

NSW HIV Strategy 2016 – 2020

Quarter 1 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.

The activities NSW Health is engaged in to meet the Strategy goals and targets is summarised in the [NSW HIV Snapshot](#). To monitor progress against the Strategy goals and targets, a range of data sources are monitored and reported against via this quarterly data report. Detailed information on NSW residents newly diagnosed with HIV up to 2013 is available in the [NSW HIV 2013 Epidemiological Report](#).

Key messages

NSW continues to make progress towards the *NSW HIV Strategy 2016-2020* goals

The number of NSW residents diagnosed with HIV in January to March 2018 fell by 14% compared to the average for the same period of the previous five years. The number of these diagnoses that were known to be made within 12 months of infection (early stage infection) was 18% lower than in same period of the previous five years.

This trend in notifications, in the setting of a continued increase in HIV testing and early uptake of treatment, suggests that the likely decrease in HIV transmission seen in 2017 is continuing in 2018.

Divergent trends continue with few notifications in Australian-born men who have sex with men

In January to March 2018, 48% fewer Australian-born men who have sex with men (MSM) were newly diagnosed compared with quarter 1 of the previous five years. This reduction continues the downward trend in new HIV diagnoses in Australian-born MSM seen in 2017. There were 63% fewer Australian-born MSM newly diagnosed in early stage infection compared to the same period of the previous five years.

Conversely, new diagnoses in overseas born MSM increased by 29% in January to March 2018 compared with quarter 1 of the previous five years. More overseas born MSM were diagnosed with HIV in NSW than Australian-born MSM. The number of diagnoses in overseas born MSM with evidence of early stage infection increased by 33%, and January to March 2018 showed the equal highest quarterly number of overseas born HIV notifications to date.

Continued efforts are needed to increase the uptake of HIV prevention options in culturally and linguistically diverse (CALD) populations in NSW, including condoms and PrEP. Of note, of the 20 early stage infections diagnosed in overseas born men in quarter 1 2018, 15 were likely acquired in Australia, indicating that these are potentially preventable with interventions within NSW.

NSW will maintain a focus on targeted HIV testing

The number of HIV tests provided in NSW continues to increase. However, between January and March 2018, 68% of MSM who were diagnosed with HIV had their last test more than 12 months prior, and 20% had never previously tested for HIV. This suggests that more work is needed to encourage people at risk of HIV to get tested for HIV more regularly, in particular people who do not engage with traditional testing services.

The NSW HIV and Hepatitis C Dried Blood Spot (DBS) test is demonstrating promising results in this area. Between 1 November 2016 and 31 March 2018, 880 HIV DBS test kits were registered in NSW, and over a third of these registrations were by people who have never taken a test before or had tested over 2 years ago. Of these registrations, 60% completed a HIV test (526 people).

Progress towards rapid initiation of HIV treatment continues

Of the 229 people newly diagnosed in January to September 2017 now followed up at six months after diagnosis, 75% initiated antiretroviral therapy within six weeks, and 96% within six months, of diagnosis. The median time to ART initiation was 26 days.

Innovative partnerships to increase access to services will add to the HIV response

Efforts to reduce new HIV infections in the Australian born MSM community must continue, whilst renewed efforts are needed to increase access to innovative HIV testing, prevention and care services in all groups who are at risk of acquiring HIV.

NSW will enhance HIV surveillance to obtain more information about the characteristics and circumstances of people newly diagnosed with HIV. The information will be used to develop more equitable and effective HIV prevention strategies, and to promote earlier testing for HIV.

Key data

HIV INFECTIONS	Target group	Jan- Mar 2018	Compared with Jan-Mar 2013-2017 average
Number of NSW residents newly diagnosed	All new diagnoses	73	14% less (av. n=84.6)
	MSM	59	13% less (av. n=67.6)
	Australian-born MSM	19	48% less (av. n=36.4)
	Overseas born MSM	40	29% more (av. n=31.0)
	Heterosexuals	11	20% less (av. n=13.8)
Number of new diagnoses with evidence of early stage infection	All new diagnoses	31	18% less (av. n=37.6)
	MSM	27	21% less (av. n=34.2)
	Australian-born MSM	7	63% less (av. n=19.0)
	Overseas born MSM	20	33% more (av. n=15.0)
Number all new diagnoses with evidence of late diagnosis	All new diagnoses	32	9% more (av. n=29.4)
PREVENT	Target group	Mar 2016 –Mar 2018	
Number of people receiving PrEP through EPIC-NSW	People in NSW at high risk of HIV infection	9,342	
TEST	Target group	Jan-Mar 2018	Compared with Jan-Mar 2017
Number of HIV serology tests performed in NSW	All	159,692	8% more (n=147,674)
Number of HIV tests performed in NSW public sexual health and HIV clinics, and priority LHD settings	All	17,503	19% more (n=14,751)
	Identifying as MSM	9,926	12% more (n=8,834)
Number of DBS tests* (*November 2016-March 2018)		526 (5 HIV positive)	
TREAT	Target group	Jan–Mar 2018	Target
Proportion of patients with diagnosed HIV infection in care, who were on treatment	Sexual Health and HIV Clinic attendees	97%	95%
	Select high and medium caseload general practices	94%	95%
Proportion of NSW residents newly diagnosed with HIV who initiated ART within four and six weeks of diagnosis	Newly diagnosed cohort for Jan-Sep 2017 (n=229)	57% < 4 weeks 75% < 6 weeks	>90%
Proportion of NSW residents newly diagnosed who were reported to be virally suppressed (VL < 200 copies/mL) at 6-month follow-up	NSW residents newly diagnosed Jan-Sep 2017 (n=229)	86%	100%

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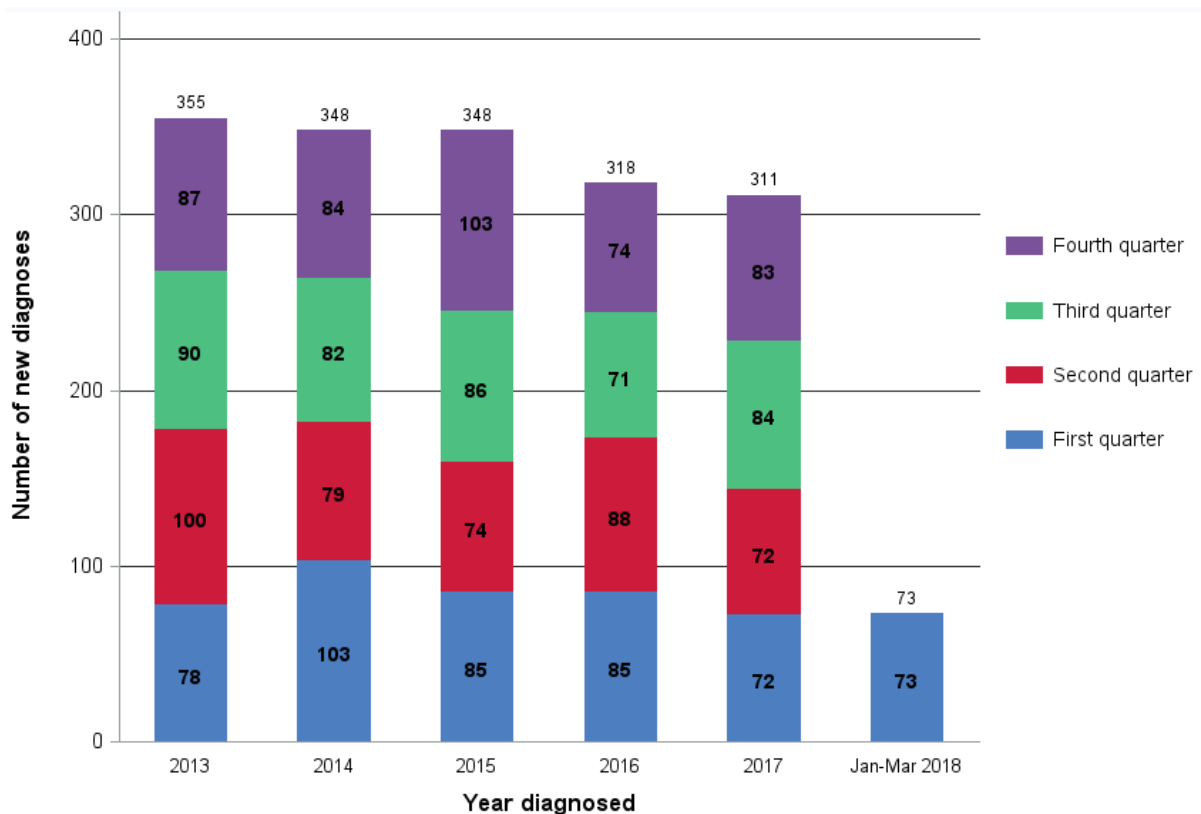
Glossary of Terms

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 notified with newly diagnosed HIV infection in 1 January 2013 to 31 March 2018

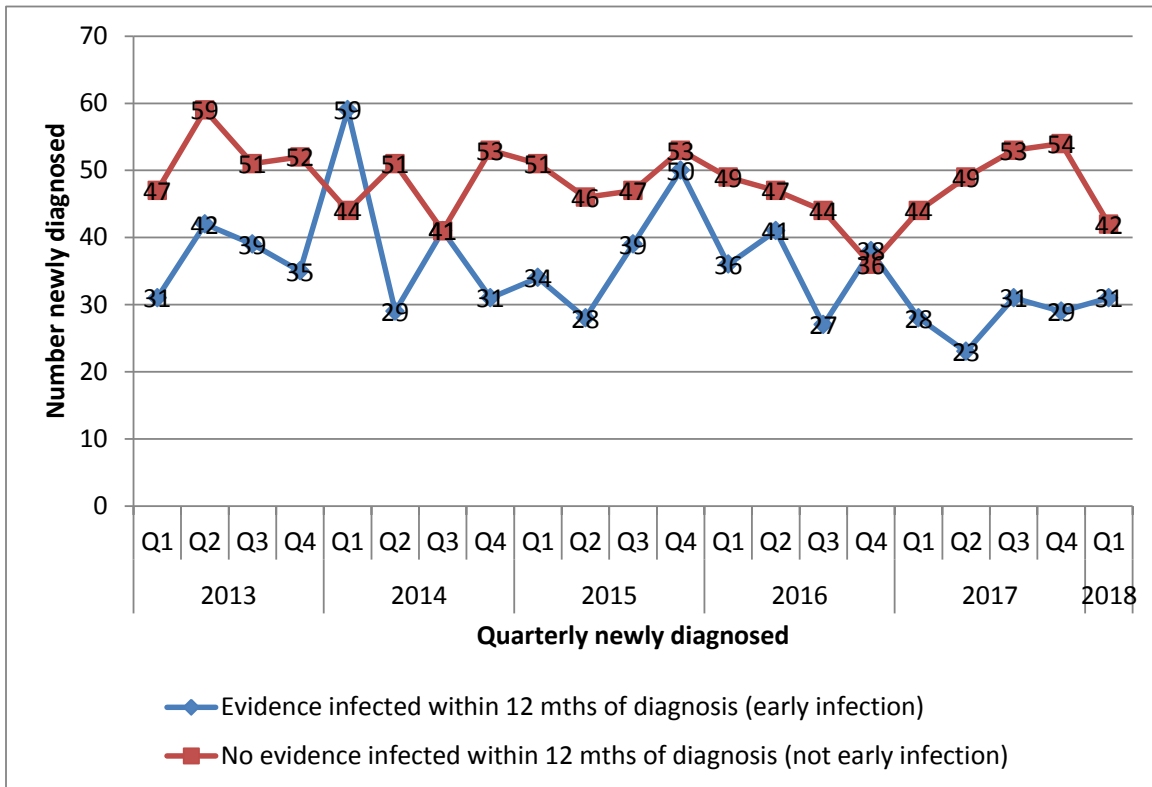


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 8 May 2018

Comments on Figures 1 and 2

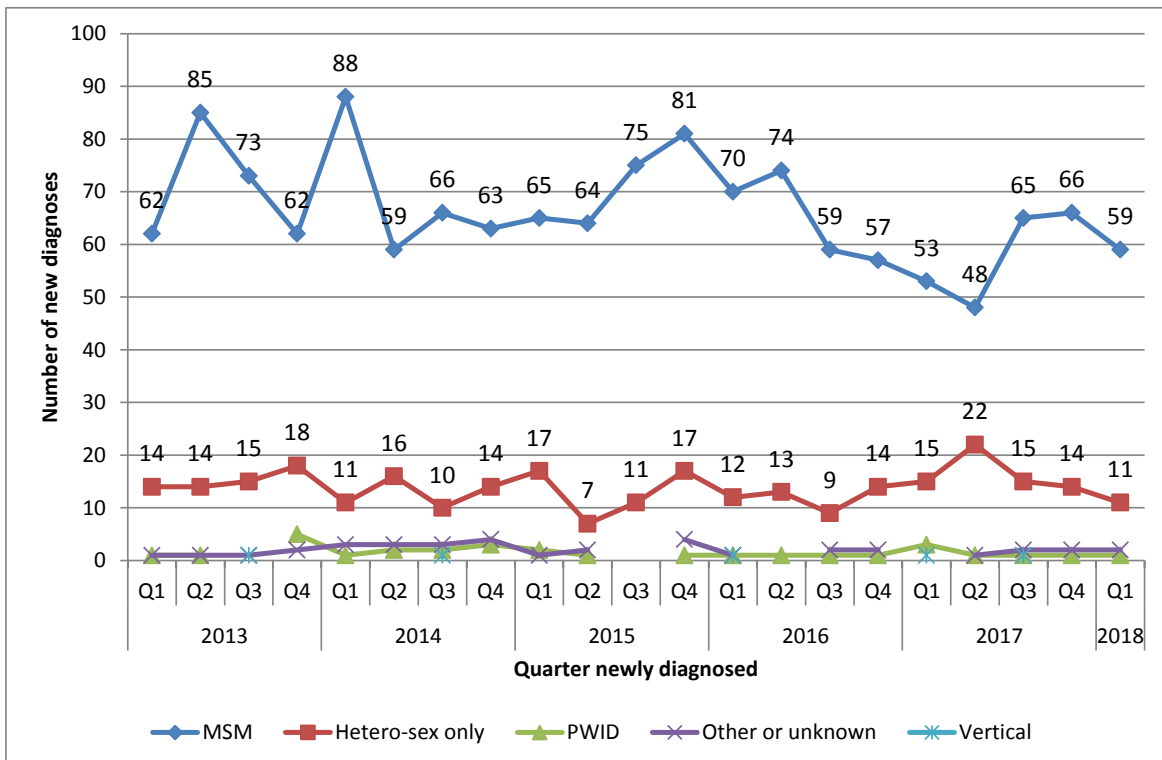
- In January to March 2018 (Q1 2018) there were 73 NSW residents notified with newly diagnosed HIV infection, 14 per cent (%) less than the average for Q1 2013-2017 (av. n=84.6).
- In Q1 2018 there was an 18% (n=31) drop in the number of new diagnoses with evidence that the infection was acquired within one year of diagnosis (early stage infection) compared to the average early stage infection count in Q1 2013-2017 (av. n=37.6) (Figure 2).
- This drop in early stage infections has occurred only in Australian-born men who have sex with men (MSM), with 63% fewer early stage infections in Q1 2018 (n=7) in this sub-group compared to the average in the group in Q1 2013-2017 (av. n= 19.0) (Figure 4).
- The number of new diagnoses in NSW in Q1 2018 should be considered in the context of: 1) continued increase in HIV testing (see Section 3), 2) increased early uptake of antiretroviral therapy (ART) among people newly diagnosed (see Section 4), 3) commencement of the population level HIV pre-exposure prophylaxis (PrEP) impact study (EPIC-NSW) in March 2016, with 9366 people recruited at 31 March 2018 (see section 2), and 4) the instability of small numbers when considering data for just one quarter.

Figure 2: All new diagnoses Q1 2013-Q1 2018 by evidence of infection 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

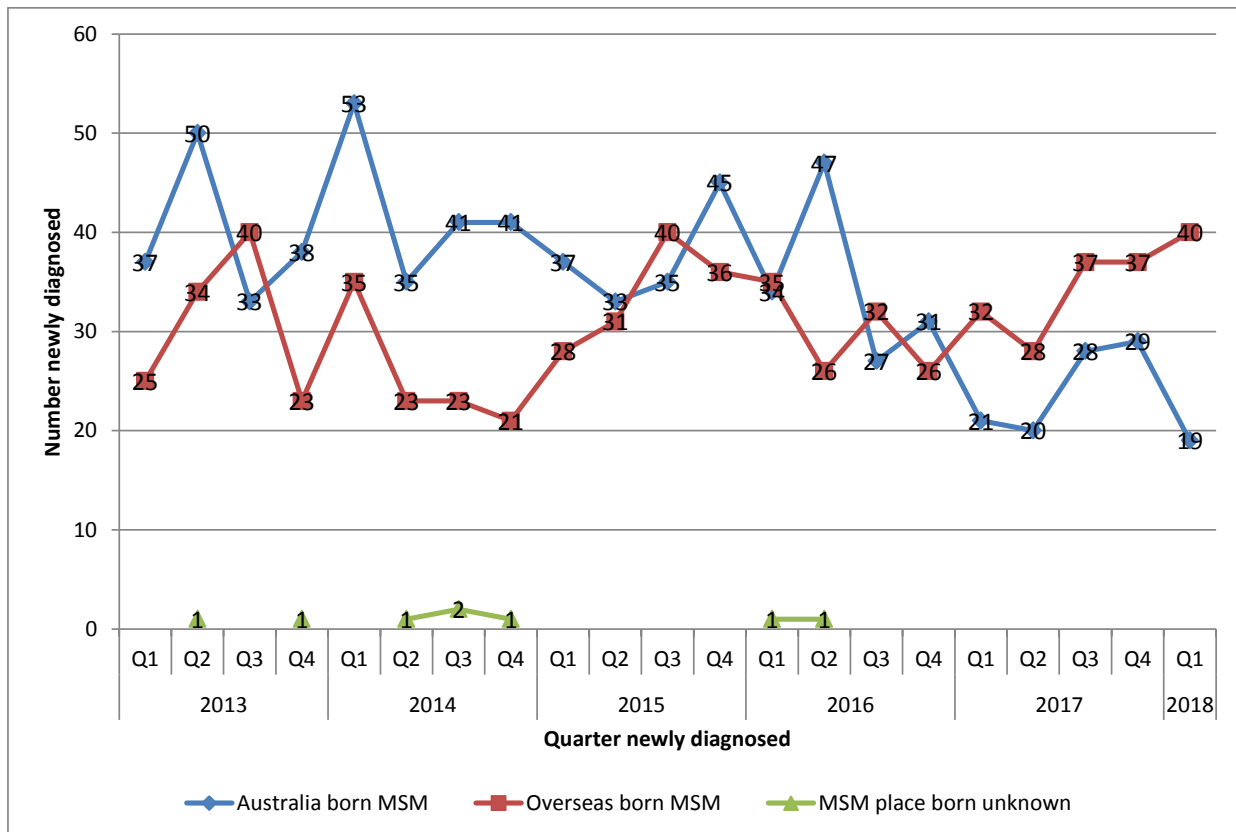
Figure 3: New diagnoses Q1 2013-Q1 2018 by reported HIV risk exposure



Comments on Figure 3

- Among the 73 new diagnoses in Q1 2018, 59 (80%) reported being MSM, 13% less than the average new diagnoses count for MSM in Q1 2013-2017 (av. n=67.6) (Figure 3).
- Of 73 new diagnoses in Q1 2018, 11 (15%) reported heterosexual acquisition of HIV, 20% less than the average count for Q1 2013-2017 (av. n=13.8) (Figure 3).
- Of the remaining three new diagnoses in Q1 2018, one was acquired via injecting drug use and two were other/unknown exposures.

Figure 4: New diagnoses Q1 2013-Q1 2018 in MSM, Australia versus overseas born



Comments on Figures 4 to 6

- Divergent epidemic trends were seen in Australian-born MSM compared with their overseas born counterparts since Q1 2017 (Figure 4).
- Of 59 MSM newly diagnosed in Q1 2018, only 19 (32%) were Australian-born, continuing a 15 months downward trend in new diagnoses in this sub-group, 48% less than the average new diagnoses count for Australian-born MSM in Q1 2013-2017 (av. n=36.4) (Figure 4).
- Conversely, new diagnoses in overseas born MSM increased by 29% in Q1 2018 (n=40) compared with the Q1 2013-2017 average (av. n=31.0) in this sub-group (Figure 4).
- Evidence of early stage infection in overseas born MSM newly diagnosed in Q1 2018 increased by 33% in overseas born MSM (n=20 in Q1 2018 versus av. n=15.0 in Q1 2013-2017) (Figure 6). Fifteen of 20 early stage infections in overseas born MSM in Q1 2018 were most likely acquired in Australia.
- For all MSM newly diagnosed in Q1 2018, 27 were in early stage infection, 21% less than the Q1 2013-2017 average (av. n=34.2).

Figure 5: New diagnoses Q1 2013-Q1 2018 in Australian-born MSM by evidence of infection within 12 months of diagnosis

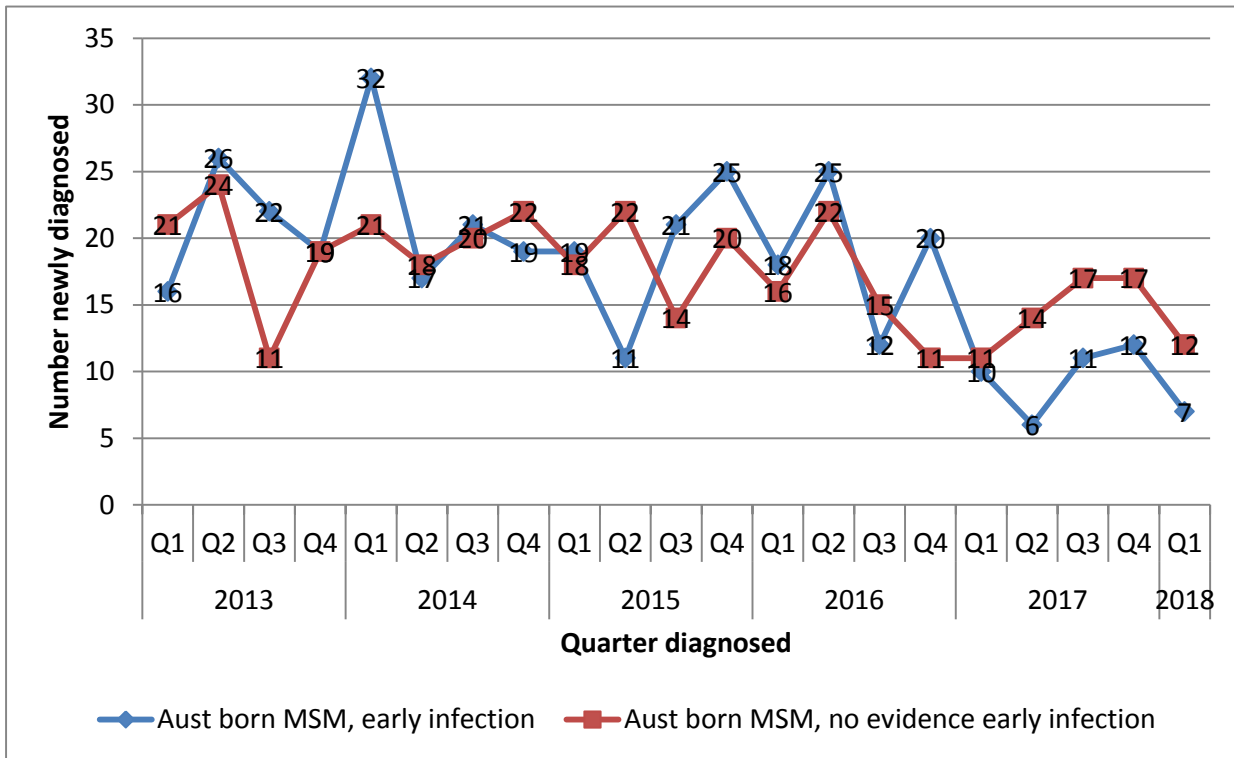


Figure 6: New diagnoses Q1 2013-Q1 2018 in overseas born MSM by evidence of infection within 12 months of diagnosis

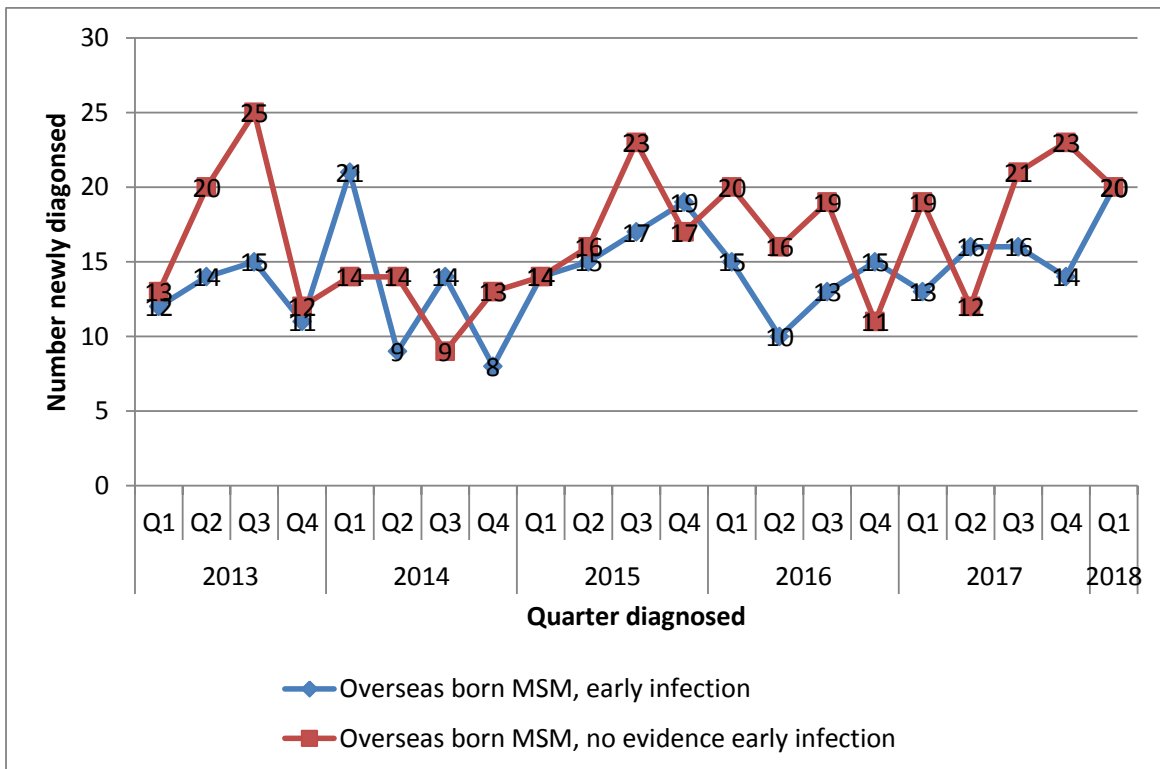
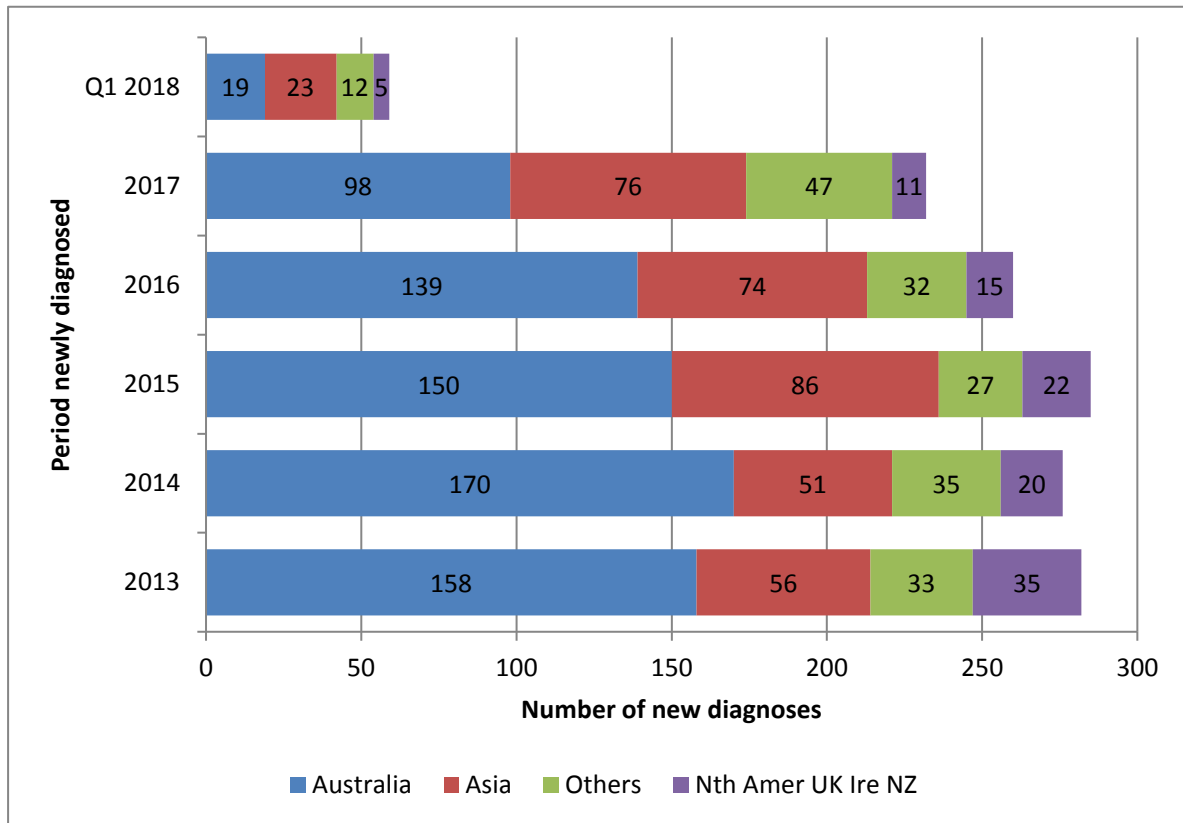


Figure 7: New diagnoses Q1 2013-Q1 2018 in MSM by world area of birth*



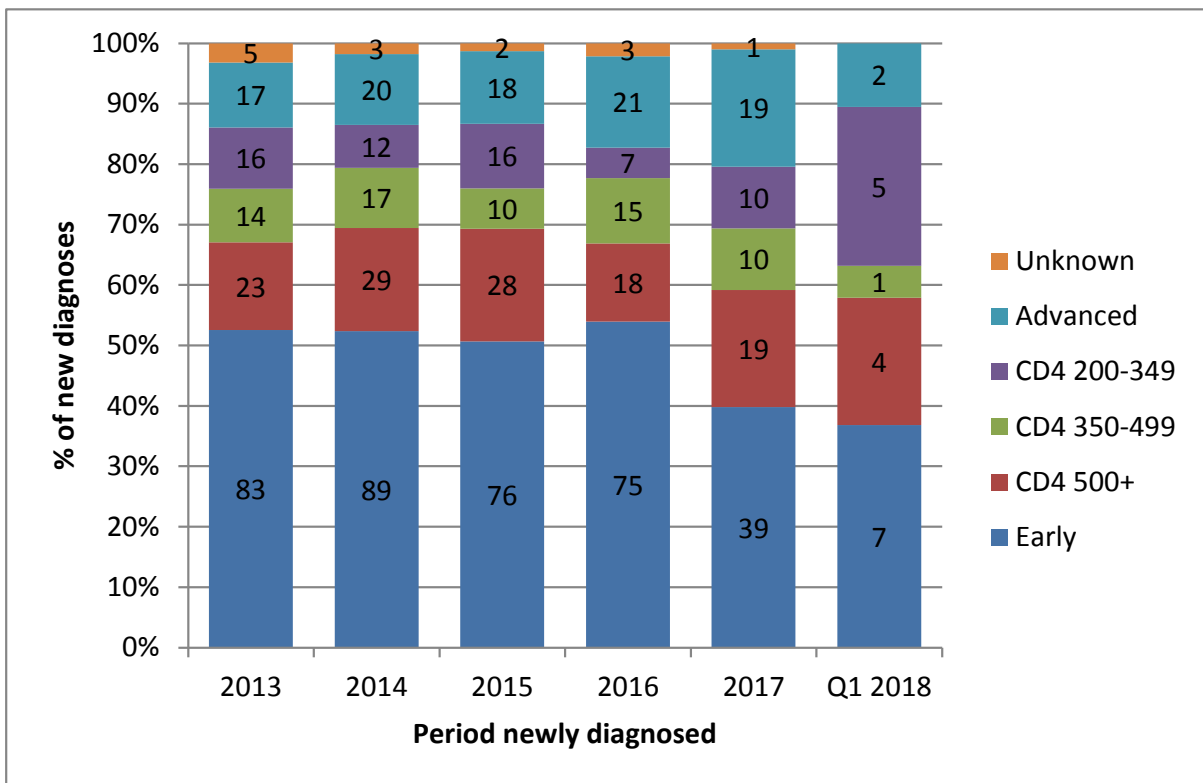
Comment on Figure 7

- The regions of birth for overseas born MSM newly diagnosed in Q1 2018 were South-East Asia (40%), Southern and Central America (27.5%), North-East Asia (12.5%), Oceania (7.5%), North-West Europe (7.5%), and 5% were from Central and Southern Asia (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.

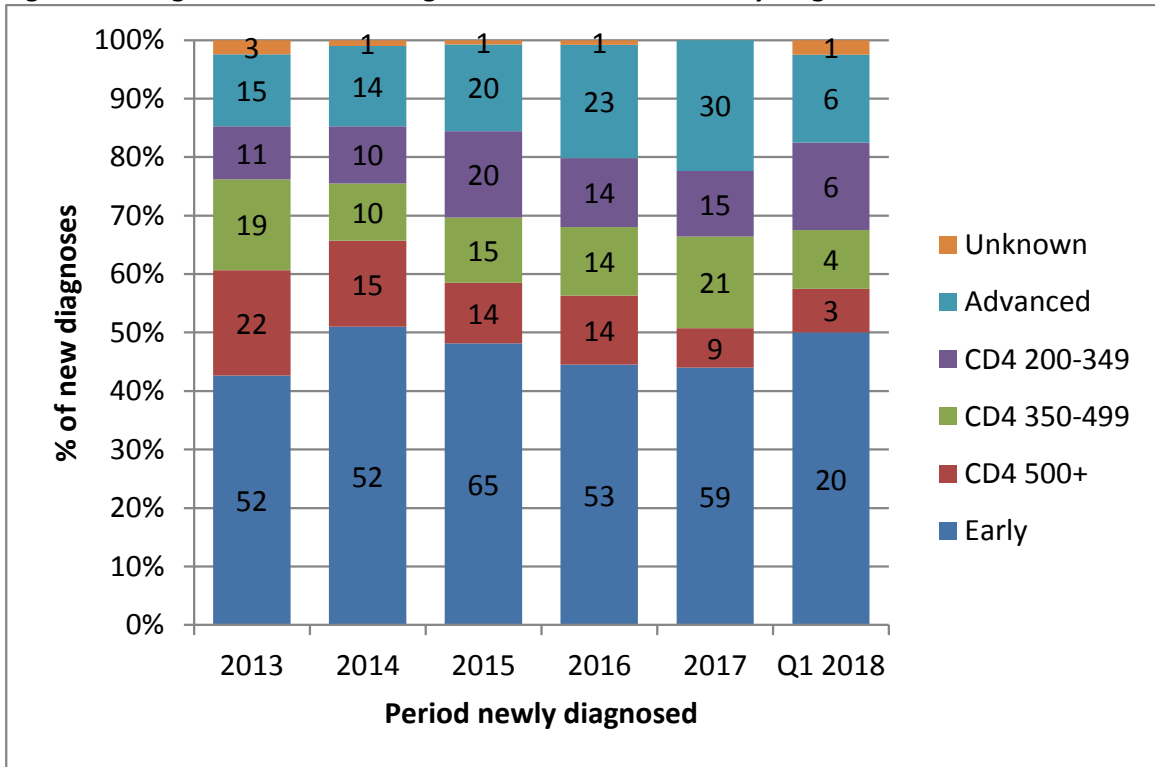
Figure 8a: Stage of infection among Australian-born MSM newly diagnosed Q1 2013-Q1 2018



Comments on Figure 8a

- Of 19 Australian-born MSM newly diagnosed in Q1 2018, seven (37%) had evidence of early stage, 63% less compared to an average of 19.0 in Q1 2013-2017 (Figure 8).
- Seven (37%) had a CD4 count of 200-349 or advanced stage disease similar to the comparison period (av. n=8.0).

Figure 8b: Stage of infection among overseas born MSM newly diagnosed Q1 2013-Q1 2018



Comments on Figures 8b and 8c

- Of 40 overseas born MSM newly diagnosed in Q1 2018, 20 (50%) had evidence of early stage, 33% more the average of 15.0 in Q1 2013-2017. Twelve (30%) had a CD4 count of 200-349 or advanced stage disease, 62% greater than 7.4 in Q1 2013-2017 (8b).
- Stage of diagnosis in people with an HIV risk other than MSM in Q1 2018 was stable (8c).

Figure 8c: Stage of infection among new diagnoses Q1 2013-Q1 2018 other than MSM exposure

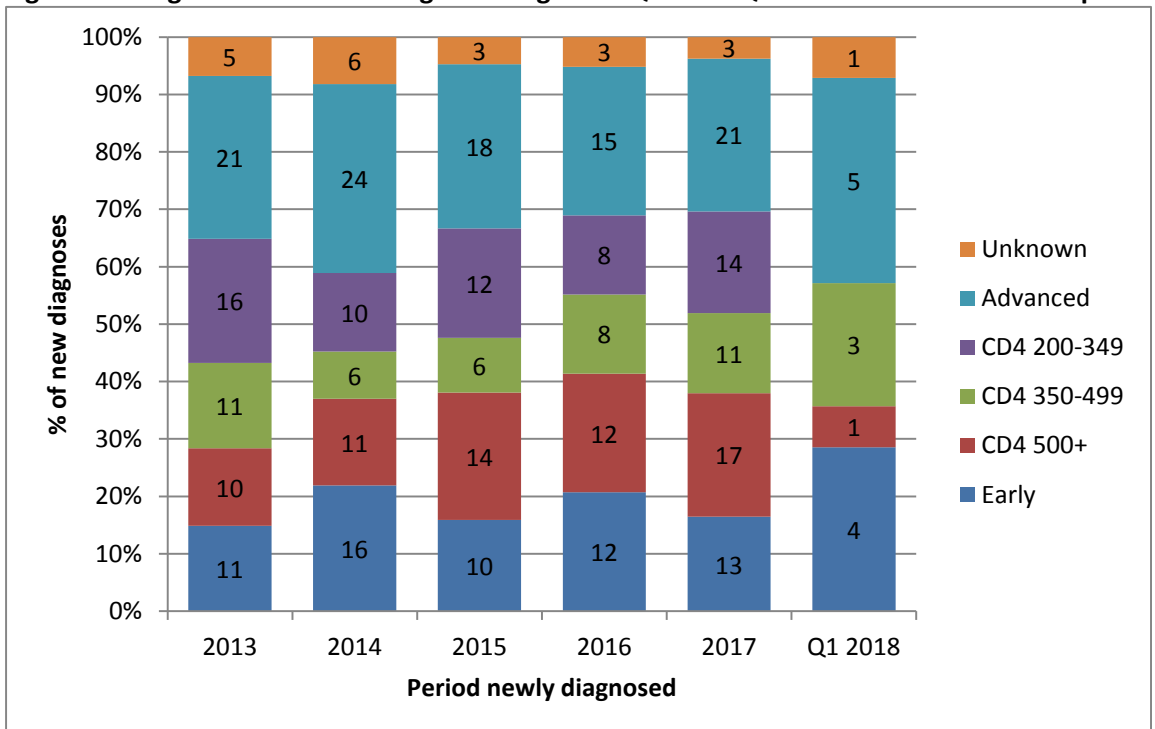
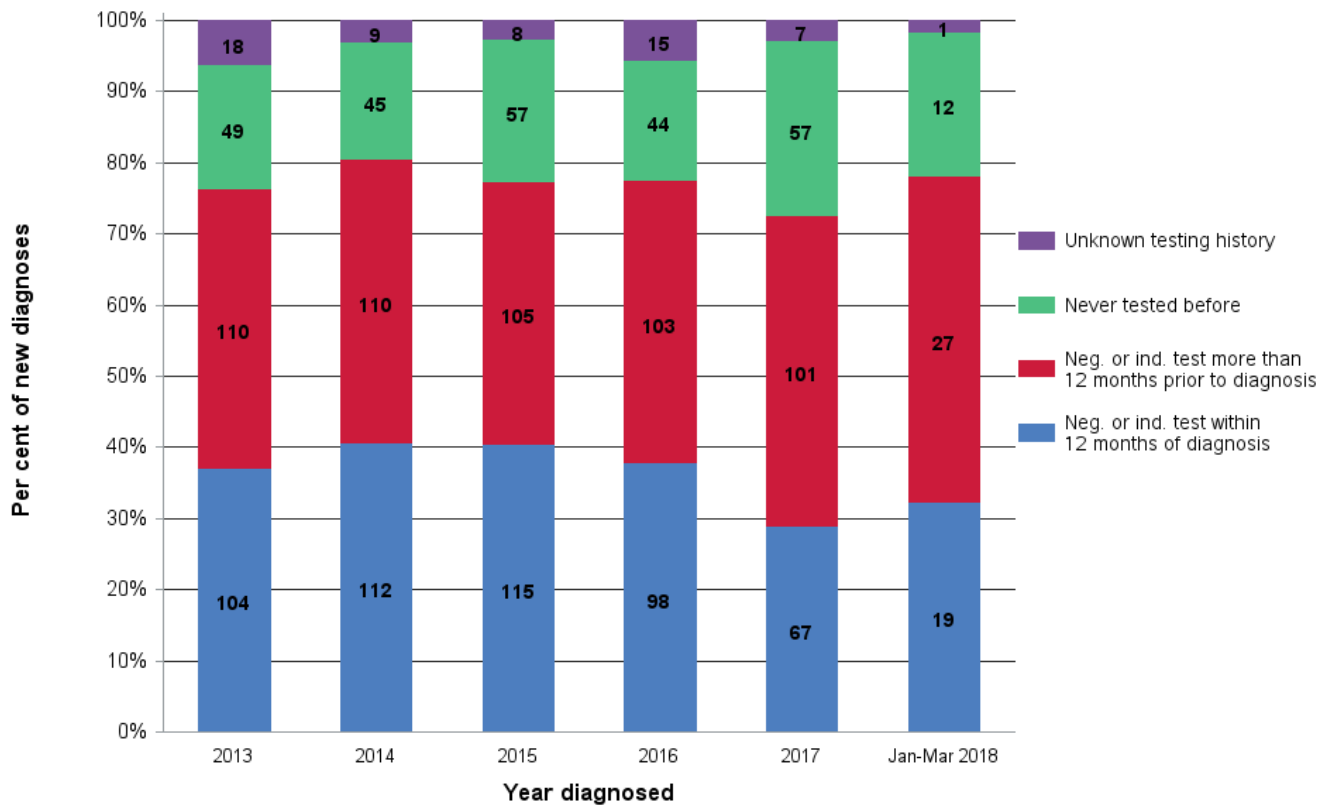


Figure 9: Per cent of new diagnoses Q1 2013-Q1 2018 in MSM by their HIV testing history



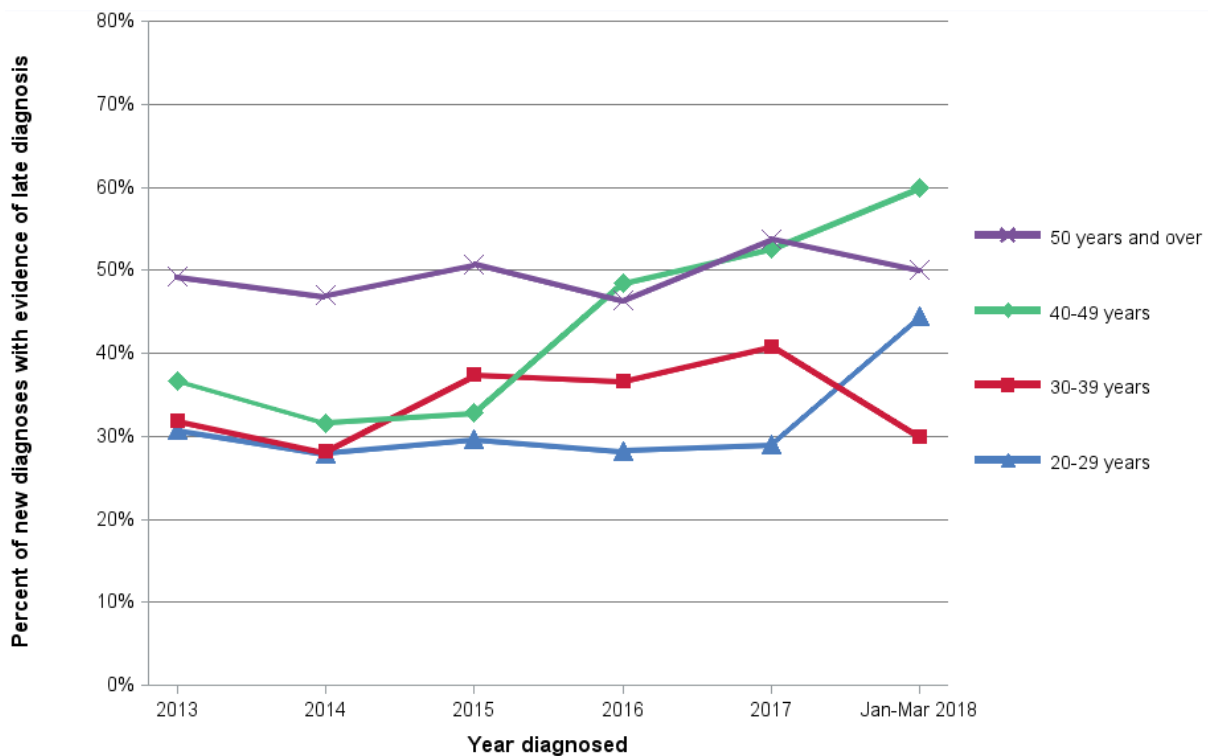
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 8 May 2018

Comments on Figure 9

Of all 59 MSM newly diagnosed in Q1 2018:

- 40 (68%) had not had a test in the 12 months prior to diagnosis, and it was 68% for both Australian-born and overseas born MSM.
- 19 (32%) were reported to have had a negative or indeterminate HIV test within 12 months of diagnosis, 23% less compared with an average of 24.6 in Q1 2013-2017.
- 12 (20%) reported not ever having had an HIV test prior to diagnosis, similar to the comparison period (av. n=13.0).

Figure 10: Per cent of new diagnoses Q1 2013-Q1 2018 in each age group category with evidence of late diagnosis



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 8 May 2018

Comments on Figure 10

- 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 73 new diagnoses in Q1 2018, 32 (44%) had evidence of late diagnosis, 9% more than the average for Q1 2013-2017 (av. n=29.4). This was 50% of those who were aged 50 years or over at diagnosis, 60% of those aged 40 to 49 years, 30% of those aged 30 to 39 years at diagnosis and 44% of those aged 20 to 29 years at diagnosis.
- The upswing in late diagnosis in 20 to 29 year olds occurred among overseas born MSM newly diagnosed, but proportions are influenced by small numbers in this quarter one report.

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

Table 1: Characteristics of Australian-born MSM and of overseas born MSM newly diagnosed in Q1 2018 versus the Q1 average count in Q1 2013-2017

Case characteristics*	Australian-born MSM			Overseas born MSM		
	Q1 2013-2017 av.	Q1 2018	Count diff.	Q1 2013-2017 av.	Q1 2018	Count diff.
Number	36.4	19	-17.4	31.0	40	+9.0
Gender						
Male	36.2	19	-17.2	30.6	39	+8.4
Transgender	0.2	0	-0.2	0.4	1	+0.6
Age in years at diagnosis						
0 to 19	0	0	-	0	0	-
20 to 29	10.4	5	-5.4	11.2	20	+8.8
30 to 39	9.0	4	-5.0	10.4	14	+3.6
40 to 49	9.2	4	-5.2	6.0	4	-2.0
50 and over	7.8	6	-1.8	3.0	2	-1.0
Evidence of early stage infection**						
Yes	19.0	7	-12.0	15.0	20	+5.0
No	17.4	12	-5.4	16.0	20	+4.0
Evidence of late diagnosis***						
Late	10.4	7	-3.4	11.0	17	+6.0
Not late	24.8	12	-12.8	19.0	22	+3.0
Unknown	1.1	0	-1.2	1.0	1	0

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 8 May 2018

*In Q1 2018 there were no Aboriginal people newly diagnosed reporting MSM risk exposure.

** Evidence of early stage infection/being infected in the 12 months prior to 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

*** 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.

Figure 11a: Per cent of new diagnoses Q1 2013-Q1 2018 in MSM, place born & likely acquired HIV

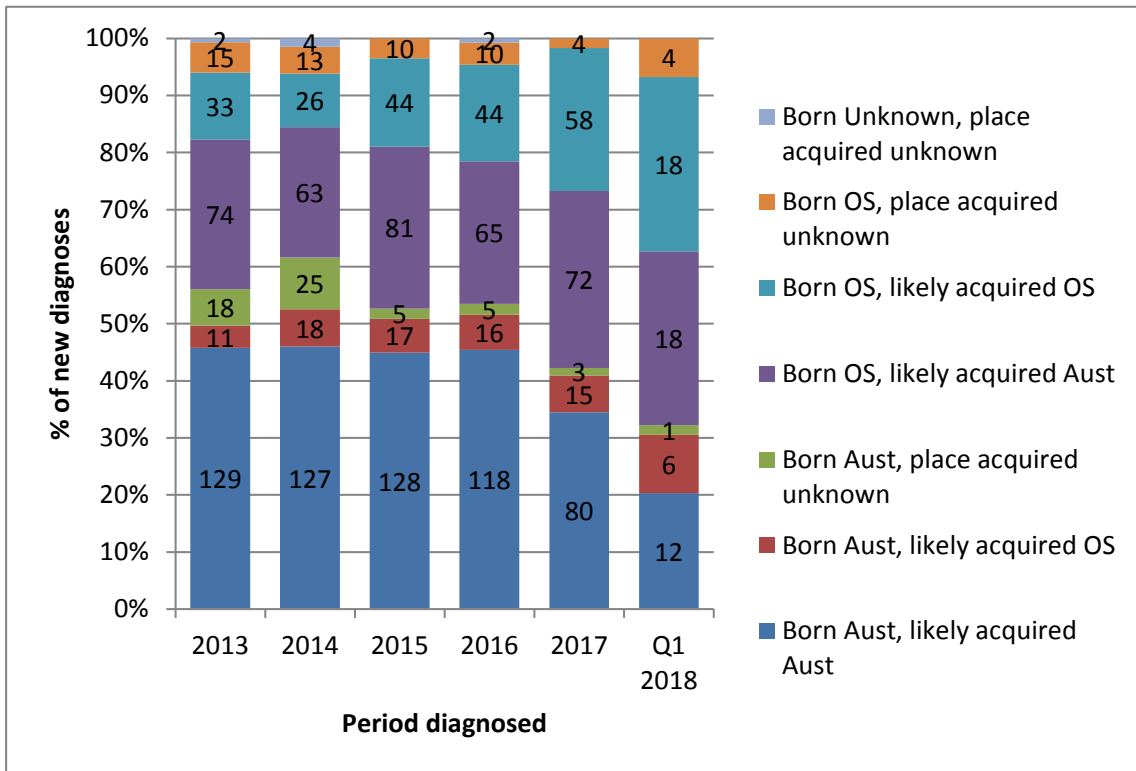
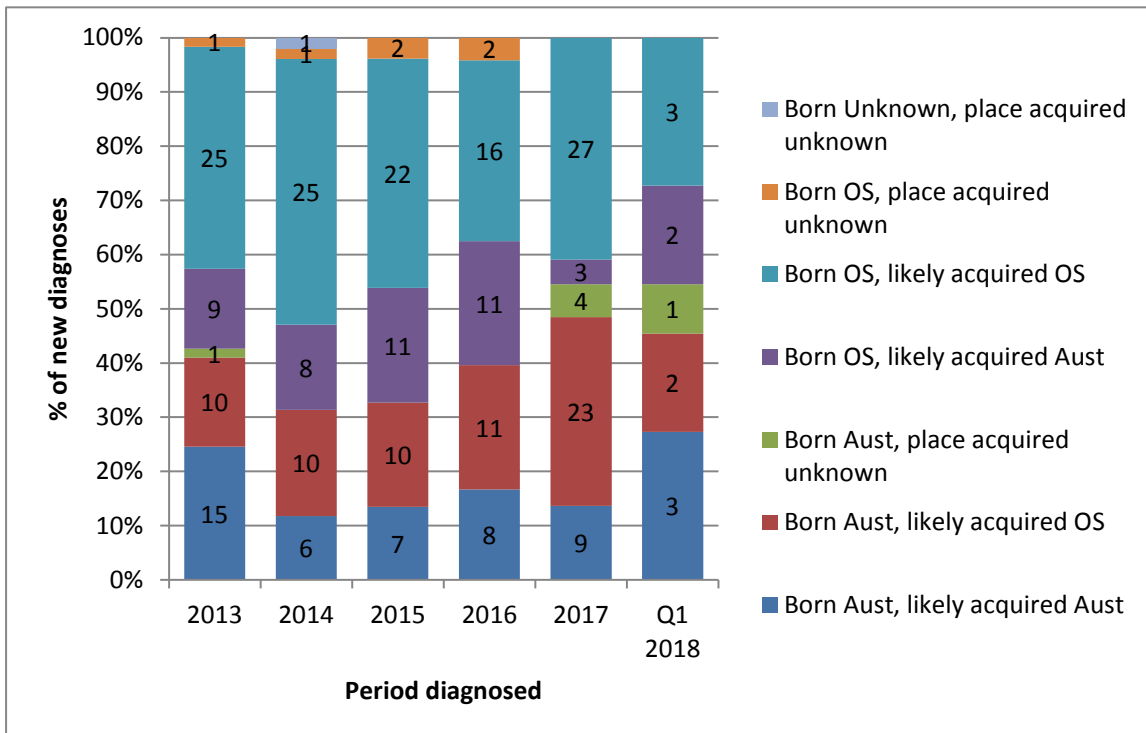


Figure 11b: Per cent of new diagnoses Q1 2013-Q1 2018 in heterosexuals, place born & likely acquired HIV



Comments on Figures 11a and b:

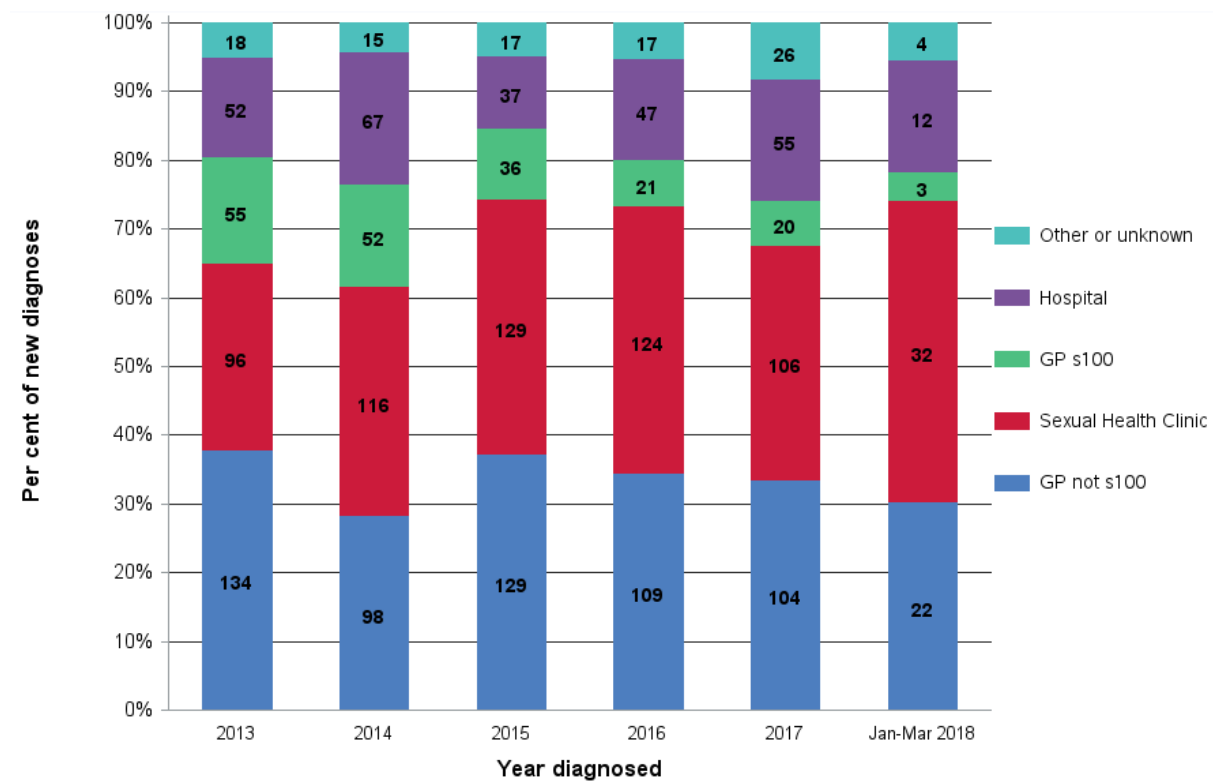
Of 59 MSM newly diagnosed in Q1 2018:

- 19 (32%) were Australian born, 48% less than the average of 36.4 for Q1 2013-2017. The number of newly diagnosed Australian-born MSM who likely acquired HIV in Australia was 12 in Q1 2018, 60% less than an average of 30.2 for Q1 2013-2017.
- 40 (68%) were born overseas, 29% more than the average of 31.0 for Q1 2013-2017. The relative increase occurred in overseas born MSM who likely acquired HIV overseas.

Of 11 heterosexual people newly diagnosed in Q1 2018:

- Six were Australian born, the same as the comparison period (Q1 2013-2017).
- Five were born overseas born, less but similar to the comparison period (av. n=7.8).

Figure 12: Per cent of new diagnoses Q1 2013-Q1 2018 by type of diagnosing doctor



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 8 May 2018

Comments on Figure 12

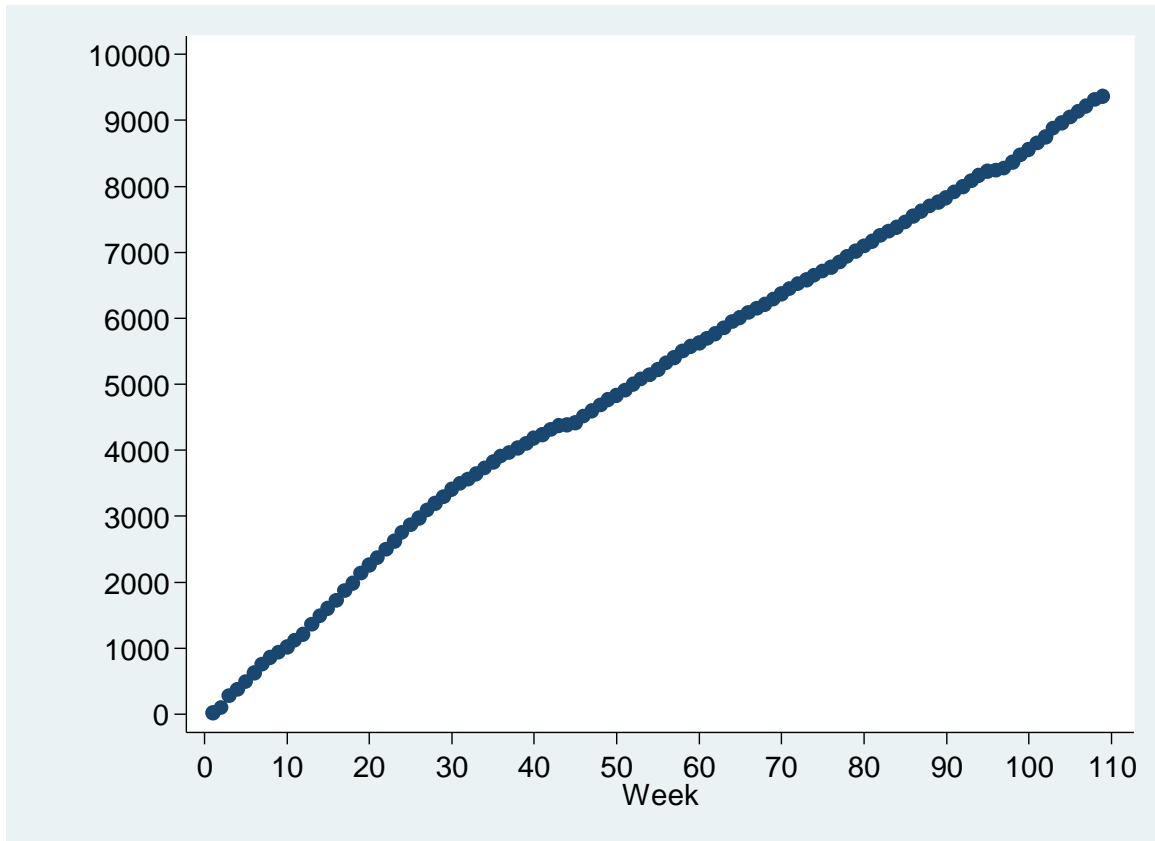
Of 73 NSW residents notified with newly diagnosed HIV infection in Q1 2018:

- 32 (44%) were diagnosed by sexual health clinics (SHC) (includes linked community testing sites), 24% more than the average of 25.8 for Q1 2013-2017.
- 22 (30%) were diagnosed by medical general practitioners (GPs) not accredited to prescribe antiretroviral therapy (ART) (GP not-s100), 31% less than 31.8 for Q1 2013-2017.
- 12 (16%) were diagnosed by hospital doctors, similar to the comparison period (av. n=12.8).
- 4 (5%) were diagnosed by other doctor types (two by immigration, one by private medical specialist and one in Justice Health), similar as in Q1 2013-2017 (av. n=3.6).
- 3 (4%) were diagnosed by GP s100 doctors (HIV specialised and accredited to prescribe ART), 72% less than 10.6 in Q1 2013-2017.

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 31 March 2018



Comments:

- A total of 9,342 participants enrolled in EPIC-NSW between 1 March 2016 and 31 March 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 2: Demographic data for EPIC-NSW participants enrolled between 1 March and 31 March 2018

Gender	N	%
Male	8,925	98.8
Female	21	0.2
Transgender, male-to-female	70	0.8
Transgender, female-to-male	11	0.1
Other	8	0.1
Total	9,035	100
Sexual identity		
Gay/Homosexual	8,366	93.5
Bisexual	505	5.6
Heterosexual	49	0.6
Other*	25	0.3
Total	8,945	100.0
Age at enrolment (years)		
Median (Inter-quartile range)	34 (28 to 43)	
Age group		
< 20	104	1.2
20-29	2,753	30.6
30-39	3,140	34.9
40-49	1,844	20.5
≥50	1,170	13.0
Total	9,011	100
Aboriginal and/or Torres Strait Islander status		
Non-Indigenous	7,976	97.9
Aboriginal and/or Torres Strait Islander **	169	2.1
Total	8,145	100
Country/Region of birth		
Australia	4,565	59.7
Oceania	285	3.7
Asia	1,134	14.8
Northern America	201	2.6
South America, Central America & the Caribbean	338	4.4
Europe	862	11.3
Middle East	127	1.7
Africa	133	1.7
Total	7,645	100
Area of residence		
Major cities	8,581	94.1
Inner Regional	492	5.4
Outer Regional	37	0.4
Remote	8	0.1
Very Remote Australia	2	0.0
Total	9,120	100

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 2

- Almost 99% of participants were male. Around 94% identified as gay/homosexual
- More than 65% of the participants were between 20-39 years, and 21% were 40-49 years old
- Of the 7,645 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 0.4% resided in an outer regional or remote area
- Of 8,145 participants who answered the question in the behavioural survey about Aboriginality, 2.1% identified as Aboriginal or Torres Strait Islander

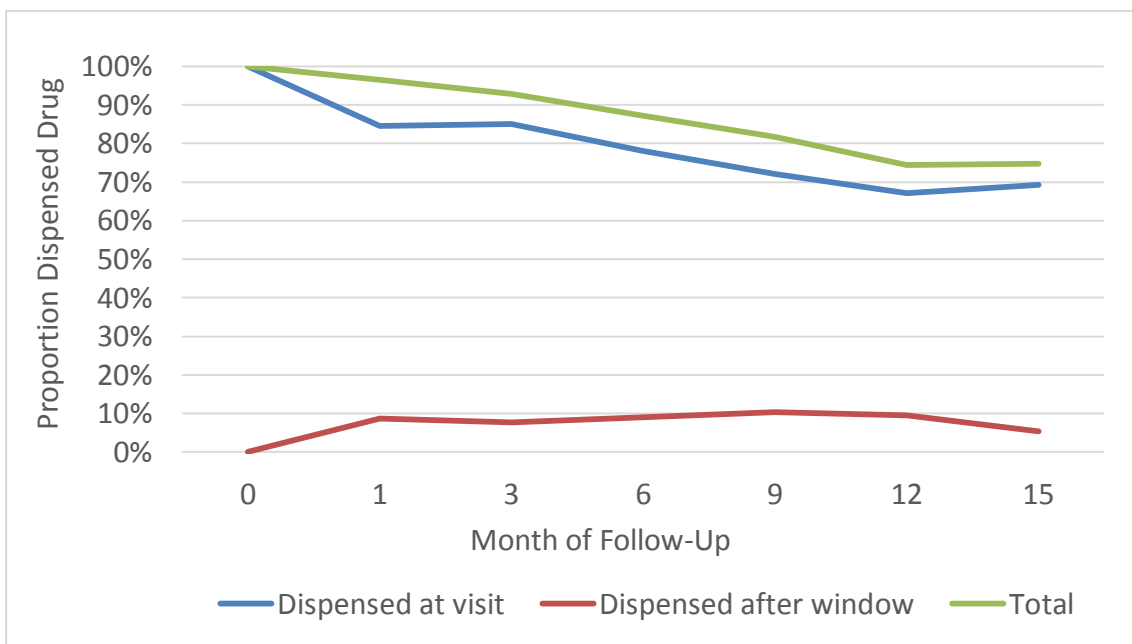
PrEP use over time by EPIC-NSW participants

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 12-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

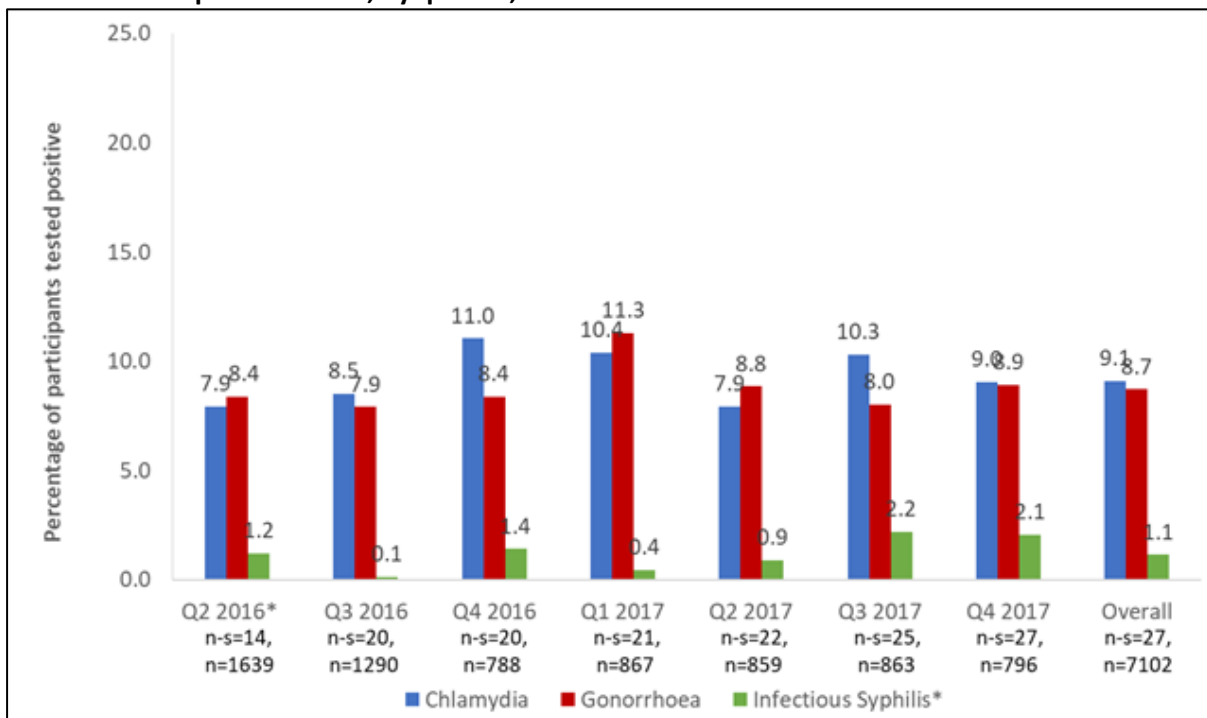
- Approximately 70% of the first 3,700 participants enrolled in EPIC-NSW presented for their clinic visit, and were dispensed PrEP within the window period (estimated date ±45 days).
- There was a group of about 10% of study participants who did not collect their PrEP within their scheduled visit window, 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?

HIV and sexually transmissible infection (STI) testing is recommended for all EPIC-NSW participants at baseline (enrolment), 1 month (HIV only) and every three months, in accordance with the NSW Health Guidelines on the Pre-Exposure Prophylaxis of HIV with Antiretroviral Medications (GL2016_011).

Of the 8,206 participants up to the end of Quarter 4 2017, STI testing data were available for 7,596 (92.6%) participant enrolled in 27 sites. The 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 271, Site 272, Site 276, Sydney Sexual Health and Western Sydney Sexual Health.

Figure 15: Proportion of individuals tested for chlamydia, gonorrhoea and infectious syphilis* at baseline with a positive result, by quarter, 1 March 2016 to 31 December 2017



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

*Infectious syphilis was based on pathology test results and clinical information available from public clinics only.

Comments on Figure 15

Of the EPIC-NSW participants tested for STIs at baseline between 1 March 2016 and 31 December 2017:

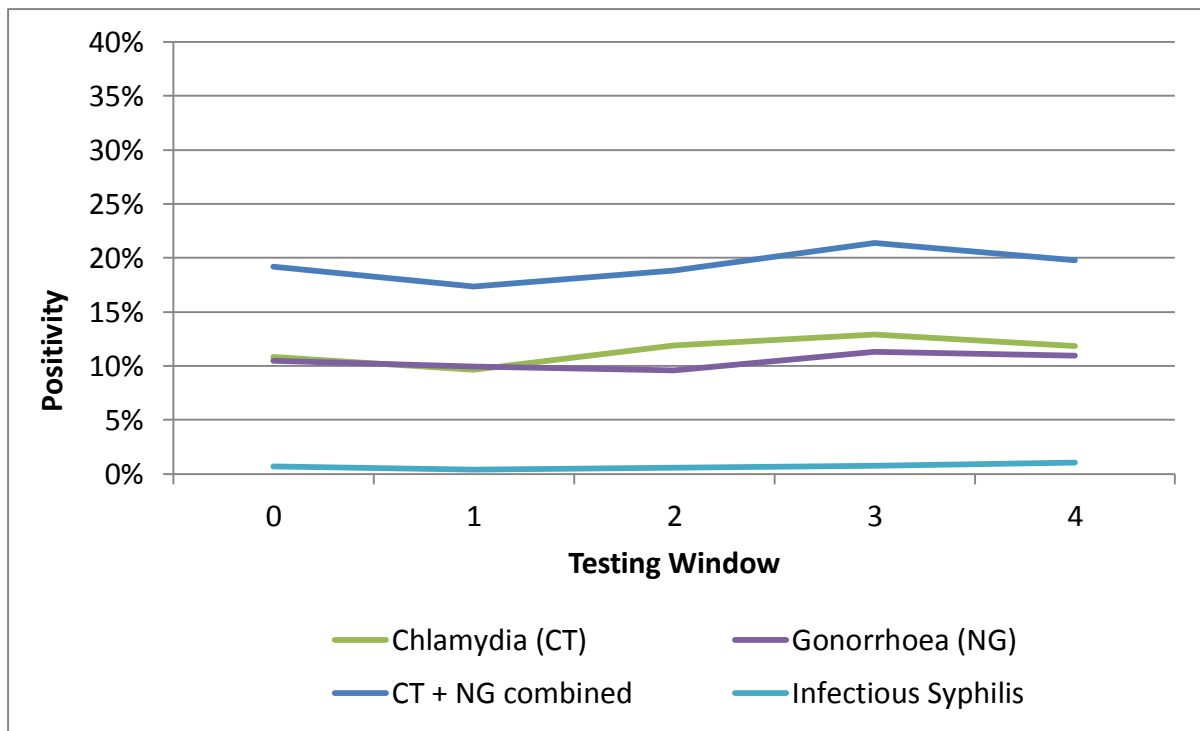
- 9.1% had a positive test result for chlamydia and 8.7% for gonorrhoea
- 1.1%.had a positive test result at public clinics for infectious syphilis

There has been a slight increase in the overall diagnosis rate for infectious syphilis, but this is based on only a handful of new cases, with the small numerator. The prevalence of STI rates remained reasonably stable over time, with some fluctuations by quarter, suggesting the program is continuing to reach men at risk of HIV.

STI positivity over 12 months of follow-up in EPIC-NSW participants

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 12 months of study follow-up. Enrolment was completed by 31 October 2016, and follow-up data was included up until 31 December 2017. A total of 3487 (94%) 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 positivity¹ over 12 months of follow-up



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

¹ Chlamydia and gonorrhoea positivity was calculated as a positive test at any anatomical site (ano-rectal, pharyngeal, or urethral).

Comments on Figure 16

- The number of chlamydia/gonorrhoea tests conducted in each testing window declined over time; from 3345 in testing window 0 (baseline), to 2502 in testing window 4 (12 month follow-up ±45 days). Data on infectious syphilis were only available from public clinics, with 1683 tests conducted in window 0 and 1117 in window 4
- Chlamydia positivity increased slightly from 10.9% in testing window 0 to 11.8% in window 4.
- Gonorrhoea positivity ranged from 9.6% in window 2 to 11.3% in window 3, and infectious syphilis from 0.4% in window 1 to 1.1% in testing window 4.
- 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 increased slightly.

2.3 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. The data for 2017 were reported in the January - March 2017 HIV Data Report. Briefly, the combined proportion of respondents reporting no anal intercourse or consistent condom use with casual partners decreased from 59.1% in 2016 to 48.0% in 2017.

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?

Between 2016 (Jan-Dec) and 2017 (Jan-Dec):

- The number of units of injecting equipment distributed in NSW has decreased in 2017 compared to 2016.
- In 2017, 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.
- 13,558,302 unit of injecting equipment were distributed in NSW. Compared to the same period in 2016:
 - 4 per cent (503,165) less units were distributed overall in NSW
 - 1 per cent (9,522) less units were distributed by Public NSP

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

- In 2017, 20% of respondents reported receptive syringe sharing in the previous month (NSW Needle and Syringe Program Enhanced Data Collection, 2017)².

² Geddes, L, Iversen J, and Maher L. NSW Needle and Syringe Program Enhanced Data Collection Report 2017, The Kirby Institute, UNSW Australia, Sydney 2017.

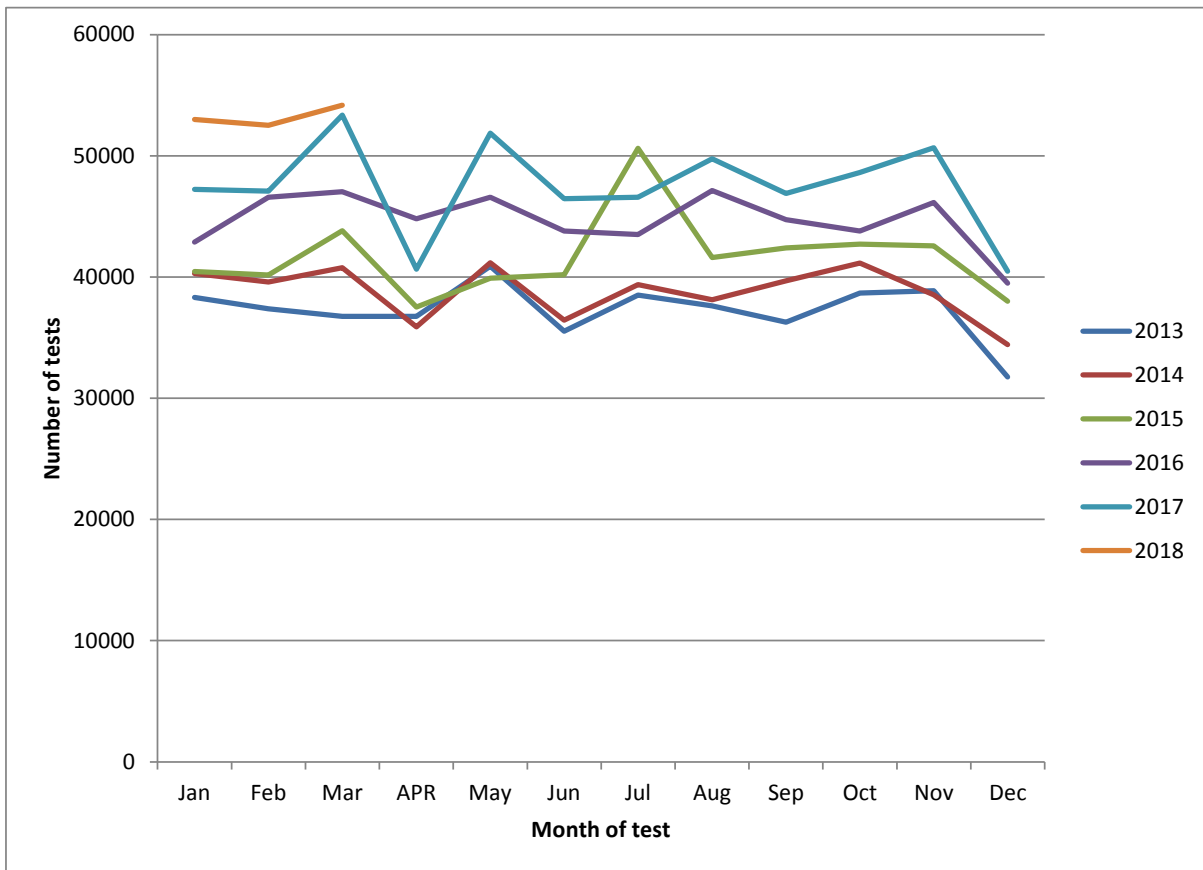
3. Increase HIV testing frequency

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 17: Number of HIV serology tests performed in 15 NSW laboratories, Jan 2013 to Mar 2018

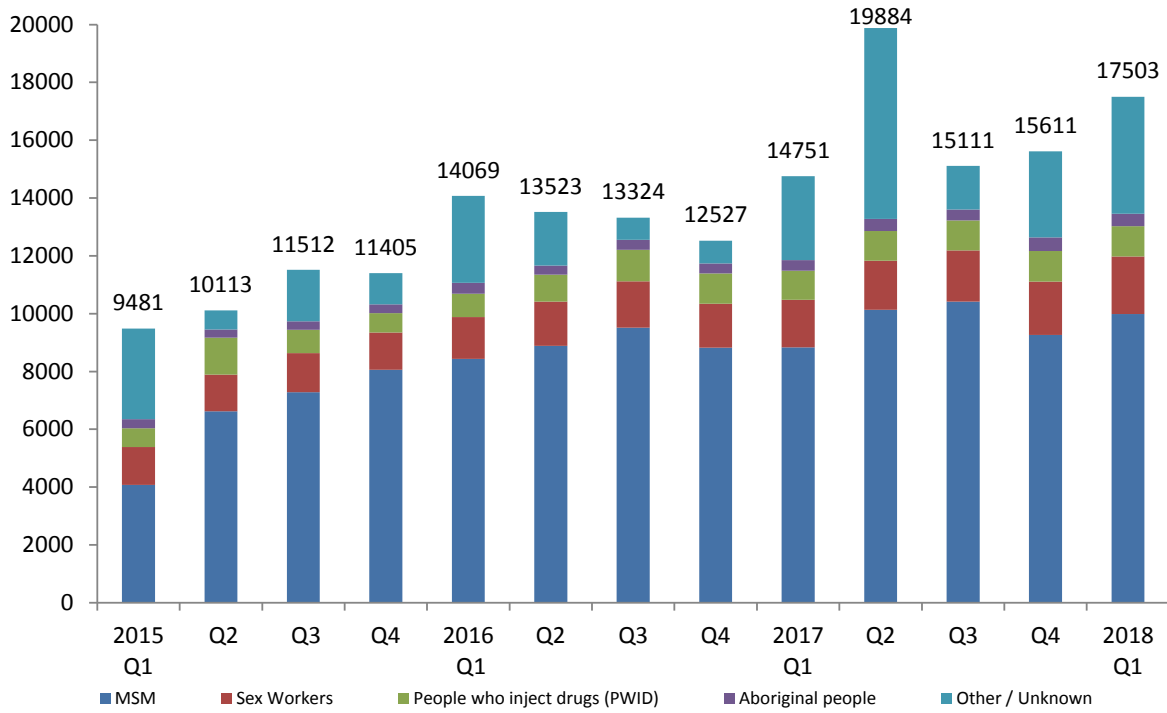


Data source: NSW Health denominator data project, extracted 14 May 2018.

Comments on Figure 17

- In Q1 2018 there were 159,692 HIV serology tests performed in 15 laboratories in NSW, which was 8% more than in Q1 2017 (n=147,674), 17% more than in Q1 2016 (n=136,503), 28% more than in Q1 2015 (n=124,447), 32% more than in Q1 2014 (n=120,667), and 42% more than in 2013 (n=112,441).

Figure 18: Number of HIV rapid and serology tests performed in public sexual health and HIV clinics and priority LHD settings in NSW between 1 January 2015 and 30 March 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 18

- In 2017 (January-March, 2018), 9,991 HIV tests were conducted in MSM in PFSHCs. This is a 7% (n=9259) increase when compared with October-December, 2017.
- Both rapid HIV testing and HIV serology are included. Priority settings include mental health, drug and alcohol, and emergency departments.

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 3: Recruitment data for the NSW DBS Self-Sampling HIV Testing Pilot, for Q1 2018 and from November 2016 to March 2018

Recruitment indicators	Q1 2018 (Jan-Mar)	Total from Nov 2016 to Mar 2018
Number of registrations for HIV DBS test	170	880
Number (%) of people who registered for a DBS kit who had never tested before or had tested over 2 years ago	95/170 (56%)	317/880 (36%)
Return rate of DBS kits	129	526/880 (60%)
Number (%) of reactive HIV tests	1/129 (0.8%)	5/526 (1.0%)

Data Source: NSW Dried Blood Spot Research database

Comments on Table 3

- Thirty-Six per cent of people who registered for the test had never previously tested for HIV or had tested more than 2 years ago
- 880 test kits have been ordered, with a return rate of 60%
- The positivity rate of returned kits is 1%

Table 4: Number per target population who registered for the NSW DBS Self-Sampling HIV Testing Pilot, for Q1 2018 and from November 2016 to March 2018*

Target population	Q1 2018 (Jan-Mar)	Total from Nov 2016 to Mar 2018
MSM	98 (58%)	637 (72%)
Partners from Asia or Africa continents	60 (35%)	283 (32%)
From Asia or Africa continents	41 (24%)	231 (26%)
Ever injected drugs**	35 (21%)	71 (8%)
Aboriginal or Torres Strait Islander People**	16 (9%)	44 (5%)

Data Source: NSW Dried Blood Spot Research database

*Participants can have the profile for more than one target population

**Included as target populations for the pilot since September 2017

Comment on Table 4

- Majority of the individuals who registered a DBS test were MSM (72%). Over a quarter of participants were from Asia/Africa and a third of participants had partners from the region.

Table 5: Registrations for the NSW DBS Self-Sampling HIV Testing Pilot per LHD of participant in Q1 2018 and from November 2016 to March 2018, and number of tests done (kits returned) in Q1 2018*

LHD	Number of registrations in Q1 2018 (Jan-Mar)	Total number of registrations in Nov 2016 - Mar 2018	Number of tests done (kits returned) in Q1 2018 (Jan-Mar)
CC LHD	4	35	2
FW LHD	1	2	0
HNE LHD	38	167	25
IaS LHD	7	54	7
Mid NC LHD	4	25	5
Murrum LHD	6	36	3
NBM LHD	2	32	1
North NSW LHD	3	19	2
North Syd LHD	19	89	15
SE Syd LHD	51	204	38
South NSW LHD	5	9	1
SW Syd LHD	6	51	6
Syd LHD	19	112	18
West NSW LHD	1	12	1
West Syd LHD	4	32	5

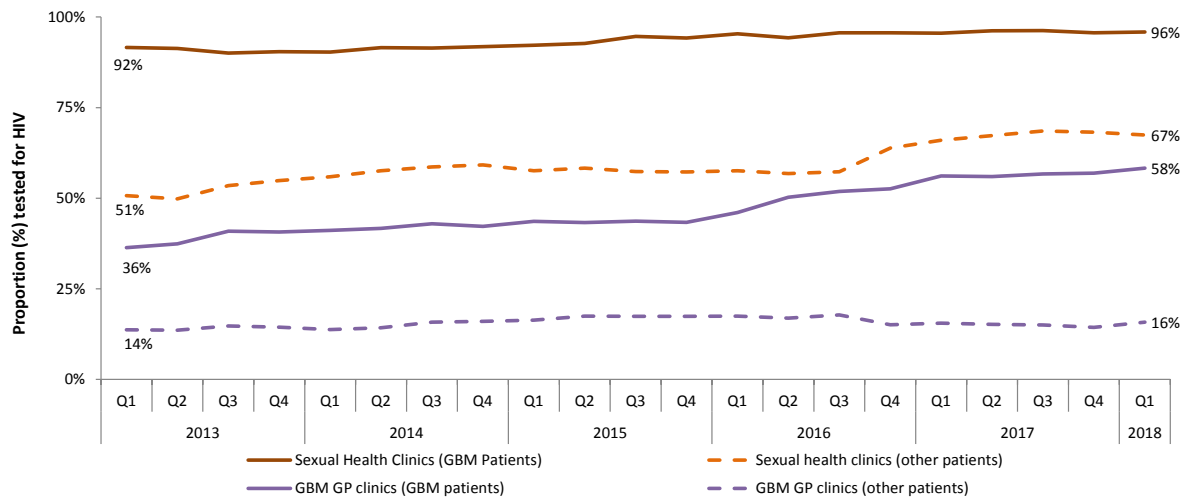
Data Source: NSW Dried Blood Spot Research database

*The total number of DBS tests by LHD for the period 1 Nov 2016 to 31 March 2018 will be available in the next report.

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 19: Proportion of patients³ attending PFSHCs and GBM GP clinics⁴ 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 March 2018⁵



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

Comments on Figure 19

- In PFSHCs, testing uptake by other patients started to increase in the middle of 2016, rising from 57% in June-September 2016 to 67% in January-March 2018. Among GBM, testing uptake was maintained at 96% since middle of 2016.
- In GP clinics, testing uptake by GBM increased from 36% in January-March 2013 to 58% in January-March 2018. The uptake remained stable among other patients at those clinics.

Testing uptake among Sydney Gay Community Periodic Survey respondents

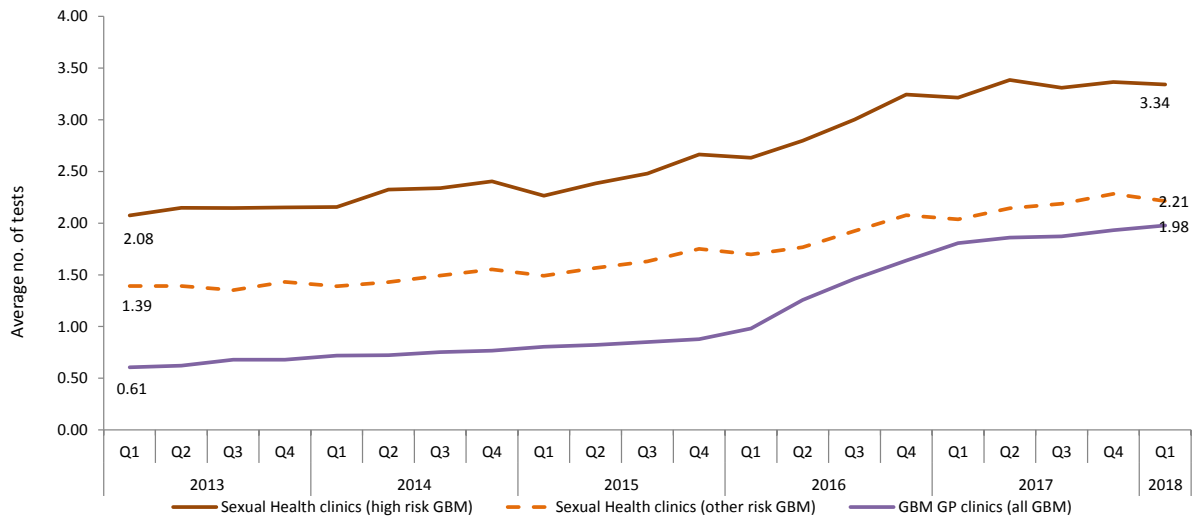
- Data from the SGCPS (conducted in February/March annually) on HIV testing patterns were reported in the January – March 2017 HIV Data Report.
- The proportion of men who have ever tested for HIV has stabilised at 87% in 2017. Nearly 80% of non-HIV-positive men reported an HIV test in the previous 12 months. Thirty one per cent of non-HIV-positive men reported three or more HIV tests in the previous 12 months.

³ Excludes patients known to be HIV positive

⁴ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually; attendance data for patients not tested for HIV was unavailable for at GP clinics prior to 2013 and has been excluded

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

Figure 20: Average number of annual HIV tests at any clinic in the ACCESS network in GBM patients⁶ attending PFSHCs and GBM GP clinics⁷ by service type and quarter, 1 January 2013 to 31 March 2018



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

Risk categorisation is available only for sexual health clinics. Risk categories are defined as follows:

- **High risk:** >5 sexual partners in the three months prior to consultation AND/OR >20 sexual partners in the 12 months prior to consultation AND/OR a diagnosis for chlamydia, gonorrhoea, and/or infectious syphilis in the 24 months prior to consultation
- **Other risk:** Any person not otherwise meeting the criteria of ‘high risk’

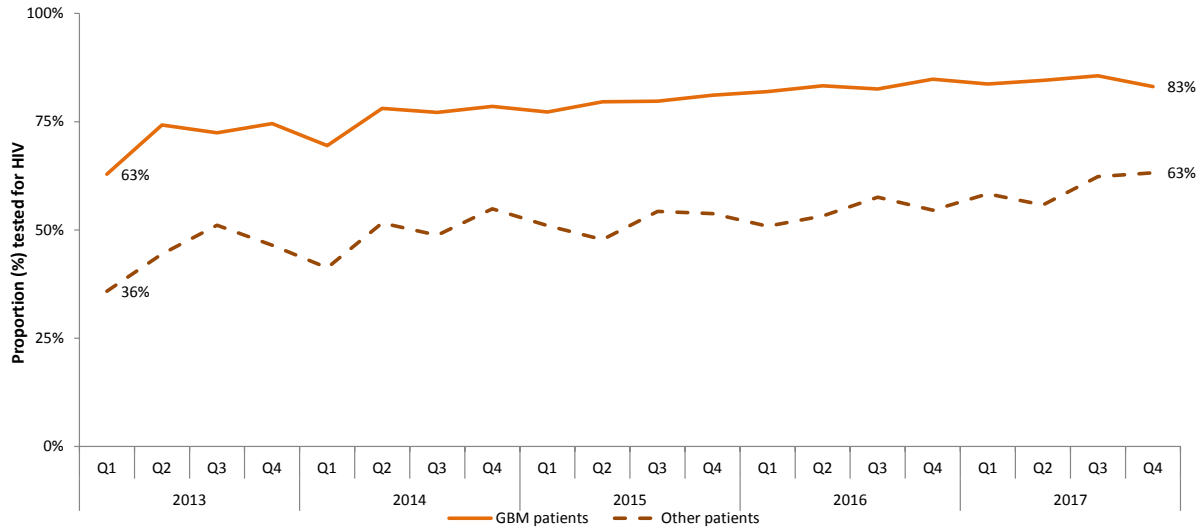
Comments on Figure 20

- In January-March 2018, testing frequency remained stable among GBM attending both PFSHCs and GBM GP clinics. Testing frequency nearly doubled among high and other risk men attending sexual health clinics when compared to early 2013.

⁶ Excludes patients known to be HIV positive

⁷ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 21: Proportion of patients⁸ attending PFSHCs and GBM GP clinics⁹ who received an HIV test at any clinic in the ACCESS network within one month of an STI diagnosis¹⁰, by service type and quarter, 1 January 2013 to 31 December 2017¹¹



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

Comments on Figure 21

- The proportion of patients tested for HIV following a STI diagnosis in increased
 - PFSHC from 63% (early 2011) to 83% in 2017.
 - GBM GP clinics from 36% in early 2013 to 63% in 2017.

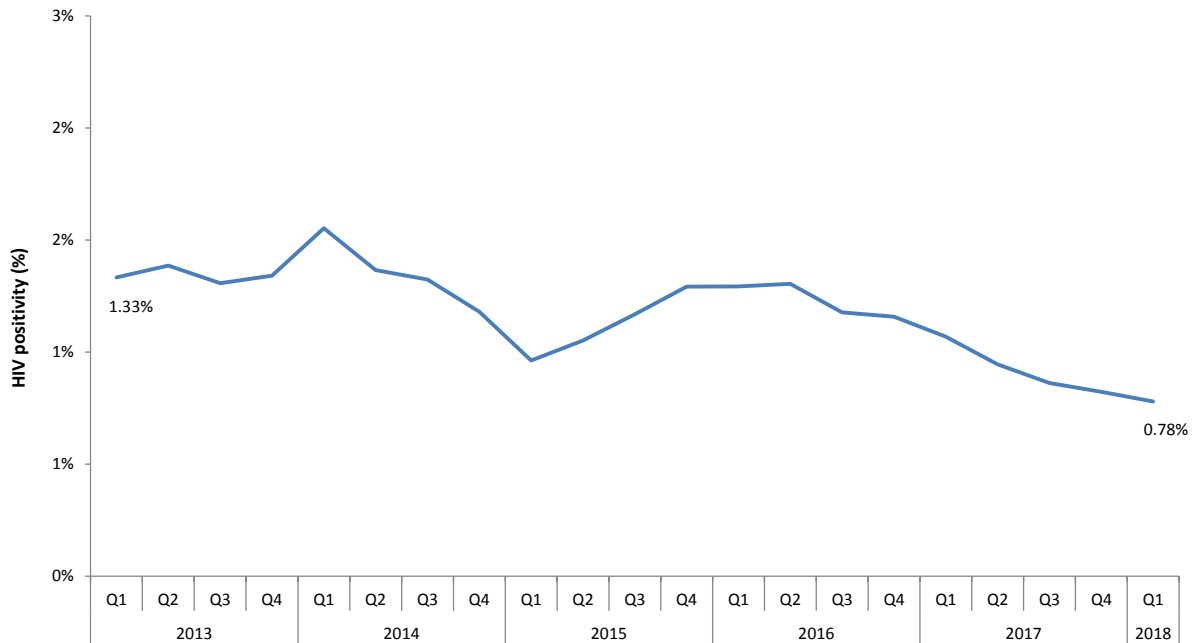
⁸ Excludes patients known to be HIV positive

⁹ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

¹⁰ Diagnosis for chlamydia, gonorrhoea and/or infectious syphilis

¹¹ The period for HIV testing is one month before or after an STI diagnosis; due to this timeframe data from quarter 1 2018 have been excluded

Figure 22: Proportion of individual GBM patients¹² tested for HIV with a positive result (HIV positivity)¹³ at any ACCESS site, by quarter, 1 January 2013 to 31 March 2018



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

Note: For this indicator, positivity refers to the proportion of unique clients tested for HIV who returned a positive result out of the total number of unique clients tested for HIV, rather than the proportion of positive HIV tests out of all HIV tests conducted.

Comments on Figure 22

- HIV positivity among GBM attending PFSHCs and GBM GP clinics has decreased from 1.33% in January-March 2011 to 0.78% in the January-March 2018.

¹² Excludes patients known to be HIV positive

¹³ 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?

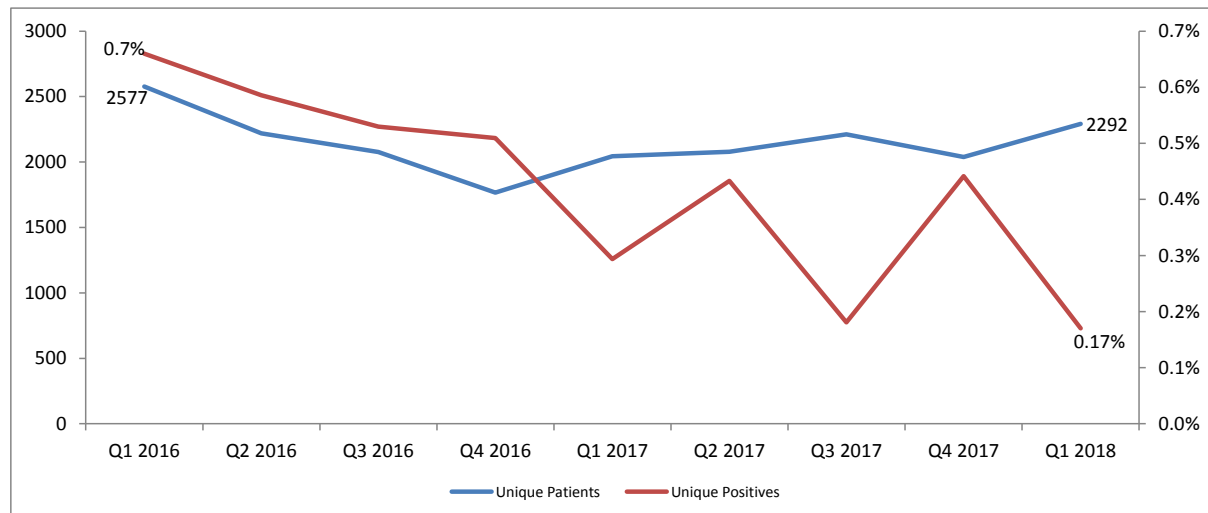
Table 6: Number of rapid HIV tests in community based sites and proportion of clients with high risk behaviour and infrequent testing history in January-March 2018

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					
<i>aTEST Oxford ST</i>	1834	0.2%	6.1%	14.9%	35.7%
<i>aTEST Kings Cross</i>	151	0%	27.2%	23.2%	24.8%
<i>aTEST Newtown</i>	307	0%	18.2%	15.3%	20.9%

Data sources: NSW Health HIV Strategy Monitoring Database¹⁴

Note: [#]Does not include 'never tested'; *Only patients who provided information on this characteristic have been included

Figure 23: The number of unique patients who had a rapid HIV test at a community based site between January 2016 and March 2018 and the proportion of tests that were positive



Data sources: NSW Health HIV Strategy Monitoring Database¹⁵

Comments on Figure 23

- 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.

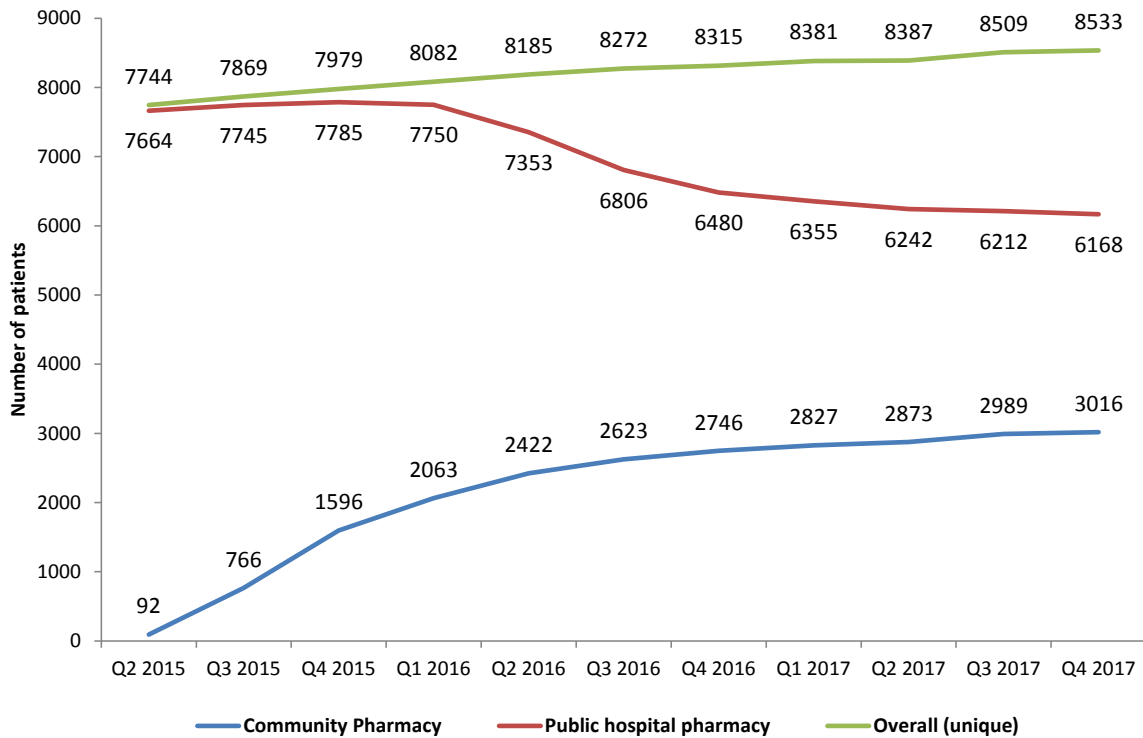
¹⁴ Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

¹⁵ 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 treatment?

Figure 24: 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 April 2014 to 31 December 2017

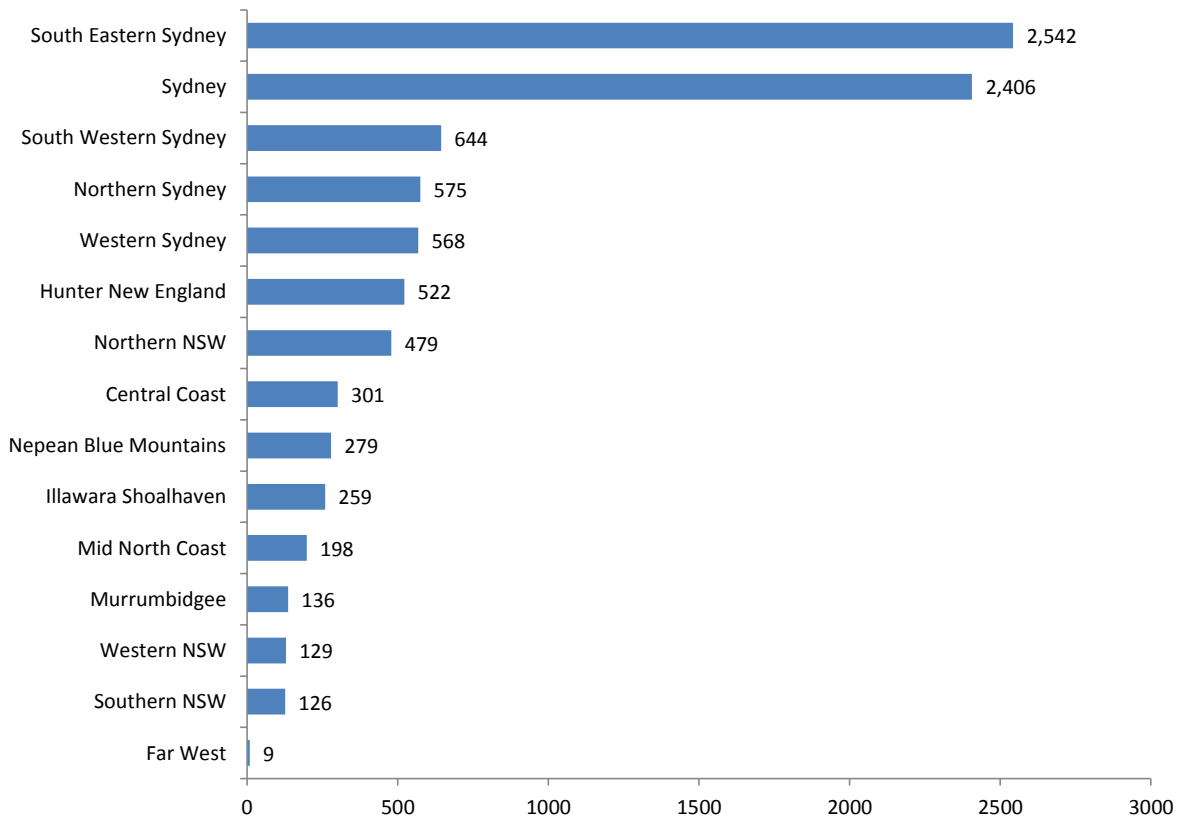


Data source: PBS Highly Specialised Drugs Programme data from 1 July 2014 to 31 December 2017 prepared for NSW Health. Note: The number of patients dispensed via community and public hospital pharmacies may add to a figure greater than the overall unique patients as some patients receive treatment from 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 24

- Between 1 January 2017 and 31 December 2017, a total of 8,533 NSW residents were dispensed ART for HIV at least once within the previous 12 months.
- Of the 8,533 residents dispensed ART, 91% were male. The majority (53.49%) were 50 years or older, 26.60% were aged 40-49 years, and about 20% aged 39 years or younger.

Figure 25: The number of NSW residents dispensed ART for HIV, by the LHD of patient residence, from 1 January to 31 December 2017¹⁶



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data from January 2017 to December 2017

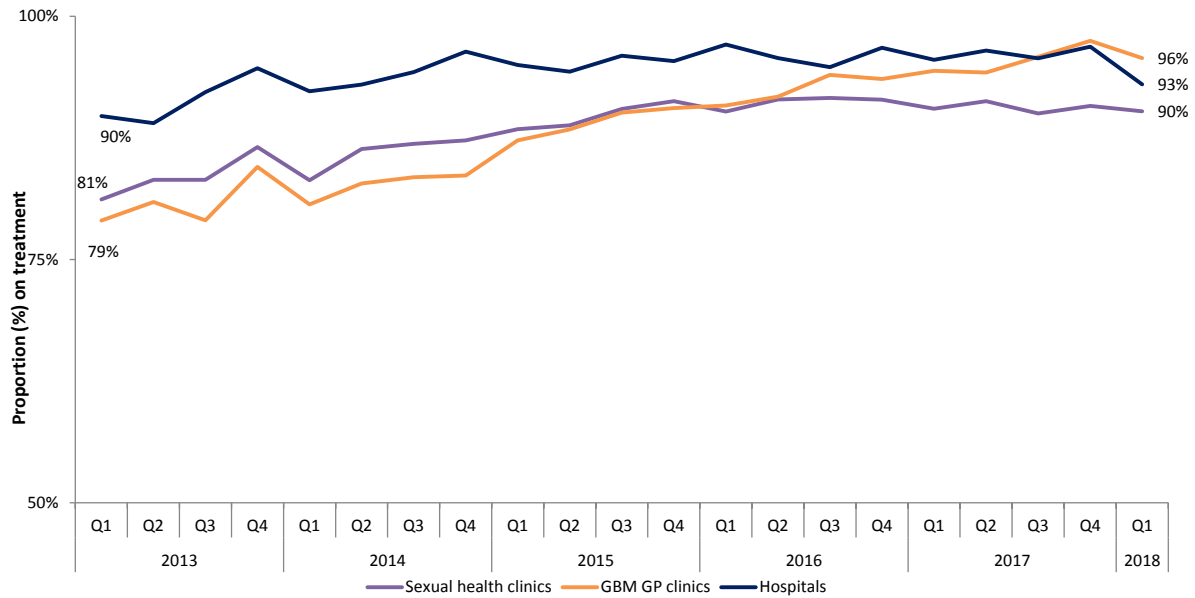
Comments on Figure 25

- About three-quarters (73.4%) of the ART dispensed in the 12 months ending 31 December 2017 was to patients residing in the following five LHDs: South Eastern Sydney, Sydney, South Western Sydney, Northern Sydney and Western Sydney LHDs.

¹⁶ The sum of the numbers displayed in the graph is higher than the total of 8,533 patients as some patients resided in more than one LHD.

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

Figure 26: Proportion of HIV positive patients¹⁷ attending PFSHCs, public hospital outpatient clinics and GBM GP clinics¹⁸ 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 2011 to 31 March 2018



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

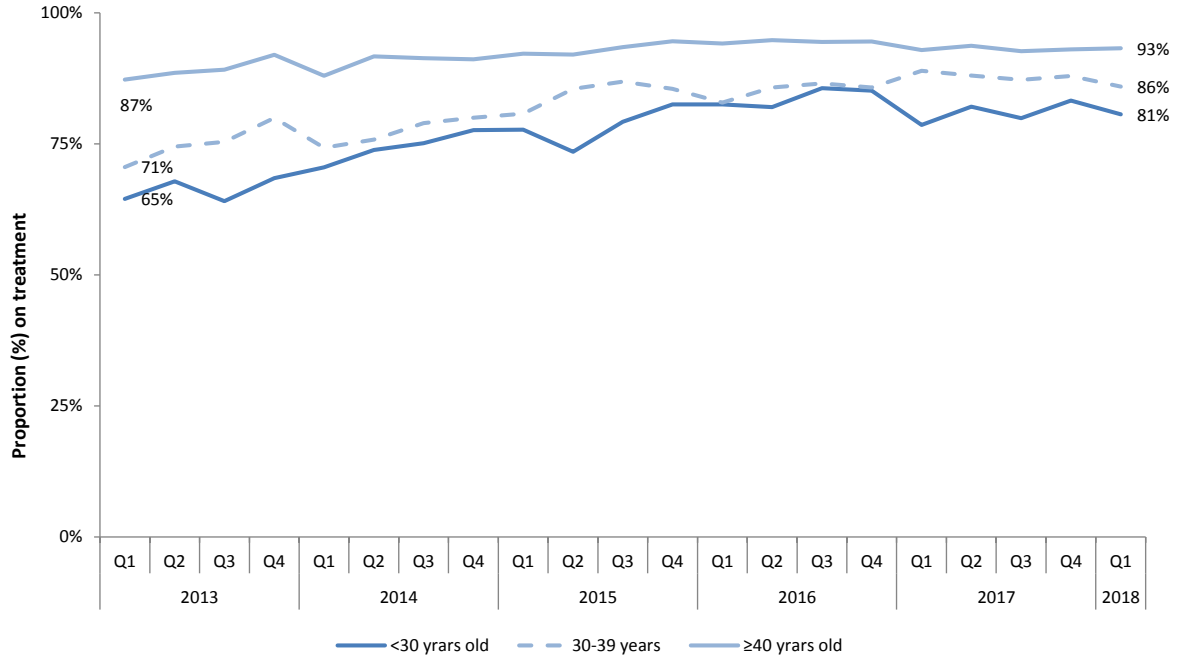
Comments on Figure 26

- HIV treatment uptake increased steadily over time across PFSHCs, GBM GP clinics and public hospitals. The greatest increase was among patients who attended GBM GP clinics, increased from 79% in early 2013 to 96% in January-March 2018.

¹⁷ Excludes patients for whom HIV care was recorded as managed elsewhere

¹⁸ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 27: Proportion of HIV positive patients attending PFSHCs, public hospital outpatient clinics and GBM GP clinics¹⁹ 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 March 2018



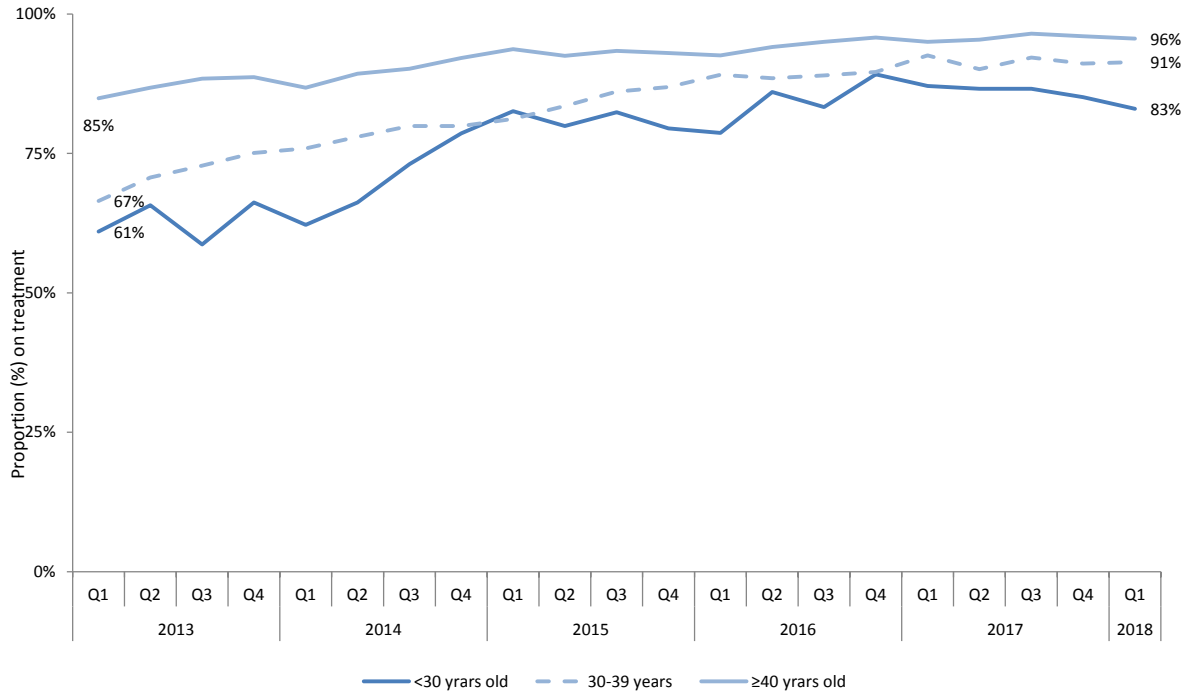
Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comments on Figure 27

- HIV treatment uptake was highest among patients aged 40 years and older. Greatest change in uptake was in patients under 30 years old, increasing from 65% in early 2013 to 93% in early 2018.

¹⁹ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 28: Proportion of HIV positive patients on treatment at PFSHCs, public hospital outpatient clinics and GBM GP²⁰ clinics on ‘undetectable’²¹ viral load at their most recent test in the previous 12-month period at any clinic in the ACCESS network²², by age group and quarter, 1 January 2013 to 31 March 2018



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

Comments on Figure 28

- The proportion of HIV positive patient with undetectable viral load (UVL) was consistently higher among patients aged 40 years and older (96%).
- The greatest change over time was among younger patients with HIV UVL among patients aged under 30 years increased from 61% in early 2011 to 83% in January-March 2018. However, the proportion has experienced a decline by 5% in January-March 2018 (83%) when compared to the same period in 2017(87%).

²⁰ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

²¹ Undetectable’ defined as <200 RNA copies/mm³ of blood

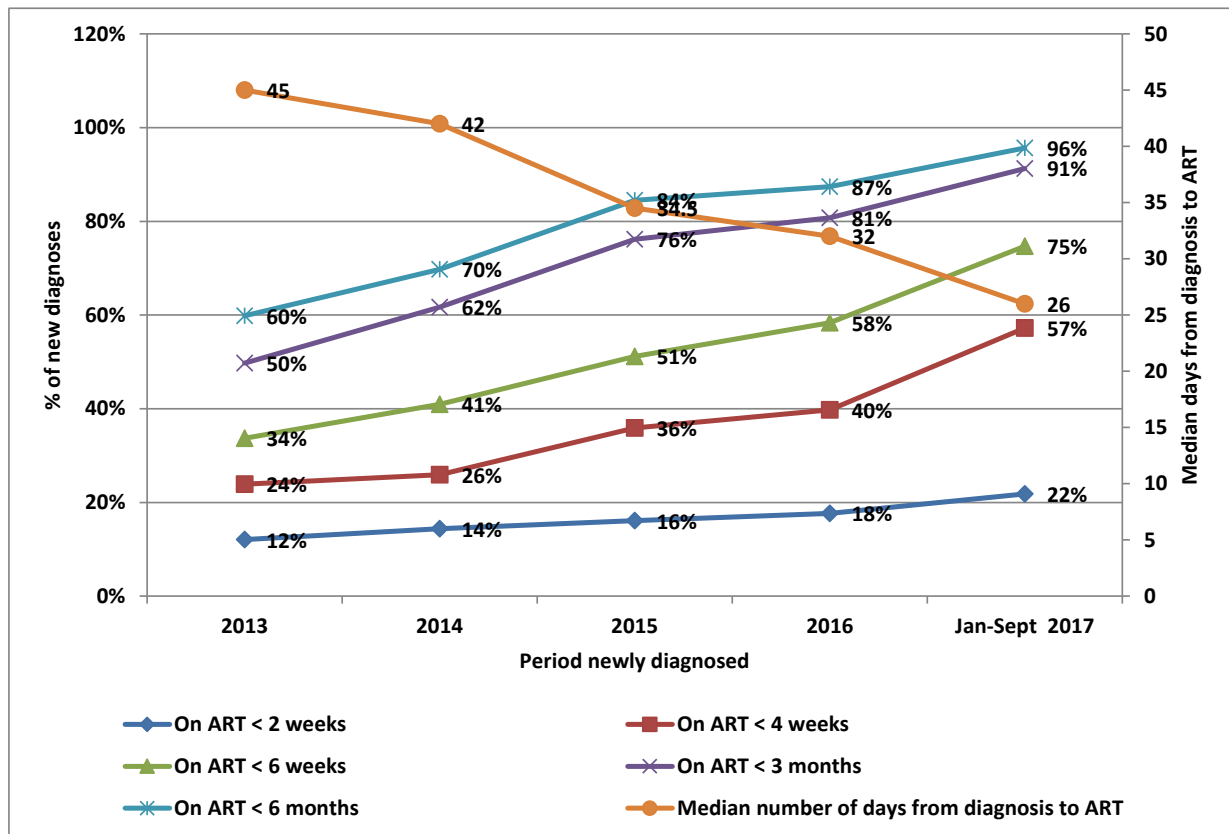
²² Excludes patients for whom viral load test information was not available

4.3 How quickly are people newly diagnosed with HIV commencing antiretroviral treatment 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 Q1 2018 report, six months post diagnosis follow up had been done on 1597 NSW residents newly diagnosed from 1 January 2013 to 30 September 2017 (356 in 2013, 347 in 2014, 348 in 2015, 317 in 2016, and 229 in January to September 2017). Information was available on 98% (n=1563) of these people. 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.

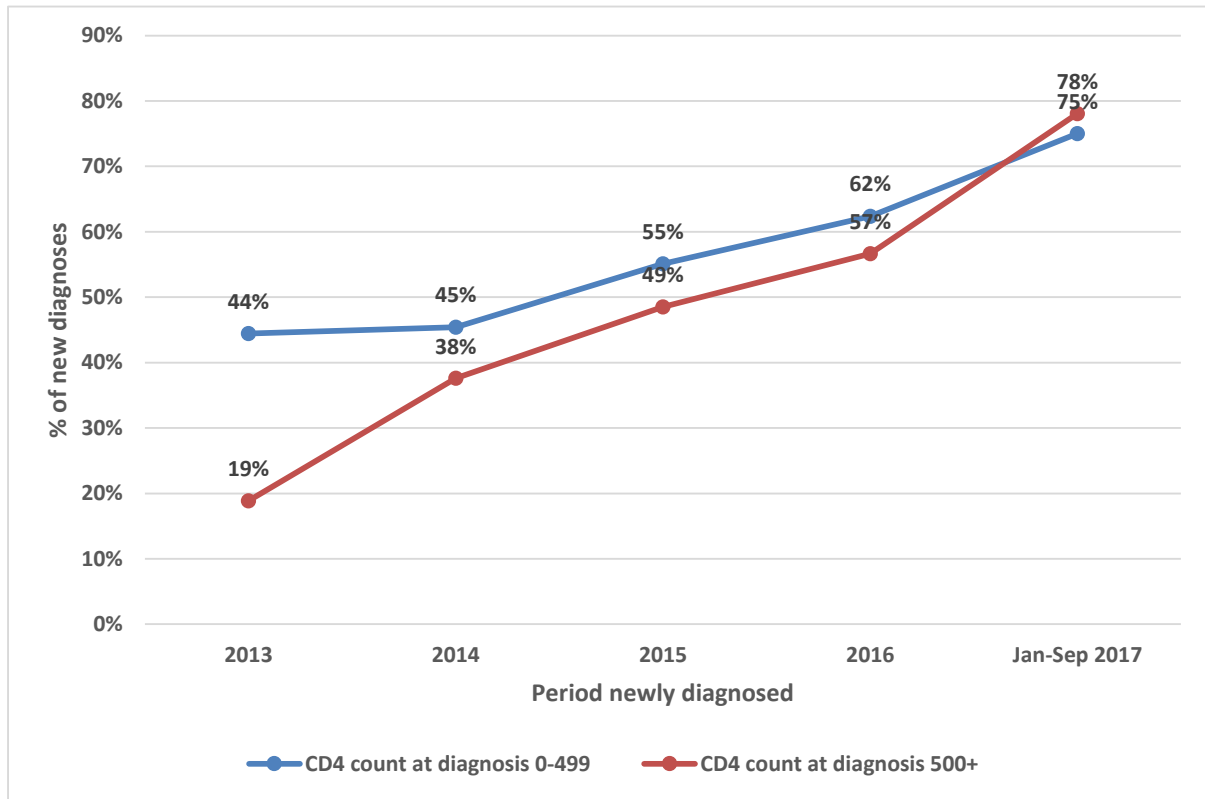
Figure 29: Time to ART for NSW residents newly diagnosed in January 2013 to September 2017



Comments on Figure 29

- Of the 229 people newly diagnosed in January to September 2017 now followed up six months post diagnosis, 22% initiated ART within two weeks, 57% within four weeks, 75% within six weeks, 91% within three months and 96% within six months of diagnosis, with the median time to ART initiation 26 days. Of the 219 on ART within six months of diagnosis, 194 (89%) were already virally suppressed at the time of the six month post diagnosis follow up, and overall 196 of all 229 (86%) new diagnoses Q1-3 2017 were virally suppressed at the time of follow up.

Figure 30: CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection in January 2013 to September 2017 and % on ART within six weeks of diagnosis

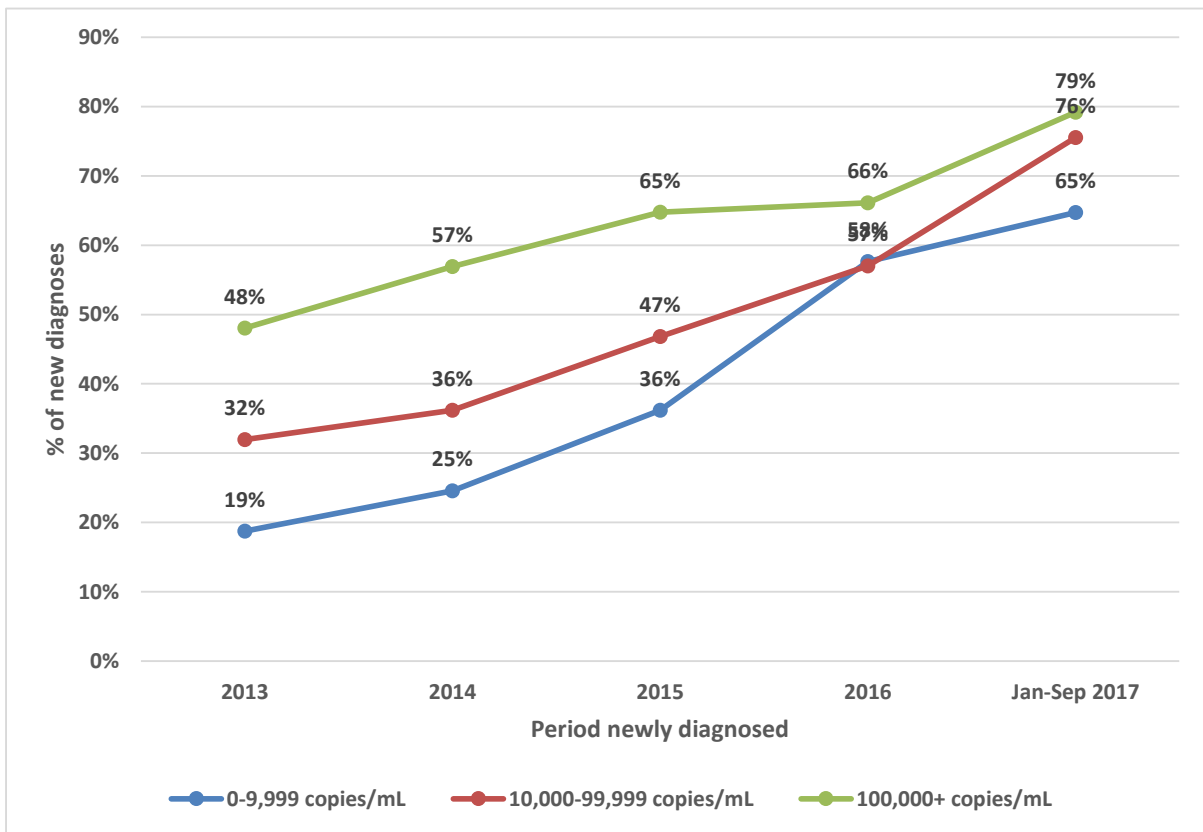


Note: excludes 52 new diagnoses with missing CD4 at diagnosis, some of whom had commenced ART within 6 months.

Comments on Figure 30

- The proportion of people newly diagnosed with a CD4 count of 0-499 cells/ μ L 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 and 78% of the January to September 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 and 77% of the January to September new diagnoses.

Figure 31: HIV viral load at diagnosis of NSW residents notified with newly diagnosed HIV infection in January 2013 to September 2017 and % on ART within six weeks of diagnosis



Note: excludes 64 new diagnoses with missing HIVVL at diagnosis, some of whom had commenced ART within 6 months.

Comments on Figure 31

- The proportion of people newly diagnosed with a HIV VL of 0-9,999 copies/mL who commenced ART within six weeks of diagnosis was 19% of the 2013, 25% of the 2014, 36% of the 2015, 58% of the 2016 and 65% of the January to September 2017 new diagnoses with low viral load.
- The proportion of people newly diagnosed with a HIV VL of 10,000-99,999 who commenced ART within six weeks of diagnosis was 32% of the 2013, 36% of the 2014, 47% of the 2015, 57% of the 2016 and 76% of the January to September 2017 new diagnoses with mid viral load.
- The proportion of people newly diagnosed with a HIV VL of 100,000 or over who commenced ART within six weeks of diagnosis was 48% of the 2013, 57% of the 2014, 65% of the 2015, 66% of the 2016 and 79% of the January to September 2017 new diagnoses with high viral load.

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

Appendix B: Characteristics of NSW residents notified with newly diagnosed HIV infection 1981 to 31 March 2018
(continues over page) Data extracted from NCIMS, Health Protection NSW, 8 May 2018.

Case characteristics	2010		2011		2012		2013		2014		2015		2016		2017		Q1 2018		Total 1981-Q1 2018	%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
Total (ALL)	305	100.0%	332	100.0%	412	100.0%	355	100.0%	348	100.0%	348	100.0%	318	100.0%	311	100.0%	73	100.0%	18343	100.0%
Gender																				
Male	280	91.8%	311	93.7%	375	91.0%	325	91.5%	321	92.2%	319	91.7%	292	91.8%	282	90.7%	69	94.5%	16862	91.9%
Female	23	7.5%	21	6.3%	36	8.7%	27	7.6%	26	7.5%	28	8.0%	22	6.9%	23	7.4%	3	4.1%	1181	6.4%
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%	1	1.4%	51	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%	249	1.4%
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%	10	3.1%	8	2.6%	1	1.4%	197	1.1%
Non-Aboriginal person	293	96.1%	324	97.6%	393	95.4%	344	96.9%	331	95.1%	338	97.1%	306	96.2%	301	96.8%	72	98.6%	11225	61.2%
Not stated	5	1.6%	3	0.9%	6	1.5%	3	0.8%	10	2.9%	3	0.9%	2	0.6%	2	0.6%	0	0.0%	6920	37.7%
Age at diagnosis in years																				
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%	9	2.5%	2	0.6%	6	1.7%	3	0.9%	5	1.6%	0	0.0%	317	1.7%
20-24	29	9.5%	34	10.2%	44	10.7%	37	10.4%	42	12.1%	45	12.9%	39	12.3%	28	9.0%	11	15.1%	2224	12.1%
25-29	56	18.4%	55	16.6%	77	18.7%	64	18.0%	51	14.7%	63	18.1%	60	18.9%	58	18.6%	16	21.9%	3610	19.7%
30-34	49	16.1%	65	19.6%	71	17.2%	49	13.8%	64	18.4%	62	17.8%	64	20.1%	58	18.6%	17	23.3%	3652	19.9%
35-39	43	14.1%	59	17.8%	64	15.5%	42	11.8%	46	13.2%	45	12.9%	48	15.1%	35	11.3%	3	4.1%	3016	16.4%
40-44	51	16.7%	46	13.9%	47	11.4%	45	12.7%	46	13.2%	32	9.2%	30	9.4%	38	12.2%	6	8.2%	2225	12.1%
45-49	30	9.8%	26	7.8%	38	9.2%	45	12.7%	30	8.6%	26	7.5%	32	10.1%	21	6.8%	4	5.5%	1323	7.2%
50-54	7	2.3%	25	7.5%	28	6.8%	24	6.8%	27	7.8%	28	8.0%	18	5.7%	19	6.1%	5	6.8%	820	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%	7	9.6%	473	2.6%
60-64	5	1.6%	2	0.6%	13	3.2%	6	1.7%	14	4.0%	15	4.3%	6	1.9%	17	5.5%	2	2.7%	263	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%	0	0.0%	140	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%	2	2.7%	92	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 continued	2010		2011		2012		2013		2014		2015		2016		2017		Q1 2018		1981-Q1	%

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																			2018	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
Total (ALL)	305	100.0%	332	100.0%	412	100.0%	355	100.0%	348	100.0%	348	100.0%	318	100.0%	311	100.0%	73	100.0%	18343	100.0%
Reported HIV risk exposure																				
Men who have sex with men	226	74.1%	269	81.0%	321	77.9%	265	74.6%	256	73.6%	264	75.9%	235	73.9%	216	69.5%	55	75.3%	11608	63.3%
MSM and IDU	8	2.6%	11	3.3%	14	3.4%	16	4.5%	20	5.7%	21	6.0%	25	7.9%	16	5.1%	4	5.5%	568	3.1%
Hetero-sex	51	16.7%	41	12.3%	58	14.1%	61	17.2%	50	14.4%	52	14.9%	48	15.1%	66	21.2%	11	15.1%	1730	9.4%
Injecting drug use	9	3.0%	8	2.4%	10	2.4%	7	2.0%	8	2.3%	4	1.1%	4	1.3%	6	1.9%	1	1.4%	572	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	1.1%	3	0.9%	1	0.3%	1	0.3%	1	1.4%	51	0.3%
Unknown	9	3.0%	2	0.6%	7	1.7%	4	1.1%	9	2.6%	3	0.9%	4	1.3%	4	1.3%	1	1.4%	3484	19.0%
LHD of residence																				
South East Sydney	109	35.7%	124	37.3%	150	36.4%	126	35.5%	112	32.2%	128	36.8%	83	26.1%	91	29.3%	27	37.0%	5715	31.2%
Sydney	76	24.9%	88	26.5%	113	27.4%	87	24.5%	82	23.6%	84	24.1%	95	29.9%	66	21.2%	13	17.8%	3108	16.9%
Northern Sydney	19	6.2%	24	7.2%	23	5.6%	25	7.0%	18	5.2%	24	6.9%	19	6.0%	29	9.3%	8	11.0%	1035	5.6%
Western Sydney	20	6.6%	31	9.3%	25	6.1%	27	7.6%	27	7.8%	20	5.7%	24	7.5%	28	9.0%	3	4.1%	778	4.2%
South Western Sydney	25	8.2%	18	5.4%	30	7.3%	33	9.3%	32	9.2%	33	9.5%	32	10.1%	29	9.3%	7	9.6%	761	4.1%
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	2.3%	5	6.8%	511	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%	0	0.0%	269	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%	2	2.7%	243	1.3%
Central Coast	5	1.6%	4	1.2%	10	2.4%	5	1.4%	8	2.3%	5	1.4%	11	3.5%	13	4.2%	2	2.7%	222	1.2%
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%	2	2.7%	218	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%	0	0.0%	152	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%	0	0.0%	130	0.7%
Murrumb-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%	3	4.1%	107	0.6%
Southern NSW	1	0.3%	2	0.6%	8	1.9%	4	1.1%	4	1.1%	2	0.6%	6	1.9%	3	1.0%	0	0.0%	69	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%	0	0.0%	8	0.0%
Other	1	0.3%	1	0.3%	3	0.7%	2	0.6%	7	2.0%	2	0.6%	2	0.6%	3	1.0%	1	1.4%	5017	27.4%

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.

Appendix D: Ending HIV Seven Statements Evaluation, ACON 2013-2017

Answer Options	FEB 2013 (n=233)	MAY 2013 (n=517)	NOV 2013 (n=553)	APRIL 2014 (n=530)	DEC 2014 (n=549)	APR 2015 (n=602)	MAR 2016 (n=515)	SEP 2016 (n=520)	APR 2017 (n=900)
Everything has changed, we can now dramatically reduce HIV transmission	48%	59%	59%	67%	61%	71%	77%	86%	77%
Now more than ever, gay men need to know their HIV status	81%	85%	86%	90%	89%	91%	92%	92%	91%
Sexually active gay men should take an HIV test at least twice a year	88%	87%	92%	93%	89%	92%	93%	96%	94%
HIV treatments now offer increased health benefits and fewer side effects	65%	66%	67%	73%	69%	75%	77%	78%	71%
HIV treatments significantly reduce the risk of passing on HIV	33%	42%	50%	64%	59%	69%	73%	83%	78%
Early HIV treatment is better for your health and can help protect your sex partners	74%	80%	89%	91%	92%	93%	93%	95%	93%
Condoms continue to be the most effective way of preventing HIV transmission	95%	92%	92%	91%	91%	85%	94%	94%	94%

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.