - Dec 2018)
MSM	156 (30%)	1037 (53%)
Partners from Asia or Africa continents	118 (22%)	560 (28%)
From Asia or Africa continents	71 (13%)	408 (21%)
Ever injected drugs**	302 (57%)	586 (30%)
Aboriginal or Torres Strait Islander People**	141 (27%)	254 (13%)

Data Source: NSW Dried Blood Spot Research database
*Participants can have profile for more than one target population. Hepatitis C RNA testing included from September 2017
**Included as target populations for the pilot since September 2017

Table 6: Number of tests done per target population for the NSW DBS Self-Sampling HIV and HCV Testing Pilot, November 2016 to December 2018

Target population	Number (%) of tests done	
	1 Nov 2016 – 30 December 2018	
Aboriginal people*	201	15%
MSM	603	44%
Ever injected drugs*	507	30%
From Asia/Africa	270	20%
Partners from Asia/Africa	356	26%

Data Source: NSW DBS Research Database

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

Comment on Table 6

- Forty-four percent of the individuals who returned a DBS test were MSM. One fifth of participants were from Asia/Africa and over a quarter of participants had partners from Asia/Africa.

Table 7: Registrations for the NSW DBS Self-Sampling HIV and HCV Testing Pilot per LHD of participant from November 2016 to December 2018, and number of tests done (kits returned) in Q4 2018

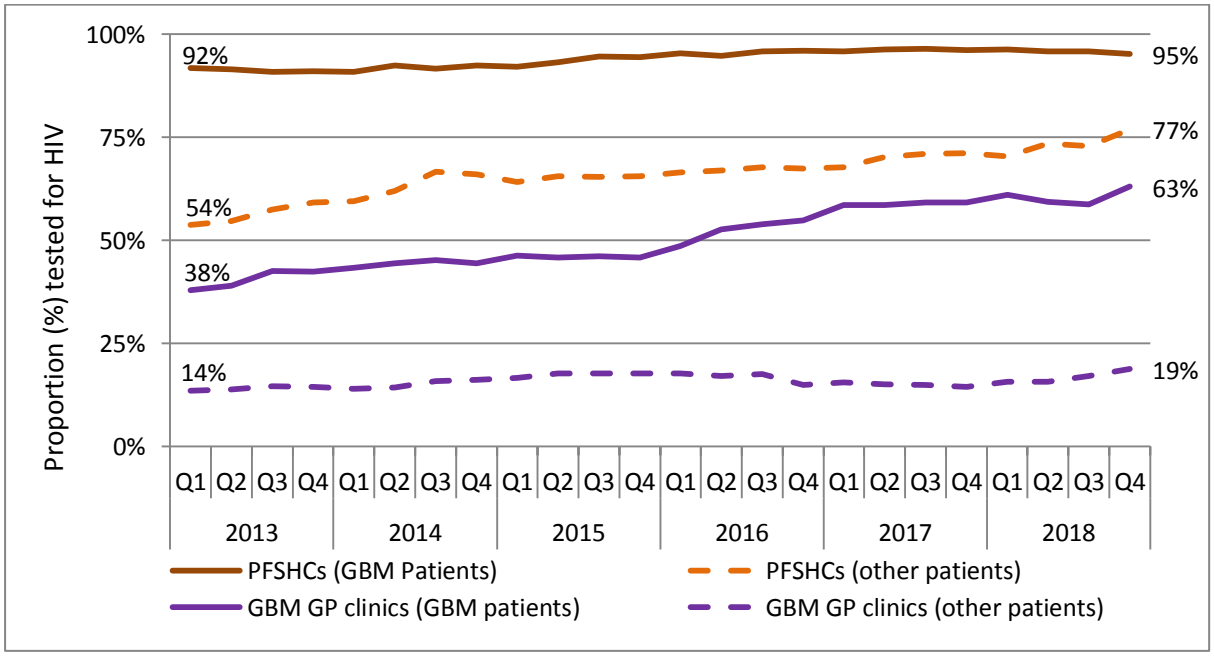
LHD	Total number of registrations in Nov 2016 - Dec 2018	Number of registrations in Q4 2018 (Oct - Dec)	Number of tests done (kits returned) in Q4 2018 (Oct - Dec)
Central Coast	51	3	10
Far West	29	9	23
Hunter New England	262	39	88
Illawarra Shoalhaven	120	22	56
Justice Health	245	139	225
Mid North Coast	39	5	12
Murrumbidgee	74	12	29
Nepean Blue Mountains	42	4	8
Northern NSW	28	4	5
Northern Sydney	165	41	66
South Eastern Sydney	356	88	161
Southern NSW	14	3	4
South Western Sydney	89	18	29
Sydney	276	96	140
Western NSW	30	8	9
Western Sydney	91	37	38

Data Source: NSW Dried Blood Spot Research database

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 20: Proportion of patients[3] attending PFSHCs and GBM GP clinics[4] 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 2018[5]



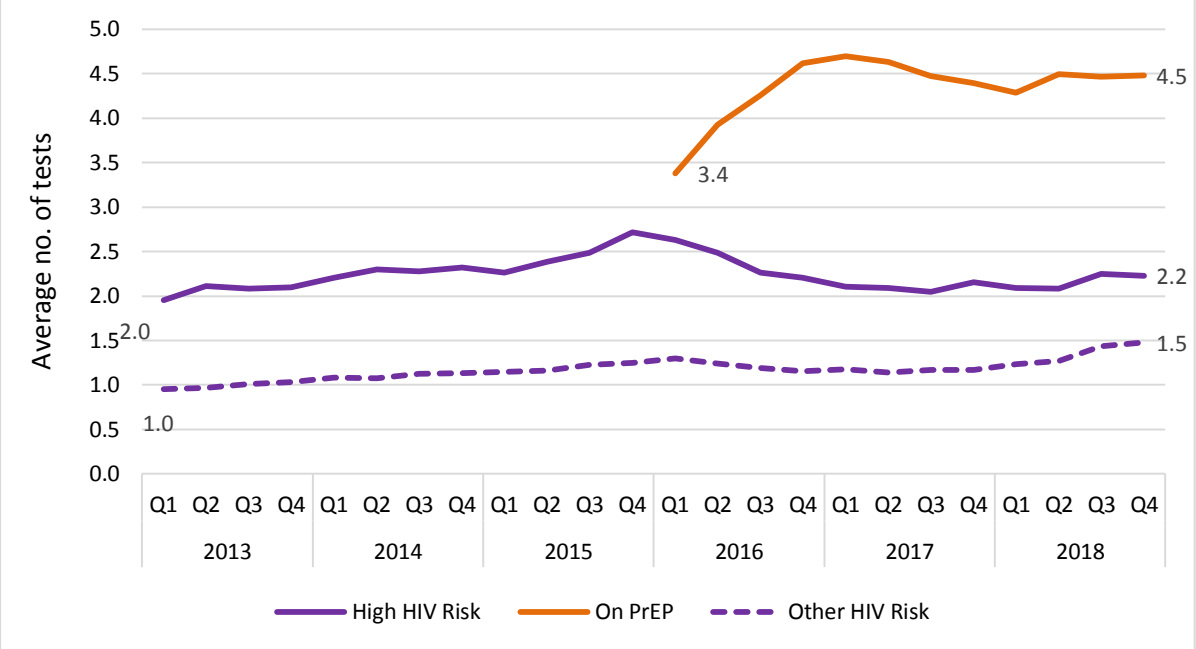
Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comments on Figure 20

- HIV testing uptake among GBM attending PFSHCs remained consistently high in the fourth quarter of 2018 (95%).
- Testing uptake increased over time among other patients attending PFSHCs, rising from 54% in Q1 of 2013 to 77% in Q4 of 2018.
- Testing uptake also increased among GBM attending GBM GP clinics (from 38% in Q1 of 2013 to 63% in Q4 of 2018).

Figure 21: Average number of annual HIV tests among GBM patients[6] attending any clinic in the ACCESS network[7], by HIV risk[8] and quarter, 1 January 2013 to 31 December 2018

[3] Excludes patients known to be HIV positive
[4] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually;
[5] 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
[6] Excludes patients known to be HIV positive
[7] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually
[8] 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.



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

Comments on Figure 21

- The average number of HIV tests among high risk GBM increased from 2.0 per year in Q1 of 2013 to 2.2 per year in Q4 of 2018 and, during the same period, increased from 1.0 to 1.5 among men of other risk profiles.

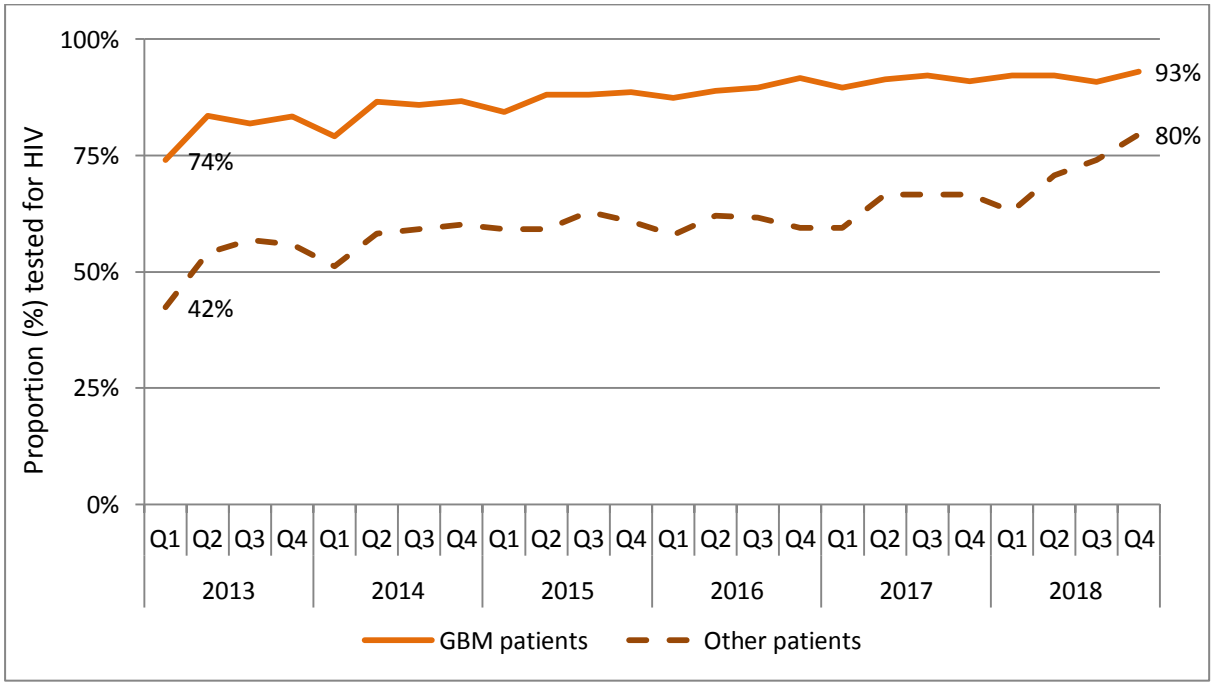
- Men identified within ACCESS as accessing PrEP through the EPIC-NSW study were considered 'low risk' for HIV and, as per the protocol for that study, had consistently high rates of HIV testing. The average number of tests per EPIC participant was 4.3.

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 hierachical decision tree, had a history of a rectal STI in the 24 months prior, or over the past 12 months evidence of inconsistent condom use, 20 or more partners, or evidence of injecting drug use
- 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.

Figure 22: Proportion of patients[9] attending PFSHCs and GBM GP clinics[10] combined who received an HIV test at any clinic in the ACCESS network in conjunction with an STI diagnosis[11], by GBM status and quarter, 1 January 2013 to 31 December 2018



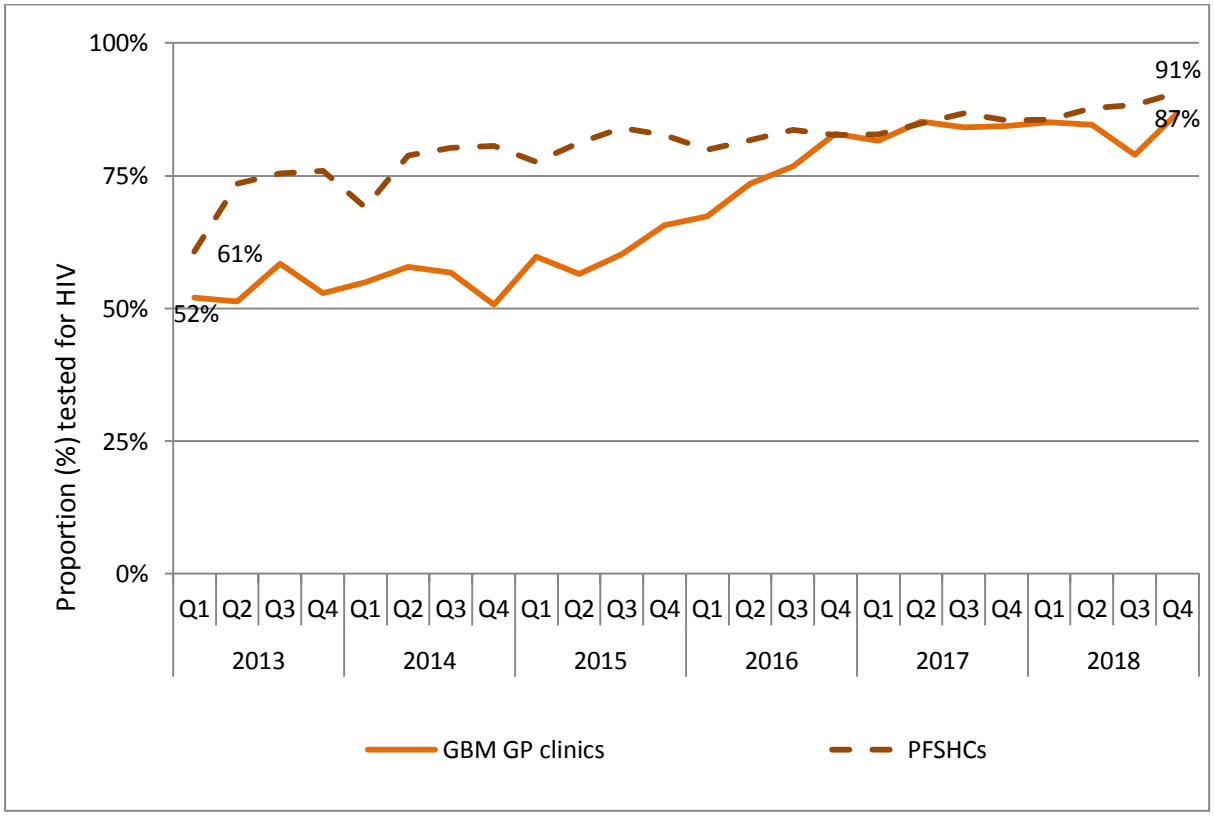
Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comment on Figure 22

- The proportion of GBM who received an HIV test in conjunction with an STI diagnosis increased over time from 74% in early 2013 to 93% in Q4 of 2018.
- Testing in conjunction with STI diagnoses was less common overall among other patients but also increased during this period (42% to 80%).

[9] Excludes patients known to be HIV positive
[10] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually
[11] 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. The number of tests conducted 30 days after STI diagnoses contribute <2% to the overall proportions tested in conjunction with an STI. Therefore, although HIV tests after Dec 31, 2018 are not included in this analysis, STIs diagnosed until the end of December 31, 2018 have been included.

Figure 23: Proportion of patients[12] attending PFSHCs and GBM GP clinics[13] who received an HIV test at any clinic in the ACCESS network in conjunction with an STI diagnosis[14], by service type and quarter, 1 January 2013 to 31 December 2018



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

Comment on Figure 23

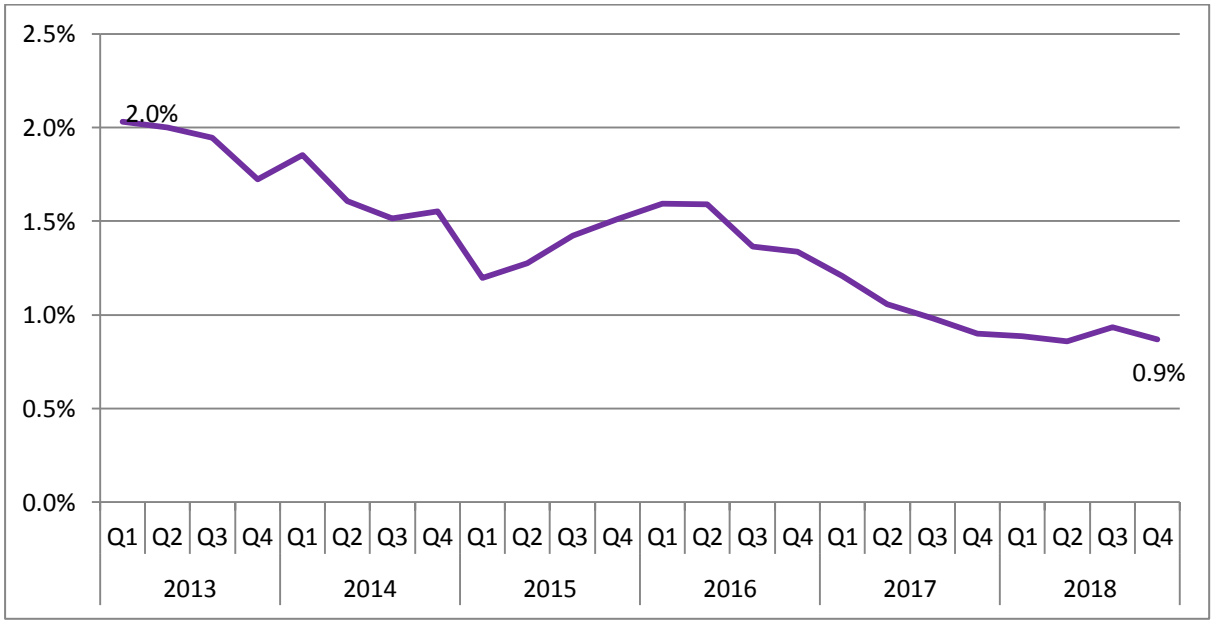
- Testing in conjunction with STI diagnosis was highest in PFSHCs, increasing from 61% in Q1 2013 to 91% at the end of Q4 2018. GBM GP clinics also saw an increase in the proportion of patients tested from 52% in Q1 of 2013 to 87% at the end of Q4 2018.

[12] Excludes patients known to be HIV positive

[13] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

[14] 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. The number of tests conducted 30 days after STI diagnoses contribute <2% to the overall proportions tested in conjunction with an STI. Therefore, although HIV tests after Dec 31, 2018 are not included in this analysis, STIs diagnosed until the end of December 31, 2018 have been included.

Figure 24: Proportion of individual GBM patients[15] tested for HIV with a positive result (*HIV positivity*[16]) at any clinic in the ACCESS network, by quarter, 1 January 2013 to 31 December 2018



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

Comment on Figure 24

- Over time, HIV positivity among GBM attending PFSHCs and GBM GP clinics has decreased from 2.0% of Q1 2013 to 0.90% in Q4 2018.

[15] Excludes patients known to be HIV positive

[16] 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)

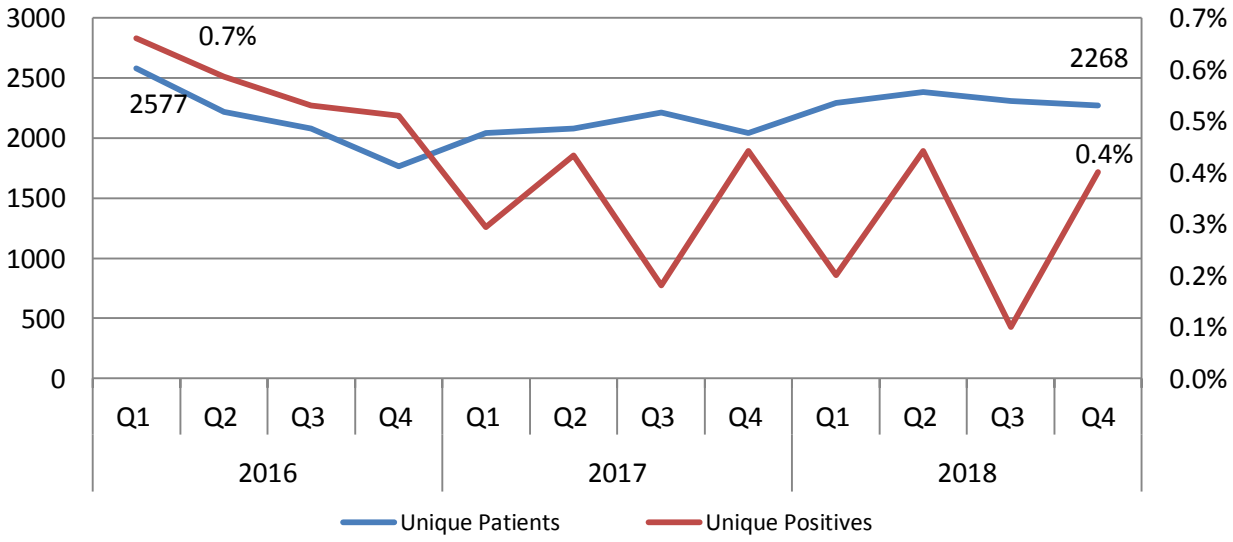
3.3 How is testing being made more accessible?

Table 8: Number of rapid HIV tests in community based sites and proportion of clients with high risk behaviour and infrequent testing history in Oct-Dec 2018

Non-traditional Settings	Number of RHT and (unique)	% Unique Positive	% never previously tested	% tested more than 12 months ago[#]	*% with > 5 sexual partners in last 3 months**
Community-based					
aTEST Oxford ST	1,959	0.4%	1.2%	12.0%	29.5%
aTEST Kings Cross	114	0.0%	21.9%	24.6%	28.7%
aTEST Newtown	195	0.5%	17.4%	10.3%	16.9%

Data sources: NSW Health HIV Strategy Monitoring Database[17]
Note: [#]Does not include 'never tested'; *Only patients who provided information on this characteristic have been included

Figure 25: The number of unique patients who had a rapid HIV test at a community based site between January 2016 and December 2018 and the proportion of tests that were positive



Data sources: NSW Health HIV Strategy Monitoring Database[18]

Comments on Figure 25

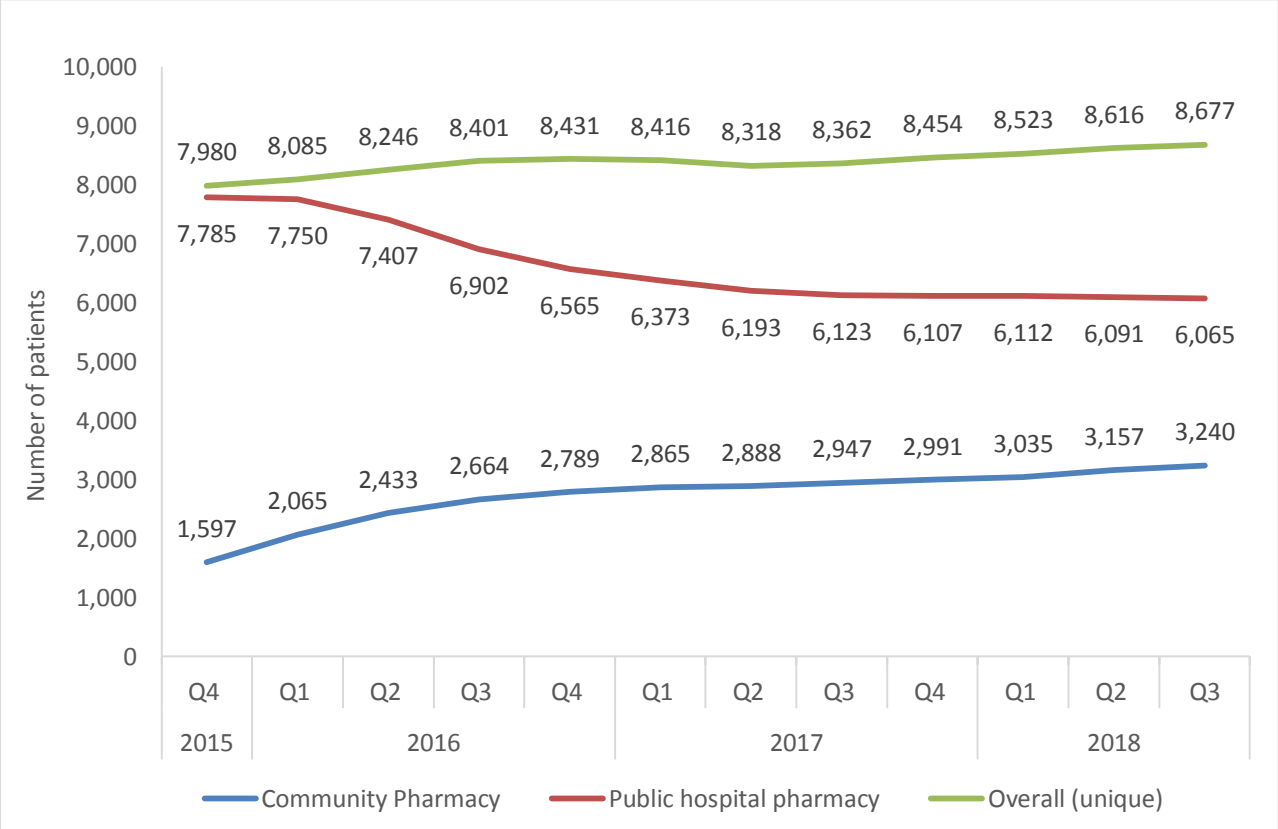
- NSW data suggests community-based testing sites are an effective testing model for engaging GBM.
- Rapid HIV testing has been effectively embedded into the mix of the testing options in NSW.

[17] Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.
[18] Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

4. Increase HIV Treatment

4.1 How many people in NSW are on antiretroviral therapy?

Figure 26: 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 Oct 2015 to 30 Sep 2018

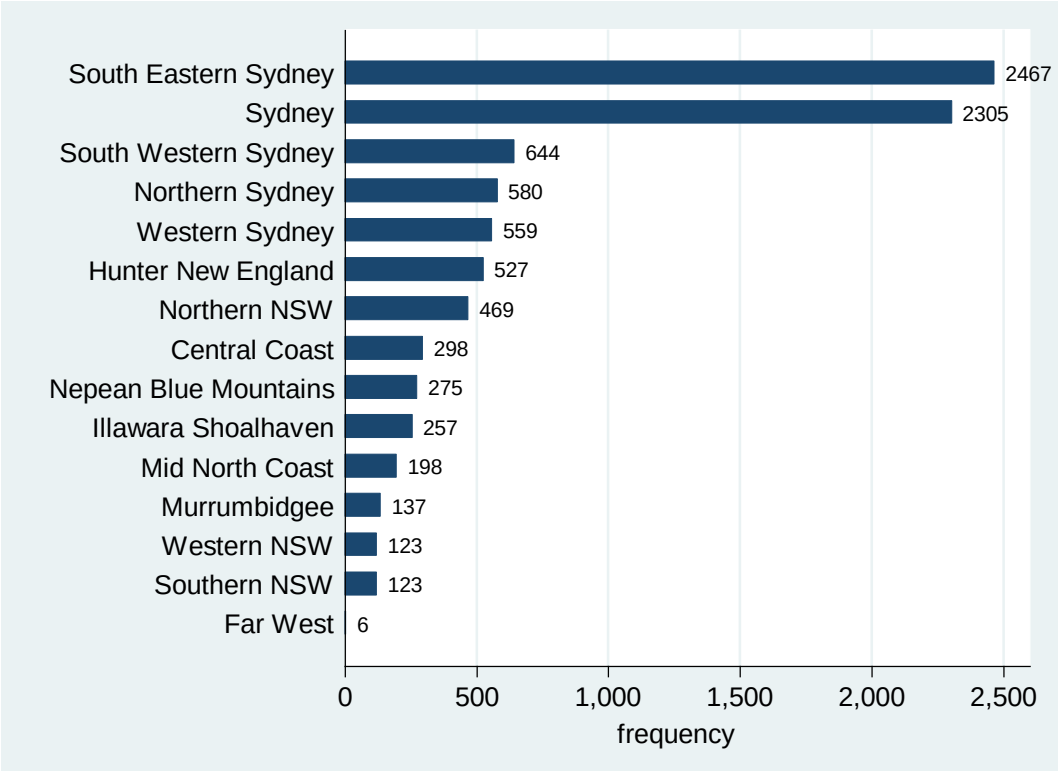


Data source: PBS Highly Specialised Drugs Programme data from 1 Oct 2015 to 30 Sep 2018 prepared for NSW Health.
Note: The number of patients dispensed via community and public hospital pharmacies may add to a figure greater than the overall unique patients as some patients receive treatment from more than one pharmacy type within a year. Due to boundary changes or movements in and or out of NSW, the overall unique number of individuals presented in the above graph may differ slightly from previous reports.

Comments on Figure 26

- Between 1 Oct 2017 and 30 Sep 2018, a total of 8,677 NSW residents were dispensed ART for HIV at least once within the previous 12 months.
- Of the 8,677 residents dispensed ART, 91.3% were male. The majority (54.6%) were 50 years or older, 25.7% were aged 40-49 years, and about 19.7% aged 39 years or younger.

Figure 27: The number of NSW residents dispensed ART for HIV, by the LHD of patient residence, from 1 Oct 2017 to 30 Sep 2018[19]



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data from Oct 2017 to Sep 2018

Comments on Figure 27

- About three-quarters (73%) of the ART dispensed in the 12 months ending 30 September 2018 was to patients residing in the following five LHDs: South Eastern Sydney, Sydney, South Western Sydney, Northern Sydney and Western Sydney LHDs.

[19] The sum of the numbers displayed in the graph is higher than the total of 8,677 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 2018 and December 2018 is summarised at Table 9[20].

Table 9: Clients who received HIV care in NSW public sexual health and HIV services from 1 January 2018 and 31 December 2018

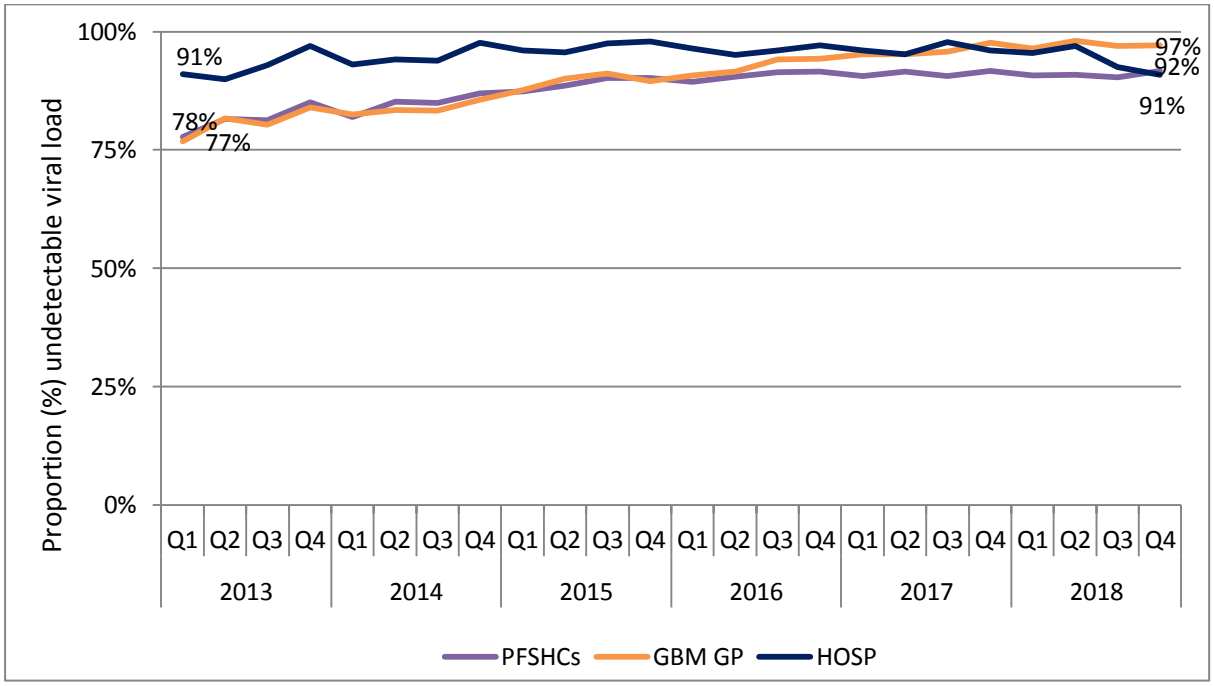
Number (%) of patients for whom treatment information was available	5,848
Number (%) on ART	5,712 (98%)

Data sources: NSW Health HIV Strategy Monitoring Database[21]

Comment on Table 9

- During period from January 2018 to December 2018, treatment information was available for 5,848 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 98%.

Figure 28: Proportion of HIV positive patients[22] attending any clinic in the ACCESS network[23] who received 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 2018



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

Comment on Figure 28

[20] 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.

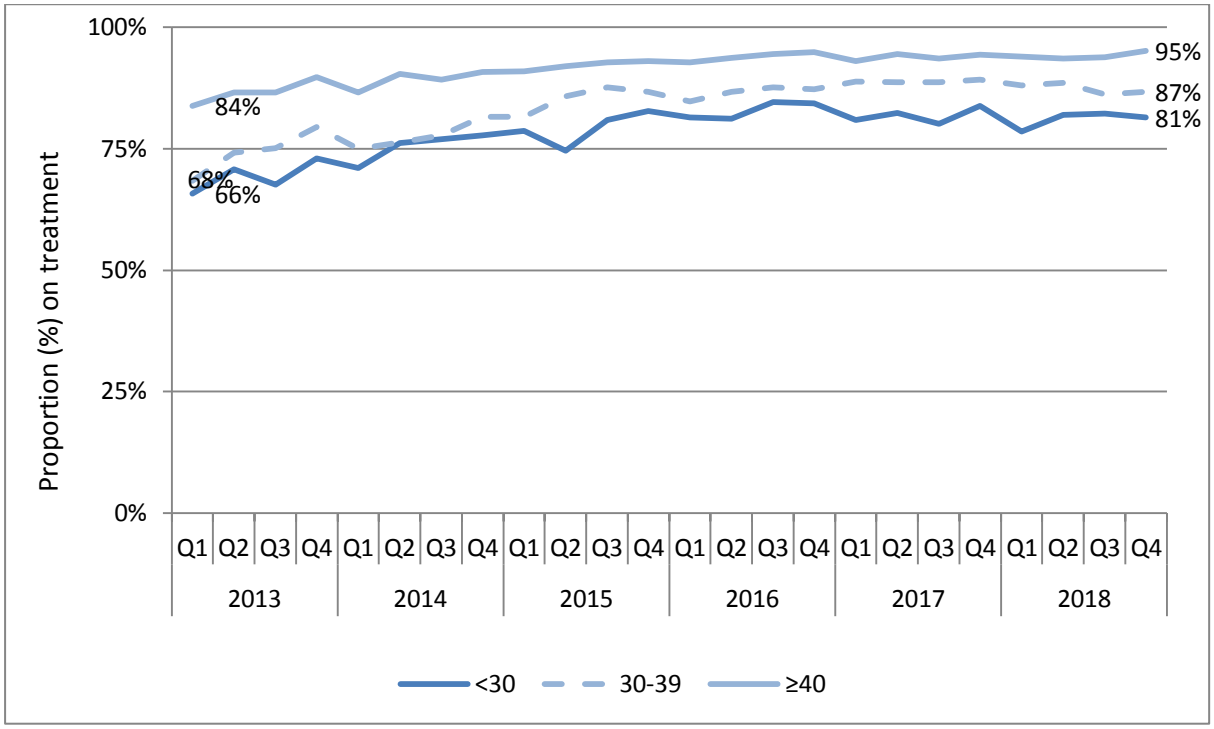
[21] Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

[22] Excludes patients for whom HIV care was recorded as managed elsewhere

[23] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

- Over time, treatment uptake for people living with HIV increased across service types. The greatest increase was among patients attending GBM GP clinics, rising from 77% in early 2013 to 97% in the fourth quarter of 2018

Figure 29: Proportion of HIV positive patients attending any clinic in the ACCESS network [24] who received 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 2018



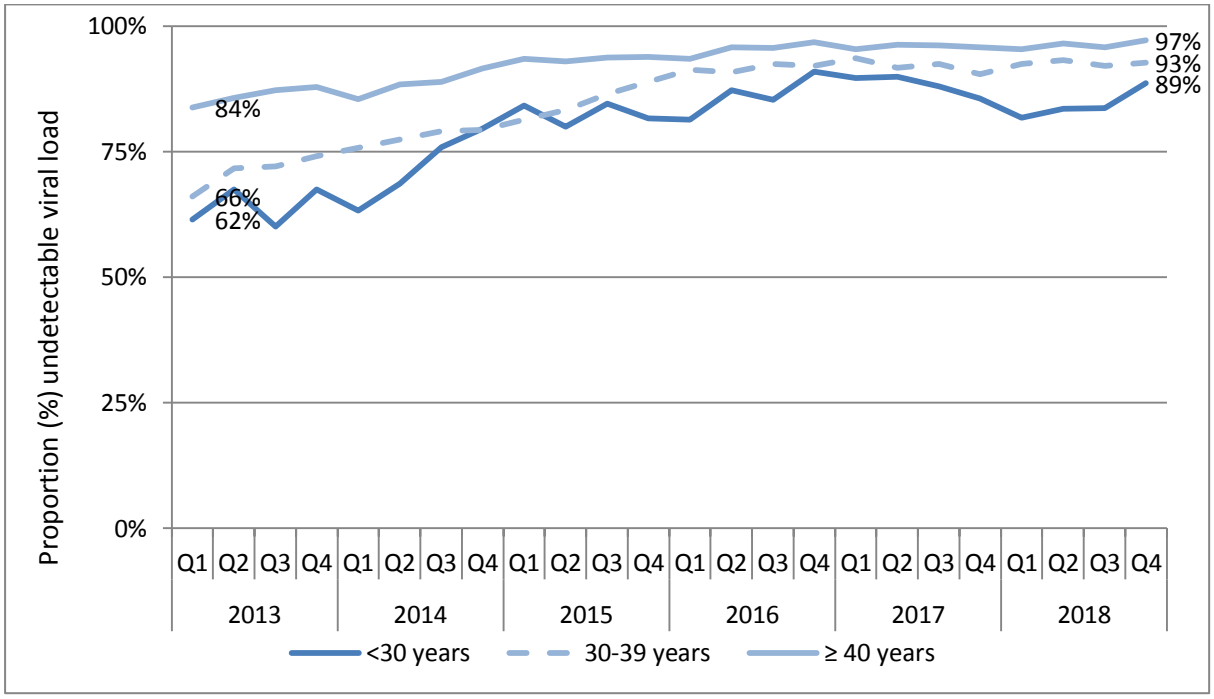
Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comment on Figure 29

- Uptake of treatment for HIV was highest among patients aged 40 years and older and lowest among those 30 years and younger, although the greatest change observed over time was among those aged 30 years and younger.

[24] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 30: Proportion of HIV positive patients on treatment at any clinic in the ACCESS network[25] with an 'undetectable'[26] viral load at their most recent test in the previous 12-month period at any clinic in the ACCESS network [27], by age group and quarter, 1 January 2013 to 31 December 2018



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

Comment on Figure 30

- The proportion of HIV positive patients with an undetectable viral load was consistently highest among older patients: 97% of patients 40 years and older had undetectable viral loads in Q4 of 2018.
- The greatest change over time, however, was among 30-39 years old and younger patients less than 30 years old, increasing from 66% to 93% and 62% to 89% respectively from Q1 2013- Q4 2018.

[25] GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

[26] 'Undetectable' defined as <200 RNA copies/mm^3 of blood

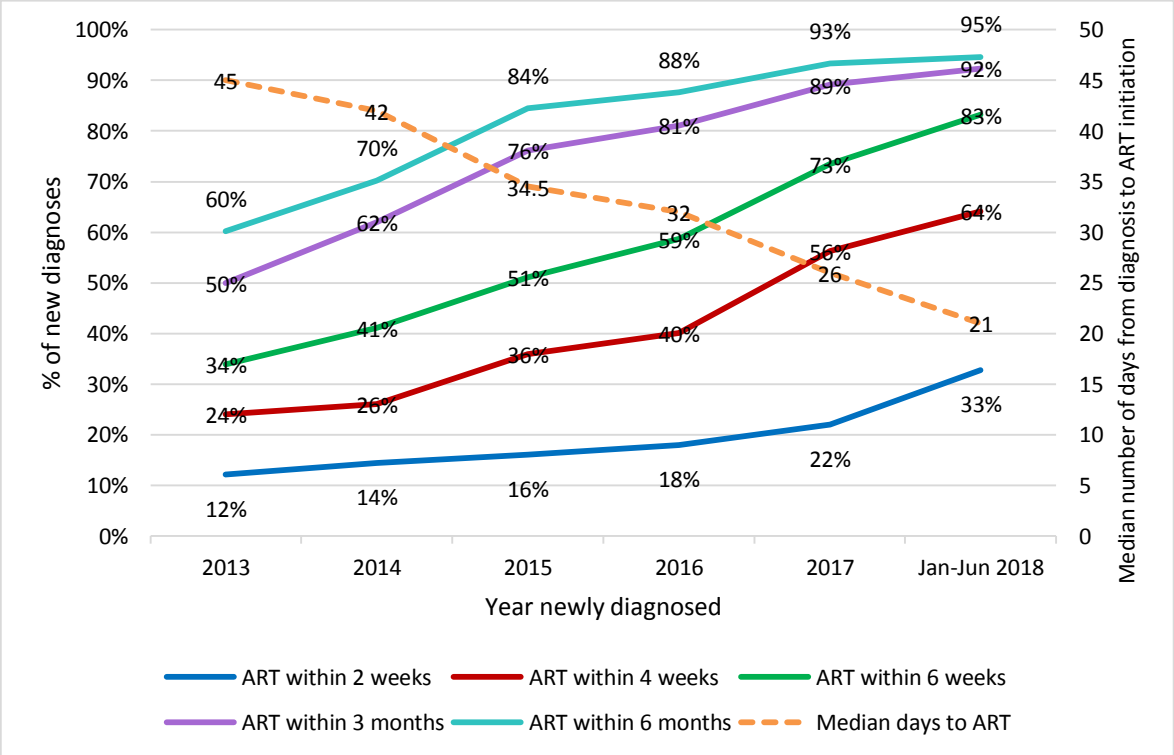
[27] Excludes patients for whom viral load test information was not available

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

Under the 2016-2020 HIV Strategy the aim is to ensure that at least 90% of people newly diagnosed with HIV are on ART within 6 weeks of diagnosis and to further reduce the time from diagnosis to ART over the life of the Strategy. In 2013 HIV surveillance in NSW was enhanced to collect at six months post diagnosis, via doctors, information on retention in care, ART commencement, pre-ART and latest HIV viral load and CD4 count.

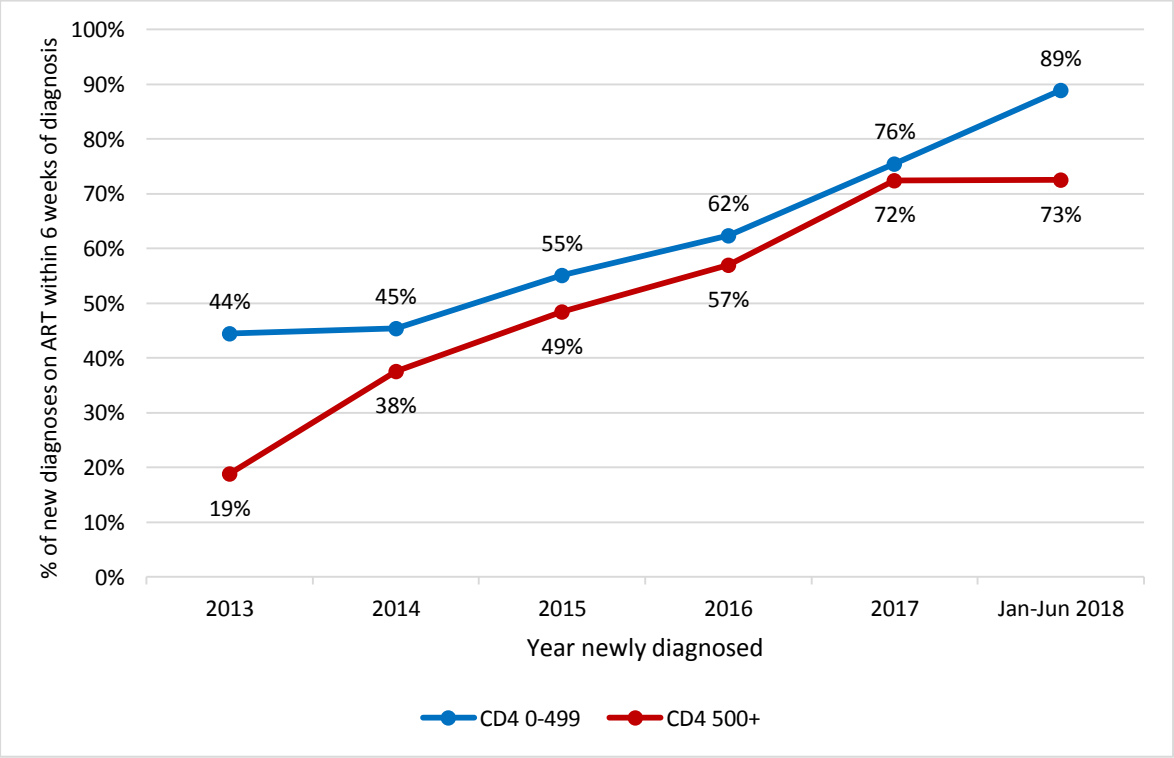
At the time of preparing this Q4 2018 report, six months post diagnosis follow up had been done on NSW residents newly diagnosed from 1 January 2013 to 30 June 2018 (n=1809). Data on initiation of ART was drawn from six months post diagnosis follow up form (FUF) data and HIV notification form data and combined for analysis. All new diagnoses were included irrespective of whether eligible for follow up and of care outcome.

Figure 31: Time to ART for NSW residents newly diagnosed in January 2013 to June 2018



- Of the 131 people newly diagnosed in January to June 2018 now followed up six months post diagnosis, 33% initiated ART within two weeks, 64% within four weeks, 83% within six weeks, 92% within three months and 95% within six months of diagnosis. The median time to ART initiation was 21 days. Of the 124 on ART within six months of diagnosis, 109 (88%) were already virally suppressed at six months follow up.

Figure 32: CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection from January 2013 to June 2018 and % on ART within six weeks of diagnosis

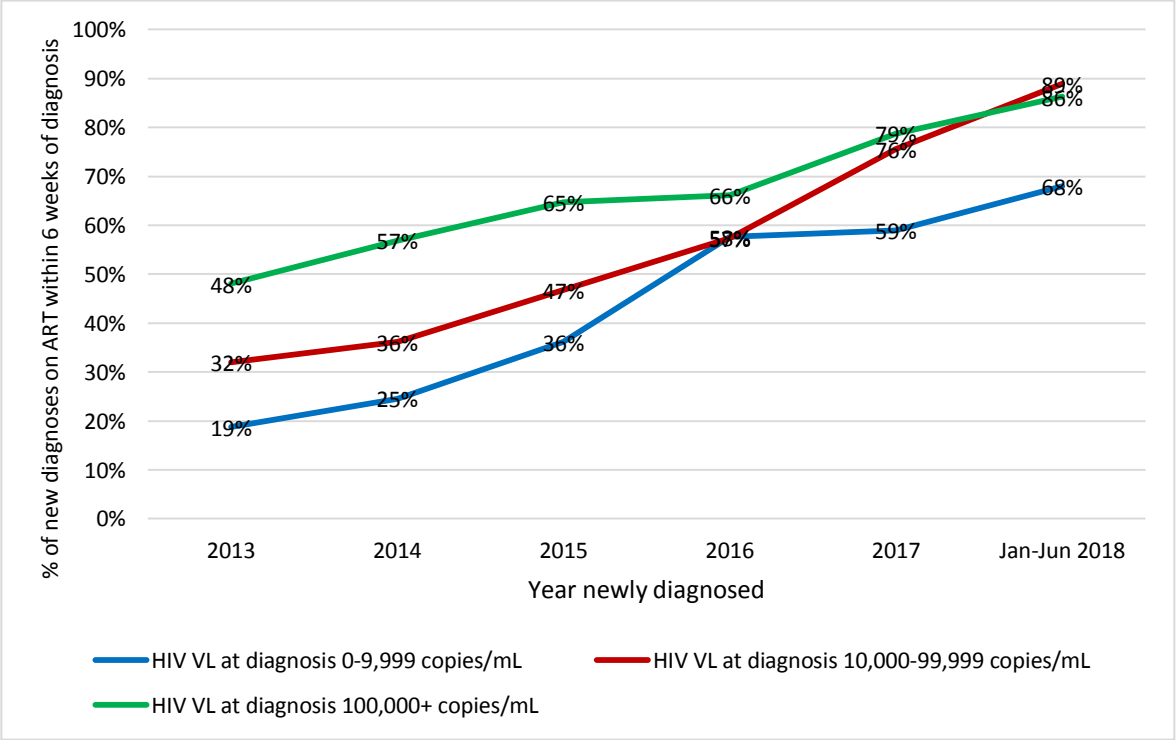


Note: excludes 49 new diagnoses with missing CD4 at diagnosis, some of whom had commenced ART within 6 months.

- 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 new diagnoses and 89% of the January to June 2018 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, 38% of the 2014, 49% of the 2015, 57% of the 2016, 72% of the 2017 new diagnoses and 73% of the January to June 2018 new diagnoses.

Figure 33: HIV viral load at diagnosis of NSW residents notified with newly diagnosed HIV infection from January 2013 to June 2018 and % on ART within six weeks of diagnosis



Note: excludes 63 new diagnoses with missing HIV VL at diagnosis, some of whom had commenced ART within 6 months.

- Of people with a HIV VL of 0-9,999 copies/mL, 19% of the 2013, 25% of the 2014, 36% of the 2015, 58% of the 2016, 59% of the 2017 and 68% of the January to June 2018 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 and 89% of the January to June 2018 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 and 86% of the January to June 2018 new diagnoses had commenced ART within six weeks of diagnosis.

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: http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx

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 homosexually active men recruited at a range of gay community sites in Sydney. 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)

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	Repeat cross-sectional survey of gay and homosexually active men recruited at a range of gay community sites in Sydney. 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.

Treatment Data Sources

Name	Custodian	Availability	Coverage
Pharmaceutical Benefits Schedule (PBS) Highly Specialised Drugs Programme data	Centre for Population Health, NSW Health	Quarterly Note: 4-6 month 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	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.
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: http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx

6. Appendix B: Characteristics of NSW residents notified with newly diagnosed HIV infection 1981 to 30 December 2018 (continues over page); data extracted from NCIMS, HPNSW, 8 February 2019.

Case characteristics	2010		2011		2012		2013		2014		2015		2016		2017		2018		1981-2018	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total (ALL)	**305**	**100.0%**	**332**	**100.0%**	**412**	**100.0%**	**354**	**100.0%**	**345**	**100.0%**	**349**	**100.0%**	**317**	**100.0%**	**313**	**100.0%**	**278**	**100.0%**	**18548**	**100.0%**
Gender																				
Male	280	91.8%	311	93.7%	375	91.0%	324	91.5%	319	92.5%	320	91.7%	291	91.8%	283	90.4%	254	91.4%	17051	91.9%
Female	23	7.5%	21	6.3%	36	8.7%	27	7.6%	25	7.2%	28	8.0%	22	6.9%	24	7.7%	21	7.6%	1197	6.5%
Transgender	2	0.7%	0	0.0%	1	0.2%	3	0.8%	1	0.3%	1	0.3%	4	1.3%	6	1.9%	3	1.1%	52	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%	248	1.3%
Aboriginal or Torres Strait Islander person status																				
Aboriginal person	7	2.3%	5	1.5%	13	3.2%	8	2.3%	7	2.0%	7	2.0%	9	2.8%	8	2.6%	11	4.0%	207	1.1%
Torres Strait Islander	0	0.0%	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	0.0%
Non-Aboriginal person	293	96.1%	324	97.6%	393	95.4%	344	97.2%	331	95.9%	339	97.1%	306	96.5%	305	97.4%	266	95.7%	11435	61.7%
Not stated	5	1.6%	3	0.9%	6	1.5%	2	0.6%	7	2.0%	3	0.9%	1	0.3%	0	0.0%	1	0.4%	6905	37.2%
Age in years at diagnosis																				
0-4	1	0.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	39	0.2%
5-9	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%	0	0.0%	1	0.3%	1	0.3%	0	0.0%	25	0.1%
10-14	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%	36	0.2%
15-19	5	1.6%	6	1.8%	9	2.2%	8	2.3%	2	0.6%	6	1.7%	3	0.9%	5	1.6%	4	1.4%	320	1.7%
20-24	29	9.5%	34	10.2%	44	10.7%	37	10.5%	41	11.9%	45	12.9%	39	12.3%	29	9.3%	36	12.9%	2250	12.1%
25-29	56	18.4%	55	16.6%	77	18.7%	65	18.4%	51	14.8%	63	18.1%	60	18.9%	58	18.5%	60	21.6%	3654	19.7%
30-34	49	16.1%	65	19.6%	71	17.2%	48	13.6%	64	18.6%	62	17.8%	63	19.9%	58	18.5%	50	18.0%	3685	19.9%
35-39	43	14.1%	59	17.8%	64	15.5%	42	11.9%	45	13.0%	45	12.9%	48	15.1%	36	11.5%	29	10.4%	3043	16.4%
40-44	51	16.7%	46	13.9%	47	11.4%	45	12.7%	46	13.3%	32	9.2%	30	9.5%	38	12.1%	28	10.1%	2246	12.1%
45-49	30	9.8%	26	7.8%	38	9.2%	45	12.7%	30	8.7%	27	7.7%	32	10.1%	21	6.7%	23	8.3%	1343	7.2%
50-54	7	2.3%	25	7.5%	28	6.8%	24	6.8%	26	7.5%	28	8.0%	18	5.7%	19	6.1%	18	6.5%	831	4.5%
55-59	22	7.2%	10	3.0%	14	3.4%	22	6.2%	15	4.3%	13	3.7%	13	4.1%	16	5.1%	15	5.4%	482	2.6%
60-64	5	1.6%	2	0.6%	13	3.2%	6	1.7%	14	4.1%	15	4.3%	6	1.9%	17	5.4%	7	2.5%	268	1.4%
65-69	6	2.0%	2	0.6%	4	1.0%	9	2.5%	7	2.0%	7	2.0%	4	1.3%	5	1.6%	4	1.4%	144	0.8%
70 or over	1	0.3%	2	0.6%	3	0.7%	2	0.6%	3	0.9%	6	1.7%	0	0.0%	10	3.2%	4	1.4%	94	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%	88	0.5%

Case characteristics	2010		2011		2012		2013		2014		2015		2016		2017		2018		1981-2018	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total (ALL)	**305**	**100.0%**	**332**	**100.0%**	**412**	**100.0%**	**354**	**100.0%**	**345**	**100.0%**	**349**	**100.0%**	**317**	**100.0%**	**313**	**100.0%**	**278**	**100.0%**	**18548**	**100.0%**
Reported HIV risk exposure																				
MSM	226	74.1%	269	81.0%	321	77.9%	265	74.9%	256	74.2%	264	75.6%	235	74.1%	217	69.3%	198	71.2%	11757	63.4%
MSM who injects drugs	8	2.6%	11	3.3%	14	3.4%	16	4.5%	20	5.8%	21	6.0%	25	7.9%	16	5.1%	18	6.5%	583	3.1%
Hetero-sex only	51	16.7%	41	12.3%	58	14.1%	61	17.2%	50	14.5%	52	14.9%	48	15.1%	67	21.4%	52	18.7%	1771	9.5%
PWID	9	3.0%	8	2.4%	10	2.4%	7	2.0%	8	2.3%	4	1.1%	4	1.3%	6	1.9%	5	1.8%	577	3.1%
Blood disorder, blood or tissue recipient	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%	0	0.0%	0	0.0%	277	1.5%
Vertical transmission	1	0.3%	0	0.0%	0	0.0%	1	0.3%	1	0.3%	0	0.0%	1	0.3%	2	0.6%	0	0.0%	53	0.3%
Other	1	0.3%	1	0.3%	2	0.5%	1	0.3%	4	1.2%	3	0.9%	1	0.3%	1	0.3%	1	0.4%	51	0.3%
Unknown	9	3.0%	2	0.6%	7	1.7%	3	0.8%	6	1.7%	4	1.1%	3	0.9%	4	1.3%	4	1.4%	3479	18.8%
LHD of residence																				
South Eastern Sydney	109	35.7%	124	37.3%	150	36.4%	126	35.6%	112	32.5%	129	37.0%	84	26.5%	92	29.4%	84	30.2%	5775	31.1%
Sydney	78	25.6%	88	26.5%	113	27.4%	91	25.7%	84	24.3%	86	24.6%	95	30.0%	71	22.7%	64	23.0%	3202	17.3%
Northern Sydney	19	6.2%	24	7.2%	23	5.6%	25	7.1%	18	5.2%	24	6.9%	19	6.0%	29	9.3%	23	8.3%	1051	5.7%
Western Sydney	20	6.6%	31	9.3%	25	6.1%	27	7.6%	27	7.8%	20	5.7%	24	7.6%	29	9.3%	25	9.0%	801	4.3%
South Western Sydney	23	7.5%	18	5.4%	30	7.3%	29	8.2%	30	8.7%	31	8.9%	31	9.8%	25	8.0%	21	7.6%	733	4.0%
Hunter New England	16	5.2%	11	3.3%	14	3.4%	17	4.8%	27	7.8%	17	4.9%	15	4.7%	7	2.2%	17	6.1%	523	2.8%
Nepean Blue Mountains	3	1.0%	4	1.2%	5	1.2%	3	0.8%	6	1.7%	6	1.7%	2	0.6%	6	1.9%	5	1.8%	273	1.5%
Illawarra Shoalhaven	8	2.6%	5	1.5%	9	2.2%	7	2.0%	6	1.7%	7	2.0%	8	2.5%	10	3.2%	7	2.5%	248	1.3%
Northern NSW	8	2.6%	11	3.3%	5	1.2%	5	1.4%	7	2.0%	8	2.3%	5	1.6%	11	3.5%	9	3.2%	226	1.2%
Central Coast	5	1.6%	4	1.2%	10	2.4%	5	1.4%	8	2.3%	5	1.4%	11	3.5%	12	3.8%	5	1.8%	224	1.2%
Mid North Coast	3	1.0%	4	1.2%	3	0.7%	6	1.7%	7	2.0%	6	1.7%	2	0.6%	4	1.3%	3	1.1%	155	0.8%
Western NSW	4	1.3%	3	0.9%	7	1.7%	5	1.4%	2	0.6%	2	0.6%	5	1.6%	5	1.6%	3	1.1%	135	0.7%
Murrumbidgee-Albury	7	2.3%	2	0.6%	5	1.2%	3	0.8%	3	0.9%	4	1.1%	9	2.8%	6	1.9%	4	1.4%	108	0.6%
Southern NSW	1	0.3%	2	0.6%	8	1.9%	4	1.1%	4	1.2%	2	0.6%	6	1.9%	3	1.0%	3	1.1%	72	0.4%
Far West	0	0.0%	0	0.0%	2	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.4%	9	0.0%
Unknown or other	1	0.3%	1	0.3%	3	0.7%	1	0.3%	4	1.2%	2	0.6%	1	0.3%	3	1.0%	4	1.4%	5013	27.0%

7. Appendix C: Demographic profile of participants who participated in EPIC study

Category	Description
Gender	Gender was obtained from the risk assessment, behavioural survey, and ACCESS databases, where available. Risk assessment data were available for 6,554 (70.2%) participants, behavioural survey data for 6,334 (67.8%) participants and ACCESS data for 8,029 (85.9%) participants. Data were not available for 307 (3.3%) participants.
Sexual identity	Sexual identity was obtained from the risk assessment and behavioural survey databases, where available. Risk assessment data were available for 6,554 (70.1%) participants, and behavioural survey data for 6,334 (67.8%) participants. Data were missing for 397 (4.2%) participants.
Age	Age was obtained from the enrolment and ACCESS databases, where available. In the enrolment database, date of birth (used to calculate age) was recorded for participants who consented to data linkage; 7,407 (79.3%) provided consent and data are available for 7,393 participants. Age was available in the ACCESS database for 8,035 participants (86.0%). Data on age were not available from either the enrolment or ACCESS databases for 331 (3.5%) of total participants.
Aboriginal and/or Torres Strait Islander status	Aboriginal and/or Torres Strait Islander status was obtained from the behavioural survey and ACCESS databases, where available. 8116 (87%) participants consented to participate in the behavioural survey and 6344 (67.8% of the total sample) completed it. Of the 1,208 (12.9%) participants whose Indigenous status was not stated, 11 participants' country/region of birth was available and not Australia, so these people were counted as Non-Indigenous, as it was assumed that there would be very few indigenous Australian or Torres Strait Islander people born outside Australia. Overall, after this assumption, data for Indigenous status was missing for 1,197 (12.8%) participants.
Country/region	Country/region of birth was obtained from the behavioural survey and ACCESS databases, where available (see above). Data for country/region of birth was missing for 1,697 (18.2%) participants.
Area of residence	Area of residence (based on participant postcode) was obtained from the enrolment, behavioural survey and ACCESS databases, where available. Data were missing for 222 (2.4%) participants.

8. Appendix D: Ending HIV Seven Statements Evaluation, ACON 2013-2018

Answer Options	FEB 2013	MAY 2013	NOV 2013	APRIL 2014	DEC 2014	APR 2015	MAR 2016	SEP 2016	APR 2017	MAR 2018
Everything has changed, we can now dramatically reduce HIV transmission	48%	59%	59%	67%	61%	71%	77%	86%	77%	87%
Now more than ever, gay men need to know their HIV status	81%	85%	86%	90%	89%	91%	92%	92%	91%	92%
Sexually active gay men should take an HIV test at least twice a year	88%	87%	92%	93%	89%	92%	93%	96%	94%	95%
HIV treatments now offer increased health benefits and fewer side effects	65%	66%	67%	73%	69%	75%	77%	78%	71%	77%
HIV treatments signifi-cantly reduce the risk of passing on HIV	33%	42%	50%	64%	59%	69%	73%	83%	78%	84%
Early HIV treatment is better for your health and can help protect your sex partners	74%	80%	89%	91%	92%	93%	93%	95%	93%	95%
Condoms continue to be the most effective way of preventing HIV transmission	95%	92%	92%	91%	91%	85%	94%	94%	94%	94%

* 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'.

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.