

NSW HIV Strategy 2016 – 2020

Quarter 4 & Annual 2017

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 goals in the NSW HIV Strategy 2016-2020

In 2017, 11% fewer NSW residents were diagnosed with HIV than the previous six year average. The number of early stage infections with evidence that infection occurred in the year prior to diagnosis decreased by 29% in 2017 compared to the average for the previous six years, indicating likely lower transmission in 2017.

There was a 6% increase in HIV testing in NSW in 2017 compared to 2016. Of all people diagnosed in January to June 2017, 77% initiated ART within six weeks of diagnosis, and 97% within six months.

Divergent trends are emerging in NSW HIV notifications

The number of new diagnoses among Australian born men who have sex with men (MSM) in 2017 was 41% less than the previous six year average, and early stage infections in this group were 56% less. Conversely, the number of new diagnoses among overseas born MSM was 13% higher in 2017 compared to the previous six year average. The increase in overseas born MSM was mostly in people with no evidence of recent infection in the 12 months prior to diagnosis (not early stage infection). In 2017, the number of new diagnoses in overseas born MSM exceeded that of Australian born MSM.

Sixty-seven people were diagnosed with HIV in 2017 following heterosexual exposure. This is 29% higher than the average number of heterosexual notifications for the previous six years. The increase occurred mainly in Australian born people who had likely acquired HIV outside Australia.

The decline in early stage HIV infections among Australian born MSM demonstrates a decrease in HIV transmission in this group, but this has not been seen in overseas born MSM or heterosexual people.

Additionally in Australian born MSM, in 2017 there was a decrease of 23% compared to the previous six years in the number of new HIV diagnoses that were not early stage infections. In contrast, in 2017 there was a 19% increase in the number of “not early stage infections” in overseas born MSM compared to the previous six years.

PrEP uptake continues to expand, but work is needed to increase access for overseas born MSM

Since the launch of the EPIC-NSW population level PrEP impact study in March 2016, 8,206 participants have enrolled in (as of 31 December 2017). To mid-February 2018, there have been no HIV transmissions reported in people who have continued to take their PrEP medication.

New diagnoses in MSM in 2017 were 19% less than the previous six year average, but this reduction has occurred only among Australian born MSM. Despite an increase in the number of overseas born EPIC-NSW participants, this group is still under-represented in the study and more effort is needed to engage this group.

Testing initiatives need to better reach overseas born people and heterosexual people at risk of HIV

The continued increase in HIV notifications among overseas born MSM and heterosexual people who are diagnosed a year or more after they were infected indicates the need to support and encourage these population groups to be tested for HIV. Increasing the availability of testing on dried blood spot samples, where the sample is self-collected and sent to the laboratory in the post, may make testing easier for some in these groups.

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 vulnerable to the HIV transmission risk.

Key data to 31 December 2017

HIV INFECTIONS	Target group	Jan- Dec 2017	Compared with Jan-Dec 2011-2016 average
Number of NSW residents newly diagnosed	Total count	313	11% less
	Count who were men who have sex with men (MSM)	232 (74% of total)	19% less
Number of MSM newly diagnosed with evidence of early stage infection	MSM	100 (43% of MSM)	33% less
Number and proportion of new diagnoses with evidence of late diagnosis	All new diagnoses	131 (42% of total)	9% more
PREVENT	Target group	Mar 2016 – December 2017	
Number of people receiving PrEP through EPIC-NSW	People in NSW at high risk of HIV infection	8,206	
TEST	Target group	Jan-Dec 2017	Compared with Jan-Dec 2016
Number of HIV serology tests performed in NSW	All	569,605	6% more (n=536,407)
Number of HIV tests performed in NSW public sexual health and HIV clinics, and priority LHD settings	All	67,637	18% more (n=57,366)
	Identifying as MSM	40,314	13% more (n=35,652)
Number of DBS tests* (*November 2016-December 2017)		393 (4 HIV positive)	
TREAT	Target group	Jan-Dec 2017	Target
Proportion of patients with diagnosed HIV infection in care, who were on treatment	Sexual Health and HIV Clinic attendees	95%	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-Jun 2017 (n=144)	57% < 4 weeks 77% < 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-Jun 2017 (n=144)	87%	100%

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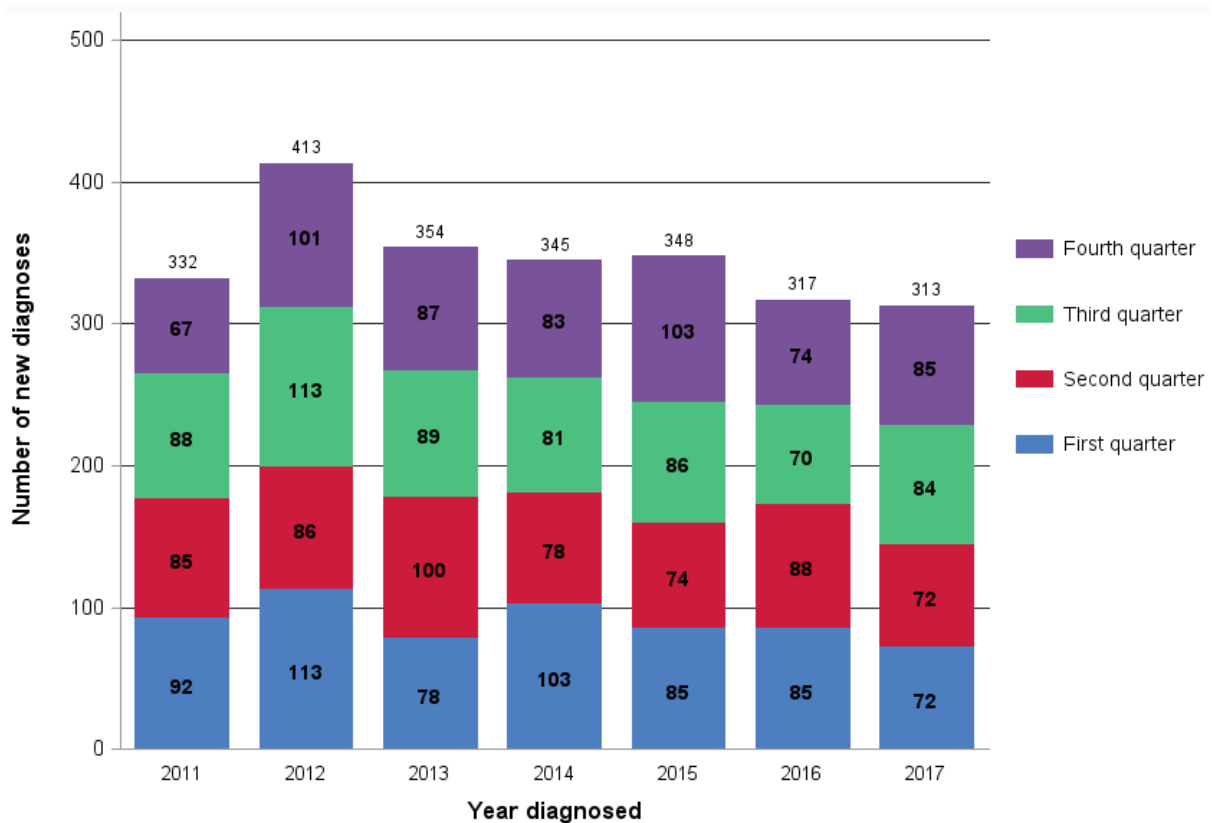
Glossary of Terms

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 2011 to 2017

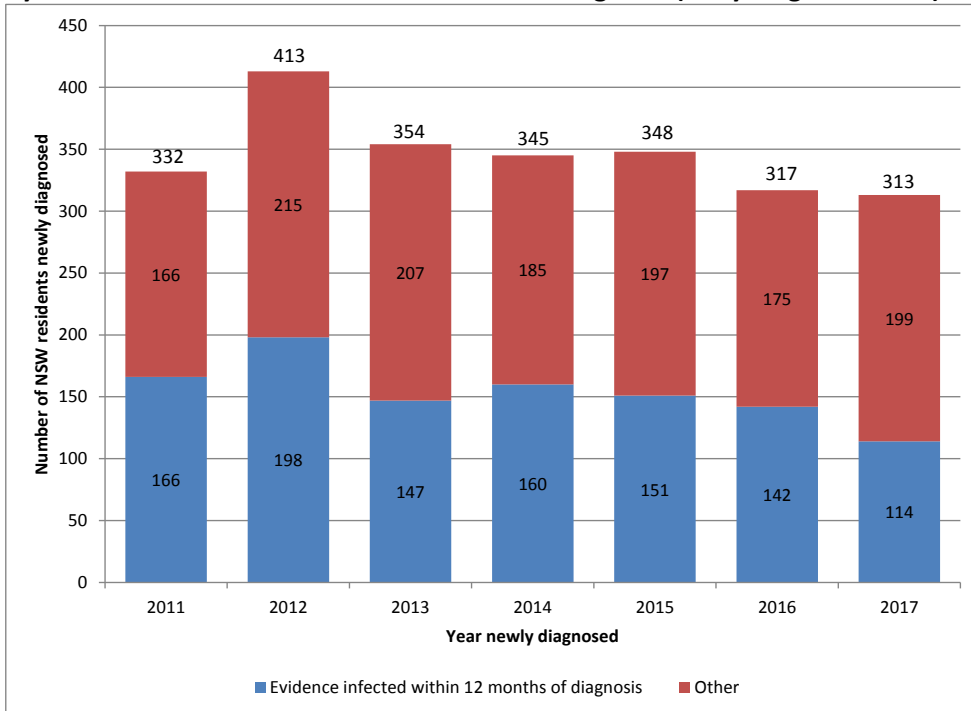


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

Comment

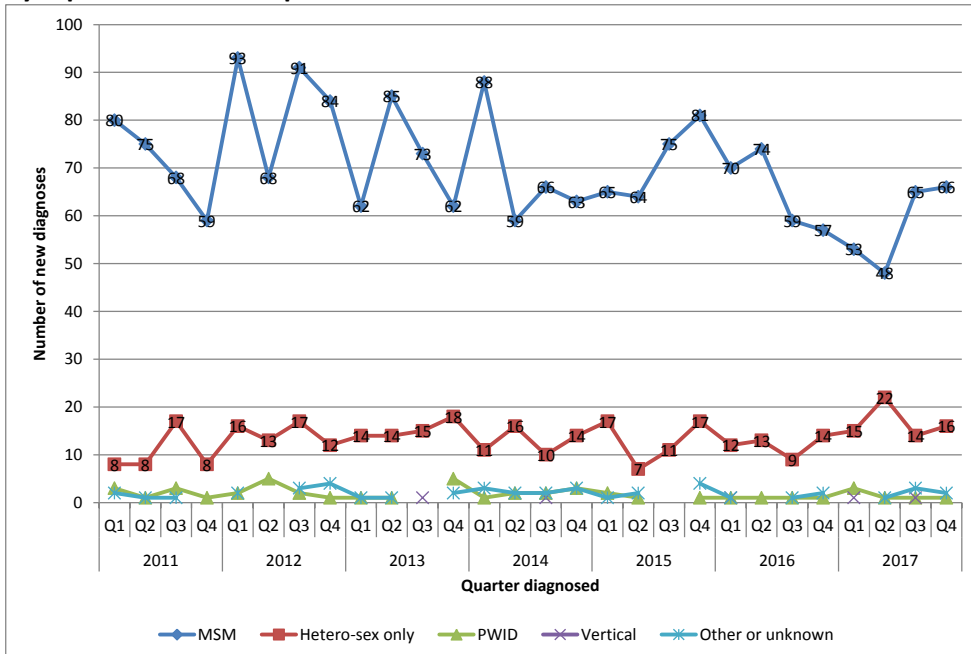
- In 2017 there were 313 NSW residents notified with newly diagnosed HIV infection, which was 11 per cent (%) less than the previous six year annual average (n=351.5).
- In October to December (quarter 4) 2017, 85 NSW residents were notified with newly diagnosed HIV infection, similar to the average for quarter 4 2011-2016 (n=86).
- Figure 1 reports the number of notifications per quarter but does not provide information on trends in HIV transmission in NSW. Analysis of notification data by stage of infection shows that in 2017 there was a 29% (n=47) drop in the number of new diagnoses where the infection was acquired within one year of diagnosis (early stage infection) compared to the average of the previous six years (Figure 2). With a stable or increasing testing rate in people at risk of HIV, this demonstrates a decrease in HIV transmission in NSW in 2017.
- Further analysis shows that the fall in early diagnoses has occurred in Australian born men who have sex with men (MSM), with a 56% fall in early diagnoses in 2017 in this sub-group compared to the average of the previous six years in this group (Figure 5).
- The number of new diagnoses in 2017 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), and 3) commencement of the population level HIV pre-exposure prophylaxis (PrEP) impact study (EPIC-NSW) in March 2016 (see section 2).

Figure 2: Number of NSW residents newly diagnosed with HIV in 2011 to 2017 by evidence of infection within 12 months of diagnosis (early stage infection)



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: Number of NSW residents newly diagnosed with HIV in 2011 to 2017 by reported HIV risk exposure

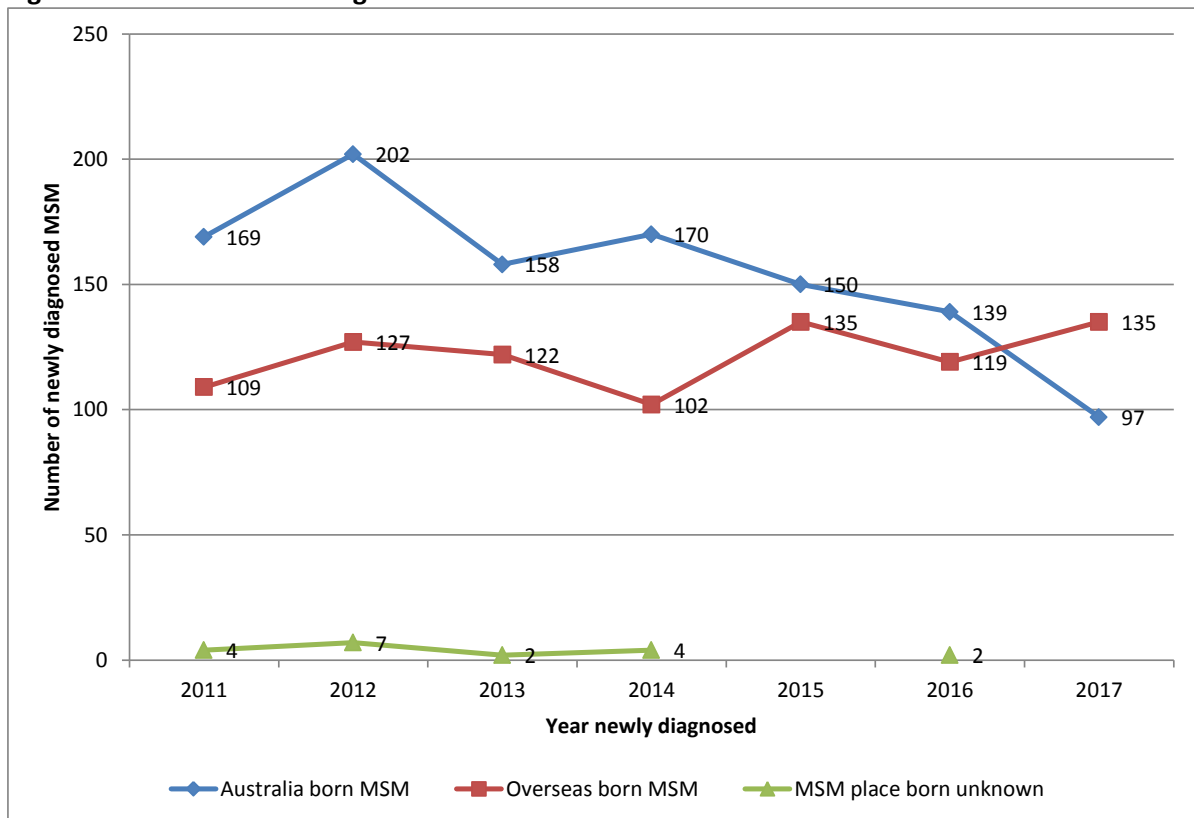


Comment

- Among the 313 new diagnoses in 2017, 232 (74%) reported being men who have sex with men (MSM), 19% less than the average annual new diagnoses count for MSM in 2011-2016 (n=286.3) (Figure 3).

- Of 85 new diagnoses in quarter (Q) 4 2017, 78% (n=66) reported being MSM, similar to the average new diagnoses count in MSM in quarter 4 2010-2015 (n=68).
- The downward trend in new diagnoses in MSM reported in Q3 2016 to Q2 2017 was not maintained in Q3 and Q4 2017 (Figure 3). However, the downward trend in notifications in Australian born men did continue in Q3 and Q4 2017 (Figure 4). Additionally, the number of early stage infections in MSM in Q3 and Q4 2017 was 24% (n=55) fewer than the previous six year average for Q3 and Q4 (n=73). Conversely, the number of diagnoses made in an advanced stage of infection in Q3 and Q4 2017 increased by 81% (n=31) compared with the 2011-2016 average for Q3 and Q4 (n=18).

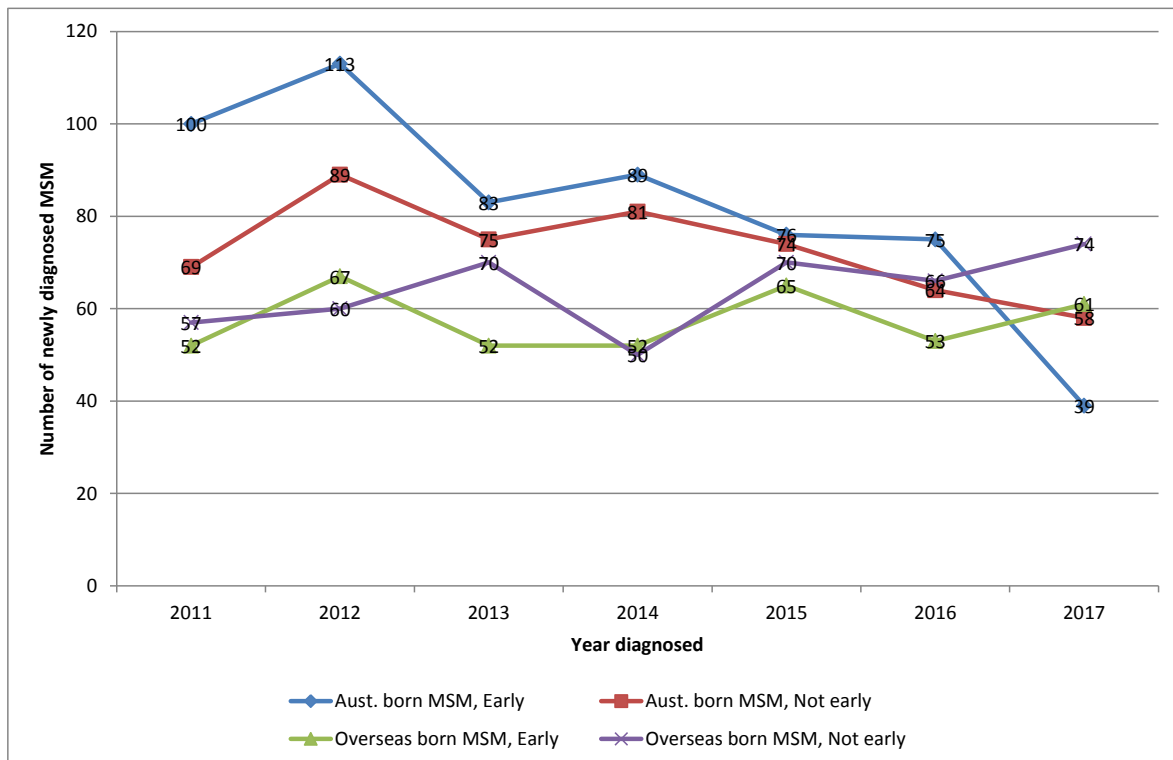
Figure 4: Number of new diagnoses in MSM in 2011 to 2017 born in Australia versus overseas



Comment

- In 2017, the number of newly diagnosed MSM who were born overseas exceeded the number born in Australia (Figure 4). In 2017 the number of MSM newly diagnosed who were born in Australia decreased by 41% while the number born overseas increased by 13% compared with the 2011-2016 averages.
- The regions of birth for overseas born MSM newly diagnosed in 2017 were South-East Asia (17%), North-East Asia (14%), Southern and Central America (8%), Southern and Eastern Europe (6%), North-West Europe (5%), and less than 5% for other regions.

Figure 5: Number of new diagnoses in MSM in 2011 to 2017 born in Australia versus overseas, by evidence of early stage infection (likely infected in the 12 months before diagnosis)

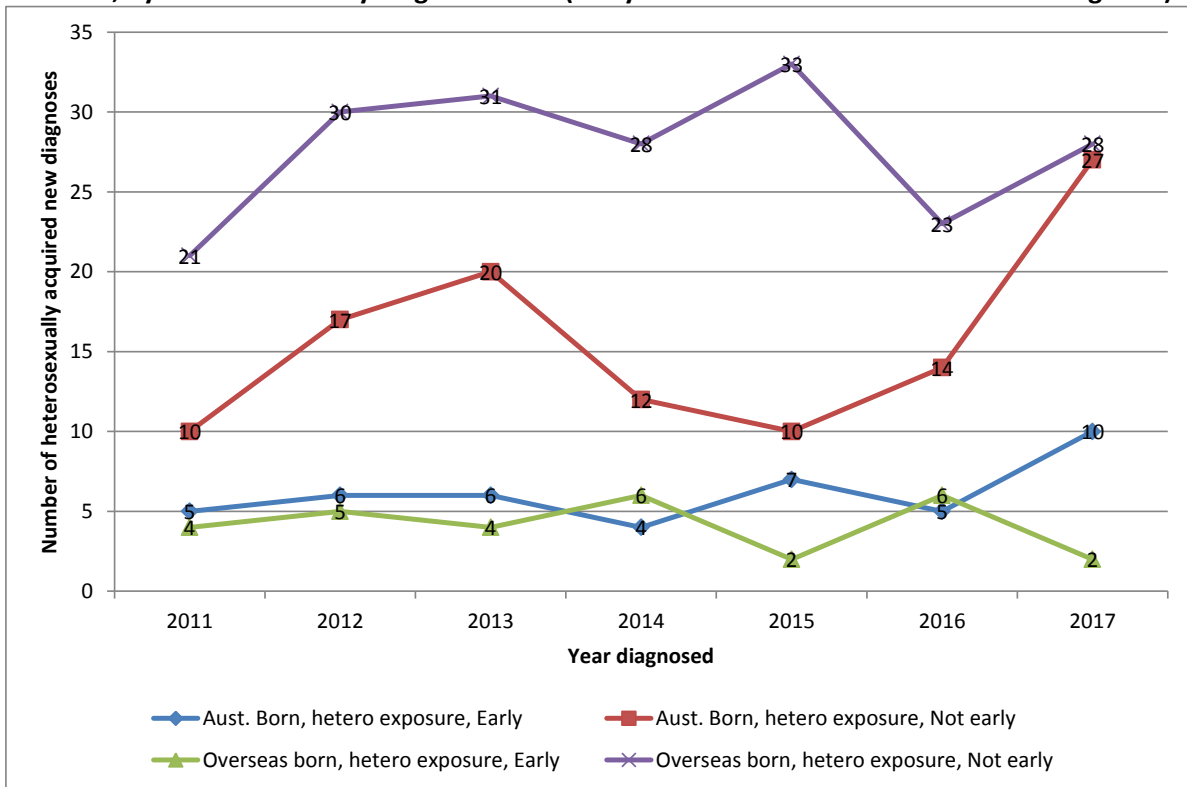


Early stage infection: a sero-conversion like illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or presentation with an AIDS defining illness at diagnosis.

Comment

- Among newly diagnosed Australian born MSM, in 2017 early stage infections (evidence infected within 12 months of diagnosis) decreased by 56% compared with the 2011-2016 average (n=89.3), and not-early stage infections decreased 23% (2011-2016 av. n=75.3) (Figure 5).
- Among newly diagnosed overseas born MSM, in 2017 early stage infections increased by 7% compared with the 2011-2016 average (n=56.8), and not-early stage infections increased by 19% (2011-2016 av. n=62.2) (Figure 5).

Figure 6: Number of heterosexually acquired new diagnoses 2011 to 2017 born in Australia versus overseas, by evidence of early stage infection (likely infected in the 12 months before 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.

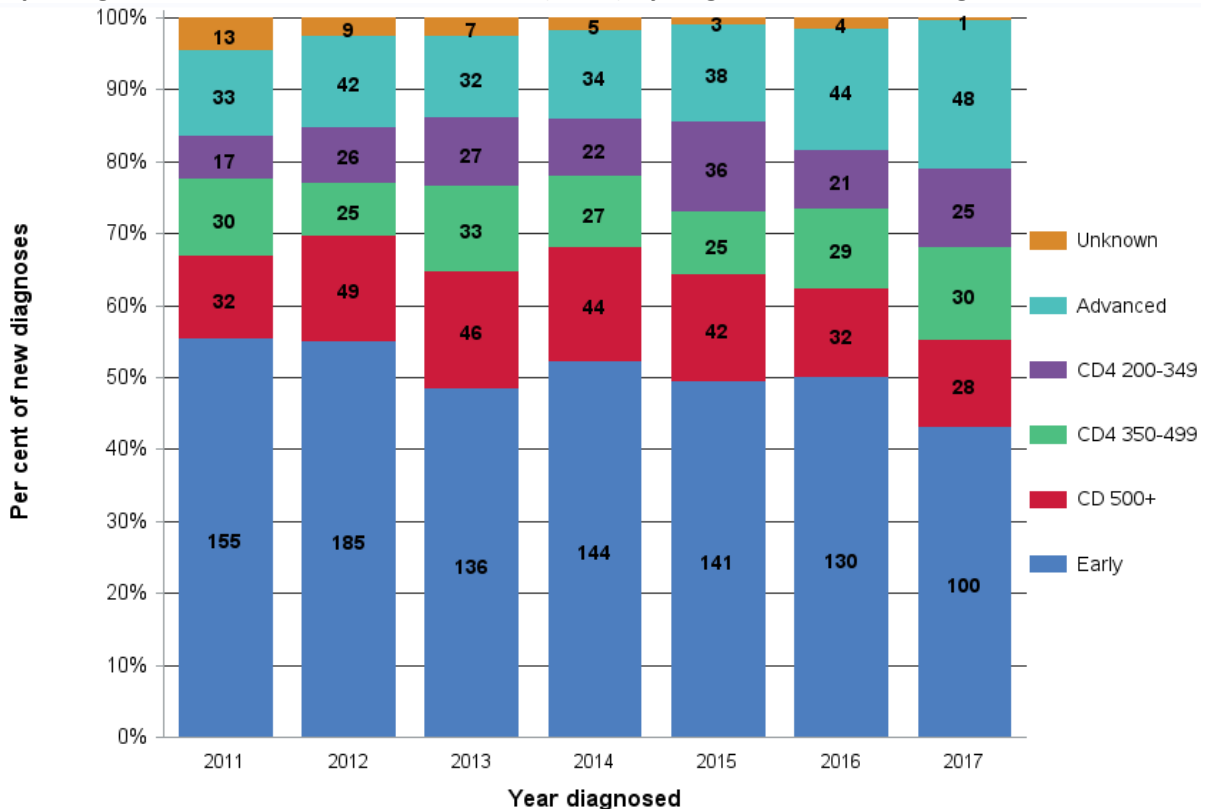
Comment

- In 2017 there were 67 new diagnoses reported to be via heterosexual exposure, 29% greater than the annual average 2011-2016 (n=52) (Figure 3).
- The number of heterosexually acquired infections with early diagnosis was stable in 2017. However, there was a 31% increase in the number of heterosexually acquired new diagnoses with non-early stage infection (55 in 2017 compared to an annual average in 2011-2016 of 42 non-early infections).
- While absolute numbers are small, the increase in non-early stage infections occurred among Australian born heterosexual people (27 in 2017 compared to an annual average in 2011-2016 of 14) (Figure 6).

1.2 What proportion of HIV notifications are newly acquired infections?

Trends in the stage of infection at which people are diagnosed with HIV provide an indication as to the timeliness of diagnosis over time. Figure 7a (new diagnoses reporting to be MSM) and 7b (new diagnoses reporting a HIV risk exposure other than male to male sex) draws on a combination of clinical symptoms at diagnosis (sero-conversion like illness, AIDS), HIV testing history and CD4 count at diagnosis to describe 'stage of infection'¹ at the time of diagnosis.

Figure 7a: Per cent of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017 reporting to be men who have sex with men (MSM) by stage of infection at diagnosis¹



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

¹Stage of infection at diagnosis: Early = Evidence of HIV infection acquired within 12 months of diagnosis, which was defined as notification of 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. CD4 500+, CD4 350 to 499, CD4 200 to 349 each excludes early and advanced categories. Advanced = CD4 count less than 200 or AIDS defining illness in absence of evidence of 'Early' diagnosis

Comment

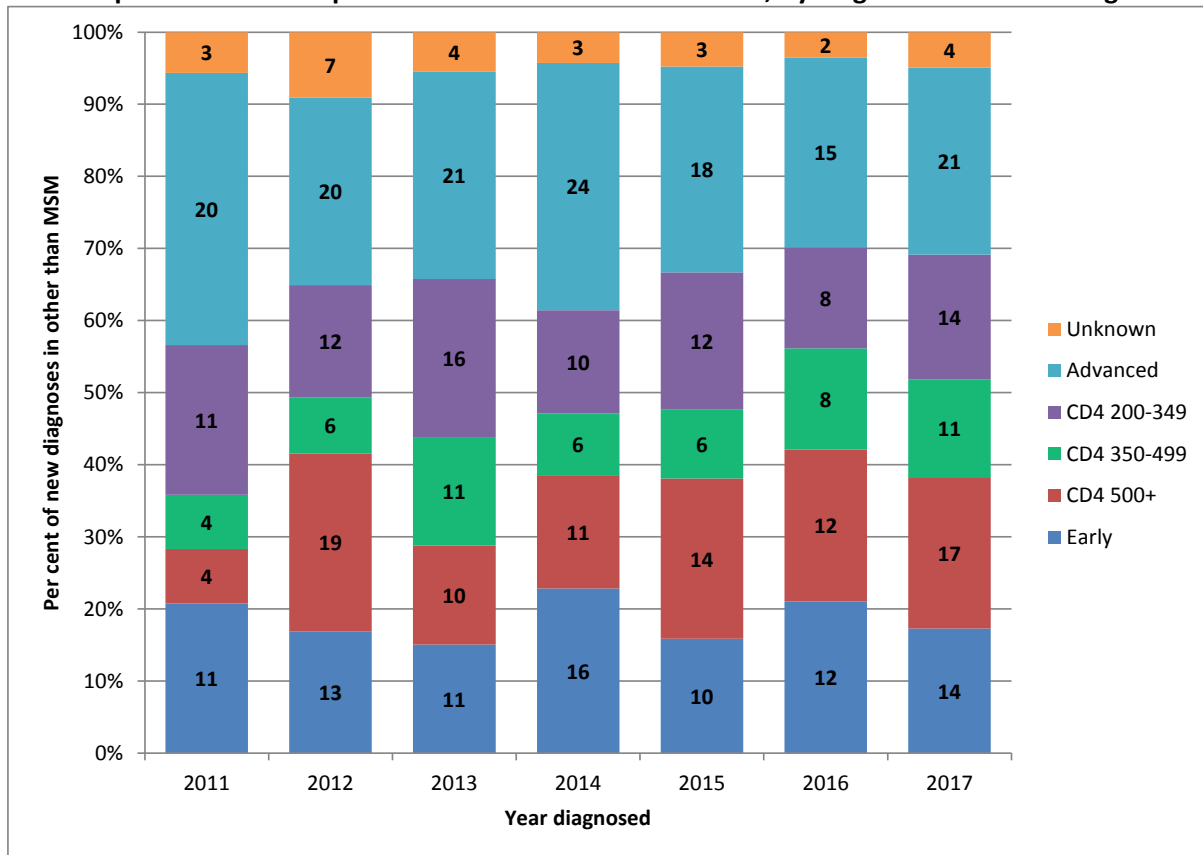
Of 232 MSM newly diagnosed in 2017:

- 100 (43%) had evidence of early stage infection, 33% less compared with an annual average of 149 early stage infections in 2011-2016 (52% of all diagnoses in the period)
- 48 (21%) had evidence of advanced stage infection, 29% more compared with an annual average of 37 advanced stage infections 2011-2016 (13% of all diagnoses in the period).

Of 66 MSM newly diagnosed in quarter 4 2017:

- 27 (41%) had evidence of early stage infection at diagnosis, 23% less compared with the quarter 4 2011-2016 average of 35 (52% of all diagnoses in the period)
- 15 (23%) had evidence of advanced stage infection, 80% more compared with the quarter 4 2011-2016 average of 8 (12% of all diagnoses in the period).

Figure 7b: Per cent of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017 with a reported HIV risk exposure other than male to male sex, by stage of infection at diagnosis¹



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

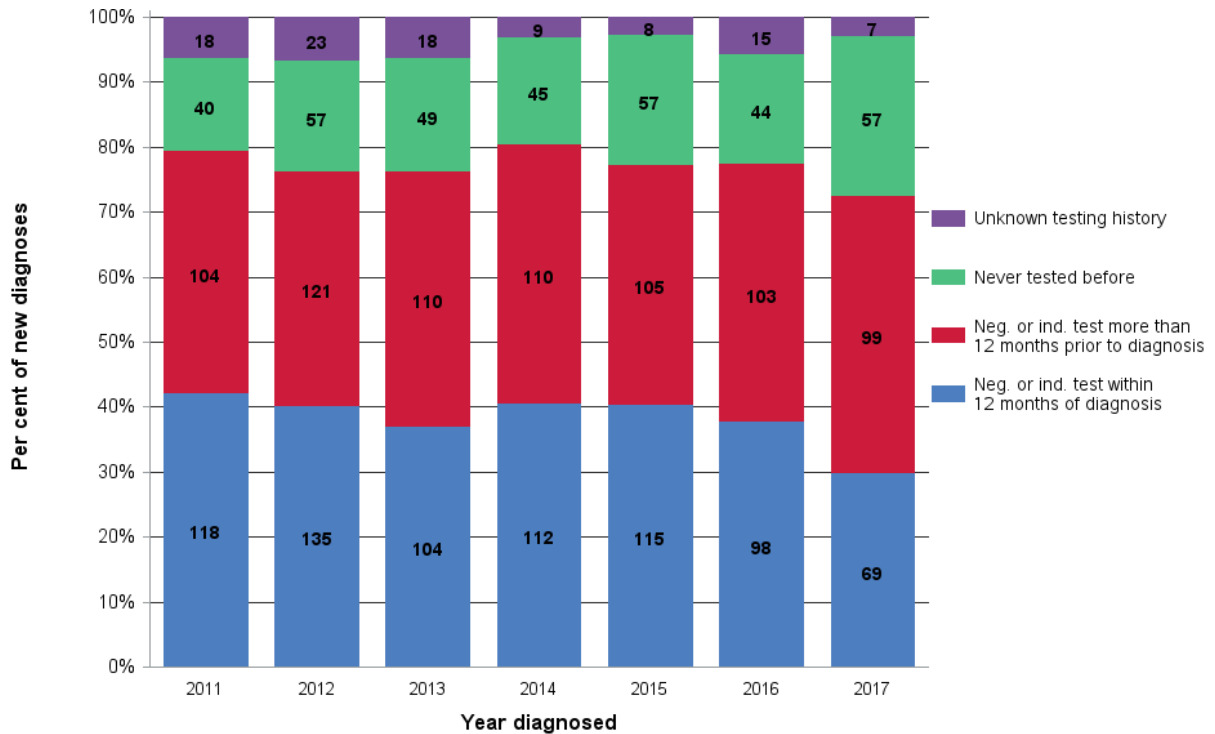
¹Stage of infection at diagnosis: Early = Evidence of HIV infection acquired within 12 months of diagnosis, which was defined as notification of a sero-conversion like illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or presentation with an AIDS defining illness at diagnosis. CD4 500+, CD4 350 to 499, CD4 200 to 349 each excludes early and advanced categories. Advanced = CD4 count less than 200 or AIDS defining illness in absence of evidence of 'Early' diagnosis

Comment

Of 81 people newly diagnosed in 2017 with an HIV risk exposure other than male to male sex:

- 14 (17%) had early stage infection, similar to the average number in 2011-2016 (n=12.2)
- 17 (21%) had no evidence of early stage infection but had a CD4 count 500 or over, more than the average number in 2011-2016 (n=11.7)
- 11 (14%) had a CD4 count 350-499 at diagnosis, more than the average number in 2011-2016 (n=6.8)
- 14 (17%) had a CD4 count 200-349, more than the average number in 2011-2016 (n=11.5)
- 21 (26%) had advanced stage infection, similar to the average number in 2011-2016 (n=19.7).

Figure 8: Per cent of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017 reporting to be MSM by HIV testing history



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

Comment

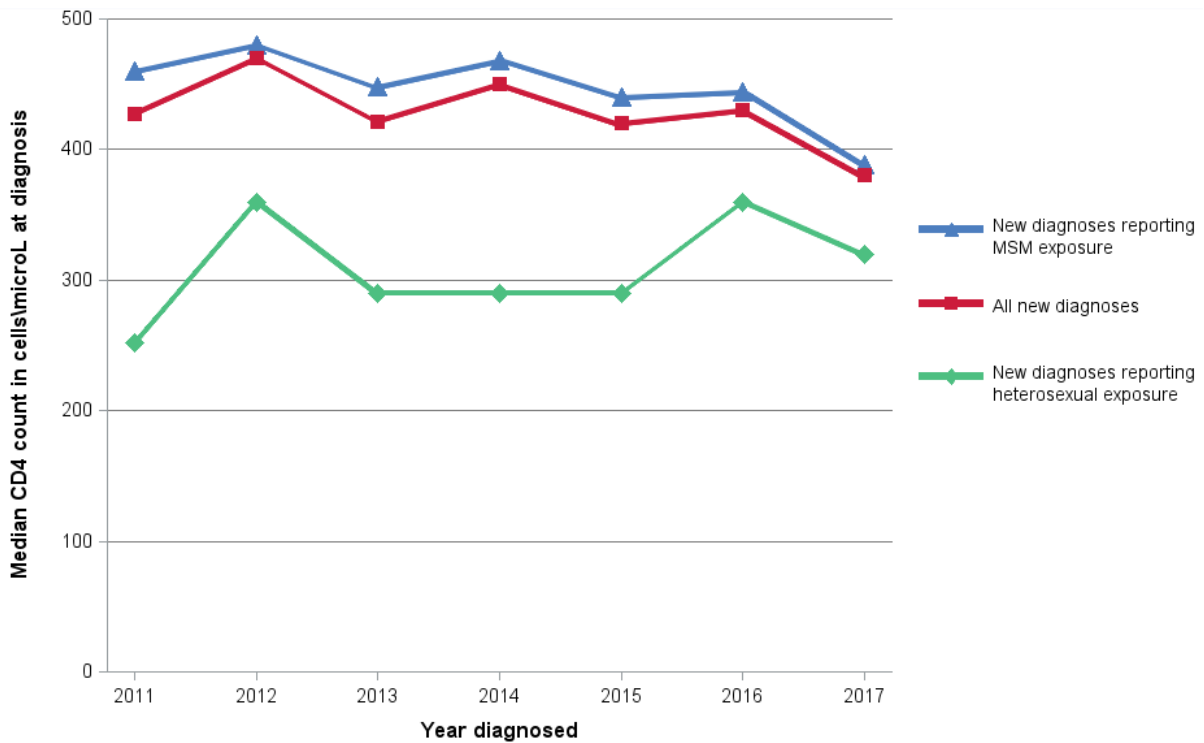
Of 232 MSM newly diagnosed in 2017:

- 69 (30%) were reported to have had a negative or indeterminate HIV test within 12 months of diagnosis, 39% less compared with an annual average of 114 in 2011-2016 (40% of all infections in the period).
- 57 (25%) reported not ever having had an HIV test prior to diagnosis, 17% more compared with an annual average of 49 in 2011-2016 (17% of all infections in the period).

Of 66 MSM newly diagnosed in quarter 4 2017:

- 22 (33%) were reported to have had a negative or indeterminate HIV test within 12 months of diagnosis, 20% less compared with an annual average of 28 in 2011-2016 (40% of all infections in the period).
- 16 (24%) reported not ever having had an HIV test prior to diagnosis, 52% more compared with an annual average of 11 in 2011-2016 (15% of all infections in the period).

Figure 9: Median CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017 for all, for those reporting to be MSM and for those reporting heterosexual acquisition of HIV¹



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

¹The median CD4 count at diagnosis for other HIV risk exposure groups such as being a person who injected drugs (PWID) are not reported separately due to very low number of cases.

Comment

- In 2017 the median CD4 count at diagnosis for all 317 NSW residents notified with newly diagnosed HIV infection was 380.
- For the 232 people newly diagnosed in 2017 reporting to be MSM, their median CD4 count at diagnosis was 388 and, for the 67 reporting heterosexual exposure to HIV it was 320.

Figure 10: Within each age group at diagnosis of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017, the per cent with evidence of late diagnosis¹

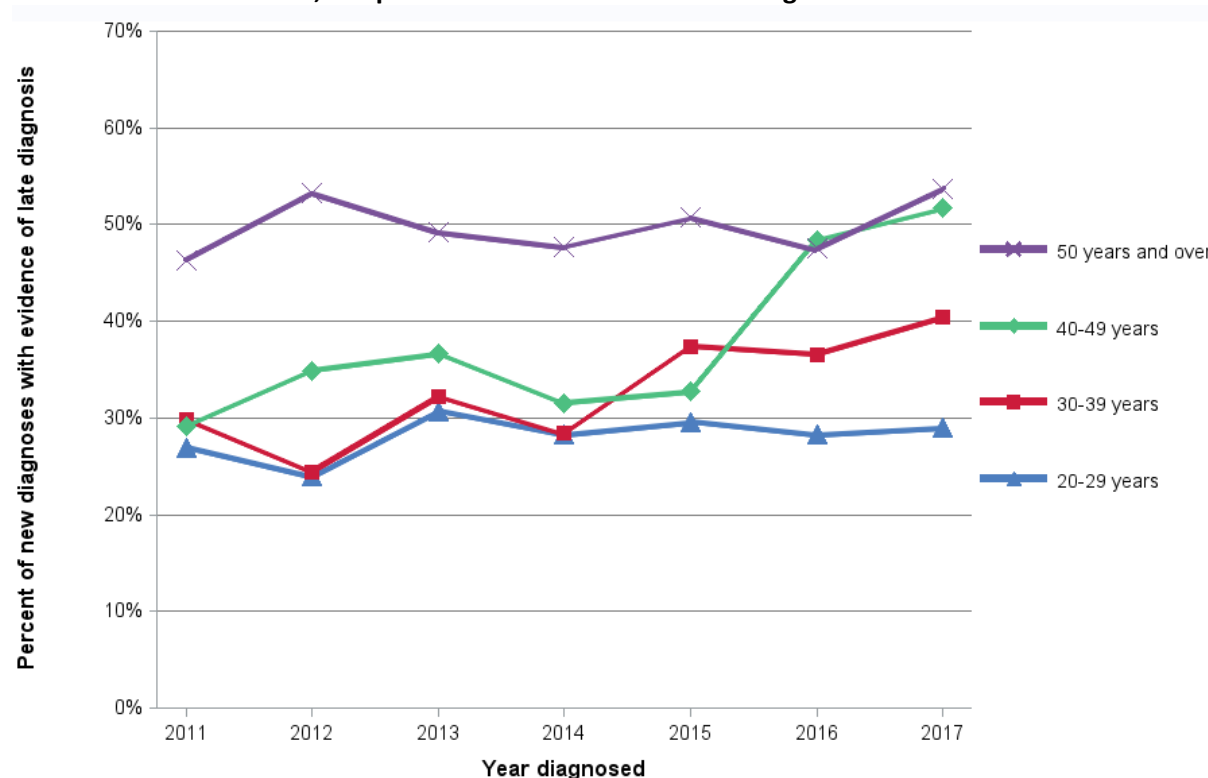


Table 1: Within each age group at diagnosis of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017, the number with evidence of late diagnosis¹

Age in years	2011	2012	2013	2014	2015	2016	2017
20 to 29	24	29	31	26	32	28	25
30 to 39	37	33	29	31	40	41	38
40 to 49	21	30	34	24	19	30	31
50+	22	33	31	32	35	19	36
Total	104	131	128	114	129	118	131

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

¹Evidence 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.

Comment

- Of 313 NSW residents newly diagnosed with HIV infection in 2017, 42% had evidence of late diagnosis. This was 54% of those who were aged 50 years or over at diagnosis, 52% of those aged 40 to 49 years, 40% of those aged 30 to 39 years at diagnosis, 29% of those aged 20 to 29 years at diagnosis, and 17% of those aged less than 20 years.

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

Table 2: Characteristics of new diagnoses 2011-2016 average count versus 2017

Case characteristics	2011-2016 average	2017	Difference in count
Number	352.3	313	-39.3
Gender			
Male	324.0	283	-41.0
Female	26.7	24	-2.7
Transgender	1.7	6	+4.3
Aboriginal and Torres Strait Islander person status			
Aboriginal or Torres Strait Islander person	8.3	8	-0.3
Not Aboriginal person	340.3	303	-37.3
Not Stated / Unknown	3.7	2	-1.7
Born Australia			
Yes	191.3	143	-48.3
No	161.0	170	+9.0
Age in years at diagnosis			
0 to 19	6.3	6	-0.3
20 to 29	101.7	86	-15.7
30 to 39	112.8	94	-18.8
40 to 49	74.2	60	-14.2
50 and over	57.3	67	+9.7
Reported HIV risk exposure			
MSM	286.8	232	-54.8
Hetero-sex only	51.8	67	+15.2
PWID	6.8	6	-0.8
Vertical*	0.5	2	+1.5
Other or unknown	6.3	6	-0.3
Evidence of late diagnosis			
Late	120.7	131	+10.3
Not late	219.0	174	-45.0
Unknown	12.7	8	-4.7
Evidence of acute infection (diagnostic lab data for this collected since 2013)	2013-2016 average		
Yes	88.0	61	-27.0
No	253.5	252	-1.5

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

*Both cases of vertical transmission: occurred overseas.

Notes:

- 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.
- Evidence of acute infection/being infected in the three months prior to diagnosis: a negative or indeterminate Western Blot test, or a sero-conversion like illness or a report of a negative HIV test within 3 months of diagnosis

Figure 11: Number of MSM newly diagnosed with HIV in 2011 to 2017 by place born and place most likely acquired HIV infection

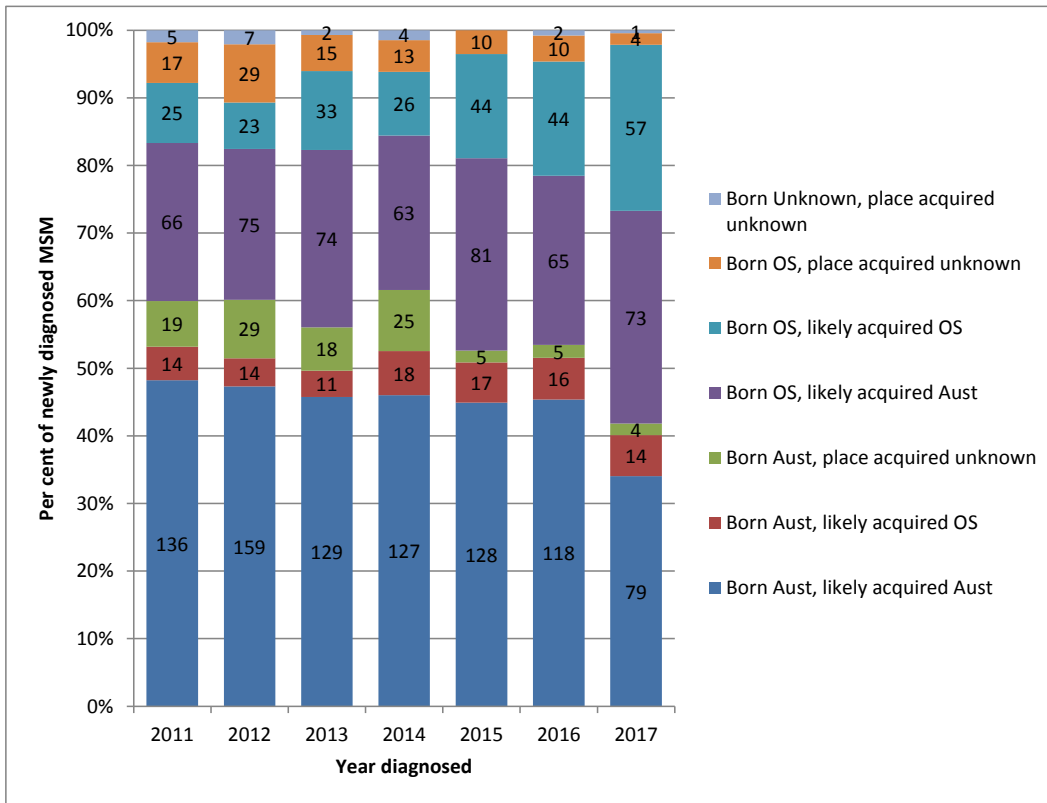
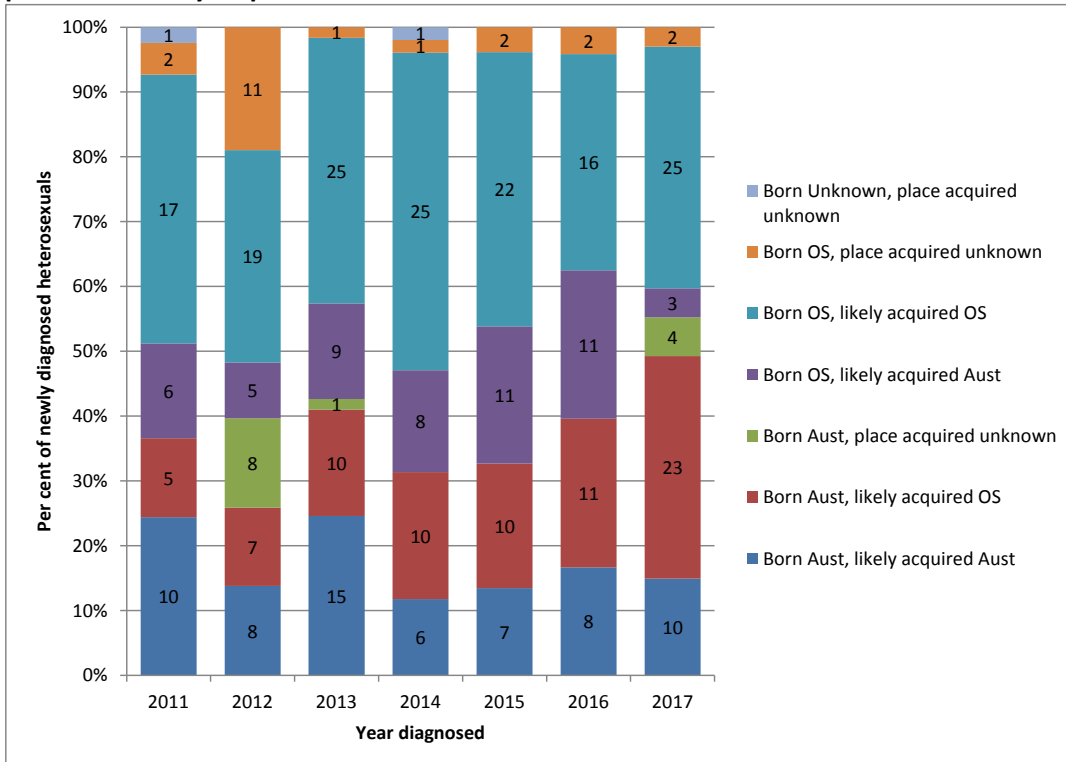


Figure 12: Number heterosexuals newly diagnosed with HIV in 2011 to 2017 by place born and place most likely acquired HIV infection



Comment on Figure 11:

Of 232 MSM newly diagnosed in 2017:

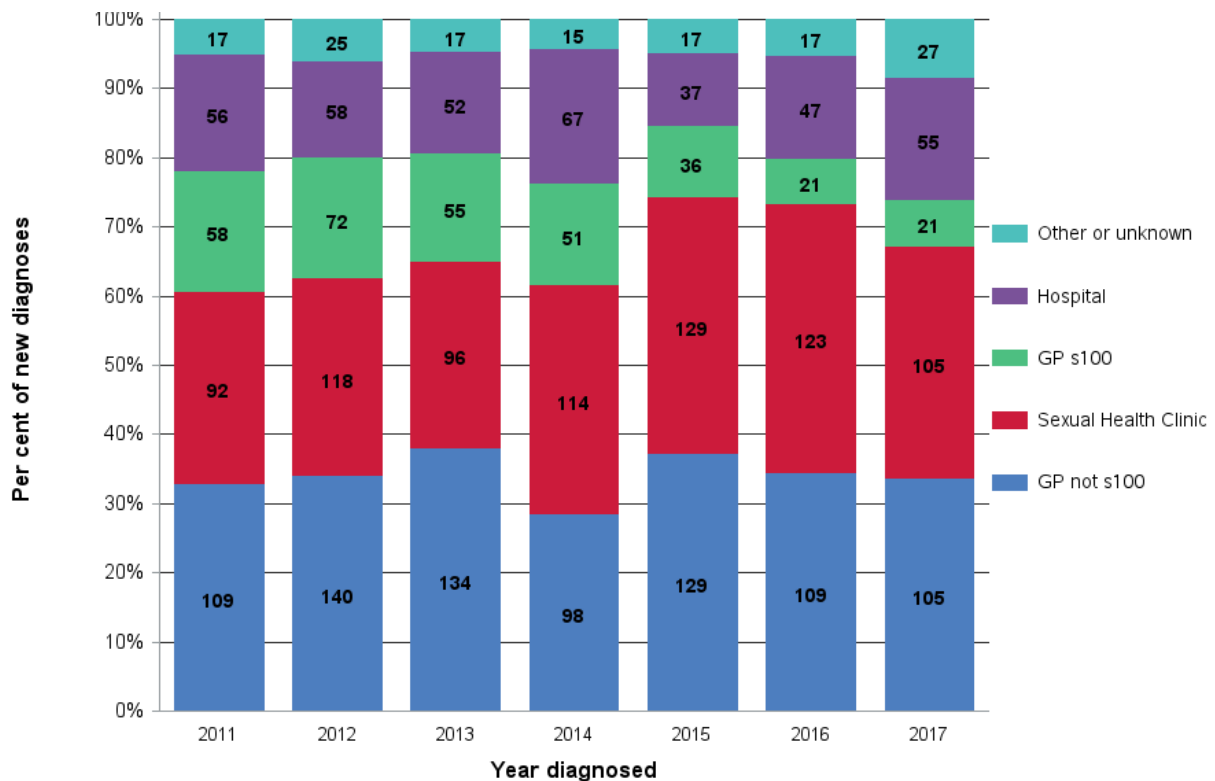
- 97 (42%) were Australian born, a 41% decrease compared with 165, the annual average for 2011-2016.
- 134 (58%) were overseas born, a 13% increase compared with 119, the annual average for 2011-2016.

Comment on Figure 12:

Of 67 heterosexual people newly diagnosed in 2017:

- 37 (55%) were Australian born, a 91% increase compared with 19, the annual average for 2011-2016.
- 30 (45%) were overseas born, 7% less compared with 32, the annual average for 2011-2016.

Figure 13: Number of NSW residents notified with newly diagnosed HIV infection in 2011 to 2017 by type of diagnosing doctor



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018

Comment

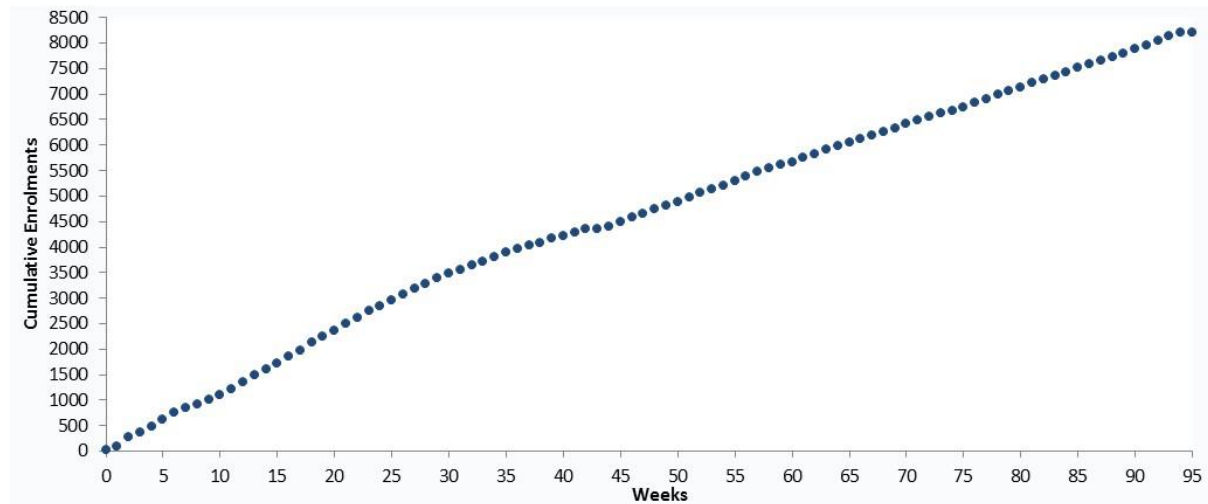
Of 313 NSW residents notified with newly diagnosed HIV infection in 2017:

- 34% were diagnosed by sexual health clinics (SHC) (includes linked community testing sites), and 34% were diagnosed by medical general practitioners (GPs) not accredited to prescribe antiretroviral therapy (ART) (GP not-s100), similar as in 2011-2016;
- 18% were diagnosed by hospital doctors, compared with 15% in 2011-2016;
- 9% were diagnosed by other doctor types (13 by immigration, 10 by private medical specialists, 2 by Justice Health, 1 by blood service and one unknown doctor type) compared with 5% in 2011-2016, and;
- 7% were diagnosed by GP s100 doctors (HIV specialised and accredited to prescribe ART), compared with 14% of the new diagnoses in 2011-2016.

2. Expand HIV Prevention

2.1 Who is accessing PrEP through EPIC-NSW?

Figure 14: Enrolment of participants in EPIC-NSW, by study week, from 1 March to 31 December 2017



Comment

- A total of 8,206 participants enrolled in EPIC-NSW between 1 March 2016 and 31 December 2017.
- 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 and 31 December 2017

Gender	N	%
Male	8,111	98.8
Female	10	0.1
Transgender, male-to-female	70	0.9
Transgender, female-to-male	10	0.1
Other	5	0.1
Total	8,206	100
Sexual identity		
Gay/Homosexual	7,695	93.8
Bisexual	444	5.4
Heterosexual	46	0.6
Other*	21	0.3
Total	8,206	100
Age at enrolment (years)		
Median (Inter-quartile range)	34 (28 to 44)	
Age group		
< 20	83	1
20-29	2,355	29.7
30-39	2,763	34.9
40-49	1,675	21.1
≥50	1,049	13.2
Total**	7,925	100
Aboriginal and/or Torres Strait Islander status		
Non-Indigenous	7,548	98.3
Aboriginal and/or Torres Strait Islander	130	1.7
Total***	7,678	100
Country/Region of birth		
Australia	4,283	60
Oceania	272	3.8
Asia	1,031	14.4
Northern America	203	2.8
South America, Central America & the Caribbean	293	4.1
Europe	804	11.3
Middle East	89	1.2
Africa	163	2.3
Total****	7,138	100
Area of residence		
Major cities	7,573	94.2
Inner Regional	430	5.3
Outer Regional	32	0.4
Remote	7	0.1
Total****	8,042	100

Notes: Demographic data was not available for all participants. **“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.** Age was obtained from the enrolment¹ and ACCESS databases. ***Aboriginal and/or Torres Strait Islander status was obtained from the behavioural survey and ACCESS databases. Of the 711 (8.7%) participants whose Indigenous status was not stated, 183 participants' country/region of birth was not Australia and these people were counted as Non-Indigenous. Data for Indigenous status was missing for 528 (6.4%) participants. **** Country/region of birth was obtained from the behavioural survey and ACCESS databases, where available. Data for country/region of birth was missing for 1,016 (12.4%) participants*****Area of residence (based on participant postcode) was obtained from the enrolment, behavioural survey and ACCESS databases, where available. Data were missing for 164 (2.0%) participants.

Comment

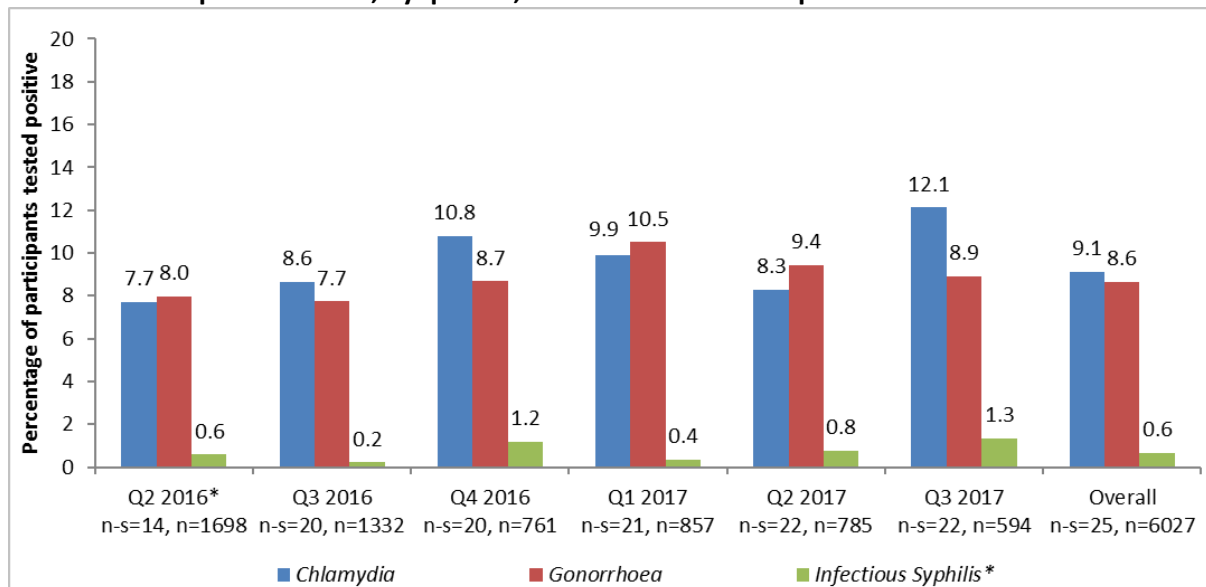
- Around 99% participants were male, among them 93.8% identified as gay/homosexual. 34.9% of participants were 30-39 years old (), 29.7% were 20-29 years old, 21.1% were 40-49 years old.
- Of the 7,138 participants who answered the question in the behavioural survey about place of birth, 60% were born in Australia, 14.4% born in Asia and 11.3% born in Europe.
- Majority of participants (94.2%) resided in major cities. Only 5.3% of participants resided in an inner regional area and 0.5% resided in an outer regional or remote area.
- Of 7,678 participants who answered the question in the behavioural survey about Aboriginality, 1.7% identified as Aboriginal or Torres Strait Islander.

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 7,284 participants up to the end of Quarter 3 2017, STI testing data were available for 82.7% (6,027) participant enrolled in 25 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 267, Site 271, Site 272, 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 30 September 2017



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.

Comment

- Of the EPIC-NSW participants tested for STIs at baseline between 1 March 2016 and 30 September 2017, 9.1% had a positive test result for chlamydia and 8.6% for gonorrhoea.
- The positive diagnosis rate for infectious syphilis in public clinics was 0.6%.
- The prevalence of STI rates remained reasonably stable over time, with some fluctuations by quarter. As STI prevalence is considered a proxy measure of high risk, a stable STI rate over time suggests the program is continuing to reach men at risk of HIV.

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 relating to the NSW ‘Ending HIV’ campaign. Key findings and a description of the evaluation is provided in Appendix B.

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

From October 2016 to September 2017

- The number of units of injecting equipment distributed in NSW has continued to increase in most LHDs, compared to the same period in 2016.
- 13,939,128 units of injecting equipment were distributed in NSW. Compared to the same period in 2016:
 - 2% (255,955) more units were distributed overall in NSW
 - 1% (94,223) more units were distributed by Public NSP

2.6 What proportion of people reuse 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.
- Respondents who were bisexual, injected daily or more frequently, and imprisoned were more likely to report RSS.

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.

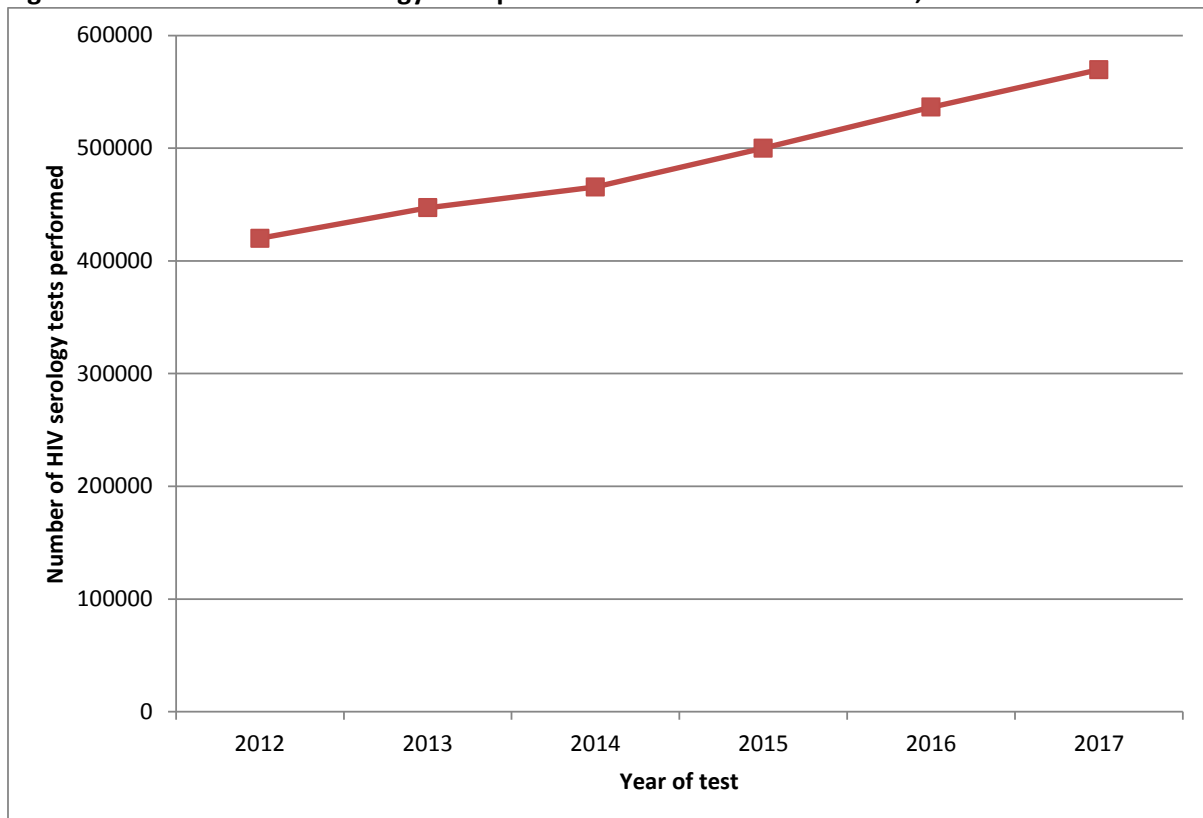
3. Increase HIV testing frequency

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 16: Number of HIV serology tests performed in 15 NSW laboratories, 2012- 2017



Data source: NSW Health denominator data project, extracted 7 February 2018.

Comment

- In 2017 there were 569,605 HIV serology tests performed in 15 laboratories in NSW, 6% more than in 2016 (n=536,407), 14% more than in 2015 (n=499,964), 22% more than in 2014 (n=465,584), 27% more than in 2013 (n=447,186) and 36% more than in 2012 (n=419,968).
- In quarter 4 2017 there were 139,759 HIV serology tests performed in 15 laboratories in NSW, 8% more than in quarter 4 2016 (n=129,415), 13% more than in quarter 4 2015 (n=123,295), 22% more than in quarter 4 2014 (n=114,109), 28% more than in quarter 4 2013 (n=109,279) and 238% more than quarter 4 2012 (n=101,434).
- From March 2016 to December 2017, 8244 people at high risk of acquiring HIV were tested (and found HIV negative) prior to their enrolment in EPIC-NSW, a population level PrEP impact study. Study participants have requested to have ongoing HIV testing every three months.

Local Health Districts

Figure 17: Number of HIV tests performed in Sydney metropolitan Local Health District Publicly Funded Sexual Health Clinics in 2017, compared to 2016

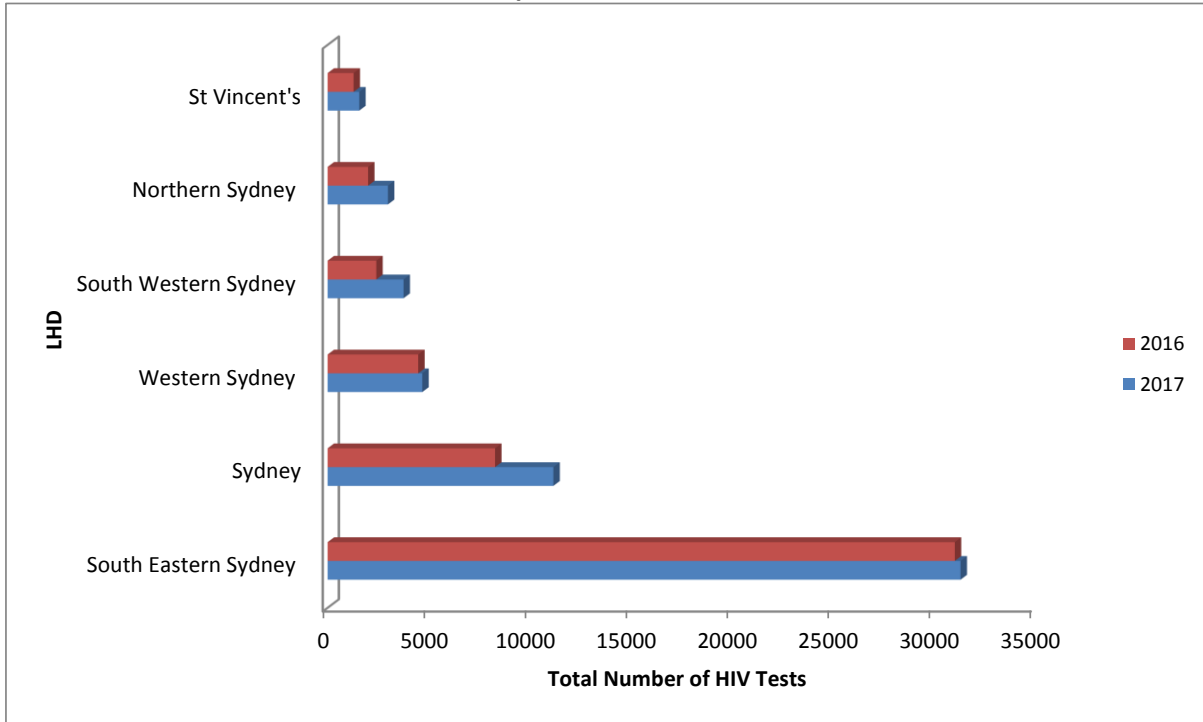
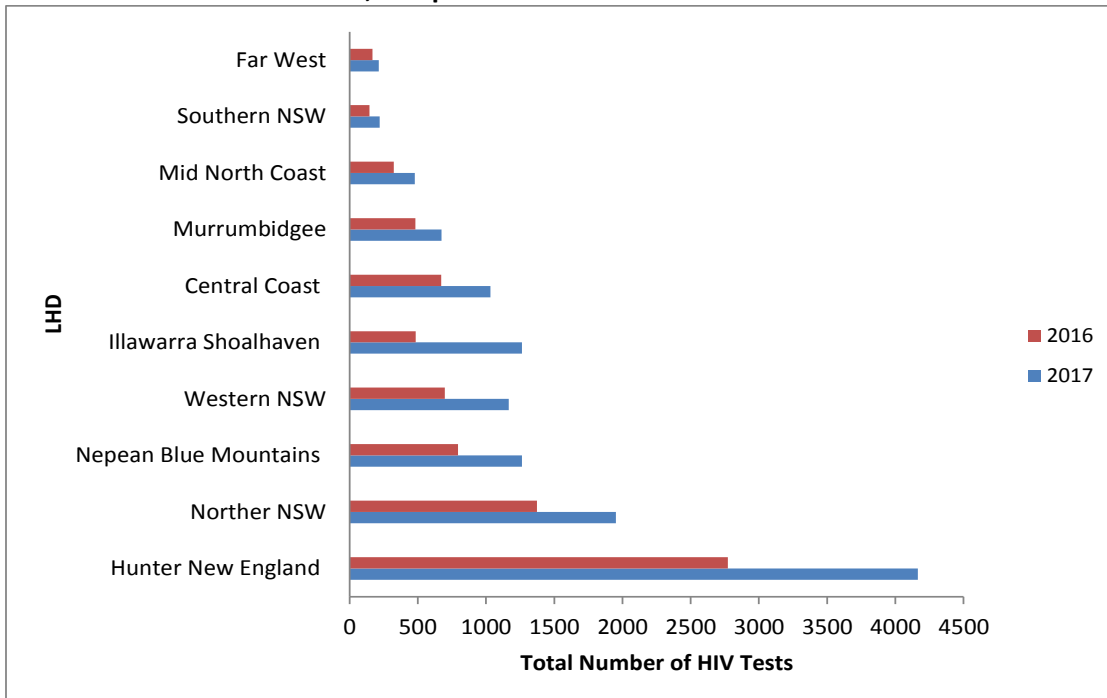


figure for January to December 2016 is an underestimate as actual activity data is not available for this period. Data source: NSW Health HIV Strategy Monitoring Database.

Figure 18: Number of HIV tests performed in regional and rural Local Health District Publicly Funded Sexual Health in 2017, compared to 2016

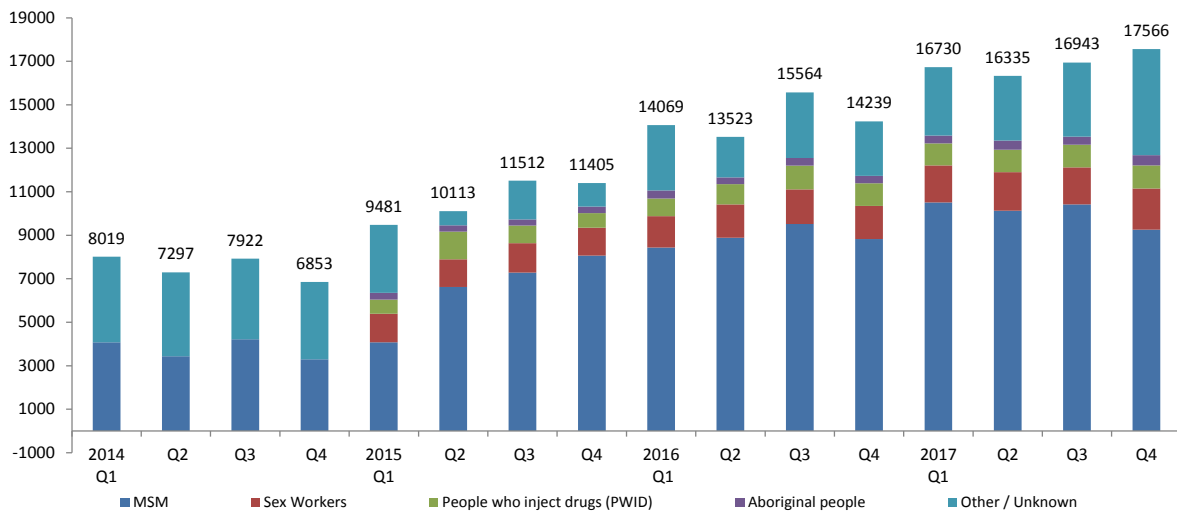


*figure for January to December 2016 is an underestimate as actual activity data is not available for this period. Data source: NSW Health HIV Strategy Monitoring Database.

Comment on Figure 17 & 18

- 67,637 HIV tests were done in all PFSHCs in NSW; 18% greater than in 2016 (n=57,366).
- HIV testing increased in all LHDs in 2017 when compared to 2016.
- LHDs where testing increased more than 50% were Illawarra Shoalhaven (160%), Western NSW (67%), Nepean Blue Mountains (59%), South Western Sydney (56%) and Hunter New England (50%) when compared to 2016.

Figure 19: Number of HIV rapid and serology tests performed in public sexual health and HIV clinics and priority LHD settings in NSW between 1 January 2014 and 30 September 2017, 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.

Comment

- In 2017 (January-December), 40,314 HIV tests were conducted in MSM in PFSHCs. This is a 13% (n=35,652) increase when compared with 2016.
- Both rapid HIV testing and HIV serology are included. Priority settings include mental health, drug and alcohol, and emergency departments. From 1 January 2017, Dried Blood Spot (DBS) self-sampling tests is also included.

Dried Blood Spot (DBS) is an alternative way to test for HIV and hepatitis C where the finger prick blood is self-collected. It is offered to eligible people for free without the need for the person to attend a health service under the NSW DBS Testing Pilot. The project aims to increase uptake and frequency of HIV testing among high-risk populations who experience barriers to testing through conventional services.

Table 4: Recruitment data for NSW HIV and Hepatitis C Dried Blood Spot (DBS) Testing Pilot, 1 November 2016 to 31 December 2017

Total Recruitment Data	Number (%)
Number of registrations for DBS test	714
Number of HIV DBS tests done	393
Number of Hep C DBS tests done	4
DBS return rate	59%
Proportion of people registering who have never tested or tested more than 2 years ago	55%
Number of reactive results	4 (HIV)

Data Source: NSW Dried Blood Spot Research database

Comment

- Fifty-five per cent of people who registered for the test had never previously tested for HIV or had tested more than 2 years ago. This demonstrates the success of DBS testing in engaging people with infrequent testing history.
- From November 2016 to December 2017, 393 HIV DBS tests for HIV and 4 for hepatitis C were conducted. Out of 714 people who registered for the test, 393 returned a sample. Out of 393 tests, 4 samples were identified as HIV positive.

Table 5: Demographic data for HIV and Hepatitis C DBS Testing Pilot, 1 November 2016 to 31 December 2017

Target population	Number (%)
Aboriginal people*	34 (5%)
MSM	542 (76%)
Ever injected drugs*	37 (5%)
From Asia/Africa	191 (27%)
Partners from Asia/Africa	227 (32%)

Data Source: NSW Dried Blood Spot Research database

*Aboriginal people and people who have ever injected drugs included from September 2017.

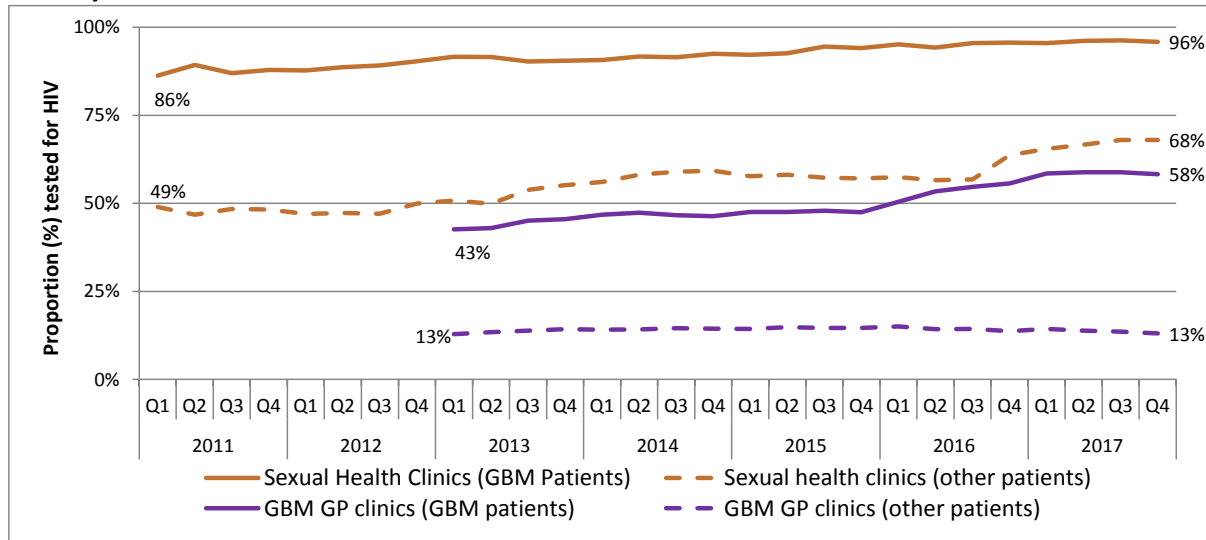
Comment

- Majority of the individuals who registered for the DBS were MSM (76%). Over a quarter of people were from Asia/Africa and a third of participants had partners from the region.

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 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 2011 to 31 December 2017⁵



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

Comment

- In PFSHCs, testing uptake by patients started to increase in the middle of 2016, rising from 57% in June-September 2016 to 68% in October-December 2017. Among GBM, testing uptake was stable at 96% in 2017.
- In GP clinics, testing uptake by GBM increased from 43% in January-March 2013 to 58% in October-December 2017. The uptake remained stable among other patients at those clinics.

Testing uptake among Sydney Gay Community Periodic Survey respondents

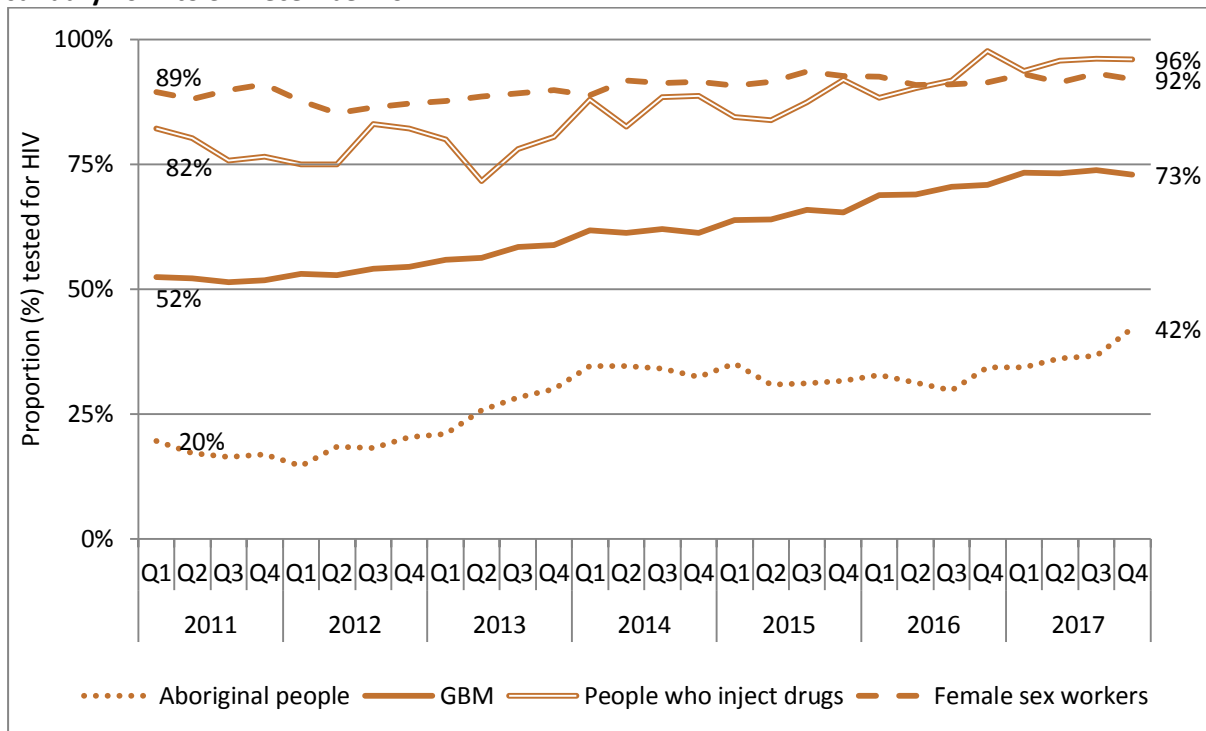
- Data from the SGCPS (conducted in February/March annually) on HIV testing patterns were reported in the January – March 2017 HIV Data Report.
- The proportion of men who have ever tested for HIV has stabilised at 87% in 2017. Nearly 80% of non-HIV-positive men reported an HIV test in the previous 12 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 21: Proportion of patients⁶ attending PFSHCs and GBM GP clinics⁷ tested at least once for HIV at any clinic in the ACCESS network in the previous year, by quarter and priority population⁸, 1 January 2011 to 31 December 2017⁹



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

Comment

- HIV test uptake increased between 2011 and 2017 in all priority populations.
- The largest increase in testing uptake was among Aboriginal people. Proportion tested for HIV doubled from 20% in January-March 2011 to 42% in October-December 2017

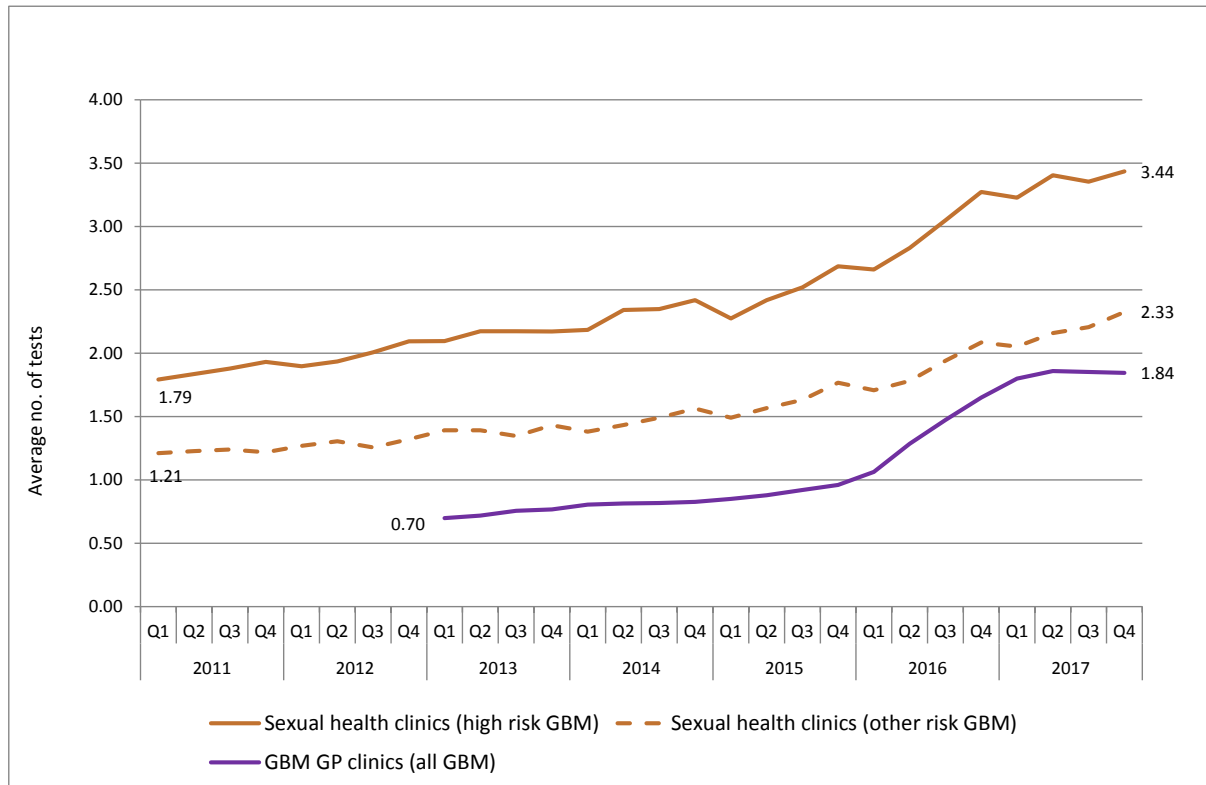
⁶ Excludes patients known to be HIV positive

⁷ 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

⁸ Priority populations other than GBM exclude GBM-identified patients; priority populations are not mutually exclusive; it was only possible to identify female sex workers and people who inject drugs if they attended a PFSHCs at least once

⁹ 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 22: Average number of annual HIV tests at any clinic in the ACCESS network in GBM patients¹⁰ attending PFSHCs and GBM GP clinics¹¹ by service type and quarter, 1 January 2011 to 31 December 2017



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

Risk categorisation is available only for sexual health clinics, defined as:

- **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'

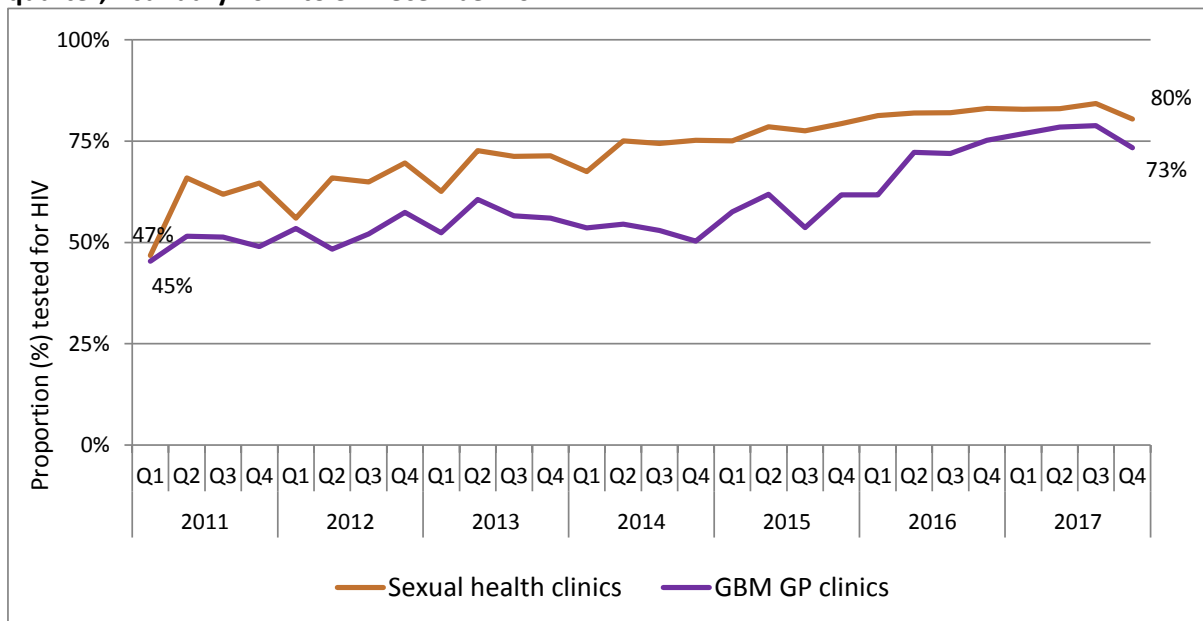
Comment

- In 2017, testing frequency increased substantially among GBM attending both PFSHCs and GBM GP clinics in NSW. Testing frequency nearly doubled among high and other risk men attending sexual health clinics.

¹⁰ Excludes patients known to be HIV positive

¹¹ 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

Figure 23: Proportion of patients¹² attending PFSHCs and GBM GP clinics¹³ who received an HIV test at any clinic in the ACCESS network within one month of an STI diagnosis¹⁴, by service type and quarter, 1 January 2011 to 31 December 2017¹⁵



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

Comment

- The proportion of patients tested for HIV in PFSHC increased from 47% in early 2011 to 80% in 2017.
- Testing in addition to STI diagnoses among patients attending GBM GP clinics increased from 45% in early 2011 to 73% in 2017.

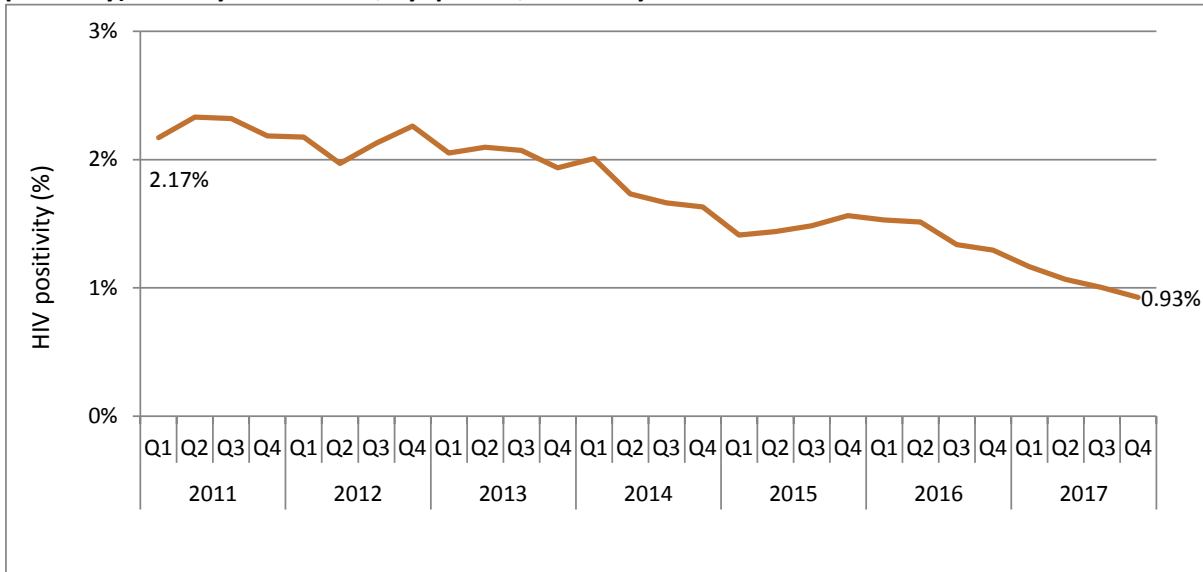
¹² Excludes patients known to be HIV positive

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

¹⁴ Diagnosis for chlamydia, gonorrhoea and/or infectious syphilis

¹⁵ The period for HIV testing is one month before or after an STI diagnosis; due to this timeframe data from quarter 4 2017 have been excluded

Figure 24: Proportion of individual GBM patients¹⁶ tested for HIV with a positive result (HIV positivity)¹⁷ at any ACCESS site, by quarter, 1 January 2011 to 31 December 2017



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.

Comment

- HIV positivity among GBM attending PFSHCs and GBM GP clinics has decreased from 2.17% in January-March 2011 to 0.93% in the October-December 2017.

¹⁶ Excludes patients known to be HIV positive

¹⁷ 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?

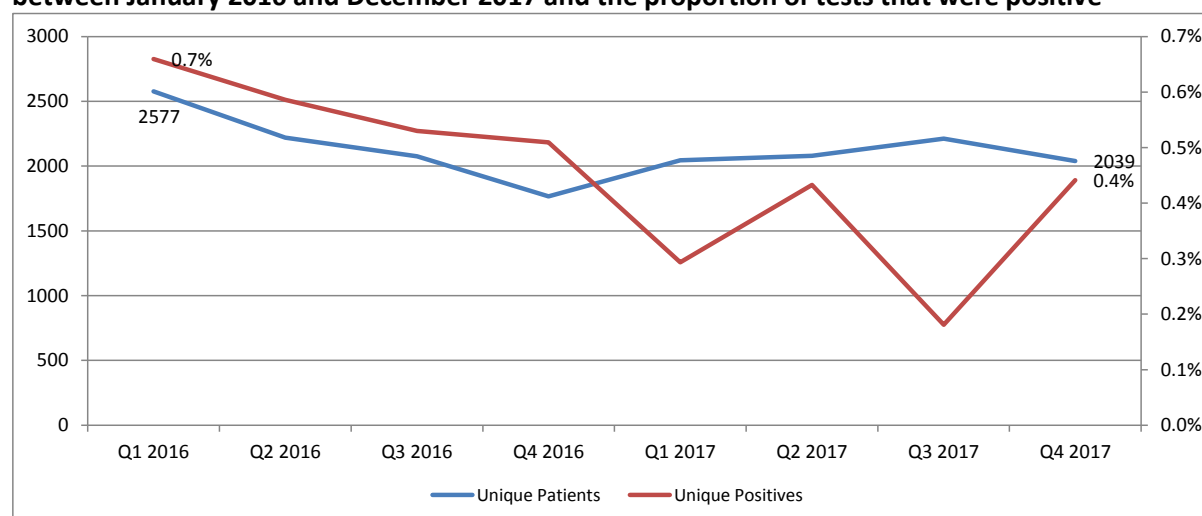
Table 6: Number of rapid HIV tests in community based sites and proportion of clients with high risk behaviour and infrequent testing history in 2017

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 Surry Hills (7 hours/week)</i>	297	0.3%	6.1%	4.4%	53.5%
<i>aTEST Oxford ST (40 hours/week)</i>	6,700	0.3%	8.1%	13%	32.4%
<i>aTEST Kings Cross (6 hours/week)</i>	515	1.6%	37.1%	18.3%	31.1%
<i>aTEST Newtown (6 hours/week)</i>	862	0.2%	27%	15.3%	24.9%

Data sources: NSW Health HIV Strategy Monitoring Database¹⁸

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 2017 and the proportion of tests that were positive



Comment

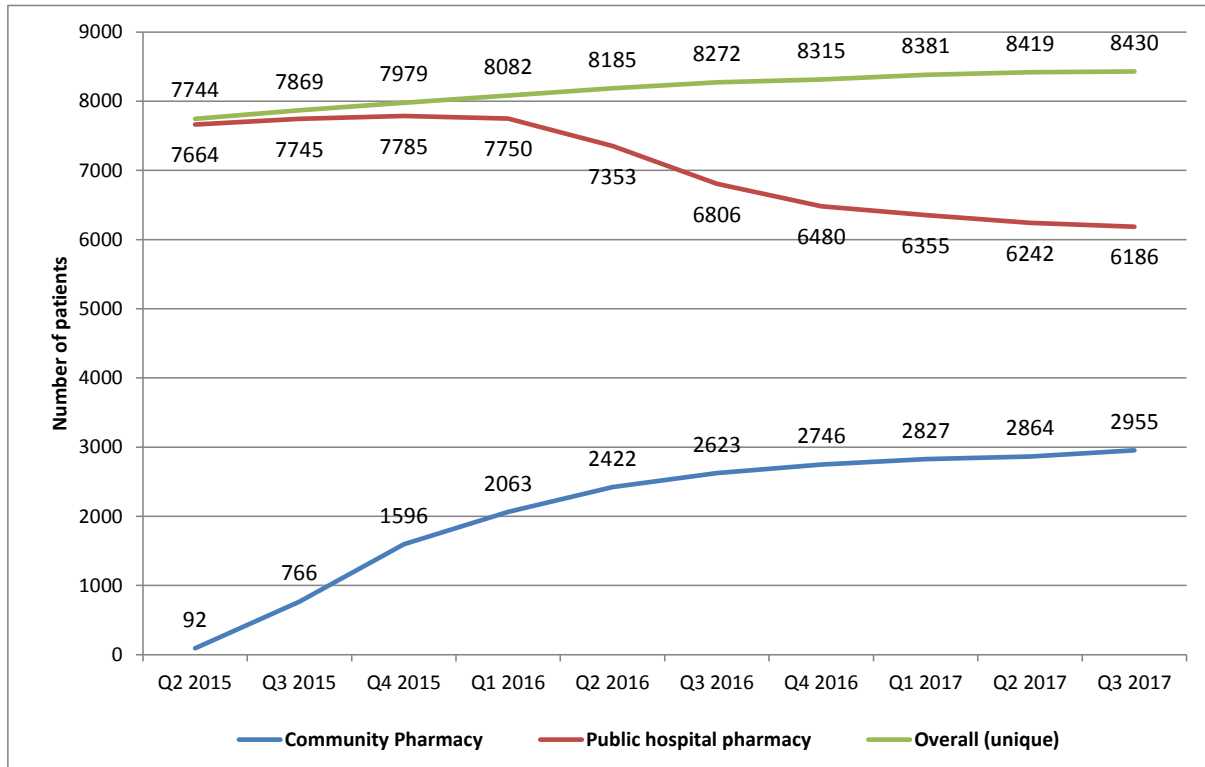
- NSW data suggests community-based testing sites are an effective testing model for engaging GBM.
- Rapid HIV testing has been effectively embedded into the mix of the testing options in NSW.

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 treatment?

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 October 2014 to 30 September 2017

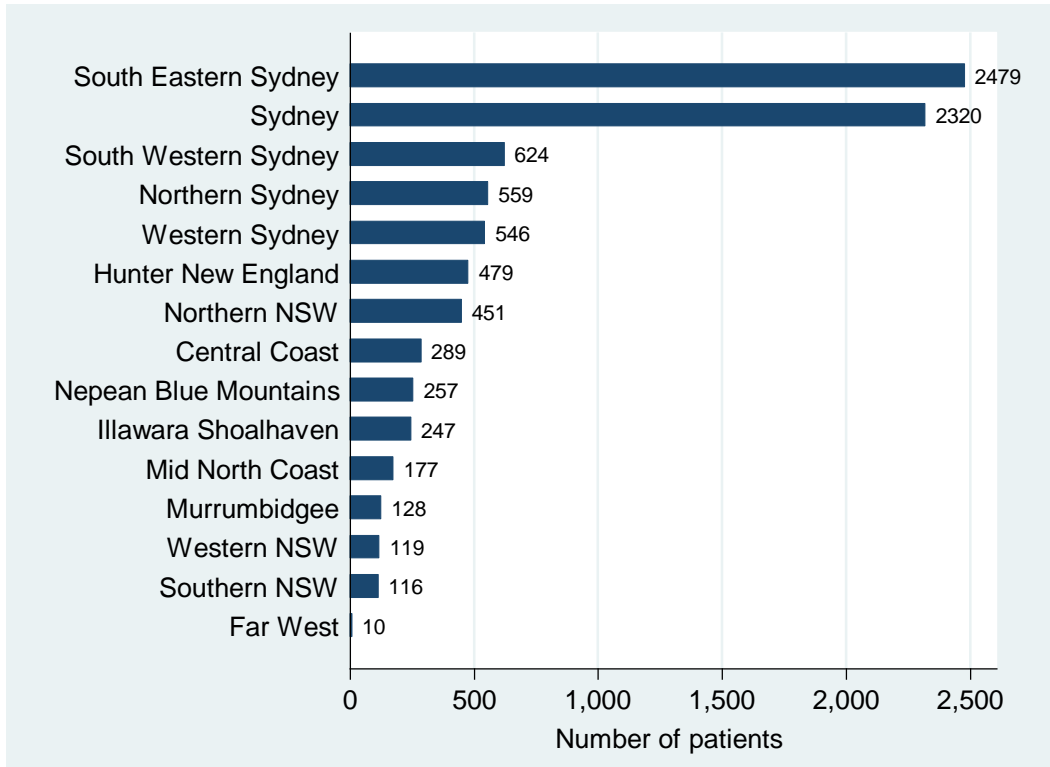


Data source: PBS Highly Specialised Drugs Programme data from 1 July 2014 to 30 September 2017 prepared for NSW Health. Note: The number of patients dispensed via community and public hospital pharmacies may add to a figure greater than the overall unique patients as some patients receive treatment from 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.

Comment

- Between 1 October 2016 and 30 September 2017, a total of 8,430 NSW residents were dispensed ART for HIV at least once within the previous 12 months.
- Of the 8,430 residents dispensed ART, 91% were male. The majority (53.02 %) were 50 years or older, 27% were aged 40-49 years, and about 20% aged 39 years or younger.

Figure 27: The number of NSW residents dispensed ART for HIV, by the LHD of patient residence, from 1 October 2016 to 30 September 2017¹⁹



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data from October 2015 to September 2017 prepared for NSW Health

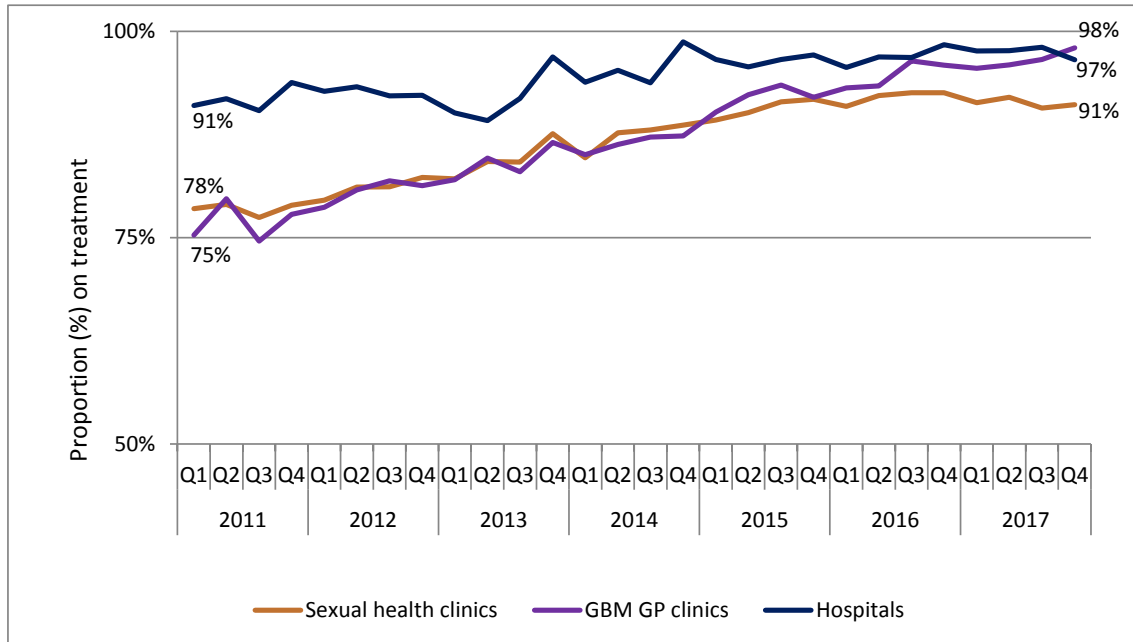
Comment

- About three-quarters (74.17%) of the ART dispensed in the 12 months ending 30 September 2017 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 8,430 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 28: Proportion of HIV positive patients²⁰ attending PFSHCs, public hospital outpatient clinics and GBM GP clinics²¹ 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 December 2017



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

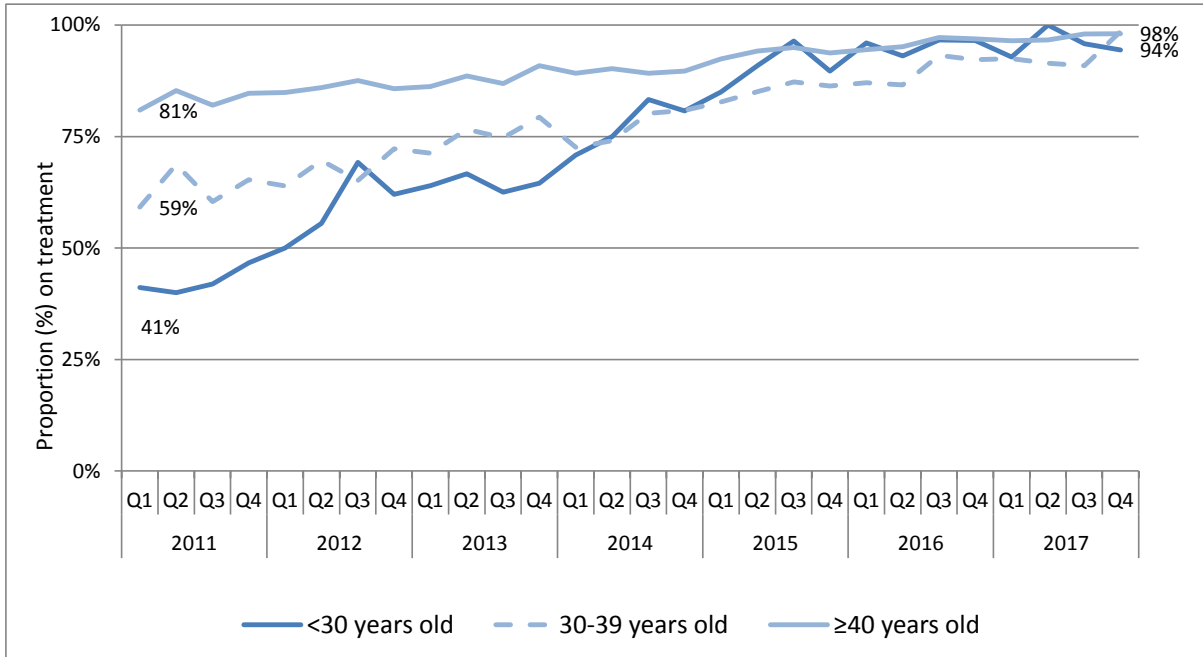
Comment

- 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 75% in early 2011 to 98% in the later part of 2017.

²⁰ Excludes patients for whom HIV care was recorded as managed elsewhere

²¹ GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 29: Proportion of HIV positive patients attending PFSHCs, public hospital outpatient clinics and GBM GP clinics²² 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 2011 to 31 December 2017



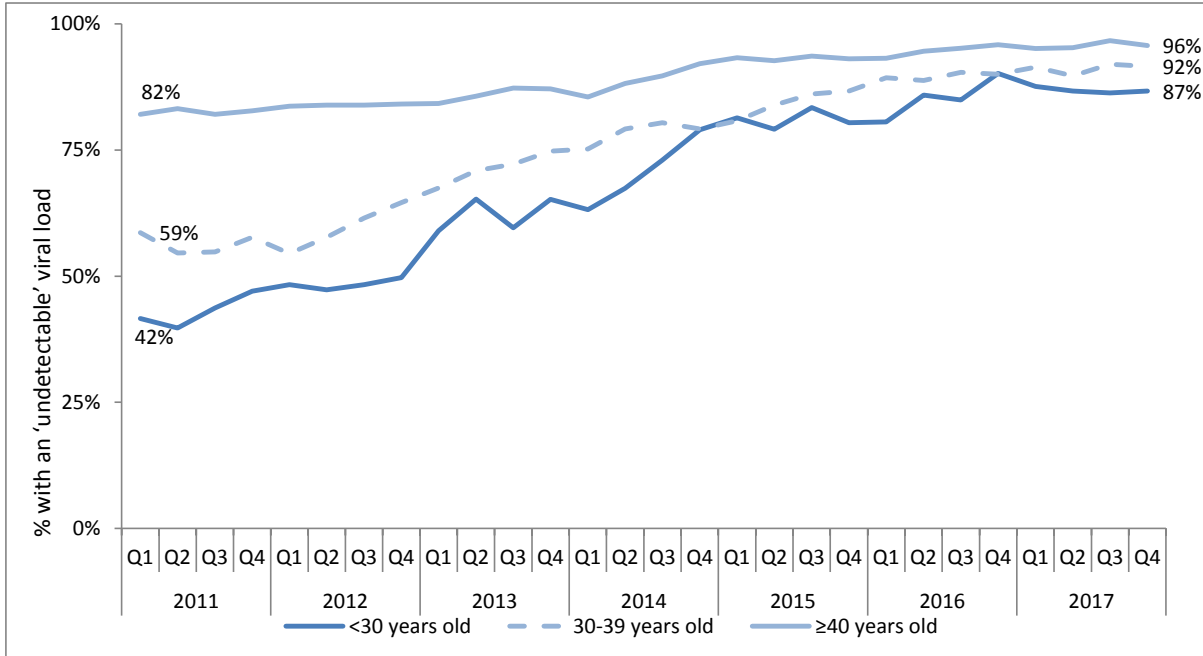
Data source: ACCESS Database, The Kirby Institute and the Burnet Institute

Comment

- 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 41% in early 2011 to 94% in late 2017.

²² GBM clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 30: Proportion of HIV positive patients on treatment at PFSHCs, public hospital outpatient clinics and GBM GP clinics on ‘undetectable’ viral load at their most recent test in the previous 12-month period at any clinic in the ACCESS network, by age group and quarter, 1 January 2011 to 31 December 2017



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

Comment

- The proportion of HIV positive patients 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 42% in early 2011 to 87% in the Q4 2017.

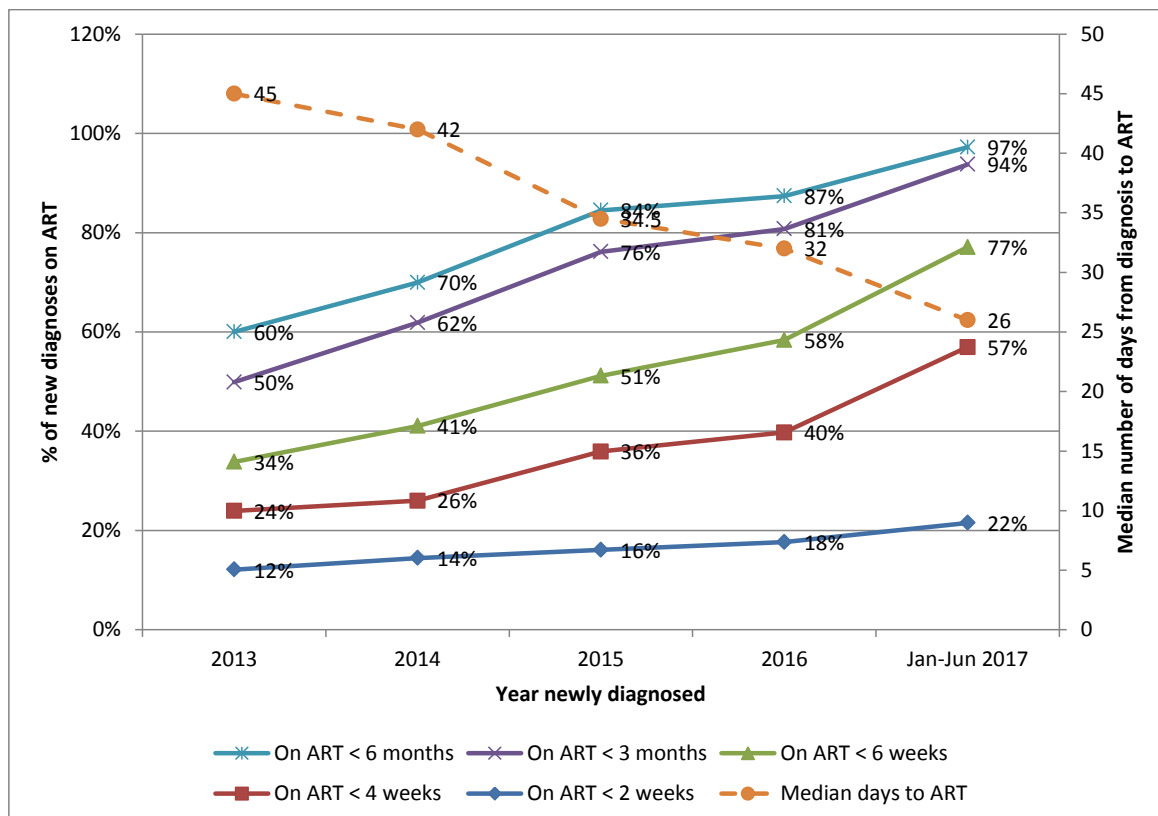
4.3 How quickly are people newly diagnosed with HIV commencing antiretroviral treatment and achieving undetectable viral load in NSW?

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. Since 2013, HIV surveillance in NSW was enhanced to:

- at the time of diagnosis, collect from doctors additional information on the patient’s HIV viral load, antiretroviral therapy (ART) commencement or deferral, and;
- at six months post diagnosis, follow up on the patient via their doctor to collect information on retention in care, ART commencement, pre-ART and latest HIV viral load and CD4 count.

In this quarter 4 & annual 2017 report, six months post diagnosis follow up data is available up to and reported on 1510 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 June 2017 (355 in 2013, 346 in 2014, 348 in 2015, 317 in 2016, and 144 in January to June 2017). Follow up data were available for 97% (n=1461) of these people newly diagnosed. 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 (i.e., in care, left NSW, lost to follow up, died, unknown).

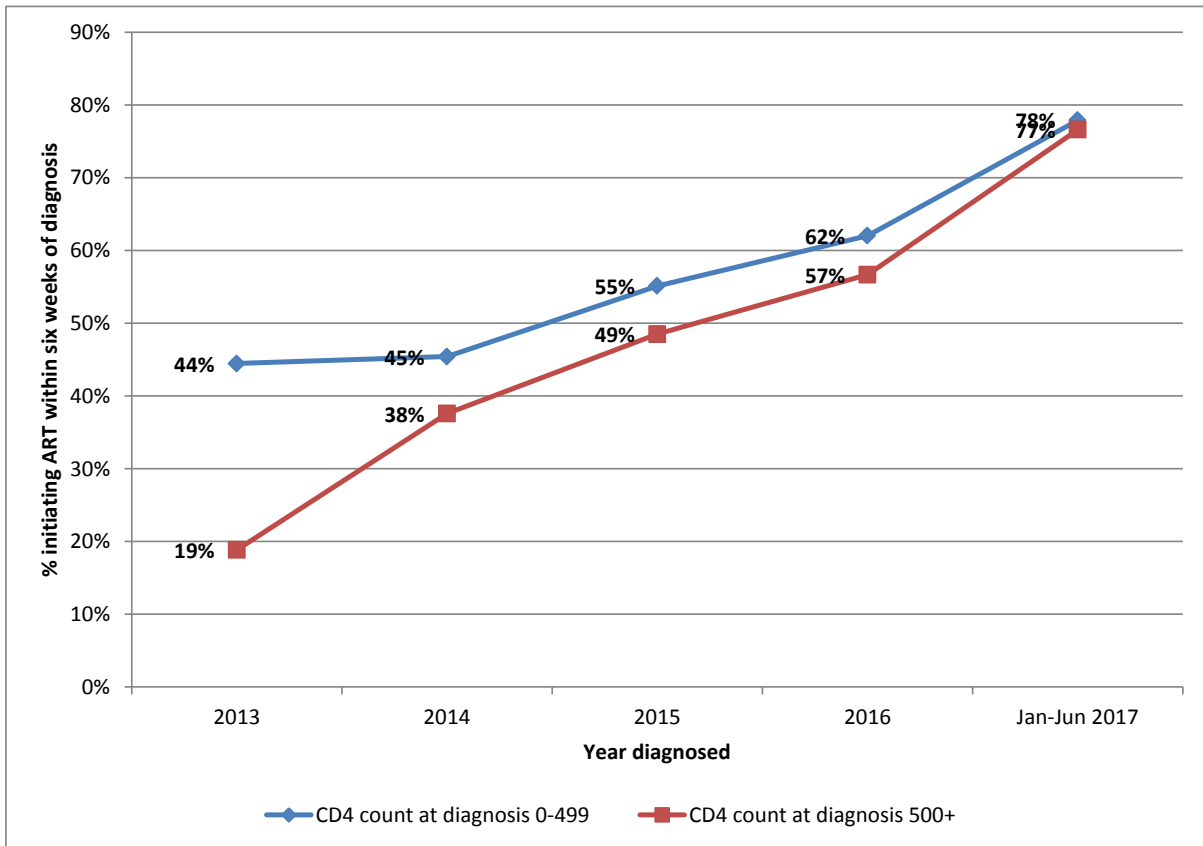
Figure 31: Time to ART among 1510 NSW residents newly diagnosed from 2013 to June 2017



Comment

- Of the 144 people newly diagnosed in January to June 2017 now followed up six months post diagnosis, 22% initiated ART within two weeks, 57% within four weeks, 77% within six weeks, 94% within three months and 97% within six months of diagnosis, with the median time to ART initiation 26 days.

Figure 32: CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection in 2013 to June 2017 and % on ART within six weeks of diagnosis

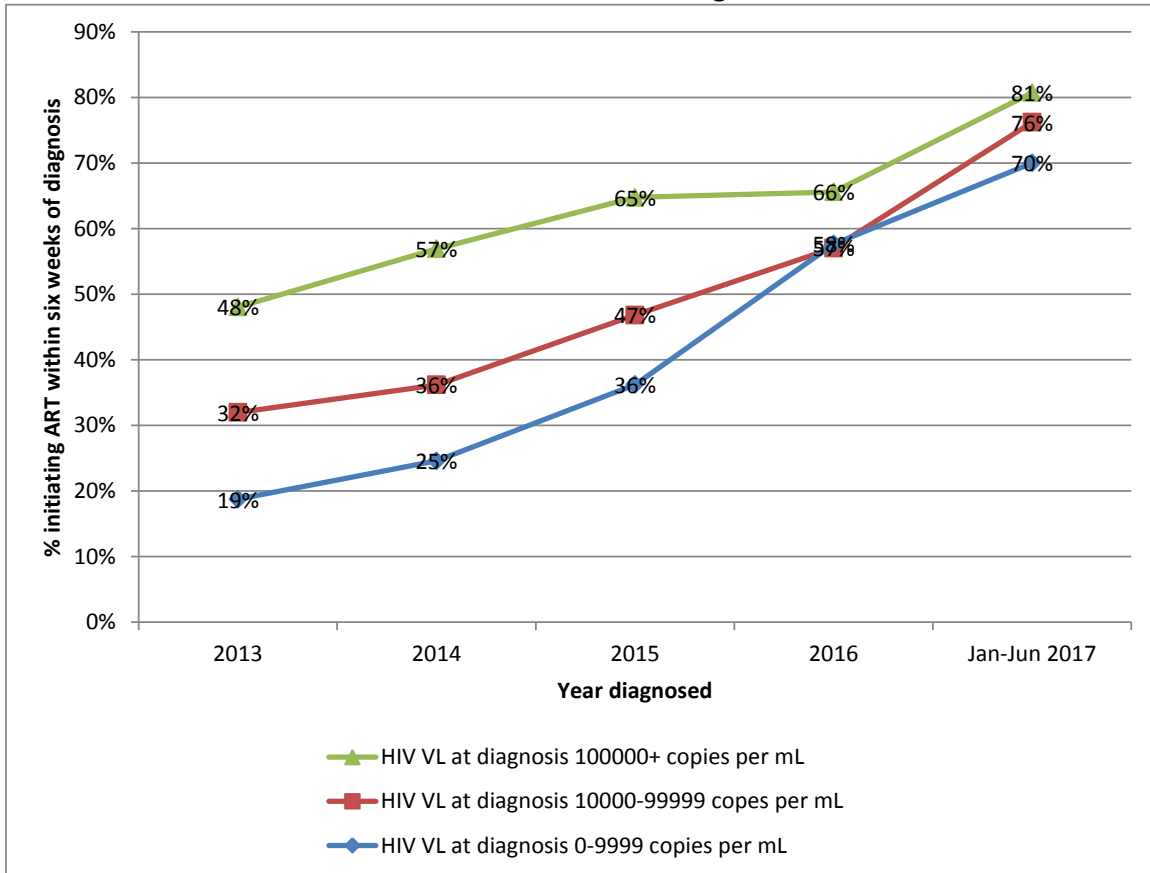


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018
 Note: excludes new diagnoses with missing CD4 at diagnosis, some of whom had commenced ART within 6 months.

Comment

- 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 June 2017 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 June 2017 new diagnoses.

Figure 33: HIV viral load at diagnosis of NSW residents notified with newly diagnosed HIV infection in 2013 to June 2017 and % on ART within six weeks of diagnosis

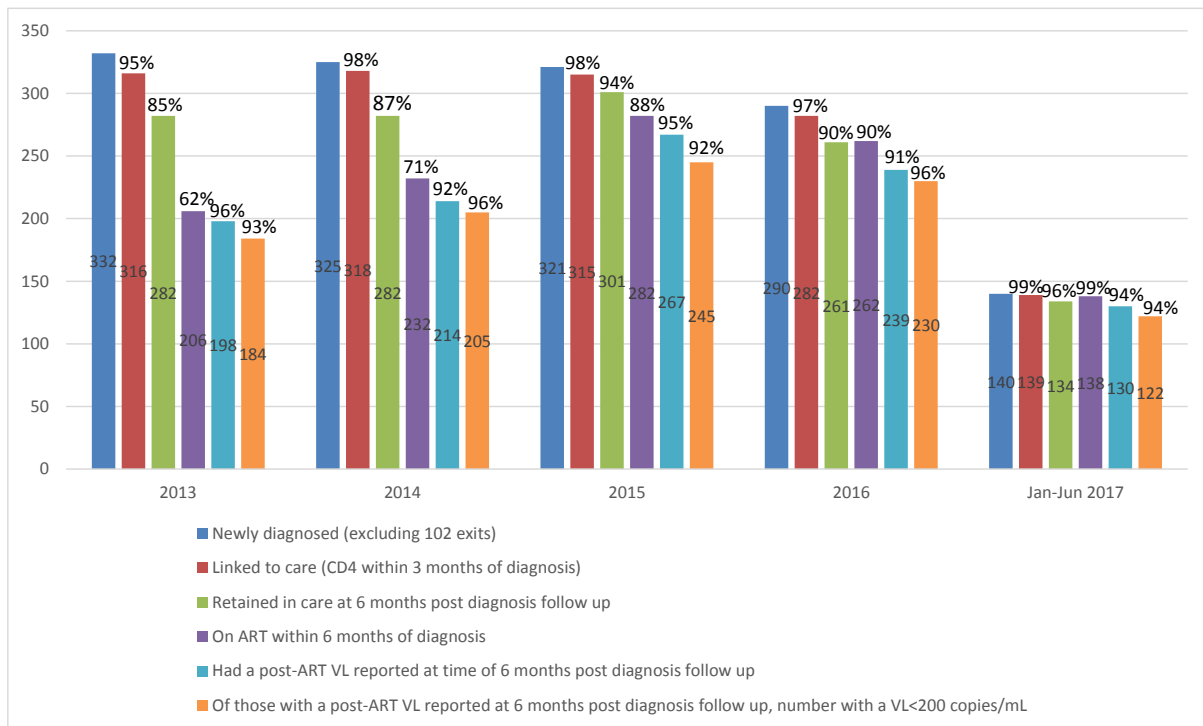


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 5 February 2018
Note: excludes new diagnoses with missing HIVVL at diagnosis, some of whom had commenced ART within 6 months.

Comment

- 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 70% of the January to June 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 June 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 81% of the January to June 2017 new diagnoses with high viral load.

Figure 34: HIV care continuum indicators measured six months post diagnosis on 1408 NSW residents newly diagnosed with HIV infection in January 2013 to June 2017



Comment

- HIV surveillance data were used to construct an HIV care continuum (or cascade) at an interval six months after diagnosis for NSW residents newly diagnosed January 2013 onwards. In this report follow up data were available on people newly diagnosed to 30 June 2017. The HIV care continuum reflects their linkage to HIV services, retention in care, early uptake of treatment and subsequent HIV viral load suppression.
- Included in the cascade were the 1408 of 1510 (93%) NSW residents newly diagnosed 2013 to June 2017 who had not permanently migrated out of NSW within 6 months (332 of 355 diagnosed 2013, 325 of 346 diagnosed 2014, 321 of 348 diagnosed 2015, 290 of 317 diagnosed in 2016 and 140 of 144 diagnosed January to June 2017). Of the 102 new diagnoses not in the cascade, 71 (70%) permanently migrated overseas, 26 (25%) permanently migrated interstate, and five (5%) had migrated out to unknown destination.
- Since 2013 and especially in 2016 to June 2017, increasing proportions of people newly diagnosed have been linked to HIV services, retained in care, commenced ART rapidly, and achieved viral load suppression within six months of diagnosis.
- Of all the 1408 NSW residents newly diagnosed 1 January 2013 to 30 June 2017 included in the cascade, 97% (n=1370) were linked to care (CD4 count at diagnosis used as proxy measure); 89% (n=1260) were reported to be retained in care six months post diagnosis; 80% (n=1120) had commenced ART within six months of diagnosis; 94% (n=1048) had a post-ART viral load by time of follow up, and 94% (n=986) of these had a VL < 200 copies/mL. Overall 70% of the 1408 new diagnoses were known to have achieved viral suppression by six months follow up. Of the 260 of 1408 not retained in care at six months post diagnosis follow up, 94 (6.7%) were lost to follow up from the reporting service, 23 (1.6%) had died within six months of diagnosis, 11 (0.8%) had an 'other' reason and 20 (1.4%) were unknown. Of 1408 newly diagnosed people in the cascade, 29 (2.1%) were known to have died by the time of reporting.

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 2017 *(continues over page)*

Data extracted from NCIMS, Health Protection NSW, 5 February 2018.

	2009		2010		2011		2012		2013		2014		2015		2016		2017		Total 1981- 2017 N	%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Total (ALL)	336	100.0%	305	100.0%	332	100.0%	413	100.0%	354	100.0%	345	100.0%	348	100.0%	317	100.0%	313	100.0%	18266	100.0%
Gender																				
Male	295	87.8%	280	91.8%	311	93.7%	376	91.0%	324	91.5%	319	92.5%	319	91.7%	291	91.8%	283	90.4%	16792	91.9%
Female	38	11.3%	23	7.5%	21	6.3%	36	8.7%	27	7.6%	25	7.2%	28	8.0%	22	6.9%	24	7.7%	1176	6.4%
Transgender	2	0.6%	2	0.7%	0	0.0%	1	0.2%	3	0.8%	1	0.3%	1	0.3%	4	1.3%	6	1.9%	50	0.3%
Unknown	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%	248	1.4%
Aboriginal person status																				
Aboriginal person	9	2.7%	7	2.3%	5	1.5%	13	3.1%	8	2.3%	7	2.0%	7	2.0%	10	3.2%	8	2.6%	197	1.1%
Non-Aboriginal person	315	93.8%	293	96.1%	324	97.6%	394	95.4%	344	97.2%	331	95.9%	338	97.1%	306	96.5%	303	96.8%	11155	61.1%
Not stated	12	3.6%	5	1.6%	3	0.9%	6	1.5%	2	0.6%	7	2.0%	3	0.9%	1	0.3%	2	0.6%	6914	37.9%
Age at diagnosis																				
0-4	1	0.3%	1	0.3%	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	1	0.3%	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%	0	0.0%	1	0.3%	1	0.3%	25	0.1%
10-14	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%	36	0.2%
15-19	3	0.9%	5	1.6%	6	1.8%	9	2.2%	9	2.5%	2	0.6%	6	1.7%	3	0.9%	5	1.6%	317	1.7%
20-24	34	10.1%	29	9.5%	34	10.2%	44	10.7%	37	10.5%	41	11.9%	45	12.9%	39	12.3%	28	8.9%	2211	12.1%
25-29	58	17.3%	56	18.4%	55	16.6%	77	18.6%	64	18.1%	51	14.8%	63	18.1%	60	18.9%	58	18.5%	3594	19.7%
30-34	42	12.5%	49	16.1%	65	19.6%	71	17.2%	48	13.6%	64	18.6%	62	17.8%	64	20.2%	58	18.5%	3632	19.9%
35-39	59	17.6%	43	14.1%	59	17.8%	64	15.5%	42	11.9%	45	13.0%	45	12.9%	48	15.1%	36	11.5%	3014	16.5%
40-44	58	17.3%	51	16.7%	46	13.9%	48	11.6%	45	12.7%	46	13.3%	32	9.2%	30	9.5%	39	12.5%	2221	12.2%
45-49	30	8.9%	30	9.8%	26	7.8%	38	9.2%	45	12.7%	30	8.7%	26	7.5%	32	10.1%	21	6.7%	1320	7.2%
50-54	28	8.3%	7	2.3%	25	7.5%	28	6.8%	24	6.8%	26	7.5%	28	8.0%	18	5.7%	19	6.1%	813	4.5%
55-59	12	3.6%	22	7.2%	10	3.0%	14	3.4%	22	6.2%	15	4.3%	13	3.7%	12	3.8%	16	5.1%	465	2.5%
60-64	1	0.3%	5	1.6%	2	0.6%	13	3.1%	6	1.7%	14	4.1%	15	4.3%	6	1.9%	17	5.4%	261	1.4%
65-69	4	1.2%	6	2.0%	2	0.6%	4	1.0%	9	2.5%	7	2.0%	7	2.0%	4	1.3%	5	1.6%	140	0.8%
70 or over	5	1.5%	1	0.3%	2	0.6%	3	0.7%	2	0.6%	3	0.9%	6	1.7%	0	0.0%	10	3.2%	90	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%

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2017

	2009		2010		2011		2012		2013		2014		2015		2016		2017		1981-2017	%
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	
Total (ALL)	336	100.0%	305	100.0%	332	100.0%	413	100.0%	354	100.0%	345	100.0%	348	100.0%	317	100.0%	313	100.0%	18266	100.0%
Reported HIV risk exposure																				
Men who have sex with men (MSM)	221	65.8%	226	74.1%	269	81.0%	322	78.0%	265	74.9%	257	74.5%	264	75.9%	235	74.1%	216	69.0%	11559	63.3%
MSM and person who injects drugs (PWID)	17	5.1%	8	2.6%	11	3.3%	14	3.4%	16	4.5%	19	5.5%	21	6.0%	25	7.9%	16	5.1%	562	3.1%
Hetero-sex only	75	22.3%	51	16.7%	41	12.3%	58	14.0%	61	17.2%	50	14.5%	52	14.9%	48	15.1%	67	21.4%	1720	9.4%
PWID	12	3.6%	9	3.0%	8	2.4%	10	2.4%	7	2.0%	8	2.3%	4	1.1%	4	1.3%	6	1.9%	571	3.1%
Blood disorder, blood or tissue recipient	1	0.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.3%	0	0.0%	0	0.0%	277	1.5%
Vertical transmission	2	0.6%	1	0.3%	0	0.0%	0	0.0%	1	0.3%	1	0.3%	0	0.0%	1	0.3%	2	0.6%	53	0.3%
Other	2	0.6%	1	0.3%	1	0.3%	2	0.5%	1	0.3%	4	1.2%	3	0.9%	1	0.3%	1	0.3%	50	0.3%
Unknown	6	1.8%	9	3.0%	2	0.6%	7	1.7%	3	0.8%	6	1.7%	3	0.9%	3	0.9%	5	1.6%	3474	19.0%
LHD of residence																				
South Eastern Sydney	106	31.5%	109	35.7%	124	37.3%	150	36.3%	126	35.6%	112	32.5%	128	36.8%	83	26.2%	92	29.4%	5688	31.1%
Sydney	92	27.4%	76	24.9%	88	26.5%	113	27.4%	87	24.6%	82	23.8%	84	24.1%	95	30.0%	66	21.1%	3094	16.9%
South Western Sydney	21	6.3%	25	8.2%	18	5.4%	31	7.5%	33	9.3%	32	9.3%	33	9.5%	32	10.1%	29	9.3%	755	4.1%
Northern Sydney	39	11.6%	19	6.2%	24	7.2%	23	5.6%	25	7.1%	18	5.2%	24	6.9%	19	6.0%	29	9.3%	1027	5.6%
Western Sydney	21	6.3%	20	6.6%	31	9.3%	25	6.1%	27	7.6%	27	7.8%	20	5.7%	24	7.6%	28	8.9%	775	4.2%
Central Coast	5	1.5%	5	1.6%	4	1.2%	10	2.4%	5	1.4%	8	2.3%	5	1.4%	11	3.5%	13	4.2%	220	1.2%
Northern NSW	5	1.5%	8	2.6%	11	3.3%	5	1.2%	5	1.4%	7	2.0%	8	2.3%	5	1.6%	11	3.5%	216	1.2%
Illawarra Shoalhaven	5	1.5%	8	2.6%	5	1.5%	9	2.2%	7	2.0%	6	1.7%	7	2.0%	8	2.5%	10	3.2%	241	1.3%
Hunter New England	17	5.1%	17	5.6%	11	3.3%	15	3.6%	18	5.1%	28	8.1%	19	5.5%	15	4.7%	7	2.2%	517	2.8%
Murrumbidgee-Albury	2	0.6%	7	2.3%	2	0.6%	5	1.2%	3	0.8%	3	0.9%	4	1.1%	9	2.8%	7	2.2%	105	0.6%
Nepean Blue Mountains	3	0.9%	3	1.0%	4	1.2%	5	1.2%	3	0.8%	6	1.7%	6	1.7%	2	0.6%	6	1.9%	268	1.5%
Western NSW	3	0.9%	4	1.3%	3	0.9%	7	1.7%	5	1.4%	2	0.6%	2	0.6%	5	1.6%	5	1.6%	130	0.7%
Mid North Coast	6	1.8%	3	1.0%	4	1.2%	3	0.7%	6	1.7%	7	2.0%	6	1.7%	2	0.6%	4	1.3%	152	0.8%
Southern NSW	6	1.8%	1	0.3%	2	0.6%	8	1.9%	4	1.1%	4	1.2%	2	0.6%	6	1.9%	3	1.0%	69	0.4%
Far West	2	0.6%	0	0.0%	0	0.0%	2	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	8	0.0%
Unknown or other	3	0.9%	0	0.0%	1	0.3%	2	0.5%	0	0.0%	3	0.9%	0	0.0%	1	0.3%	3	1.0%	5001	27.4%
Total (ALL)	336	100.0%	305	100.0%	332	100.0%	413	100.0%	354	100.0%	345	100.0%	348	100.0%	317	100.0%	313	100.0%	18266	100.0%

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

The table below shows the figures over the eight separate surveys.

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.