

NSW HIV Strategy 2016 – 2020

Quarter 1 2016 Data Report



Executive Summary

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 and 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 publically 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](#).

From January to March 2016 (quarter 1 2016):

- 84 NSW residents were notified with newly diagnosed HIV infection, nine per cent (%) less than the quarter 1 average 2010 to 2015 (n=92). 81% (n=68) of the new diagnoses reported being men who have sex with men (MSM), similar to previous years. The MSM new diagnose count was 9% less than the average number of diagnoses in MSM quarter 1 2010 to 2015 (n=75). The Aboriginal new diagnoses count was 4% (n=3).
- 38% (n=32) of the new diagnoses had a CD4 at diagnosis of less than 350 cells/ μ L, indicative of late diagnosis, compared with 35% of the new diagnoses in quarter 1 2010-2015.
- Of 68 MSM newly diagnosed, 47% (n=32) had evidence of early stage infection, compare with 54% of new diagnoses in quarter 1 of 2010 to 2015; 15% (n=10) evidence of advanced stage infection at diagnosis compared with 12% of new diagnoses in quarter 1 of 2010 to 2015.
- 136,503 HIV serology tests were performed in 15 laboratories in NSW; 10% greater than in quarter 1 2015 (n=124,447), 13% greater than in quarter 1 2014 (n=120,667) and 21% greater than in quarter 1 2013 (n=112,441).
- 13,177 HIV tests were performed across NSW public sexual health clinics; 20% greater than the same period in 2015. Among MSM, there was a 52% increase in HIV tests compared with the same period in 2015.
- Data from public sexual health and HIV clinics indicate 89 - 91% of people living with HIV who attended these services were on antiretroviral therapy (ART).
- Of 89 NSW residents newly diagnosed July to September 2015 followed up six months post diagnosis during this quarter, 57% (n=49) had commenced ART within six weeks, 84% (n=72) within three months and 88% (n=76) within six months of diagnosis; 83% (n=63) of those on ART had achieved viral suppression (VL < 400 copies/mL) at the time of six months post diagnosis follow up.

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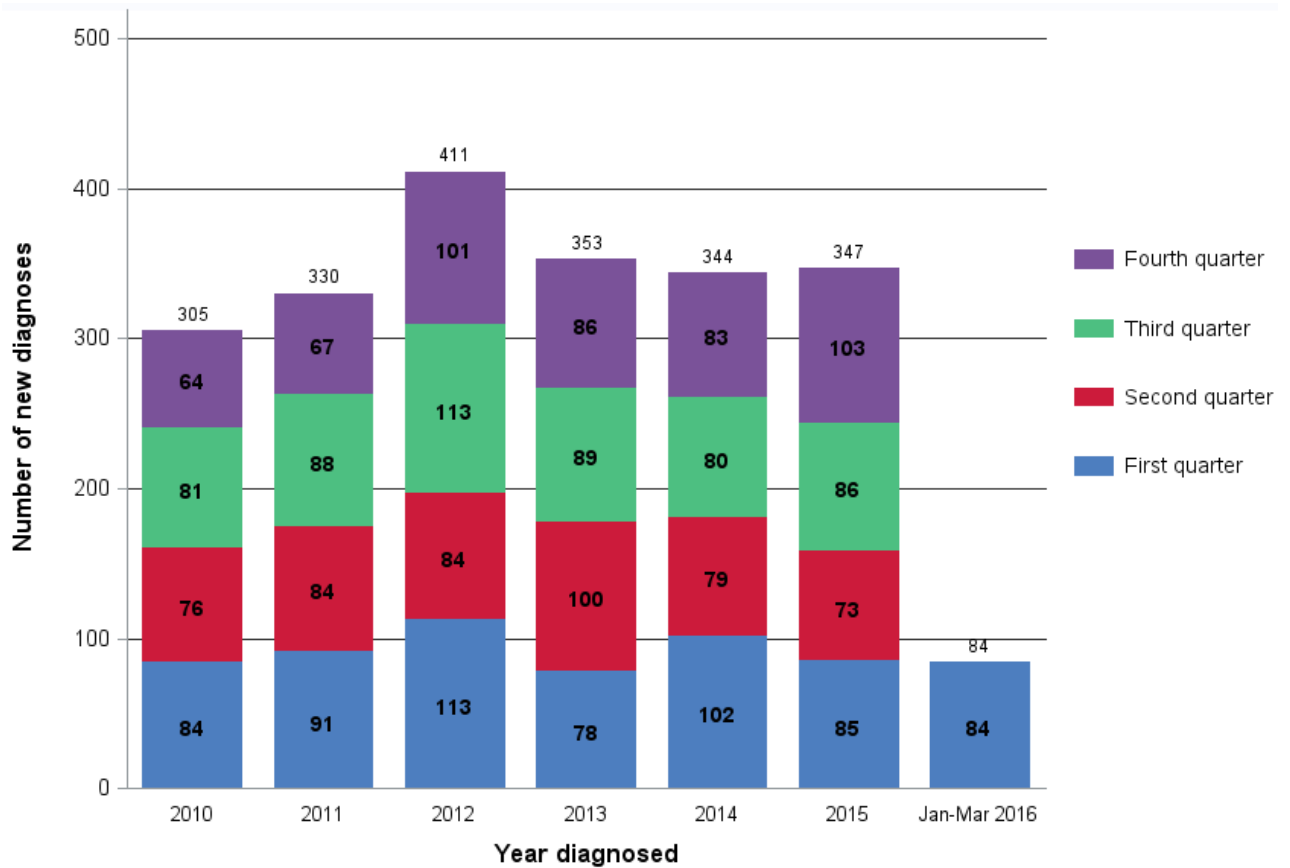
Glossary of Terms

| | |
|--------|--|
| ART | Antiretroviral therapy |
| CAIC | Condomless anal intercourse with casual partners |
| HIV | Human Immunodeficiency Virus |
| LHD | Local Health District |
| MSM | Men who have sex with men |
| NSP | Needle and syringe program |
| NSW | New South Wales |
| NSWPHS | New South Wales Population Health Survey |
| PWID | People who inject drugs |
| PFSHC | Publicly Funded Sexual Health Clinic |
| PrEP | Pre-exposure prophylaxis |
| SGCPS | Sydney Gay Community Periodic Survey |

1. Reduce HIV transmission

1.1 How many cases are notified?

Figure 1: Number of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

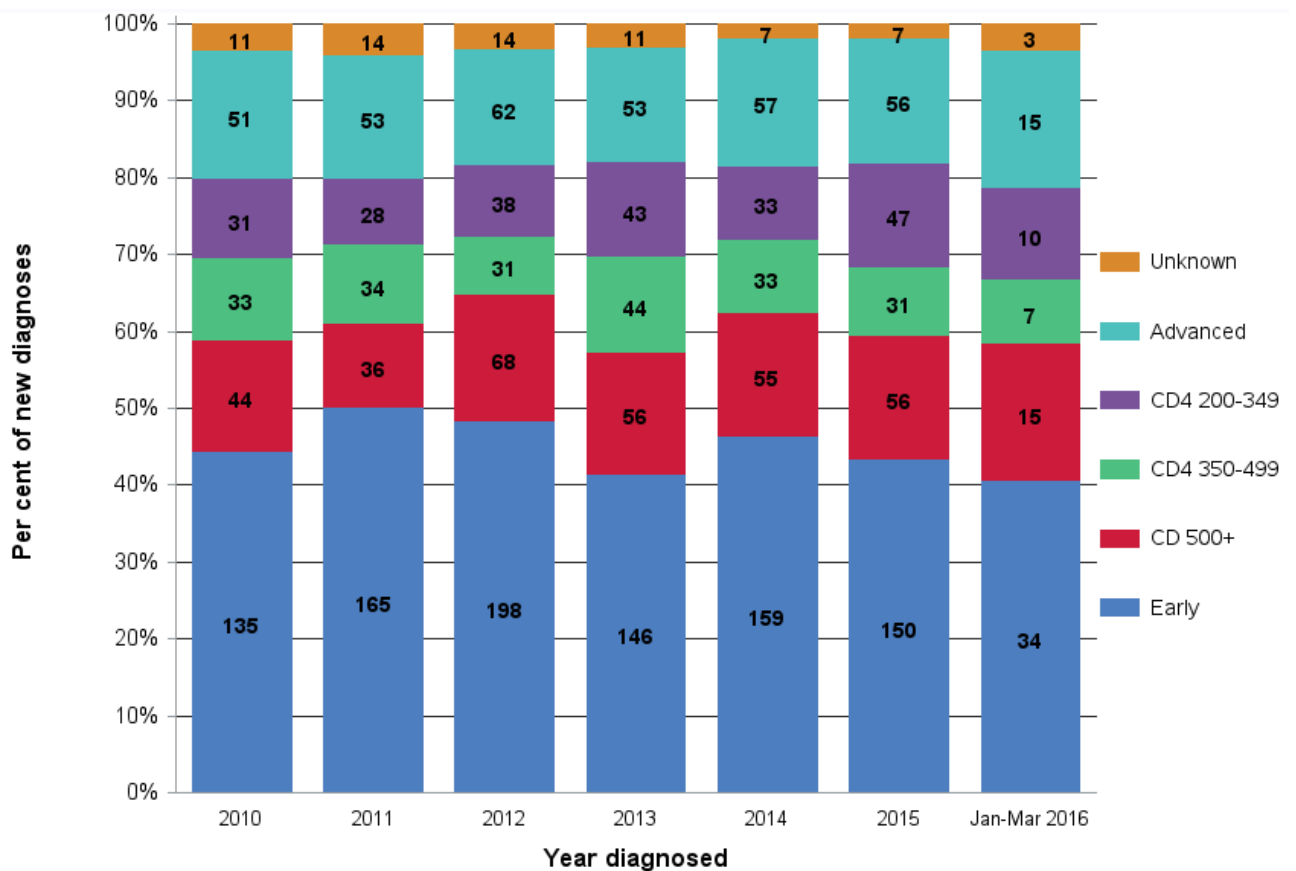
From January to March 2016 (quarter 1 2016) 84 NSW residents were notified with newly diagnosed HIV infection, nine per cent (%) less than the quarter 1 average 2010 to 2015 (n=92).

In 2015, 81% (n=68) of the 84 new diagnoses reported being men who have sex with men (MSM); this count was 9% less than the average number of new diagnoses in MSM in quarter 1 2010 to 2015 (n=75).

1.2 What proportion of HIV notifications are newly acquired infections?

Trends in the stage of infection at which people present when newly diagnosed with HIV provide an indication as to the timeliness of diagnosis over time and whether an infection was recently acquired or not. Figure 2a (all new diagnoses) and 2b (new diagnoses reporting to be MSM) draws on a combination of notification data including 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 3 (all new diagnoses) utilises CD4 count at diagnosis only. A CD4 count of less than 350 cells/ μ L is indicative of late diagnosis.

Figure 2a: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by stage of infection at diagnosis¹



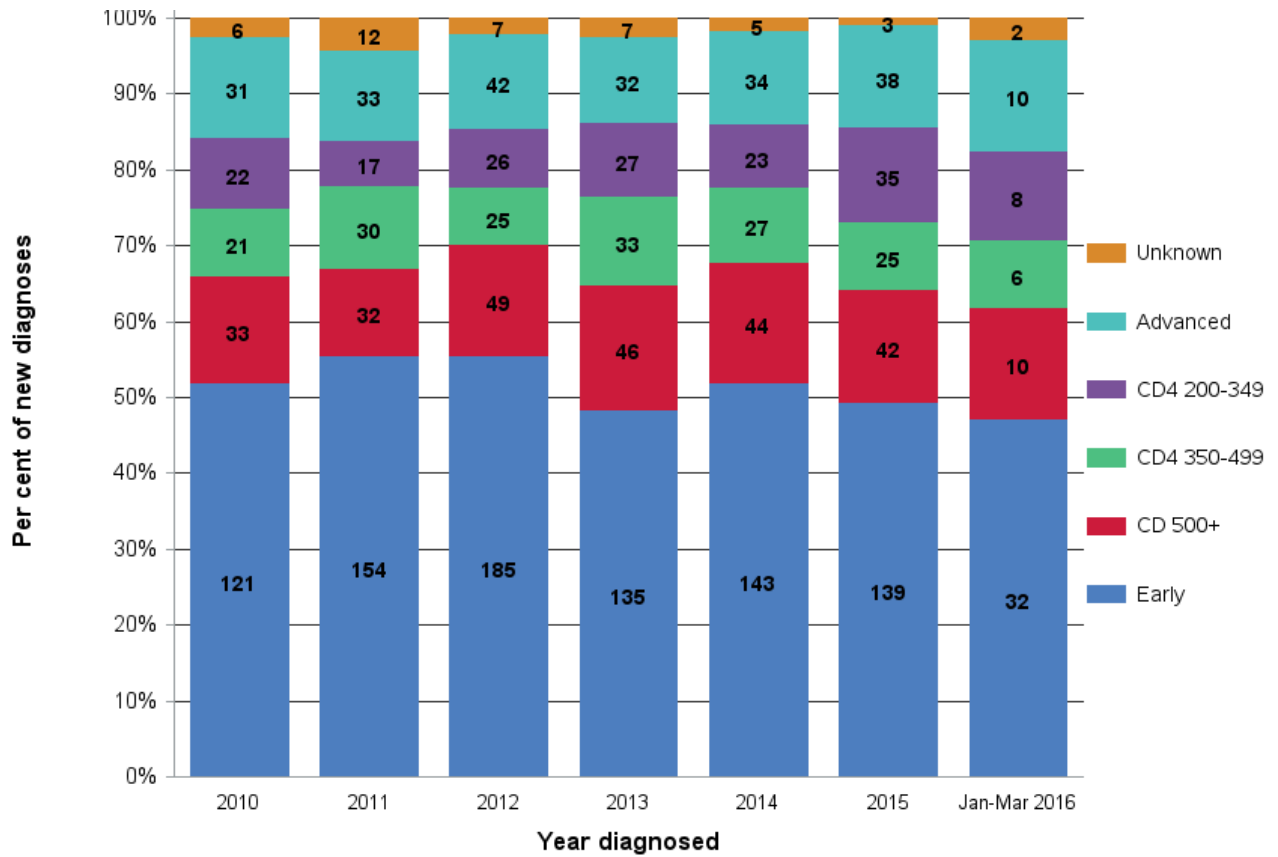
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

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 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016 40% (n=34) had evidence of early stage infection, compare with 47% of new diagnoses in quarter 1 of 2010 to 2015; 18% (n=15) had evidence of advanced stage infection at diagnosis compared with 15% of new diagnoses in quarter 1 of 2010 to 2015.

Figure 2b: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 reporting to be men who have sex with men (MSM) by stage of infection at diagnosis¹



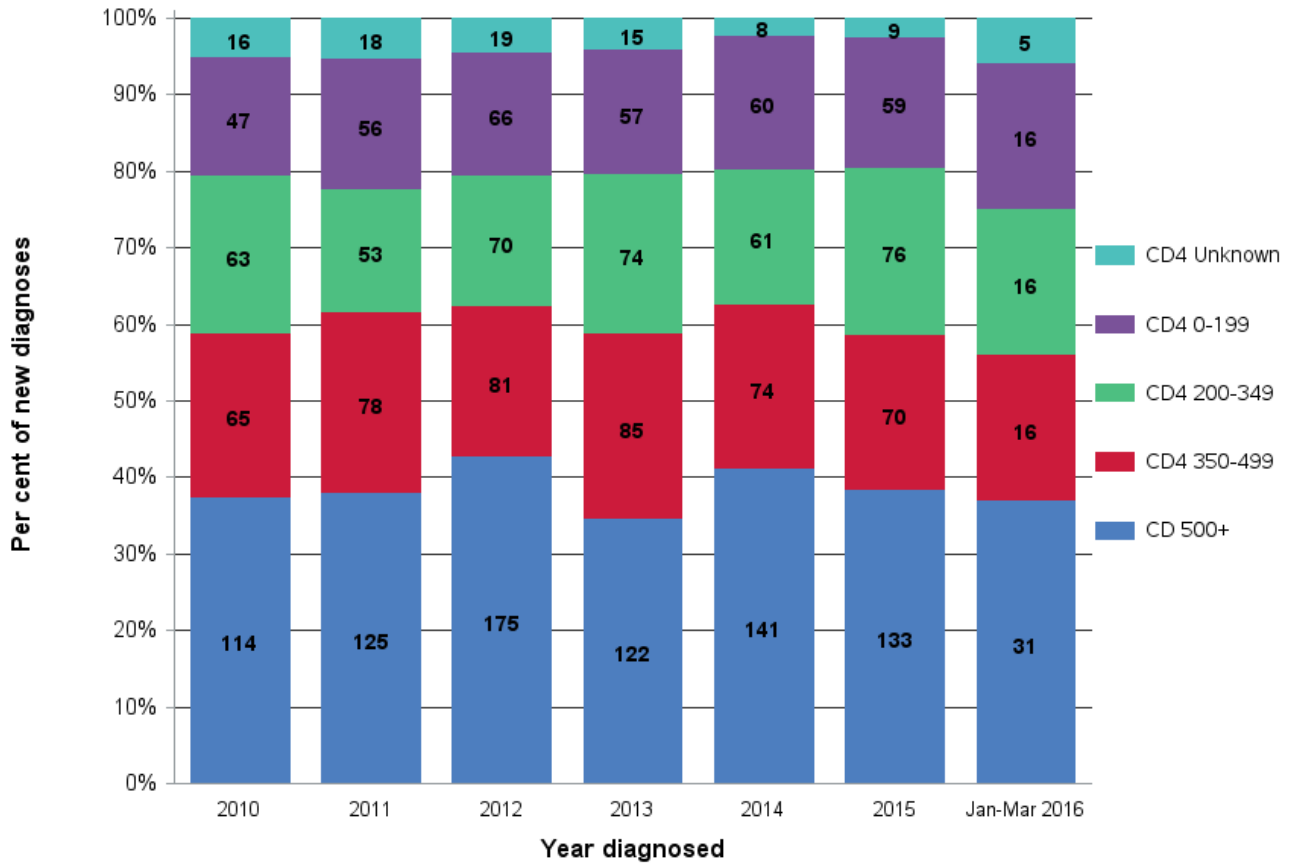
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

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 68 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016 reported to be MSM, 47% (n=32) had evidence of early stage infection, compare with 54% of new diagnoses in quarter 1 of 2010 to 2015; 15% (n=10) had evidence of advanced stage infection at diagnosis compared with 12% of new diagnoses in quarter 1 of 2010 to 2015.

Figure 3: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by CD4 count at diagnosis



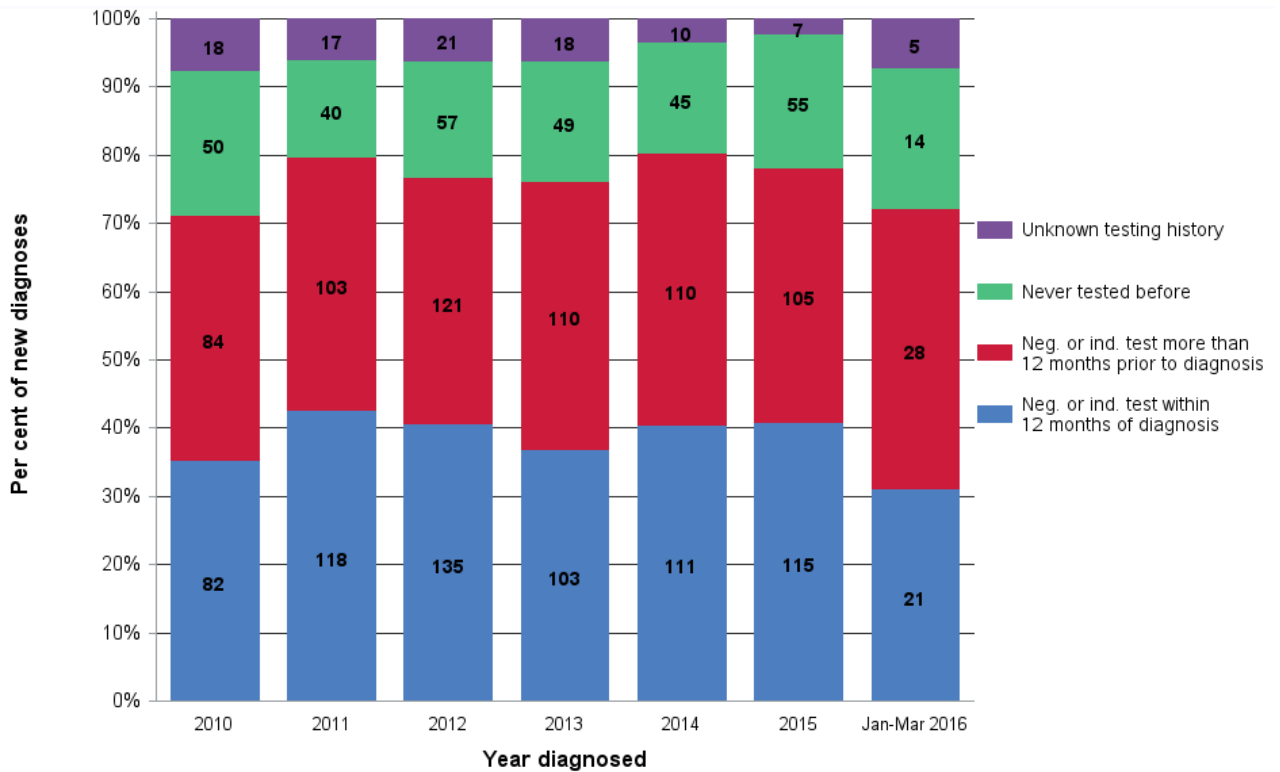
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 37% (n=31) had a CD4 count (in cells/ μ L) at diagnosis of 500 or over, 19% (n=16) of 350 to 499, 19% (n=16) of 200 to 349, 19% (n=16) of 0 to 199 and 6% (n=5) were unknown.

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 38% (n=32) had a CD4 count at diagnosis of less than 350 cells/ μ L, indicative of late diagnosis, compared with 35% of the new diagnoses in quarter 1 2010-2015.

Figure 4: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 reporting to be MSM by HIV testing history



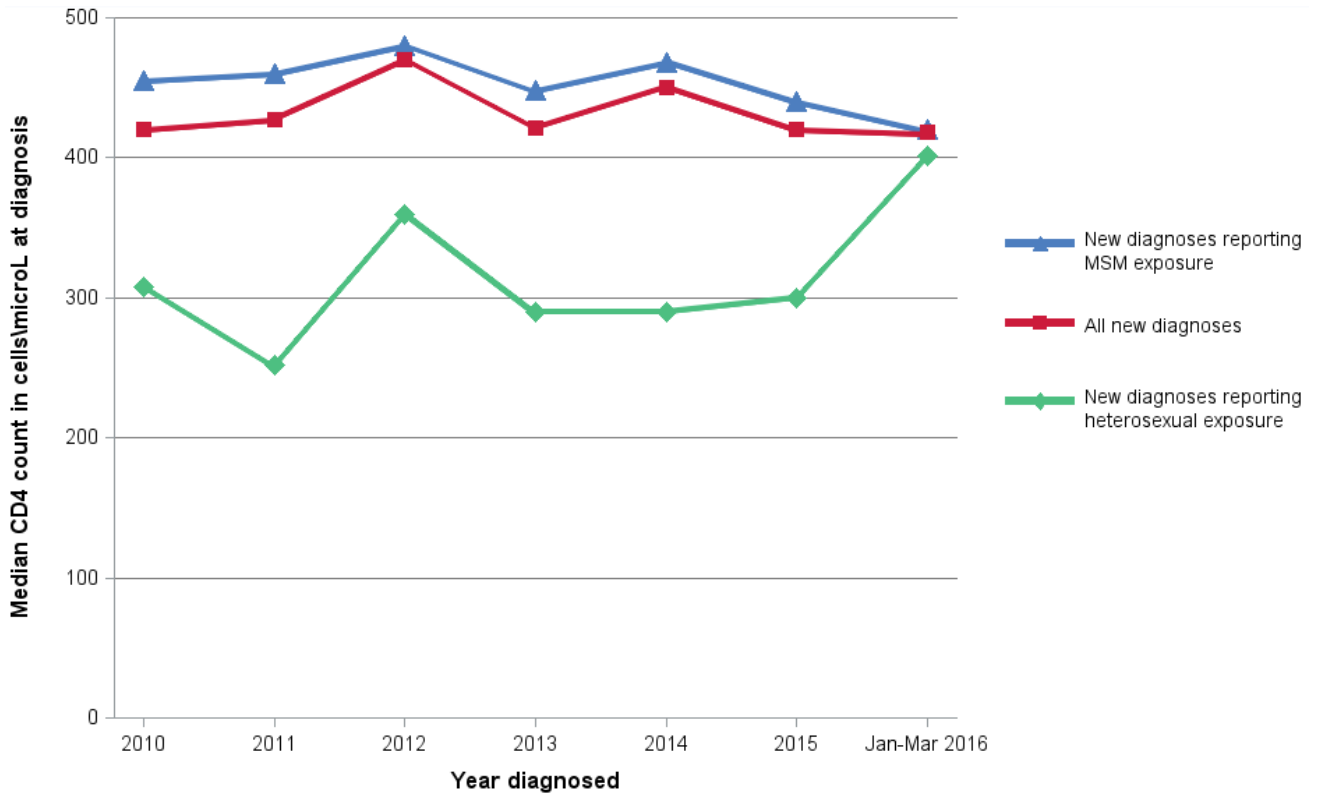
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

Of 68 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016 reported to be MSM, 31% (n=21) were reported to have had a negative or indeterminate HIV test within 12 months of diagnosis, compared with 38% of MSM newly diagnosed in quarter 1 2010-2015.

Of the 68 new diagnoses in MSM in quarter 1 2016, 21% (n=14) reported not ever having had an HIV test prior to diagnosis, compared with 18% of MSM newly diagnosed in quarter 1 2010-2015.

Figure 5: Median CD4 count at diagnosis of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 for all, for those reporting to be MSM and for those reporting heterosexual acquisition of HIV¹



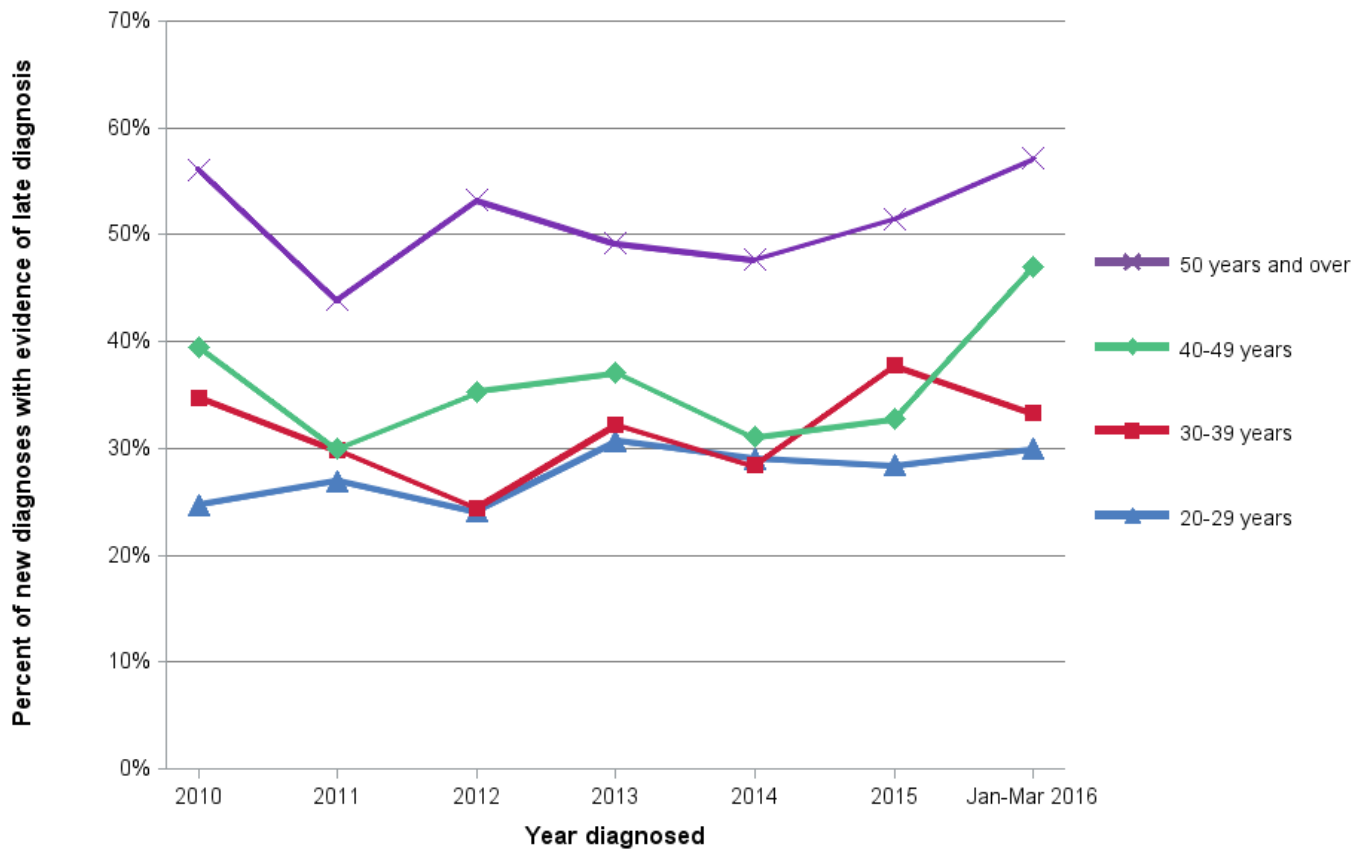
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

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

The median CD4 count at diagnosis for all 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016 was 418. For 68 reporting to be MSM the median CD4 count at diagnosis was 420 and for the 10 cases reporting heterosexual exposure to HIV it was 402. The median CD4 count for heterosexually acquired infections diagnosed in quarter 1 2016 is likely skewed by the low number of ten, typical of three months of data.

Figure 6: Within each age group at diagnosis of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 the per cent with evidence of late diagnosis¹



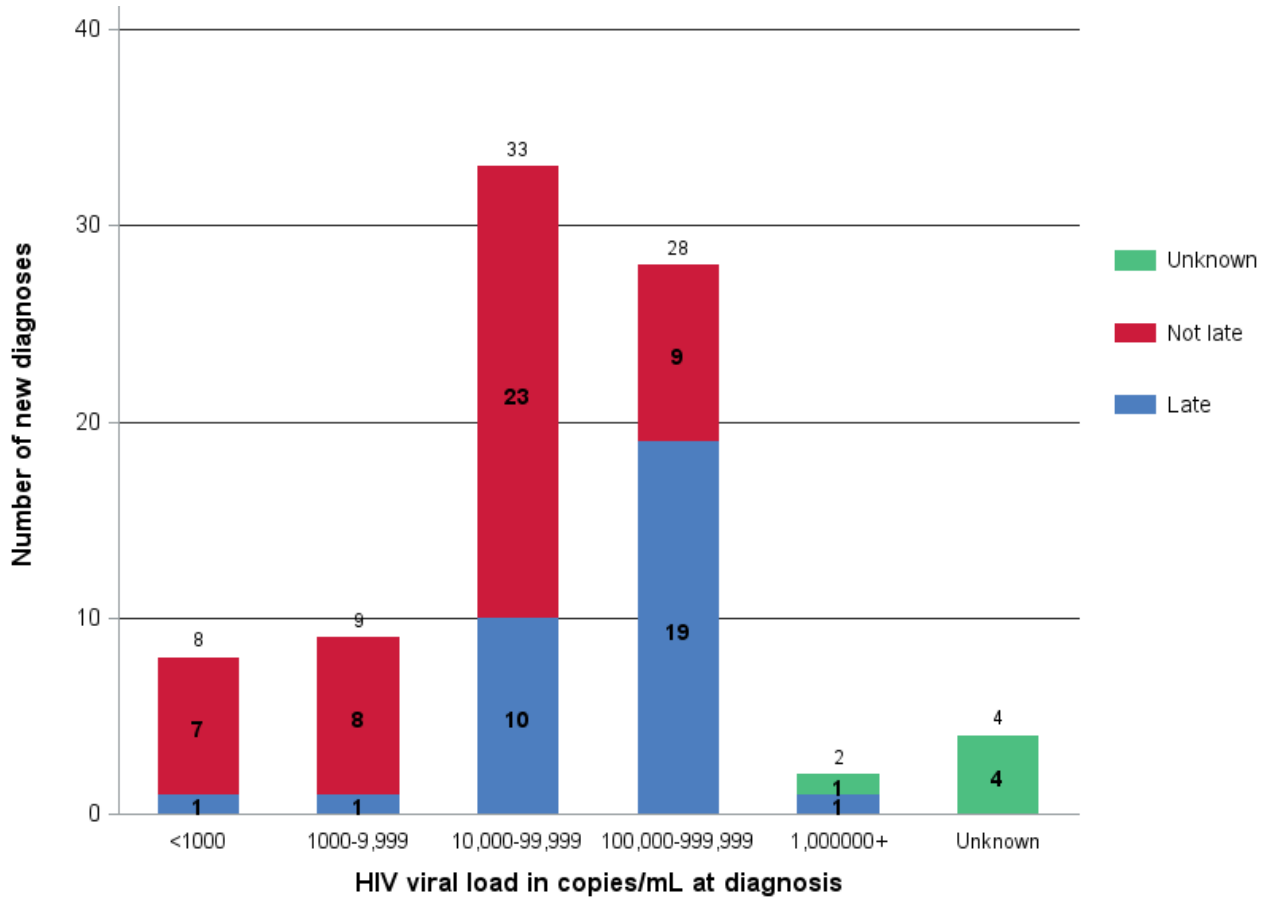
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

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 14 new diagnoses in quarter 1 2016 aged 50 years or over at diagnosis, 57% had evidence of late diagnosis, a greater proportion than in the younger age groups. The proportion of new diagnoses in quarter 1 2016 with evidence of late diagnosis was 47% of 17 aged 40 to 49 years, 33% of 21 aged 30 to 39 years and 30% of 30 aged 20 to 29 years at diagnosis. There were only two new diagnoses in people aged less than 20 years of age.

Figure 7: Number of NSW residents notified with newly diagnosed HIV infection in Quarter 1 2016 by HIV viral load at diagnosis and evidence of late diagnosis¹



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

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

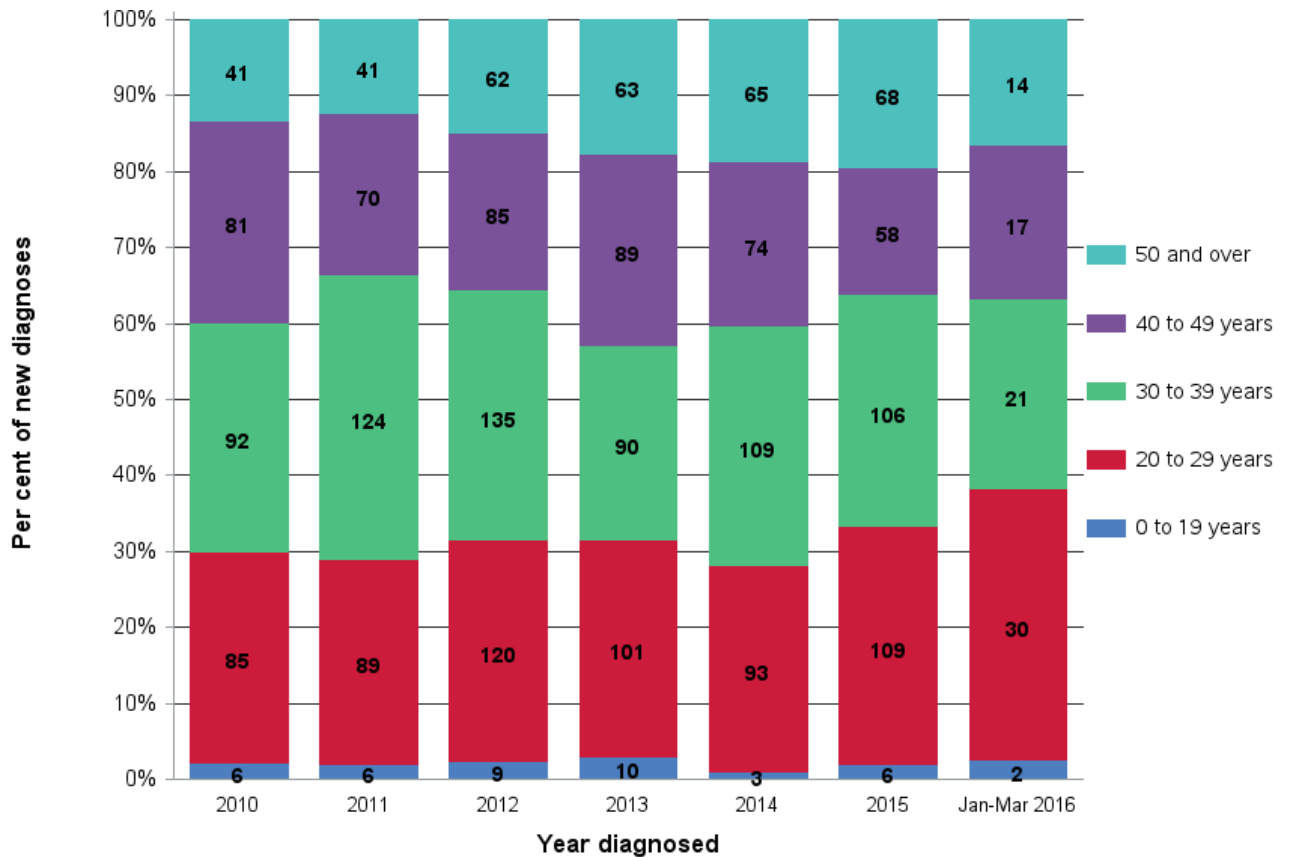
Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 20% (n=17) had an HIV viral load (HIV VL) 0-9,999 copies/mL, 39% (n=33) had an HIV VL of 10,000-99,999, 33% (n=28) had an HIV VL of 100,000-999,999, 2% (n=2) had an HIV VL of 1,000,000 or over and 5% (n=4) had an unknown HIV VL at diagnosis. Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 38% (n=32) had evidence of late diagnosis and of those diagnosed late 63% (n=20) had an HIV VL of 100,000 copies/mL or more at diagnosis.

For the HIV-infected individual, unchecked viral replication is associated with negative clinical outcomes and is a factor in disease progression and death, independent of CD4 count. Higher viral loads are associated with a higher risk of transmission of HIV and lower viral loads are associated with a lower risk of transmission of HIV.

1.3 Which groups are being notified?

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 93% (n=78) were male and 7% (n=6) were female, similar to previous years (Appendix A). Of these 84 newly diagnosed people, 4% (n=3) were reported to be Aboriginal people. The proportion of new HIV diagnoses which are in Aboriginal people is slightly higher than previous quarter 1 counts, but this is difficult to interpret because of the small number of notifications in this population group. The number of HIV notifications in Aboriginal people will continue to be monitored closely.

Figure 8: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by age at diagnosis

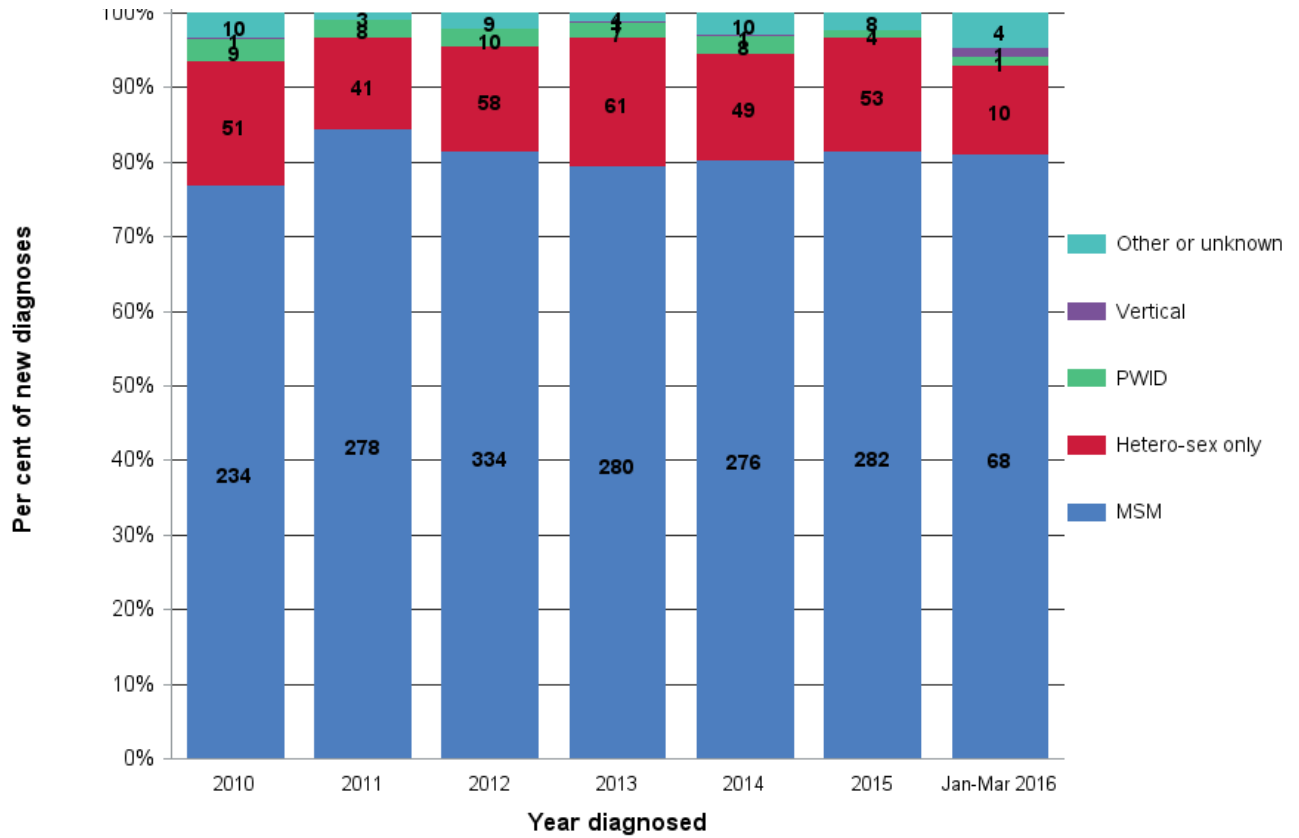


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 2% (n=2) were less than 20 years of age at diagnosis, 36% (n=30) were 20 to 29 years, 25% (n=21) were 30 to 39 years, 20% (n=17) were 40 to 49 years and 17% (n=14) were 50 years or over. Of new diagnoses in quarter 1 2010-2015, 1% were 0 to 19 years, 27% were 20 to 29 years, 32% were 30 to 39 years, 24% were 40 to 49 years and 16% were 50 years and over.

Figure 9: Per cent of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by reported HIV risk exposure

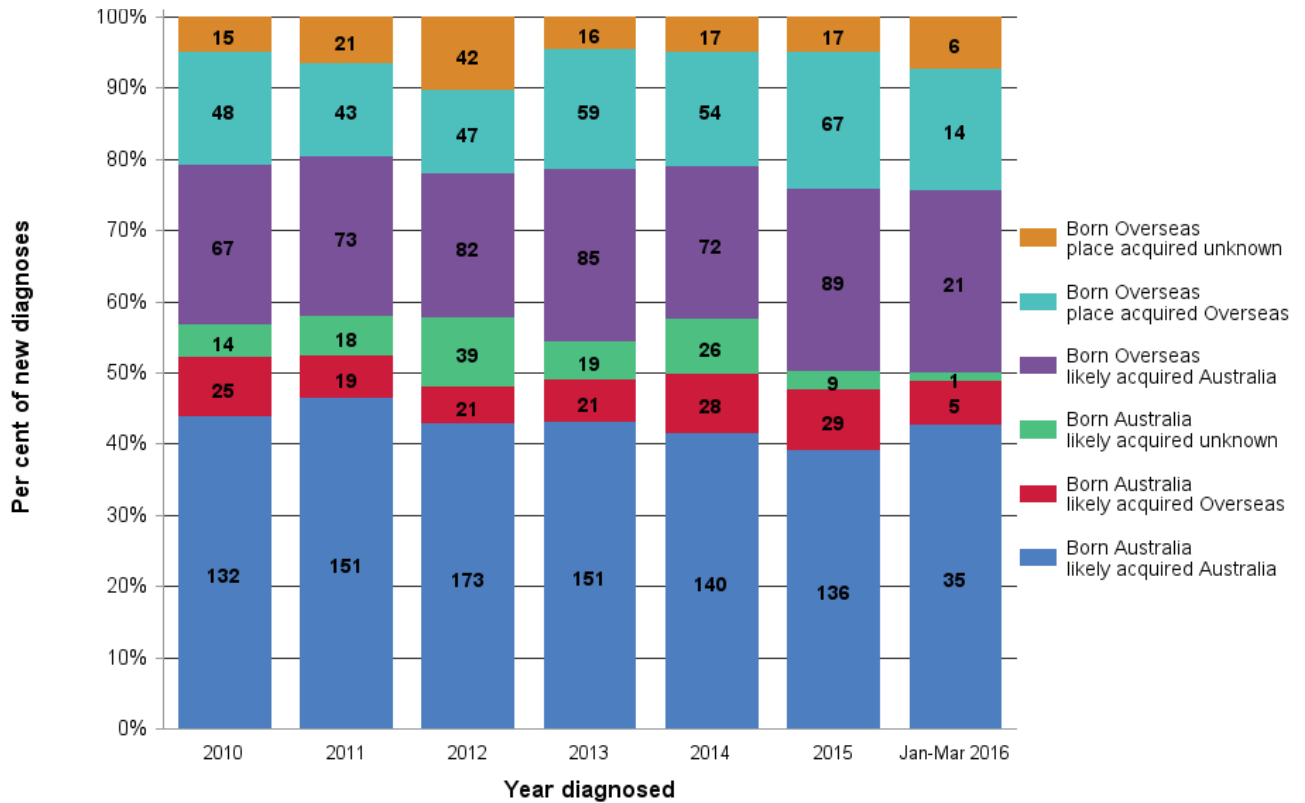


Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, HIV risk exposure was reported as male to male sex for 81% (n=68), heterosexual sex for 12% (n=10), injecting drug use (PWID) for 1% (n=1), vertical transmission (that occurred overseas) for 1% (n=1) and another type or unknown exposure for 5% (n=4). This was a similar breakdown of HIV risk exposures as was reported for people newly diagnosed in quarter 1 2010-2015.

Figure 10: Number of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by place of birth and place most likely acquired HIV*



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016
* Excluded were 27 new diagnoses 2010 to 31 March 2016 with unknown country of birth.

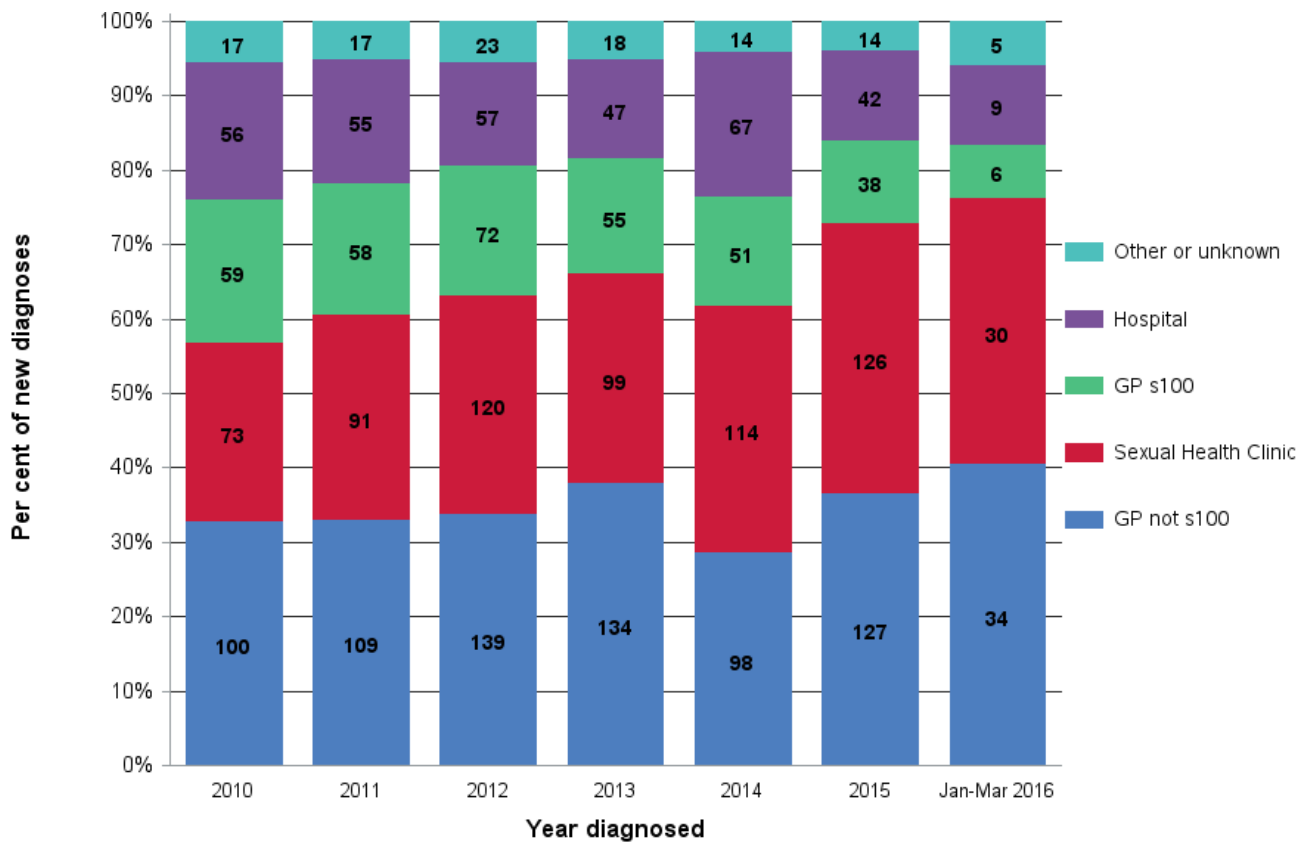
Comment

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016, 49% (n=41) were born in Australia, compared with 54% of new diagnoses in quarter 1 2010-2015. In quarter 1 2016 49% (n=41) were born overseas, compared with 45% of new diagnoses in quarter 1 2010-2015.

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016:

- 42% (n=35) were born in and likely acquired HIV in Australia, the same % as for new diagnoses in quarter 1 2010-2015;
- 6% (n=5) were born in Australia but likely acquired HIV overseas, similar to the 7% of new diagnoses in quarter 1 2010-2015=20 2009-2014;
- 1% (n=1) was born in Australia with the place they likely acquired their infection unknown, compared with 5% for quarter 1 2010-2015;
- 25% (n=21) were born overseas but likely acquired in Australia, compared with 27% of new diagnoses in quarter 1 2010-2015;
- 17% (n=14) were born overseas and likely acquired HIV overseas, compared with 12% of new diagnoses in quarter 1 2010-2015;
- 7% (n=6) were born overseas with the place they likely acquired their infection unknown, compared with 6% for quarter 1 2010-2015, and;
- 2% (n=7) had country of birth and place acquired unknown (1% in quarter 1 2010-2015).

Figure 11: Number of NSW residents notified with newly diagnosed HIV infection from 1 January 2010 to 31 March 2016 by type of diagnosing doctor



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

Of 84 NSW residents notified with newly diagnosed HIV infection in quarter 1 2016:

- 40% (n=34) were diagnosed by medical general practitioners (GPs) not accredited to prescribe antiretroviral therapy (ART) (GP not-s100), compared with 34% of the new diagnoses in quarter 1 2010-2015;
- 36% (n=30) were diagnosed by sexual health clinics (SHC) (includes linked community testing sites), compared with 30% of the new diagnoses in quarter 1 2010-2015;
- 11% (n=9) were diagnosed by hospital located doctors, compared with 15% of the new diagnoses in quarter 1 2010-2015;
- 7% (n=6) were diagnosed by GP s100 doctors (HIV specialised and accredited to prescribe ART), compared with 17% of the new diagnoses in quarter 1 2010-2015, and;
- 6% (n=5) were diagnosed by other doctor types such as immigration services, compared with 4% of the new diagnoses in quarter 1 2010-2015.

Figure 12: Number of NSW residents notified with newly diagnosed HIV infection in Quarter 1 2016 by type of diagnosing doctor and self-reported HIV risk exposure

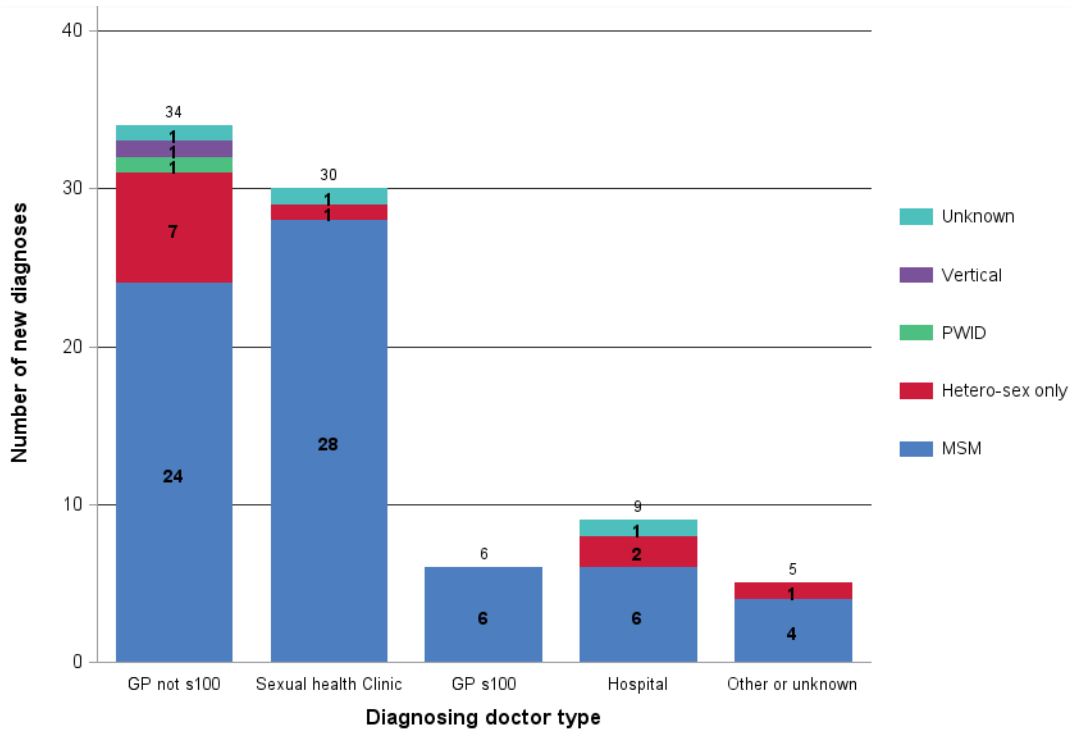
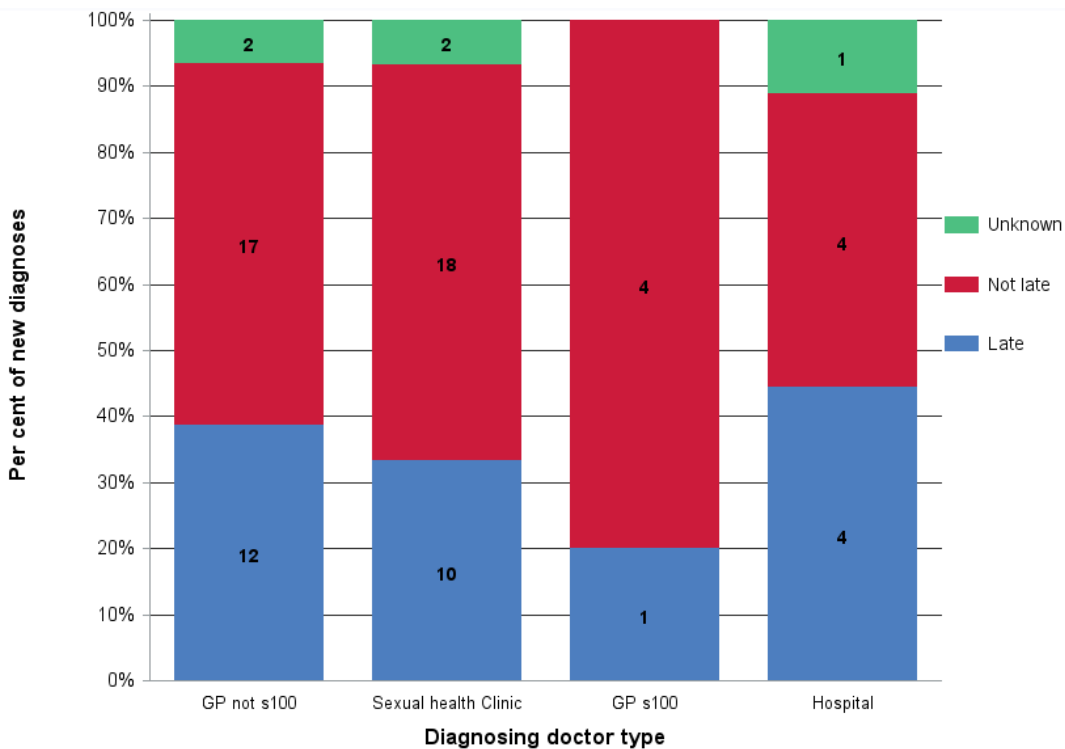


Figure 13: NSW residents notified with newly diagnosed HIV infection in Quarter 1 2016 by type of diagnosing doctor* and evidence of late diagnosis



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016. *9 new diagnoses with other or unknown doctor type excluded

2. Expand HIV Prevention

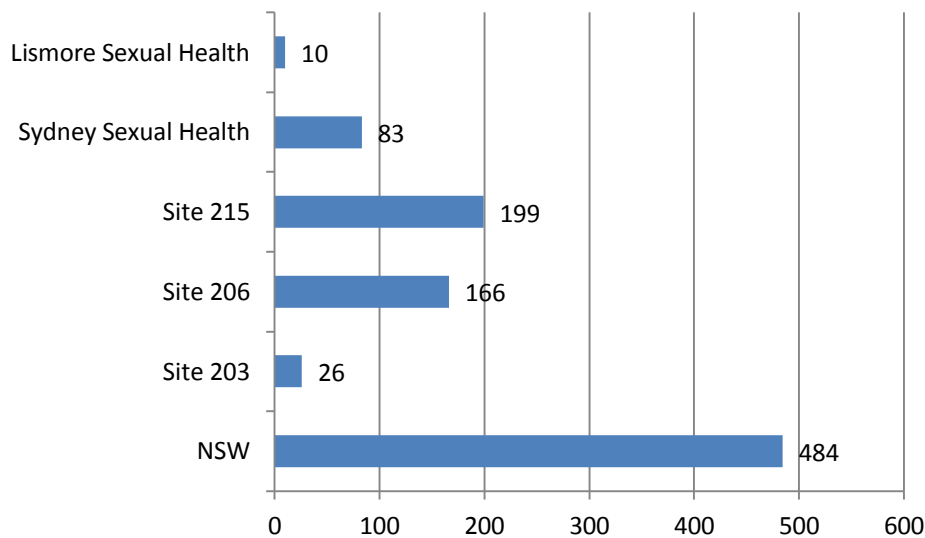
2.1 How many people are accessing pre-exposure prophylaxis (PrEP) through EPIC-NSW?

PrEP is the next critical tool for the HIV prevention. EPIC-NSW: Expanded PrEP Implementation in Communities in NSW was launched on 1 March 2016 to provide PrEP to 3700 people at a high risk of HIV infection in NSW for 2 years. Over 2016, participants will be enrolled at approximately 25 public and private clinics across NSW.

Between 1 March 2016 and 31 March 2016, 484 participants were enrolled at 5 clinics (East Sydney Doctors, Holdsworth House, Taylor Square Private Clinic, Sydney Sexual Health Centre and Lismore Sexual Health Clinic). Figure 14 displays the number of patients enrolled by each clinic.

In addition, approximately 300 participants are enrolled in the PrELUDE PrEP demonstration trial, which provides PrEP to people at a high risk infection for up to 2.5 years. Participants in PrELUDE will be transitioned to EPIC-NSW by September 2016.

Figure 14: Participants enrolled in EPIC-NSW by clinic between 1 March and 31 March 2016¹

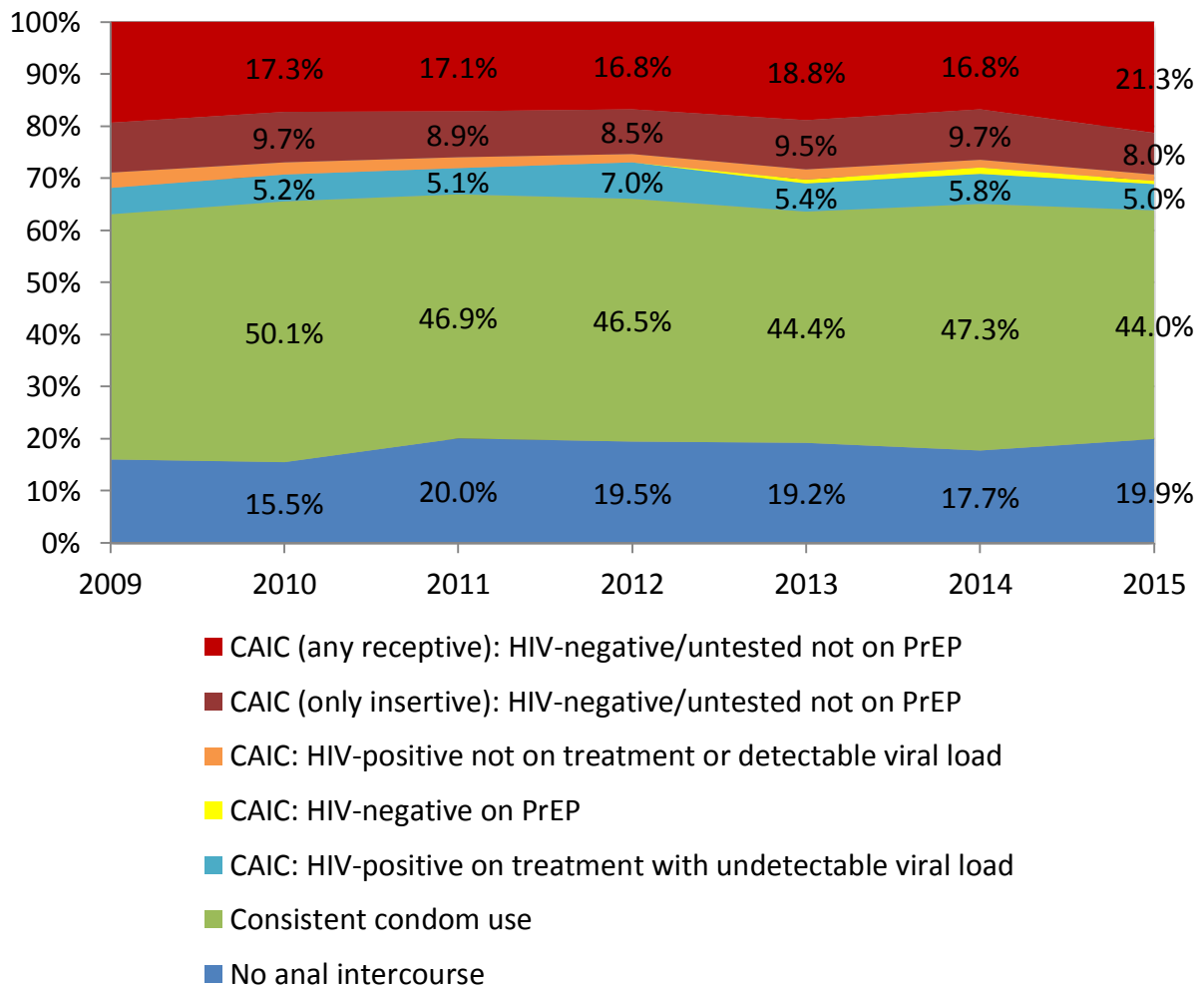


¹ Private practices have been de-identified. As each clinic began enrolling participants at a different date, the activity of clinics should not be compared directly.

2.2 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). Figure 15 shows the sexual practices of men with casual male partners in the six months prior to survey. Given the introduction of pre-exposure prophylaxis (PrEP) in NSW and the focus on the preventative benefits of HIV treatment in the current Strategy, we have modified our reporting of condomless anal intercourse with casual partners (CAIC) in the SGCPS, distinguishing between HIV-positive men who are virally suppressed or not and HIV-negative men who are protected by PrEP or not. These subcategories can be seen in Figure 15.

Figure 15: Anal intercourse, condom use and antiretroviral protection with casual male partners in the six months prior to survey, Sydney Gay Community Periodic Survey



Note: Denominator varies from 1408 to 1996 gay men with casual partners per year.

Comment

Among gay men with casual male partners, the proportions who avoid anal intercourse or who consistently use condoms have remained relatively stable since 2009. Over a third of men with casual partners report some condomless anal intercourse (CAIC); this proportion has remained

relatively stable since 2009. The proportion of HIV-positive men not on treatment or with a detectable viral load who report CAIC has fallen since 2009 (to 1.2% of men with casual partners in 2015). During 2013-2015 there were very few HIV-negative men on PrEP in the SGCPs (0.7%-1.3% of men with casual partners). This is expected to change in 2016.

2.3 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.

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

In the year ending 31 December 2015, a total of 13,202,904 units of injecting equipment were distributed in NSW. This figure includes injecting equipment distributed by pharmacies participating in the Pharmacy NSP Fitpack® scheme and by the Public NSP. This represents an increase of 770,022 additional units (6.2%) compared with the previous 12 months.

During the same period to 31 December 2015, the number of units of injecting equipment distributed by the Public NSP increased by 777,252 units (7.1%), while the number of units of injecting equipment distributed by the Pharmacy NSP Fitpack® scheme remained stable, with a decrease of 7,230 units (0.5% decrease).

(NSW Health NSP Minimum Data Set)

As of 31 December 2015, under the public NSP there were a total of 27 primary and 306 secondary outlets, 254 ADMs and IDCs located across NSW. In addition, there were 518 Pharmacies participating in the Pharmacy NSW Fitpack Scheme, making a total of 1,105 NSP outlets located across NSW as at 31 December 2015. This represents an increase of 56 additional outlets (5.3%) compared with same period in 2014.

(NSW NSP Data Collection)

2.5 What proportion of people reuse other people’s needles and syringes (receptive syringe sharing) in NSW?

Among respondents in the NSW NSP Enhanced Data Collection (NNEDC), reports of receptive syringe sharing (RSS) in the previous month declined from 22% in 2013 to 14% in 2014^[1]. In 2015, the proportion who reported receptive sharing of needles and syringes was 16%, which is stable compared with 2014 ($p=0.067$).^{[2] [3]}

^[1] In 2013, the first of three consecutive annual NNEDC was conducted. The purpose of the data collection is to report NSP client demographic, behavioural and drug use data on an annual basis to strengthen the state-wide prevention approach, and also inform LHDs in planning for NSP service delivery at the local level. Methodology: Clients are surveyed over a 2 week period in February. A total of 2938 individual NSW NSP clients were surveyed in 2013; 3029 people were surveyed in 2014; and 2,453 in 2015. The majority of NSPs ($n=50$ NSPs) participated in the study in both 2013 and 2014; and 49 NSPs participated in 2015. Refer to Appendix 1, Table 1.

^[2] Geddes, L, Iversen J, Maher L NSW Needle and Syringe Program Enhanced Data Collection 2015. A report for the Ministry of Health by the Kirby Institute, UNSW Australia, 2015.

^[3] Note 2013 and 2014 RSS in this Data Report has been calculated using a revised methodology compared with the NSW HIV Strategy 2012-2015 Data Report (<http://www.health.nsw.gov.au/endinghiv/Pages/tools->

These results are broadly comparable to NSW results from the Australian NSP Survey (ANSPS). In the ANSPS, which is conducted at selected NSW NSP services, the proportion of NSW respondents who reported receptive sharing of needles and syringes in the previous month was 13% in 2013 and 16% in 2014.^[4]

Findings from the upcoming 2015 NSW NSP Enhanced Data Collection will indicate whether the reduction between 2013 and 2014 identified in that survey is a continuing trend or an expected fluctuation.

[and-data.aspx](#)). The 2013 and 2014 HIV Data reports present RSS as a proportion of all NSP survey respondents. The revised methodology used in this Data Report for Hepatitis C and B presents RSS as a proportion of PWID respondents who reported injection in the last month. The revised methodology is consistent with the ANSPS, and enables the results of the surveys to be compared.

^[4] Iversen J, and Maher L. Australian Needle and Syringe Program Survey National Data Report 1995-2014. The Kirby Institute, UNSW Australia, 2015. In 2014, 646 people in NSW were surveyed in 19 primary NSPs. Refer to Appendix 1, Table 2.

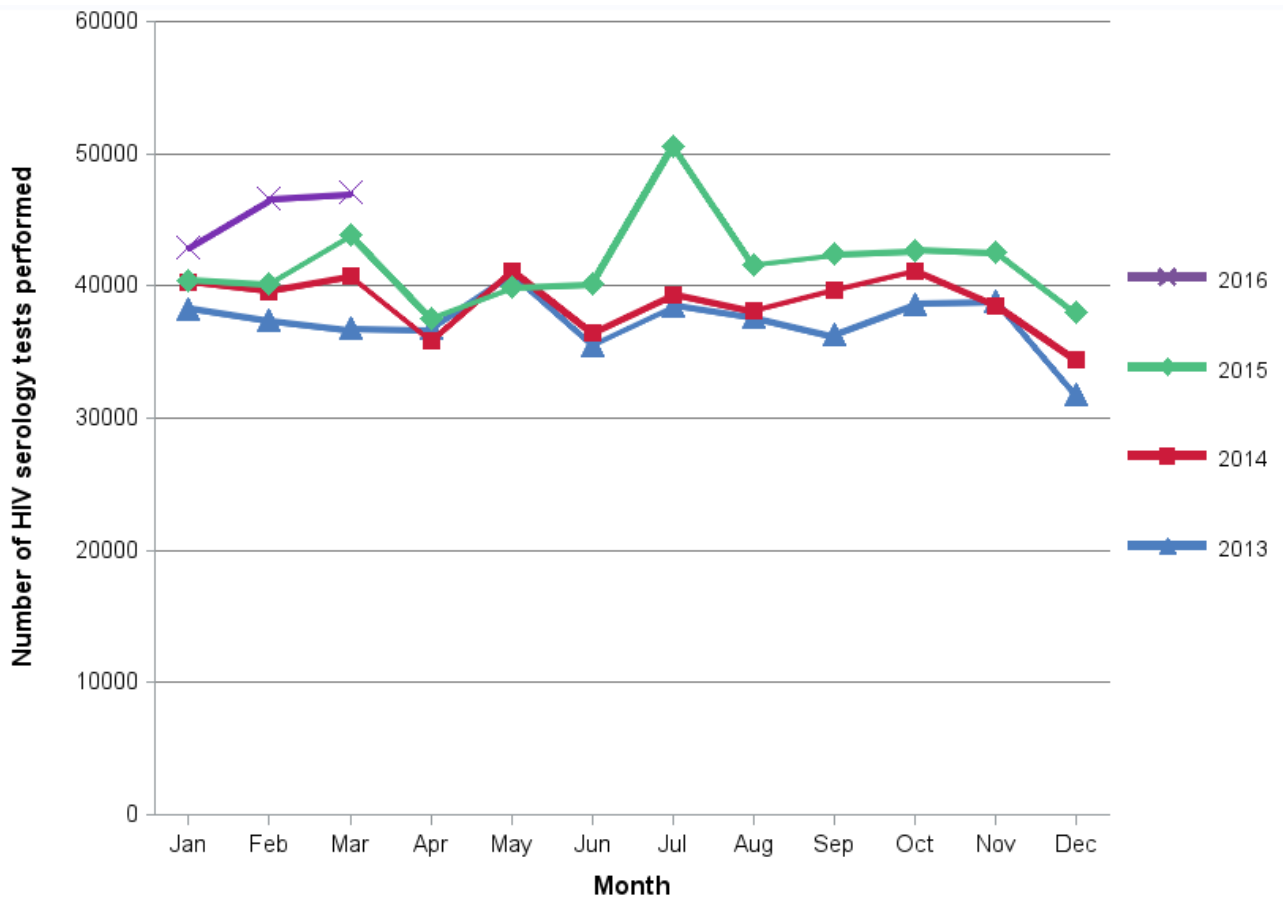
3. Increase HIV testing frequency

3.1 Is HIV testing increasing in NSW?

3.1.1 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 labs January 2012 to March 2016



Data source: NSW Health denominator data project, extracted 13 May 2016.

Comment

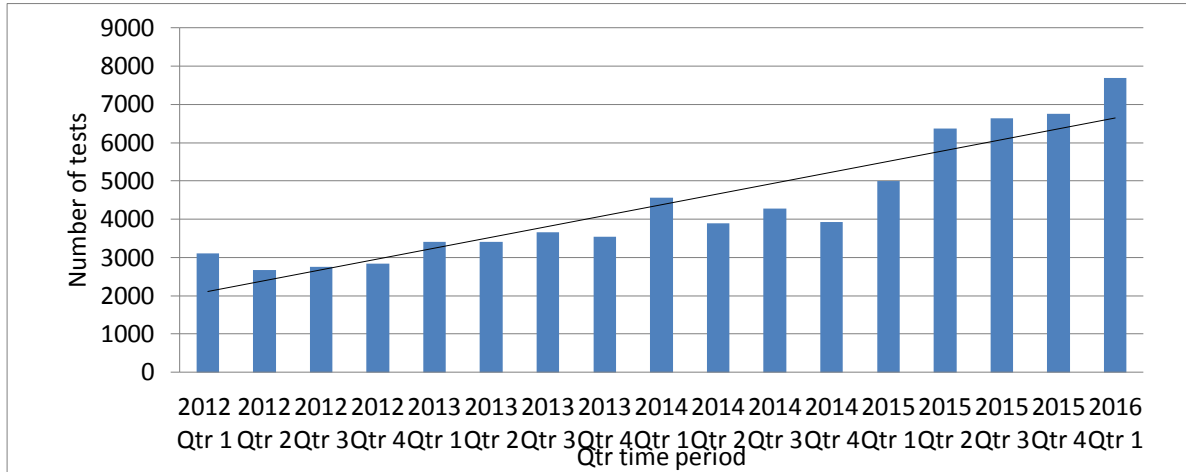
From January to March 2016 (quarter 1), there were 136,503 HIV serology tests performed in 15 laboratories in NSW; 10% greater than in quarter 1 2015 (n=124,447), 13% greater than in quarter 1 2014 (n=120,667) and 21% greater than in quarter 1 2013 (n=112,441). The spike in HIV serology test count in July 2015 coincided with an HIV testing awareness initiative (“NSW HIV Testing Week”) and also a public health intervention, when a letter was sent to select dental patients in early July recommending testing for HIV and hepatitis B and C.

3.1.2 Local Health Districts

HIV testing data in Publicly Funded Sexual Health Clinics (PFSHCs) has been available for all LHDs since July 2013; however the type of data is not uniform due to different data management systems.

Figure 17 displays the number of HIV tests done in PFSHC between 1 January 2012 and 31 March 2016 in South Eastern Sydney LHD. Both rapid HIV testing and HIV serology are included.

Figure 17: Number of HIV serology tests performed in South Eastern Sydney Local Health District Publicly Funded Sexual Health Clinics per quarter 2012 to 31 March 2016



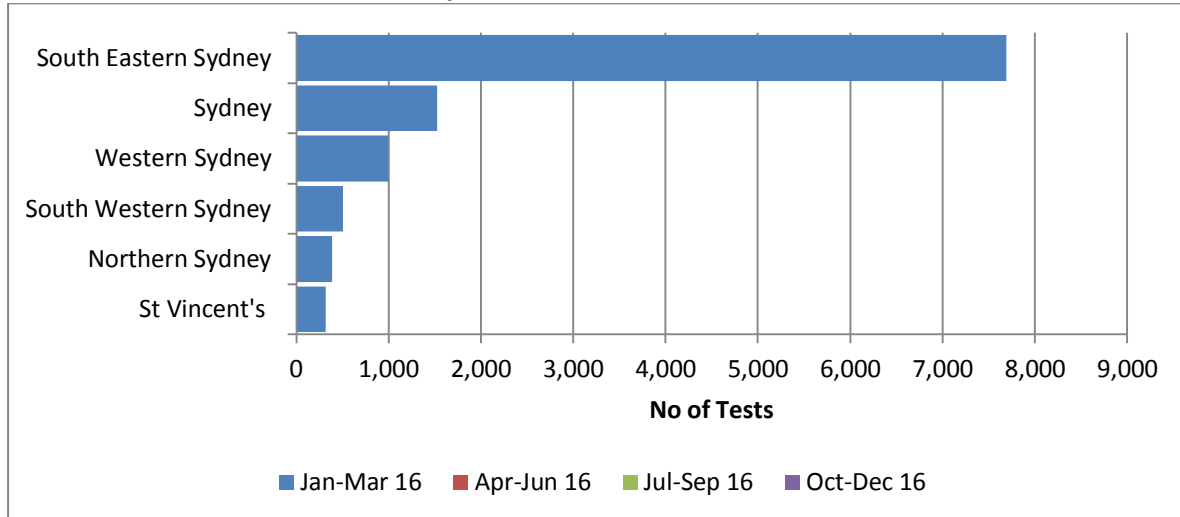
Data source: South Eastern Sydney Local Health District

Comment

In quarter 1 2016, testing in South Eastern Sydney LHD (Figures 17) increased by 55% (n=7,693) compared with the same period in 2015 (n=4,993).

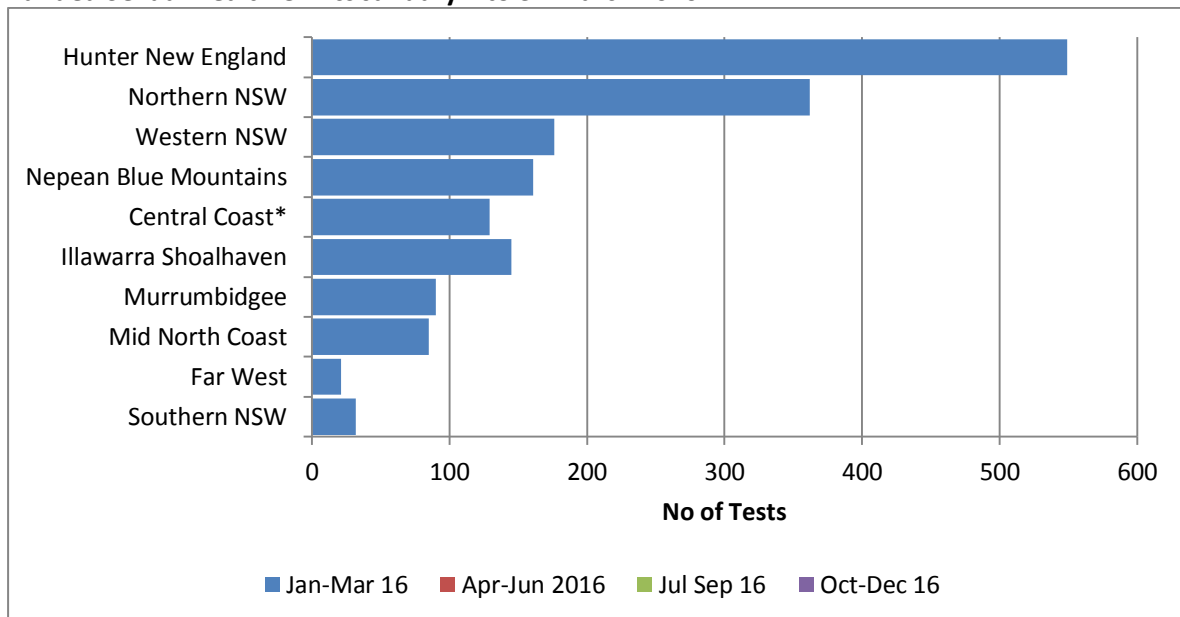
A comparison in the number of HIV tests done between 1 January and 31 March 2016 for metropolitan PFSHCs is displayed in Figure 18 and for regional and rural PFSHCs in Figure 19. Both rapid HIV testing and HIV serology are included.

Figure 18: Number of HIV tests performed in Sydney metropolitan Local Health District Publicly Funded Sexual Health Clinics January 1 to 31 March 2016



Data source: NSW Health HIV Strategy Monitoring Database

Figure 19: Number of HIV tests performed in regional and rural Local Health District Publicly Funded Sexual Health Clinics January 1 to 31 March 2016



*Central Coast figures are an underestimate as actual activity data is not available from Dec 2013

Data source: NSW Health HIV Strategy Monitoring Database

Comment

From January to 31 March 2016, 13,177 HIV tests were done in all PFSHCs in NSW; 20% greater than the same period in 2015 (n=10,951). From January to 31 March 2016, testing increased particularly in some local health districts; HIV testing in Sydney LHD increased by 26% (n=1,526) compared with the same period in 2015, and Northern NSW LHD increased by 68% (n=362) compared to the same period in 2015.

3.2 Where is HIV testing being done?

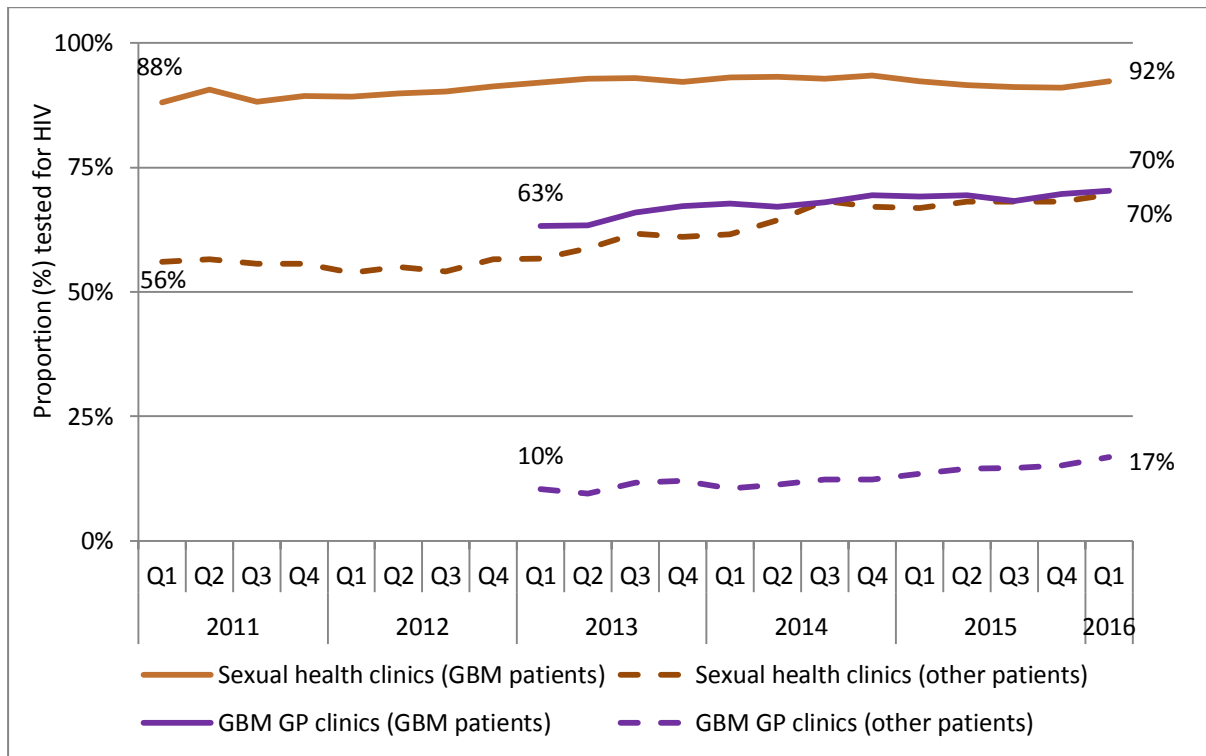
Apart from PFSHCs, HIV testing takes place in a range of other clinical and community settings. A large proportion of testing occurs in the private sector, especially in general practice.

3.2.1 General practice with high caseload of gay and bisexual men (GBM GP clinics) and PFSHCs

Data from the ACCESS project data base (managed by the Kirby Institute) has been added to the monitoring and evaluation framework for the NSW HIV Strategy to strengthen NSW’s systems for monitor progress and report outcomes against the NSW HIV Strategy 2016-2020.

Figure 20 displays HIV testing uptake in both PFSHCs and GBM GP clinics from the ACCESS database.

Figure 20: Proportion of patients² attending PFSHCs and GBM GP clinics³ tested at least once for HIV at the same service in the previous year period, by quarter and service type, 1 January 2011 to 31 March 2016^{4,5}



Data source: ACCESS Database, The Kirby Institute

Comment

HIV testing uptake has increased in both PFSHCs and GBM GP clinics, with the greatest increase among patients attending PFSHCs. General Practice plays a critical role in testing for and diagnosing HIV infections. People attend GP clinics for a range of health issues and may choose to test for HIV as part of their routine care in general practice or via the mix of testing options available in NSW.

² Excludes patients known to be HIV positive

³ GBM GP clinics defined as general practice clinics serving at least 50 GBM patients annually; attendance data for patients not tested for HIV was unavailable for patients attending GP clinics prior to 2013 and has been excluded

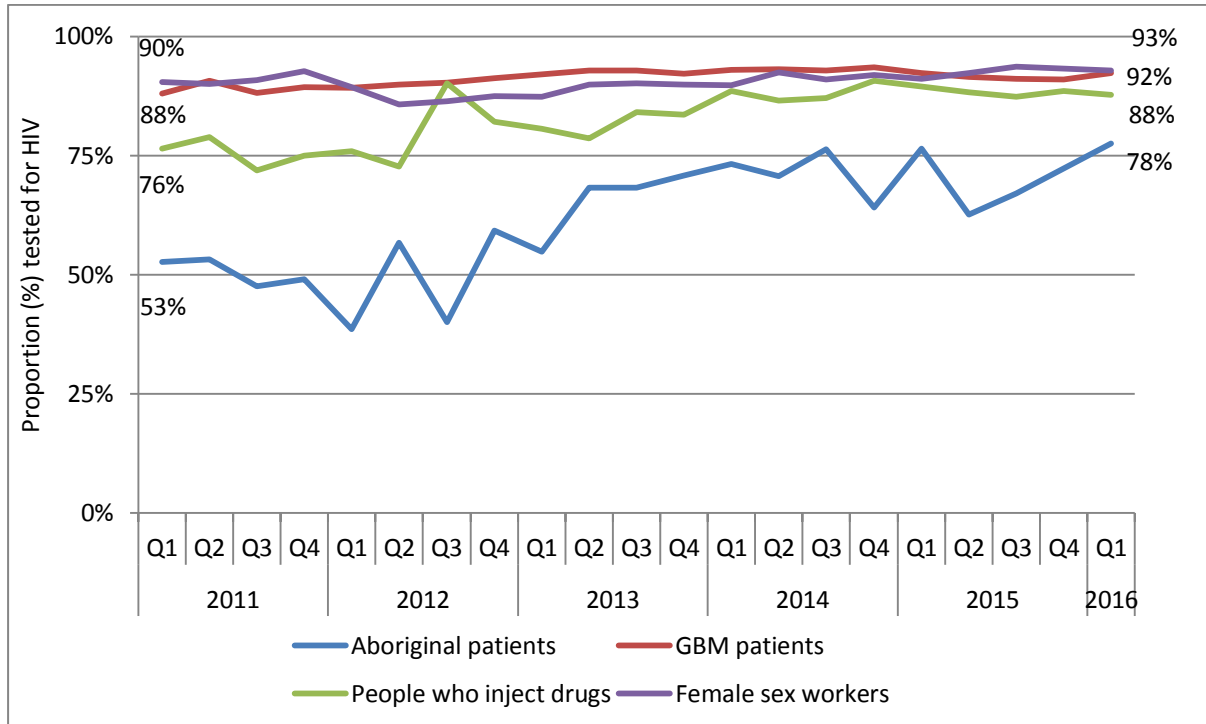
⁴ Patients are only uniquely identified with a health service, which means that if a patient moves between services they were counted multiple times

⁵ The 12 month testing period is retrospective, which means that if a patient attended in a quarter the proportion represents those who had an HIV test in the previous 12 months.

3.3 Who are being tested and testing patterns for HIV?

To reduce the pool of undiagnosed HIV infection, testing should be targeted to high risk populations. Figure 21 and Table 1 summarises the available data from PFSHCs on HIV testing in priority population groups.

Figure 21: Proportion of patients⁶ attending PFSHCs tested at least once for HIV at the same service in the previous year period, by quarter and priority population, 1 January 2011 to 31 March 2016^{7,8}



Data source: ACCESS Database, The Kirby Institute

Comment

Testing uptake increased among GBM attending PFSHCs, from 88% in quarter 1 2011 to 92% in quarter 1 2016. Over time, HIV testing at PFSHCs increased for Aboriginal patients and those who reported injecting drug use and remained high (>90%) among female sex workers.

⁶ Excludes patients known to be HIV positive

⁷ Patients are only uniquely identified with a health service, which means that if a patient moves between services they were counted multiple times

⁸ The 12 month testing period is retrospective, which means that if a patient attended in a quarter the proportion represents those who had an HIV test in the previous 12 months.

Table 1: HIV testing in priority populations, Publicly Funded Sexual Health Clinics, NSW

| Priority Population | % of HIV tests in all PFSHCs, Q1 2016* | Number of HIV tests in all PFSHCs, Q1 2016* | % increase in HIV tests compared with Q1 2015 in all PFSHCs [#] |
|---|--|---|--|
| GBM | 66% | 8,431 | 52% |
| Sex workers [^] | 11% | 1,449 | 10% |
| People who inject drugs (PWID) [^] | 6% | 781 | 23% |
| Aboriginal people | 3% | 380 | 21% |

*Excludes Central Coast LHD who was unable to provide testing data by priority population.

[#]Excludes LHDs without testing data by priority population in Q1 2016 (St Vincent's Hospital Network and Central Coast LHD).

[^]Includes people who *ever* were sex workers or who *ever* injected drugs.

Data source: NSW Health HIV Strategy Monitoring Database⁹

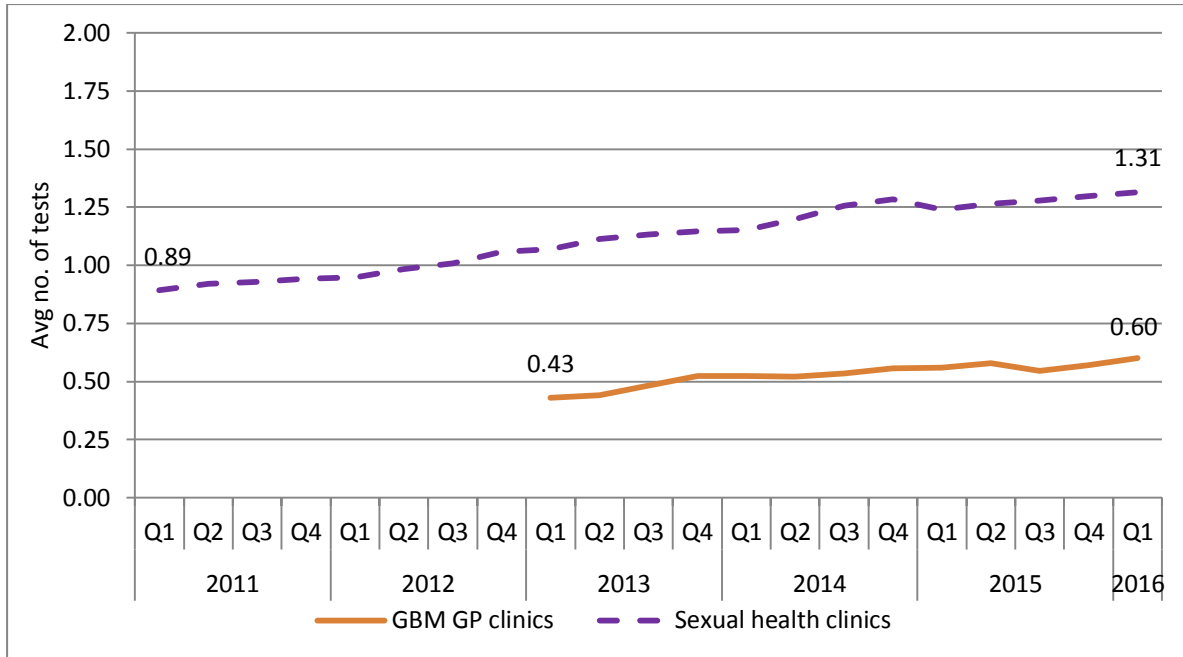
Comment

In summary, data from PFSHCs indicates that priority populations are being reached by public sexual health services. Achieving further increases in testing frequency, particularly in high risk GBM, is important to identify and link HIV infected individuals to care; and to reduce the number of people living with HIV in NSW who are undiagnosed.

⁹ Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

3.4 Testing patterns for HIV?

Figure 22: Average number of HIV tests at the same service¹⁰ per year per patient¹¹ attending PFSHCs and GBM GP clinics¹², by service type and quarter, 1 January 2011 to 31 March 2016



Data source: ACCESS Database, The Kirby Institute

Comment

Over time, more patients have been getting tested more often in a year. This increase suggests higher repeat testing at the same service among individuals.

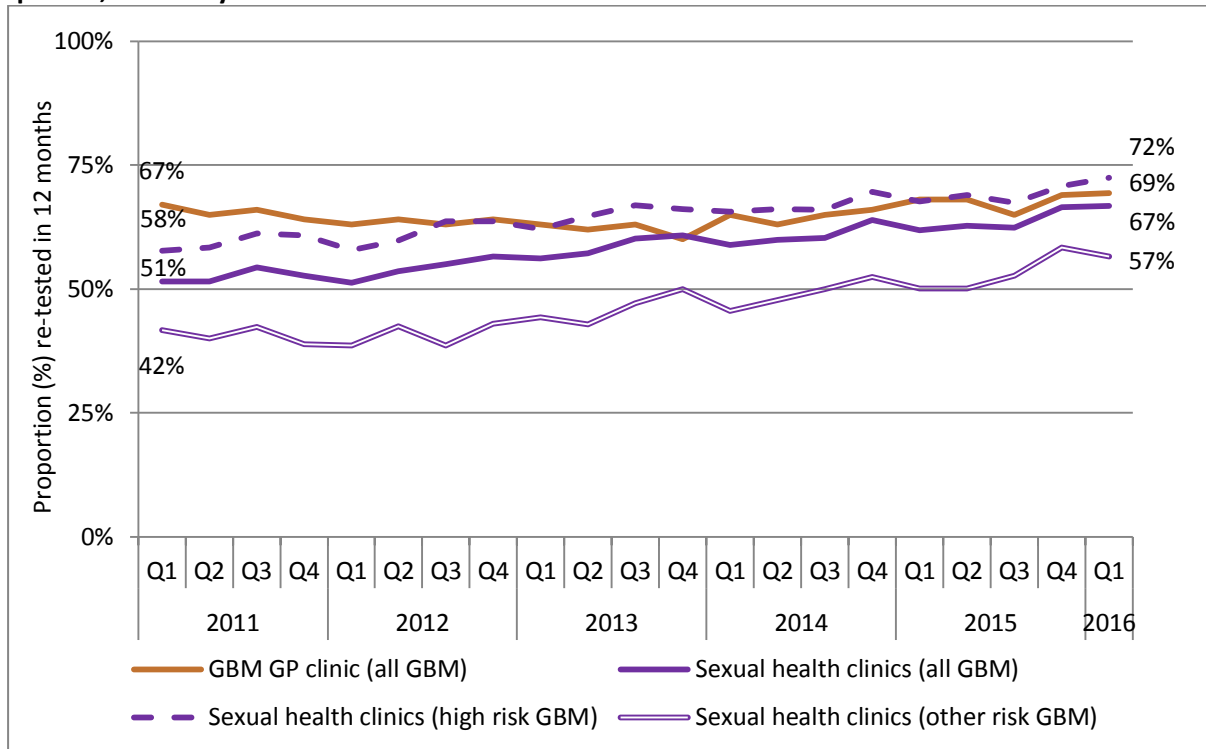
Data displayed in Figure 22 is limited to patients who are uniquely identified with a health service; therefore, if a patient moves between services they were counted multiple times as a new patient rather than a patient returning for a HIV test. Data system will be link shortly allowing for patients to move between clinics and not be counted multiple times. It is anticipated that a further increase in repeat testing will be report after the systems are linked.

¹⁰ Average test numbers only include tests at the same service; tests at multiple services were not counted

¹¹ Excludes patients known to be HIV positive

¹² GBM GP clinics defined as general practice clinics serving at least 50 GBM patients annually; attendance data for patients not tested for HIV was unavailable for patients attending GP clinics prior to 2013 and has been excluded

Figure 23: Proportion of GBM patients¹³ tested for HIV at PFSHCs and GBM GP clinics with a previous HIV test at the same clinic in the past 12 months¹⁴, by service type, risk classification and quarter, 1 January 2011 to 31 March 2016¹⁵



Data source: ACCESS Database, The Kirby 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

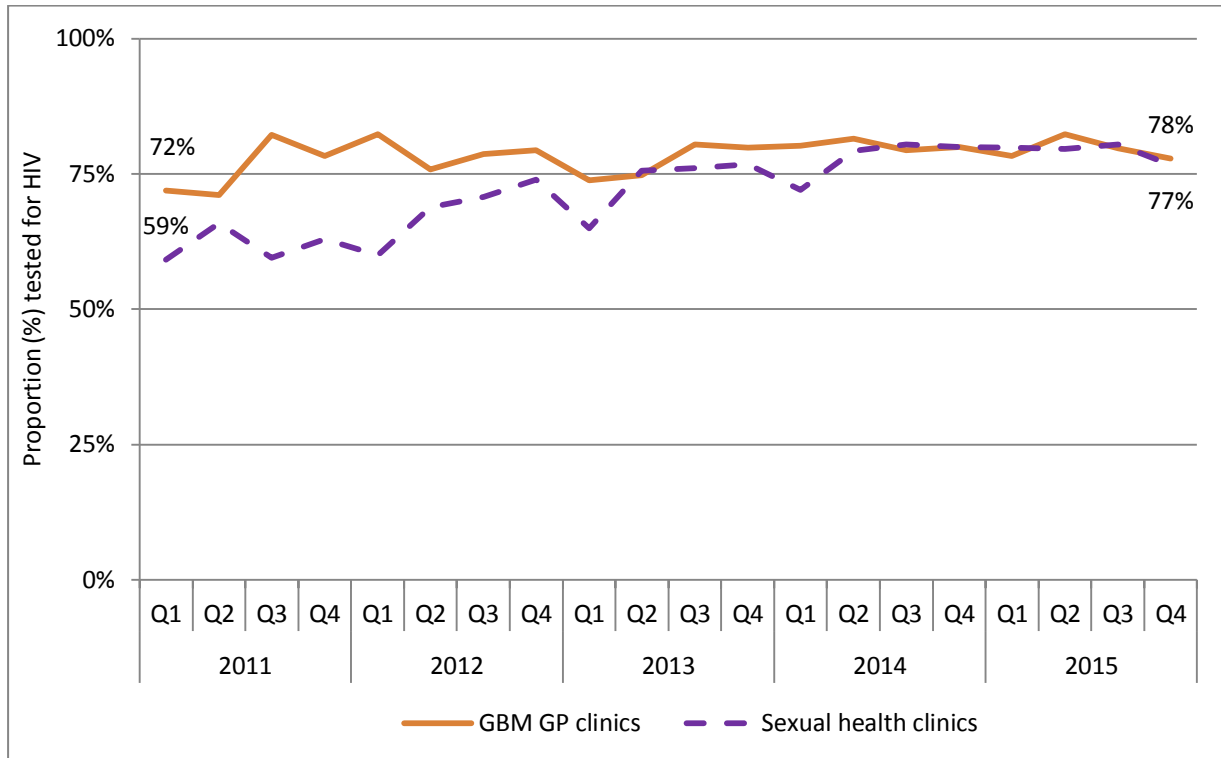
Overall, a slightly higher proportion of GBM tested for HIV at GBM GP clinics had been tested at the same service in the previous 12 months than among GBM attending PFSHCs. Re-testing at 12 months in the same service remained stable at GBM GP clinics but increased at PFSHCs.

¹³ Excludes patients known to be HIV positive

¹⁴ Re-testing only calculated at the same service as initial test; patients may have been tested elsewhere.

¹⁵ The 12 month re-testing period is retrospective, which means that if a patient attended in a quarter and had an HIV test then the proportion represents those who had an HIV test in the previous 12 months.

Figure 24: Proportion of patients¹⁶ attending PFSHCs and GBM GP clinics who received an HIV test¹⁷ within one month of an STI diagnosis¹⁸, by service type and quarter, 1 January 2011 to 31 December 2015¹⁹



Data source: ACCESS Database, The Kirby Institute

Comment

The majority of STI diagnoses in PFSHCs and GBM GP clinics were accompanied by a test for HIV (78% and 77% respectively). In PFSHCs, the proportion of STI diagnoses that include an HIV test increased over time, reaching a level similar to that observed in GBM GP clinics.

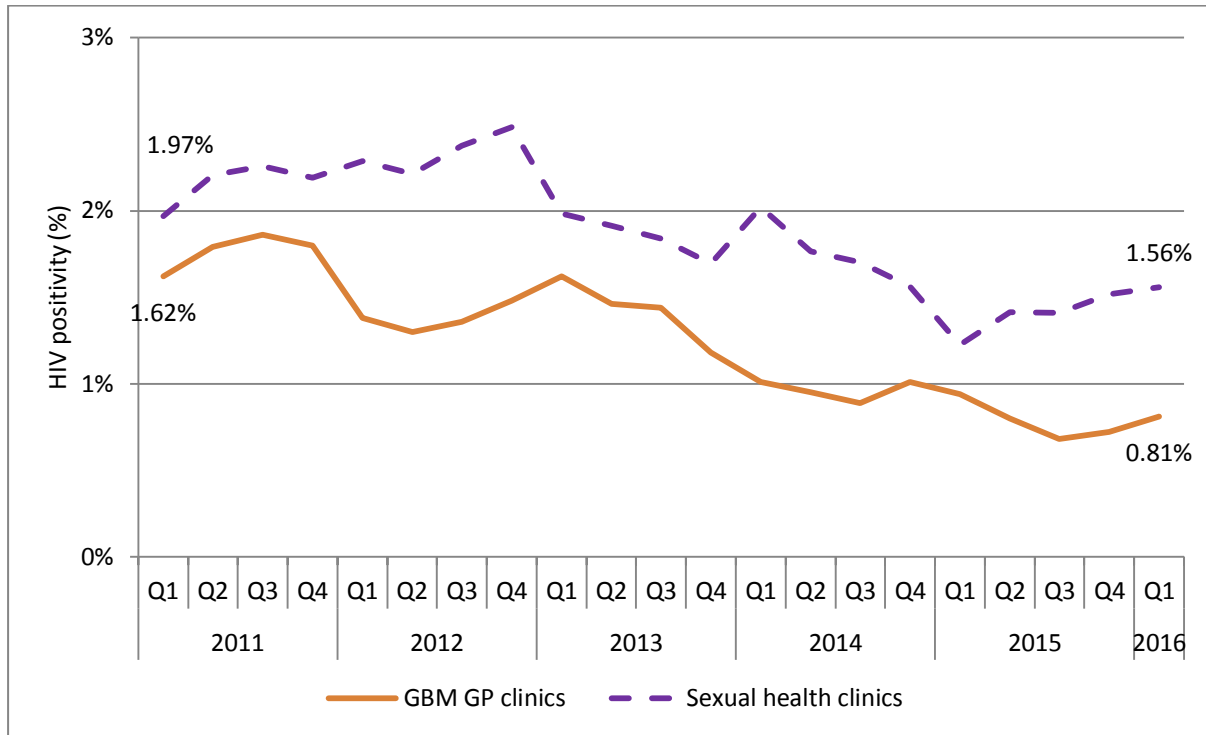
¹⁶ Excludes patients known to be HIV positive

¹⁷ Only includes HIV tests at the same service as the STI diagnosis

¹⁸ Diagnosis for chlamydia, gonorrhoea, and/or infectious syphilis

¹⁹ The period for HIV testing is one month before or after an STI diagnosis. Due to the timeframe for HIV testing, data from Q1 2016 have been excluded.

Figure 25: Proportion of individual GBM patients²⁰ attending PFSHCs and GBM GP clinics tested for HIV with a positive result (*HIV positivity*²¹), by service type and quarter, 1 January 2011 to 31 March 2016



Data source: ACCESS Database, The Kirby Institute

Comment

HIV positivity declined over time since 2011 in both PFSHCs and GBM GP clinics. With increased HIV testing overall and testing targeting priority populations, it is anticipated that HIV positivity in PFSHCs and GBM GP clinics will decrease over time. This is an important indicator and should not deter services from continuing to increase testing in accordance with current guidelines.

²⁰ Excludes patients known to be HIV positive; patients only uniquely identified within a service.

²¹ HIV positivity is calculated as the proportion of individuals tested in a retrospective year period (i.e., discounting repeat tests among individuals) with a confirmed HIV diagnosis. Patients already known to be HIV positive were excluded and a diagnosis was considered ‘confirmed’ if there was either a positive p24 antigen or western blot test.

3.5 How is testing being made more accessible?

3.4.1 Rapid testing

Rapid HIV testing has been embedded into the mix of the testing options in NSW, with a focus on community based testing services. Table 2 displays the number of rapid HIV tests done and the proportion of clients with high risk behaviours and infrequent testing history in community-based and other non-traditional clinical testing sites in NSW.

Table 2: Number of rapid HIV tests in non-traditional testing sites and proportion of clients with high risk behaviour and infrequent testing history from 1 January to 31 March 2016

| Non-traditional Settings | Number of RHT Q1 2016 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> | 301 (301) | 0.0% | 19% | 14% | 22% |
| <i>aTEST Oxford ST (40 hours/week)</i> | 1,939 (1937) | 0.8% | 11% | 14% | 32% |
| <i>aTEST Kings Cross (3 hours/week)</i> | 135 (135) | 0.0% | - | 14% | 39% |
| <i>aTEST Newtown (6 hours/week)</i> | 204 (204) | 0.5% | - | 19% | 13% |

Data sources: NSW Health HIV Strategy Monitoring Database²²

Comment

Though the number of clients tested in community sites is relatively small, NSW data suggests it is an effective testing model for engaging GBM, a high proportion of whom reported high risk behaviours, or infrequent testing for HIV.

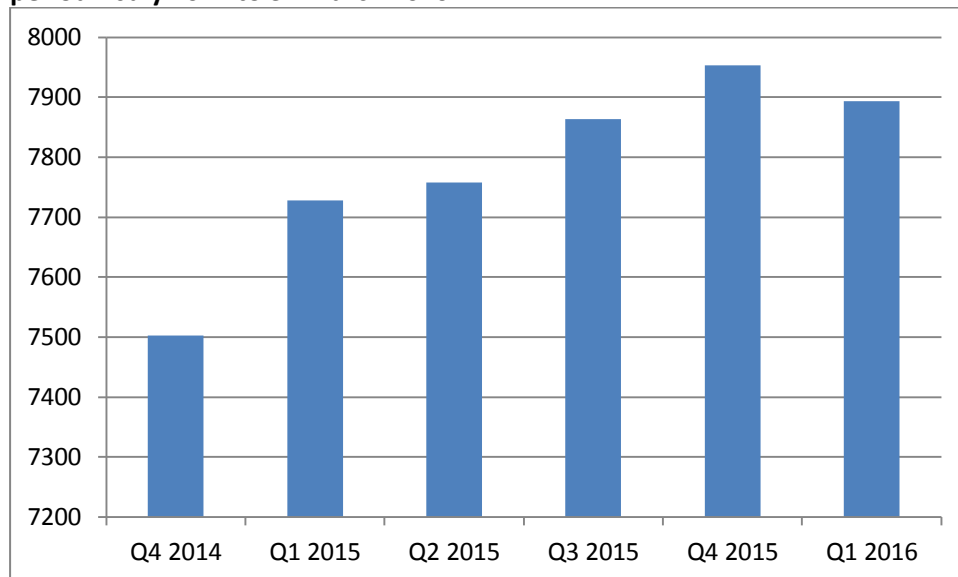
²² Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

4 Increase HIV treatment

4.1 How many people in NSW are on antiretroviral treatment?

Complete data on dispensing of HIV treatments by NSW public hospital pharmacies has been available since 2014.

Figure 26a: Number of patients dispensed ART in NSW by public hospitals each quarter for the period 1 July 2014 to 31 March 2016^{23,24,25}



Data source: Health Share NSW iPharmacy data and data submitted by Western Sydney, Nepean Blue Mountains and Hunter New England LHDs

In the 12 months between 1 April 2015 to 31 March 2016, 7,893 people diagnosed with HIV in NSW and in care were dispensed antiretroviral therapy (ART) through the Pharmaceutical Benefits Scheme (PBS) from a public hospital pharmacy at least once. It does not include non PBS dispensing by public hospitals, or people who may be accessing ART through a community pharmacy or through other sources, including those who purchase HIV treatment from overseas, receive ART through clinical trials or are dispensed ART for post-exposure prophylaxis.

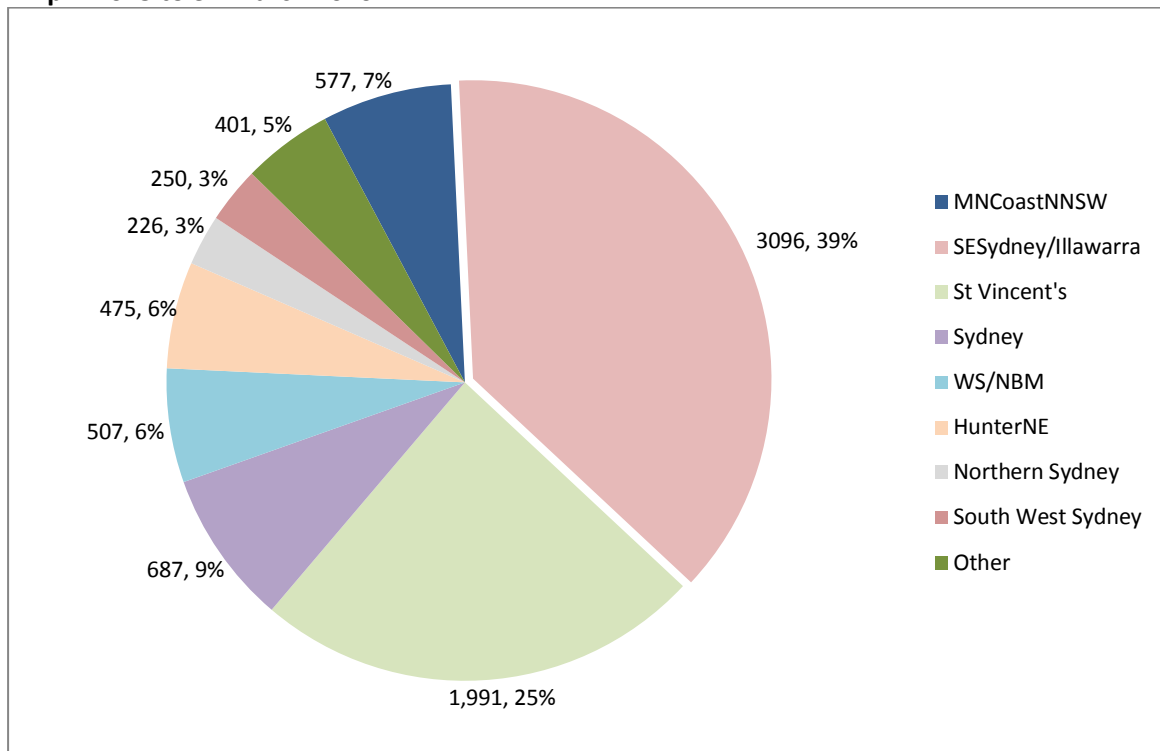
Almost three-quarters (72%) of all ART dispensing by public hospital pharmacies in NSW in the year ending 31 March 2016 occurred through inner metropolitan pharmacies, with over half of all patients receiving ART from pharmacies at the Albion Centre (27.81%) or the St Vincent's Hospital (25.22%). A further 7.45% received ART from the Royal Prince Alfred Hospital and 7.18% from Sydney Hospital and Sydney Eye Hospital.

²³ NSW HIV dispensing data has been revised to correct a duplication error identified in the NSW iPharmacy data.

²⁴ In December 2013, Health Share NSW completed the NSW rollout of a standardised iPharmacy system, which enables the collection of data from LHDs about pharmacy dispensing activities including dispensing of ART for HIV. 2013 was the first year for which actual treatment numbers can be ascertained. Past estimates were based on modelled data and therefore comparisons should be made with caution.

²⁵ Northern NSW, Mid North Coast, South Western Sydney, Justice Health, Murrumbidgee and Southern NSW LHDs came online with the iPharmacy system late in 2013. The 2014 calendar year ART dispensing data was the first complete data available of the public pharmacies from which iPharmacy data is extracted.

Figure 26b: Number of patients dispensed ART in NSW by LHD of dispensing public pharmacy from 1 April 2015 to 31 March 2016^{26,27}



Data source: Health Share NSW ipharmacy data and data submitted by Western Sydney, Nepean Blue Mountains and Hunter New England LHDs

It is of note that public hospital dispensing data no longer captures all HIV treatment dispensing in NSW as community dispensing of HIV treatments became available from 1 July 2015. iPharmacy data on unique patients dispensed ART within each quarter provides evidence of the significant uptake of community dispensing across NSW, with data indicating that the St Vincent's Network and South Eastern Sydney Local Health District experienced the greatest decline in unique patients accessing their services with a 31.1% and 26.8% decrease since the introduction of community pharmacy respectively.

The NSW Ministry of Health is working with the Commonwealth Pharmaceutical Benefits Scheme towards complete public hospital and community pharmacy ART dispensing data being made available to NSW and for a comprehensive range of data including on ART initiations, the LHD of patient's residence, prescriber location and drug combinations.

²⁶ 'Other' includes Central Coast 157 (2.0%); Far West/Western NSW 78 (1.0%); Murrumbidgee 46 (0.6%); Southern NSW 43 (0.5%); Childrens Hospital Network 14 (0.2%); Justice Health 70 (0.9%).

²⁷ The numbers displayed in the graph add up to a figure greater than the overall total of 7,893 for 01/04/15 -31/3/16. This is because a small number of cross-LHD patient flows are not eliminated. The majority of the cross-LHD flows were between the St Vincent's Hospital Network and SESILHDs.

4.2 What are the current antiretroviral treatment prescribing patterns?

Data on the treatment status of clients who received HIV care in NSW public sexual health and HIV services in the year ending 31 March 2016 is summarised at Table 3²⁸.

Table 3: Clients who received HIV care in NSW public sexual health and HIV services from 1 April 2015 and 31 March 2016

| | |
|---|------------|
| Number (%) of patients for whom treatment information was available | 3572 |
| Number (%) on ART | 3234 (91%) |

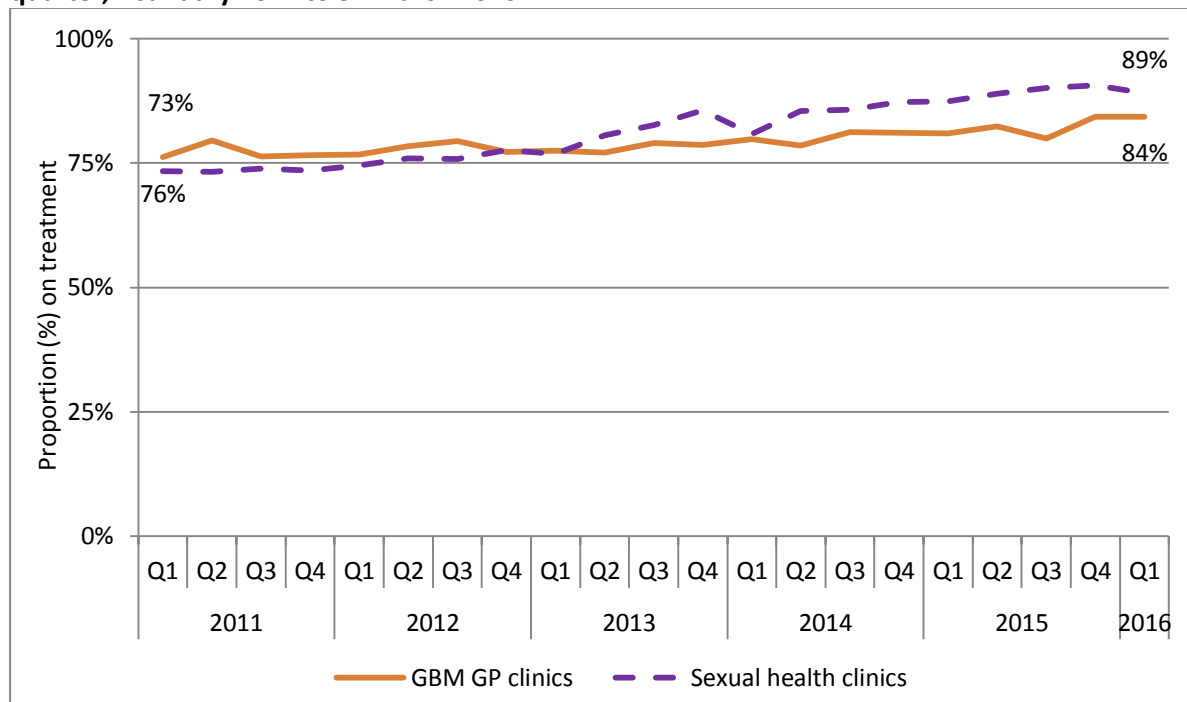
Data sources: NSW Health HIV Strategy Monitoring Database²⁹

Comment

In the year ending 31 March 2016, 3,572 clients with HIV received care in public HIV and sexual health clinics in NSW. The available data indicates that treatment coverage in public clinics is high at 91%.

Figures 27 and 28 displays data from the ACCESS program database on the proportion of HIV positive patients attending PFSHCs and GBM GP clinics who received HIV treatment, by age group and quarter.

Figure 27: Proportion of HIV positive patients³⁰ attending PFSHCs³¹ and GBM GP clinics³² who received HIV treatment from that service at least once in the previous year, by service type and quarter, 1 January 2011 to 31 March 2016



Data source: ACCESS Database, The Kirby Institute

²⁸ Data is representative of all clients who has received HIV care in NSW public HIV and sexual health services in the last 12 months where treatment information is available.

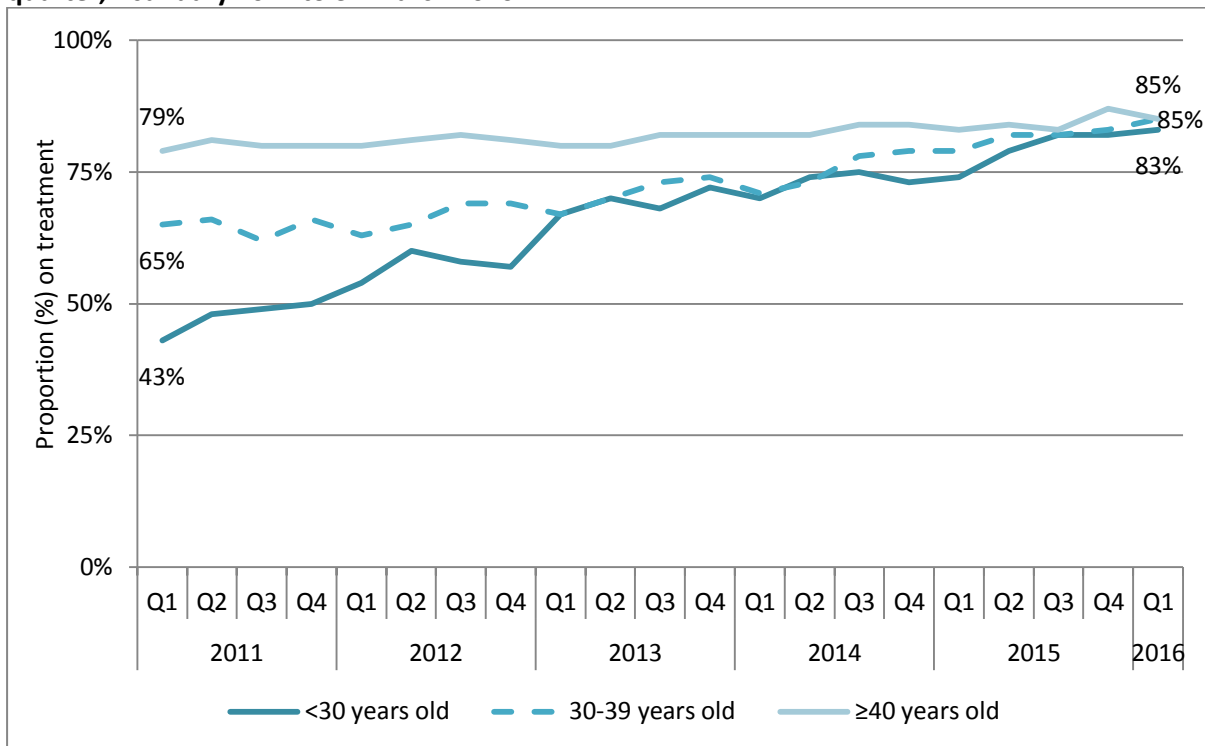
²⁹ Public sexual health and HIV services data provided by Local Health Districts for the purpose of monitoring the implementation of the NSW HIV Strategy.

³⁰ Excludes patients for whom HIV care was managed elsewhere

³¹ Excludes public HIV Outpatient clinics

³² GBM GP clinics defined as general practice clinics serving at least 50 GBM patients annually

Figure 28: Proportion of HIV positive patients³³ attending PFSHCs³⁴ and GBM GP clinics³⁵ who received HIV treatment at least once from that service in the previous year, by age group and quarter, 1 January 2011 to 31 March 2016



Data source: ACCESS Database, The Kirby Institute

Comment

HIV treatment uptake has increased over time in both PFSHCs and GBM GP clinics. Since 2011, the greatest increase in treatment uptake was among those under 30 years old; treatment uptake also increased among patients aged 30-39 years and, to a lesser degree, among those age 40 years and older.

³³ Excludes patients for whom HIV care was managed elsewhere

³⁴ Excludes public HIV Outpatient clinics

³⁵ GBM GP clinics defined as general practice clinics serving at least 50 GBM patients annually

4.2.2 Retention in care, ART commencement and viral suppression among NSW residents notified with newly diagnosed HIV infection 1 January 2013 to 30 September 2015 follow up six months post diagnosis

Since 2013, HIV surveillance in NSW was enhanced to:

- a) at the time of diagnosis, collect from doctors additional information on the patient's HIV viral load, antiretroviral therapy (ART) commencement or deferral, and;
- b) 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 each quarterly report, the cases reported on with respect to six months post diagnosis follow up data, will have been diagnosed at least six months prior to each report period. In this quarter 1 2016 report, six months post diagnosis follow up data is reported on 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 and up to 30 September 2015. Managing services had returned 94% (n=889) of the six month post diagnosis follow up forms on these 941 new diagnoses; this comprised forms on 97% (342/353) of the new diagnoses in 2013, 92% (316/344) of the new diagnoses in 2014 and 95% (231/244) of the new diagnoses January to September 2015.

ART uptake at six weeks, three months and by six months post diagnosis among NSW residents newly diagnosed with HIV from 1 January 2013 to 30 September 2015

Data on commencement of ART by six months post diagnosis 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 care outcome reported at the six months post diagnosis follow up (i.e., retained in care, moved out of NSW, lost to follow up, died, unknown). In mid-2015 strong evidence emerged that starting ART as early as possible after diagnosis irrespective of CD4 count maximised individual health gain (START study). A key indicator to monitor against the NSW HIV Strategy 2016-2020 is the proportion of NSW residents newly diagnosed who commence ART within six weeks of diagnosis. The impact of the START study results may start to be observed in the follow up data on people newly diagnosed in the third or the fourth quarter 2015 onwards, while the impact of policy and program work under the NSW HIV Strategy 2016-2020 may start to be observed in the follow up data on people newly diagnosed in quarter 1 2016 onwards.

Figure 29 and Table 4: ART commencement status at six weeks, three months and six months post diagnosis, among 941 NSW residents newly diagnosed from 1 January 2013 to 30 September 2015.

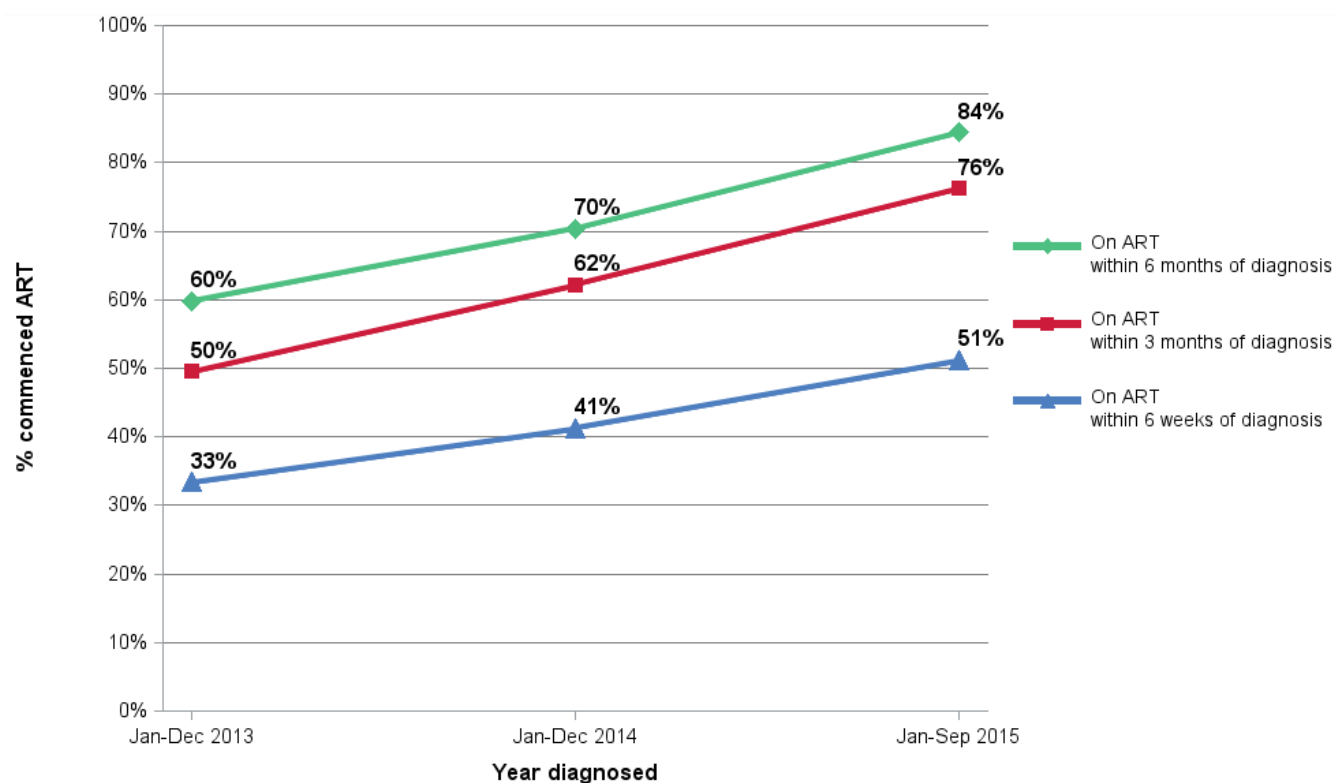


Table 4: ART commencement status reported at six months post diagnosis follow up on 941 NSW residents newly diagnosed from 1 January 2013 to 30 September 2015.

| ART status at six months post diagnosis | Diagnosed Jan-Dec 2013 | Diagnosed Jan-Dec 2014 | Diagnosed Jan-Sep 2015 | Total |
|---|------------------------|------------------------|------------------------|------------|
| On ART within a 6 weeks of diagnosis | 118 (33%) | 142 (41%) | 125 (51%) | 385 (41%) |
| On ART > 6 weeks - <=3 months | 57 (16%) | 72 (21%) | 61 (25%) | 190 (20%) |
| On ART > 3 months - <=6 months | 36 (10%) | 28 (8%) | 20 (8%) | 84 (9%) |
| No ART by six months post diagnosis | 102 (29%) | 78 (23%) | 28 (11%) | 208 (22%) |
| ART status unknown at follow up | 40 (11%) | 24 (7%) | 10 (4%) | 74 (8%) |
| Total | 353 | 344 | 244 | 941 |

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

The latest available six months follow up data are for those newly diagnosed in quarter 3 2015. Of the 89 new diagnoses in July to September 2015, 57% (n=49) had commenced ART within six weeks, 84% (n=72) within three months and 88% (n=76) within six months of diagnosis. Eighty-three per cent (n=63) had achieved viral suppression (VL < 400 copies/mL) at the time of six months post diagnosis follow up.

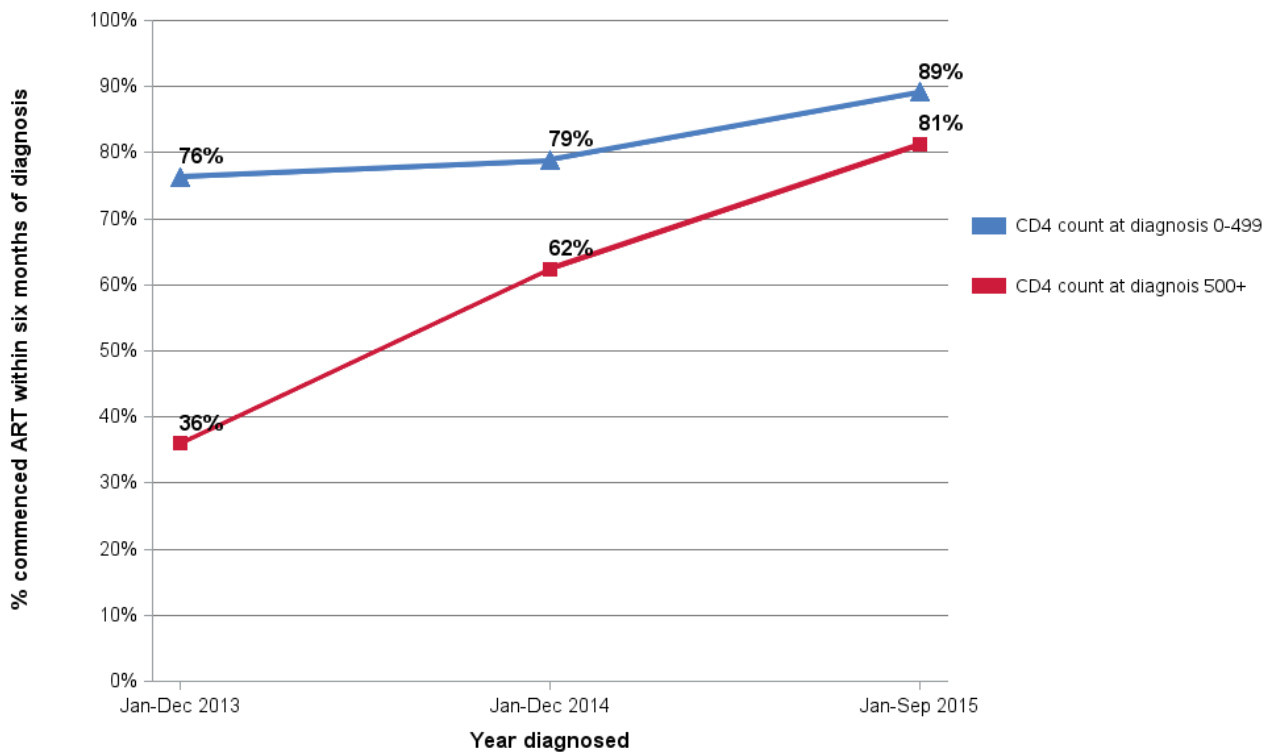
Of 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 September 2015, 41% (n=385) had commenced ART within six weeks of diagnosis. This comprises 33% (118/353) of people newly diagnosed in 2013, 41% (142/344) of those diagnosed in 2014 and 51% (125/244) of those diagnosed in January to September 2015.

Of 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 September 2015, 61% (n=575) had commenced ART within three months of diagnosis. This comprises 50% (175/353) of people newly diagnosed in 2013, 62% (214/344) of people newly diagnosed in 2014 and 76% (186/244) of people newly diagnosed in January to September 2015.

Of 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 September 2015, 70% (n=659) had commenced ART within six months of diagnosis. This comprises 60% (211/353) of people newly diagnosed in 2013, 70% (242/344) of people newly diagnosed in 2014 and 84% (206/244) of people newly diagnosed in January to September 2015.

Of the 273 NSW residents newly diagnosed 1 January 2013 to 30 June 2015 who either had not commenced ART or who were of unknown ART status within six months of diagnosis, 66 (24%) were known to have commenced ART more than six months post diagnosis.

Figure 30: Per cent of NSW residents notified with newly diagnosed HIV infection in 2013, 2014 and January to September 2015 who had commenced ART within six months by CD4 at diagnosis.



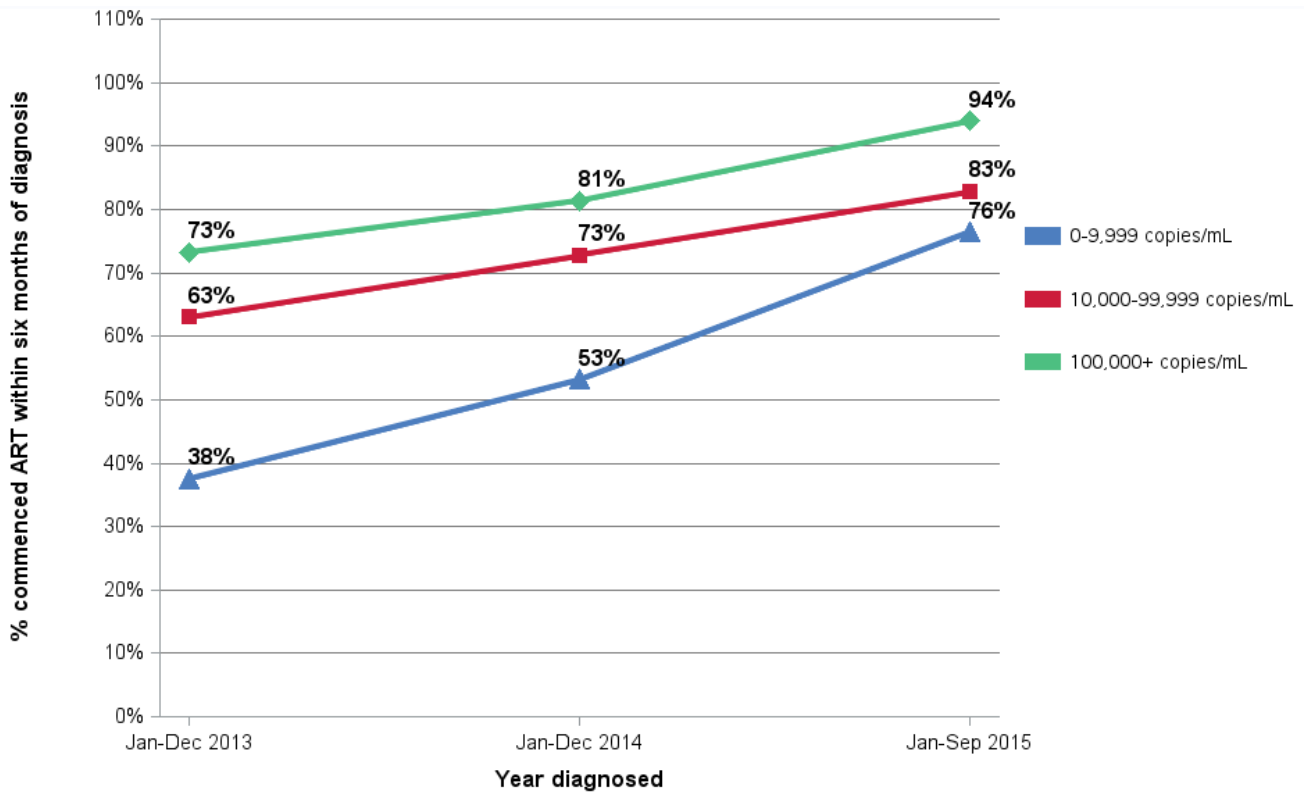
Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

The proportion of people newly diagnosed with a CD4 count of 0-499 cells/ μ L who commenced ART within six months of diagnosis was 76% of the 2013, 79% of the 2014 and 89% of the January to September 2015 new diagnoses cohorts.

The proportion of people new diagnosed with a CD4 count of 500 or over who commenced ART within six months of diagnosis was 36% of the 2013, 62% of the 2014 and 81% of the January to September 2015 new diagnoses cohorts.

Figure 31: Per cent of NSW residents notified with newly diagnosed HIV infection in 2013, 2014 and January to September 2015 who had commenced ART within six months by HIV VL at diagnosis



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

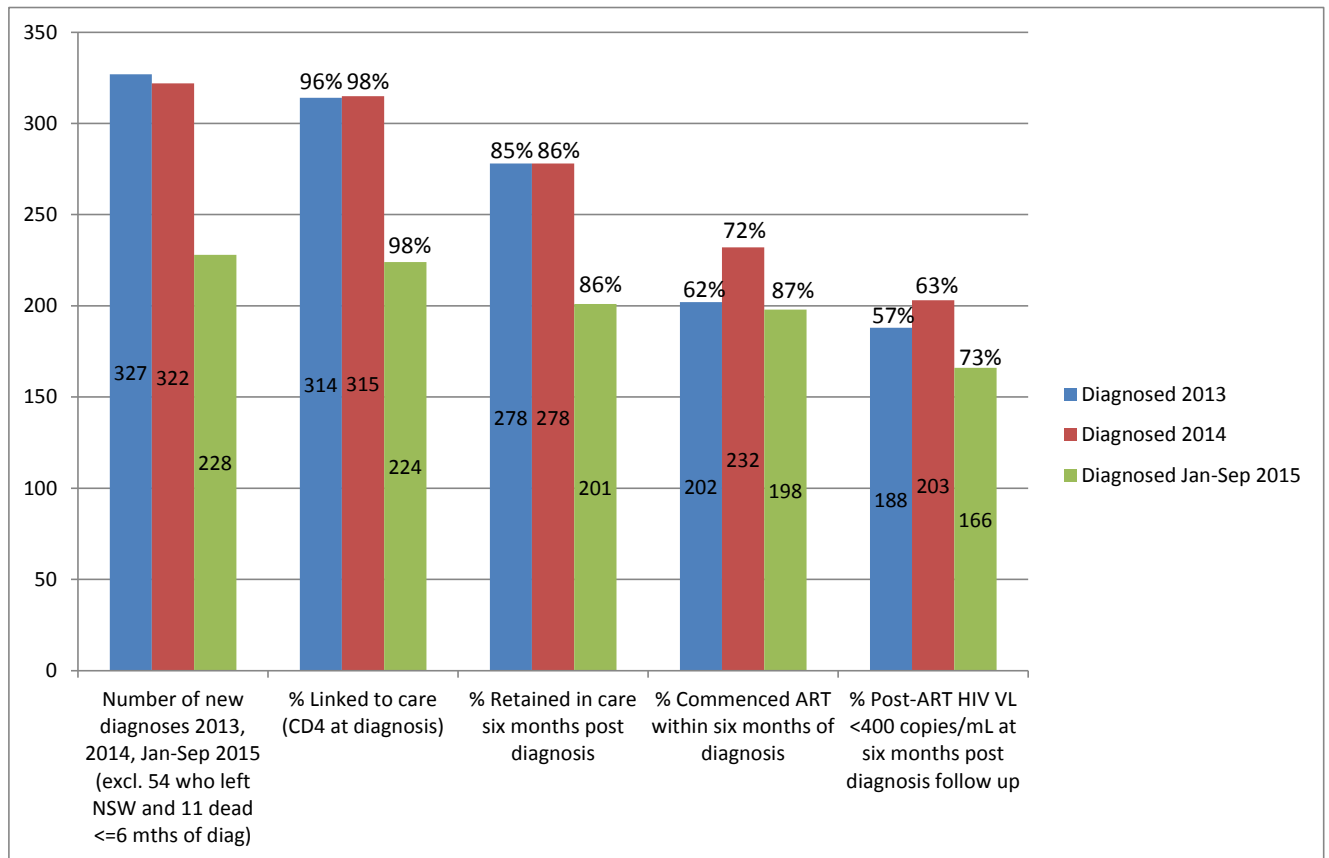
Comment

The proportion of people new diagnosed with a HIV VL of 0-9,999 copies/mL who commenced ART within six months of diagnosis was 38% of the 2013, 53% of the 2014 and 76% of the January to September 2015 new diagnoses cohorts.

The proportion of people new diagnosed with a HIV VL of 10,000-99,999 who commenced ART within six months of diagnosis was 63% of the 2013, 73% of the 2014 and 83% of the January to September 2015 new diagnoses cohorts.

The proportion of people new diagnosed with a HIV VL of 100,000 or over who commenced ART within six months of diagnosis was 73% of the 2013, 81% of the 2014 and 94% of the January to September 2015 new diagnoses cohorts.

Figure 32: HIV care cascade indicators reported six months post diagnosis on 877 of 941 NSW residents newly diagnosed with HIV infection from 1 January 2013 to 30 September 2015



Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Comment

An HIV care cascade was derived from HIV notification and six months post diagnosis follow surveillance data. Of 941 NSW residents newly diagnosed HIV infection 1 January 2013 to 30 September 2015 followed up six months post diagnosis by the time of this report, 54 were known to have moved out of NSW (overseas or interstate) and 11 had died within six months of diagnosis. These 67 new diagnoses were excluded from the HIV care cascade.

Overall of 877 NSW residents newly diagnosed HIV infection 1 January 2013 to 30 September 2015 not known to have left NSW or died within six months of diagnosis, 97% (n=853) were linked to care (CD4 count at diagnosis used as proxy measure); 86% (n=757) were reported to be retained in care six months post diagnosis; 72% (n=632) had commenced ART within six months of diagnosis, and; 64% (n=557) had achieved viral suppression (VL < 400 copies/mL) by six months post diagnosis.

When comparing the 2013, 2014 and the January to September 2015 new diagnoses cohorts, the proportion linked to care and retained in care at six months post diagnosis was similar across the cohorts. The proportion commencing ART within six months of diagnosis increased from 62%, to 72%, to 87% respectively. The proportion achieving viral suppression within six months of diagnosis increased from 57%, to 63% and to 73% respectively.

5. Sustain the virtual elimination of HIV related deaths

5.1 What is the number of deaths for which HIV/AIDS was reported as underlying cause?

Ascertaining the number of deaths due to HIV is complex in an era when people with HIV have access to effective treatment giving them a long life expectancy. People with HIV are subject to the same causes of morbidity and mortality as are people without HIV. Methods to better estimate deaths attributable to HIV are being investigated.

Appendix A: Characteristics of NSW residents notified with newly diagnosed HIV infection 1981 to 31 Mar 2016

| Case characteristics | 1981-2008 | % | 2009 | % | 2010 | % | 2011 | % | 2012 | % | 2013 | % | 2014 | % | 2015 | % | Qtr 1 16 | % | 1981-31/3/16 | % |
|----------------------------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|--------------|------------|
| Gender | 15164 | 100 | 336 | 100 | 305 | 100 | 330 | 100 | 411 | 100 | 353 | 100 | 344 | 100 | 347 | 100 | 84 | 100 | 17674 | 100 |
| Male | 13957 | 92.0 | 295 | 87.8 | 280 | 91.8 | 309 | 93.6 | 374 | 91.0 | 323 | 91.5 | 319 | 92.7 | 318 | 91.6 | 78 | 92.9 | 16253 | 92.0 |
| Female | 930 | 6.1 | 38 | 11.3 | 23 | 7.5 | 21 | 6.4 | 36 | 8.8 | 27 | 7.6 | 24 | 7.0 | 28 | 8.1 | 6 | 7.1 | 1133 | 6.4 |
| Transgender | 30 | 0.2 | 2 | 0.6 | 2 | 0.7 | 0 | 0.0 | 1 | 0.2 | 3 | 0.8 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 40 | 0.2 |
| Unknown | 247 | 1.6 | 1 | 0.3 | 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 | 121 | 0.8 | 9 | 2.7 | 7 | 2.3 | 5 | 1.5 | 12 | 2.9 | 8 | 2.3 | 7 | 2.0 | 6 | 1.7 | 4 | 4.8 | 179 | 1.0 |
| Non-Aboriginal person | 8177 | 53.9 | 315 | 93.8 | 293 | 96.1 | 323 | 97.9 | 393 | 95.6 | 343 | 97.2 | 329 | 95.6 | 337 | 97.1 | 79 | 94.0 | 10589 | 59.9 |
| Not stated | 6866 | 45.3 | 12 | 3.6 | 5 | 1.6 | 2 | 0.6 | 6 | 1.5 | 2 | 0.6 | 8 | 2.3 | 4 | 1.2 | 1 | 1.2 | 6906 | 39.1 |
| Years of age at diagnosis | | | | | | | | | | | | | | | | | | | | |
| 0-4 | 37 | 0.2 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 39 | 0.2 |
| 5-9 | 21 | 0.1 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 1 | 1.2 | 24 | 0.1 |
| 10-14 | 35 | 0.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 36 | 0.2 |
| 15-19 | 268 | 1.8 | 3 | 0.9 | 5 | 1.6 | 6 | 1.8 | 9 | 2.2 | 9 | 2.5 | 2 | 0.6 | 6 | 1.7 | 1 | 1.2 | 309 | 1.7 |
| 20-24 | 1874 | 12.4 | 34 | 10.1 | 29 | 9.5 | 34 | 10.3 | 44 | 10.7 | 37 | 10.5 | 41 | 11.9 | 45 | 13.0 | 8 | 9.5 | 2146 | 12.1 |
| 25-29 | 3046 | 20.1 | 58 | 17.3 | 56 | 18.4 | 55 | 16.7 | 76 | 18.5 | 64 | 18.1 | 52 | 15.1 | 64 | 18.4 | 22 | 26.2 | 3493 | 19.8 |
| 30-34 | 3105 | 20.5 | 42 | 12.5 | 49 | 16.1 | 65 | 19.7 | 71 | 17.3 | 48 | 13.6 | 64 | 18.6 | 61 | 17.6 | 11 | 13.1 | 3516 | 19.9 |
| 35-39 | 2566 | 16.9 | 59 | 17.6 | 43 | 14.1 | 59 | 17.9 | 64 | 15.6 | 42 | 11.9 | 45 | 13.1 | 45 | 13.0 | 10 | 11.9 | 2933 | 16.6 |
| 40-44 | 1821 | 12.0 | 58 | 17.3 | 51 | 16.7 | 44 | 13.3 | 47 | 11.4 | 44 | 12.5 | 45 | 13.1 | 32 | 9.2 | 9 | 10.7 | 2151 | 12.2 |
| 45-49 | 1037 | 6.8 | 30 | 8.9 | 30 | 9.8 | 26 | 7.9 | 38 | 9.2 | 45 | 12.7 | 29 | 8.4 | 26 | 7.5 | 8 | 9.5 | 1269 | 7.2 |
| 50-54 | 607 | 4.0 | 28 | 8.3 | 7 | 2.3 | 25 | 7.6 | 28 | 6.8 | 24 | 6.8 | 26 | 7.6 | 28 | 8.1 | 5 | 6.0 | 778 | 4.4 |
| 55-59 | 327 | 2.2 | 12 | 3.6 | 22 | 7.2 | 10 | 3.0 | 14 | 3.4 | 22 | 6.2 | 15 | 4.4 | 12 | 3.5 | 5 | 6.0 | 439 | 2.5 |
| 60-64 | 182 | 1.2 | 1 | 0.3 | 5 | 1.6 | 2 | 0.6 | 13 | 3.2 | 6 | 1.7 | 14 | 4.1 | 15 | 4.3 | 3 | 3.6 | 241 | 1.4 |
| 65-69 | 92 | 0.6 | 4 | 1.2 | 6 | 2.0 | 2 | 0.6 | 4 | 1.0 | 9 | 2.5 | 7 | 2.0 | 7 | 2.0 | 1 | 1.2 | 132 | 0.7 |
| 70 or over | 58 | 0.4 | 5 | 1.5 | 1 | 0.3 | 2 | 0.6 | 3 | 0.7 | 2 | 0.6 | 3 | 0.9 | 6 | 1.7 | 0 | 0.0 | 80 | 0.5 |
| Unknown | 88 | 0.6 | 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 |

| Reported HIV risk exposure | 1981-2008 | % | 2009 | % | 2010 | % | 2011 | % | 2012 | % | 2013 | % | 2014 | % | 2015 | % | Qtr 1 16 | % | 1981-31/3/16 | % |
|---|--------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|-----------|--------------|--------------|--------------|
| Men who have sex with men (MSM) | 9252 | 61.0 | 221 | 65.8 | 226 | 74.1 | 267 | 80.9 | 320 | 77.9 | 264 | 74.8 | 257 | 74.7 | 261 | 75.2 | 64 | 76.2 | 11132 | 63.0 |
| MSM and person who injects drugs (PWID) | 412 | 2.7 | 17 | 5.1 | 8 | 2.6 | 11 | 3.3 | 14 | 3.4 | 16 | 4.5 | 19 | 5.5 | 21 | 6.1 | 4 | 4.8 | 522 | 3.0 |
| Hetero-sex only | 1216 | 8.0 | 75 | 22.3 | 51 | 16.7 | 41 | 12.4 | 58 | 14.1 | 61 | 17.3 | 49 | 14.2 | 53 | 15.3 | 10 | 11.9 | 1614 | 9.1 |
| PWID | 501 | 3.3 | 12 | 3.6 | 9 | 3.0 | 8 | 2.4 | 10 | 2.4 | 7 | 2.0 | 8 | 2.3 | 4 | 1.2 | 1 | 1.2 | 560 | 3.2 |
| Blood disorder, blood or tissue recipient | 275 | 1.8 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 | 0 | 0.0 | 277 | 1.6 |
| Vertical transmission | 45 | 0.3 | 2 | 0.6 | 1 | 0.3 | 0 | 0.0 | 0 | 0.0 | 1 | 0.3 | 1 | 0.3 | 0 | 0.0 | 1 | 1.2 | 51 | 0.3 |
| Other | 34 | 0.2 | 2 | 0.6 | 1 | 0.3 | 1 | 0.3 | 2 | 0.5 | 1 | 0.3 | 4 | 1.2 | 3 | 0.9 | 1 | 1.2 | 49 | 0.3 |
| Unknown | 3429 | 22.6 | 6 | 1.8 | 9 | 3.0 | 2 | 0.6 | 7 | 1.7 | 3 | 0.8 | 6 | 1.7 | 4 | 1.2 | 3 | 3.6 | 3469 | 19.6 |
| LHD of residence | | | | | | | | | | | | | | | | | | | | |
| South Eastern Sydney | 4658 | 30.7 | 106 | 31.5 | 109 | 35.7 | 123 | 37.3 | 150 | 36.5 | 124 | 35.1 | 112 | 32.6 | 128 | 36.9 | 21 | 25.0 | 5531 | 31.3 |
| Sydney | 2306 | 15.2 | 92 | 27.4 | 76 | 24.9 | 88 | 26.7 | 113 | 27.5 | 87 | 24.6 | 82 | 23.8 | 84 | 24.2 | 23 | 27.4 | 2951 | 16.7 |
| Northern Sydney | 807 | 5.3 | 39 | 11.6 | 19 | 6.2 | 24 | 7.3 | 23 | 5.6 | 25 | 7.1 | 18 | 5.2 | 24 | 6.9 | 6 | 7.1 | 985 | 5.6 |
| Western Sydney | 550 | 3.6 | 21 | 6.3 | 20 | 6.6 | 31 | 9.4 | 25 | 6.1 | 27 | 7.6 | 27 | 7.8 | 21 | 6.1 | 6 | 7.1 | 728 | 4.1 |
| South Western Sydney | 501 | 3.3 | 21 | 6.3 | 25 | 8.2 | 18 | 5.5 | 30 | 7.3 | 33 | 9.3 | 30 | 8.7 | 32 | 9.2 | 7 | 8.3 | 697 | 3.9 |
| Hunter New England | 366 | 2.4 | 16 | 4.8 | 16 | 5.2 | 10 | 3.0 | 14 | 3.4 | 17 | 4.8 | 27 | 7.8 | 17 | 4.9 | 3 | 3.6 | 486 | 2.7 |
| Nepean BM | 229 | 1.5 | 3 | 0.9 | 3 | 1.0 | 4 | 1.2 | 5 | 1.2 | 3 | 0.8 | 6 | 1.7 | 6 | 1.7 | 2 | 2.4 | 261 | 1.5 |
| Illawarra Shoalhaven | 177 | 1.2 | 5 | 1.5 | 8 | 2.6 | 5 | 1.5 | 9 | 2.2 | 7 | 2.0 | 6 | 1.7 | 7 | 2.0 | 3 | 3.6 | 227 | 1.3 |
| Northern NSW | 150 | 1.0 | 5 | 1.5 | 8 | 2.6 | 11 | 3.3 | 5 | 1.2 | 5 | 1.4 | 7 | 2.0 | 7 | 2.0 | 2 | 2.4 | 200 | 1.1 |
| Central Coast | 154 | 1.0 | 5 | 1.5 | 5 | 1.6 | 4 | 1.2 | 10 | 2.4 | 5 | 1.4 | 8 | 2.3 | 5 | 1.4 | 4 | 4.8 | 200 | 1.1 |
| Mid North Coast | 110 | 0.7 | 6 | 1.8 | 3 | 1.0 | 4 | 1.2 | 3 | 0.7 | 6 | 1.7 | 7 | 2.0 | 6 | 1.7 | 0 | 0.0 | 145 | 0.8 |
| Western NSW | 94 | 0.6 | 3 | 0.9 | 4 | 1.3 | 3 | 0.9 | 7 | 1.7 | 5 | 1.4 | 2 | 0.6 | 2 | 0.6 | 1 | 1.2 | 121 | 0.7 |
| Murrumbidgee-Albury | 63 | 0.4 | 2 | 0.6 | 7 | 2.3 | 2 | 0.6 | 5 | 1.2 | 3 | 0.8 | 3 | 0.9 | 4 | 1.2 | 2 | 2.4 | 91 | 0.5 |
| Southern NSW | 32 | 0.2 | 6 | 1.8 | 1 | 0.3 | 2 | 0.6 | 8 | 1.9 | 4 | 1.1 | 4 | 1.2 | 2 | 0.6 | 2 | 2.4 | 61 | 0.3 |
| Far West | 4 | 0.0 | 2 | 0.6 | 0 | 0.0 | 0 | 0.0 | 2 | 0.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 8 | 0.0 |
| Unknown or other | 4963 | 32.7 | 4 | 1.2 | 1 | 0.3 | 1 | 0.3 | 2 | 0.5 | 2 | 0.6 | 5 | 1.5 | 2 | 0.6 | 2 | 2.4 | 4982 | 28.2 |
| Total | 15164 | 100.0 | 336 | 100.0 | 305 | 100.0 | 330 | 100.0 | 411 | 100.0 | 353 | 100.0 | 344 | 100.0 | 347 | 100.0 | 84 | 100.0 | 17674 | 100.0 |

Data source: Notifiable Conditions Information Management System, Health Protection NSW, extracted 11 May 2016

Appendix B: Ending HIV Seven Statements Evaluation, ACON 2015

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

| Percentage of respondents who strongly agree or agree with the statements below. | | | | | | | |
|--|------------------------|------------------------|------------------------|--------------------------|------------------------|------------------------|-----|
| 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) | +/- |
| Everything has changed, we can now dramatically reduce HIV transmission | 48% | 59% | 59% | 67% | 61% | 71% | +23 |
| Now more than ever, gay men need to know their HIV status | 81% | 85% | 86% | 90% | 89% | 91% | +10 |
| Sexually active gay men should take an HIV test at least twice a year | 88% | 87% | 92% | 93% | 89% | 92% | +4 |
| HIV treatments now offer increased health benefits and fewer side effects | 65% | 66% | 67% | 73% | 69% | 75% | +10 |
| HIV treatments significantly reduce the risk of passing on HIV | 33% | 42% | 50% | 64% | 59% | 69% | +36 |
| Early HIV treatment is better for your health and can help protect your sex partners | 74% | 80% | 89% | 91% | 92% | 93% | +19 |
| Condoms continue to be the most effective way of preventing HIV transmission | 95% | 92% | 92% | 91% | 91% | 85% | -10 |

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.