

NSW HIV Strategy 2012 – 2015

Quarter 1 2014 Data Report



Executive Summary

The *NSW HIV strategy 2012–2015: A New Era* was launched in December 2012 and includes major changes in the way that HIV is detected, treated and prevented in NSW, as well as improved support for people at the time of their HIV diagnosis and throughout their life.

Recent evidence suggests that combination antiretroviral (ART) treatment can offer improved health benefits for people living with HIV and the potential to dramatically reduce the risk of passing on HIV. This makes treatment a critical part of HIV prevention. Gaining the optimal benefit in NSW relies on early detection of HIV through increased HIV testing, early provision of ART treatment for people diagnosed with HIV, and support for treatment adherence to achieve undetectable viral load.

In brief, the 2015 targets of the NSW HIV Strategy are to:

- Reduce HIV transmission by 60% among men who have sex with men.
- Reduce heterosexual transmission of HIV and transmission of HIV among Aboriginal populations by 50%
- Sustain the virtual elimination of mother to child transmission of HIV
- Sustain the virtual elimination of HIV transmission in the sex industry
- Sustain the virtual elimination of HIV among people who inject drugs
- Reduce the average time between HIV infection and diagnosis
- Increase to 90% the proportion of people living with HIV on ART
- Sustain the virtual elimination of HIV related deaths

The range of activities NSW health is engaged in to meet these targets and current progress is summarised in the NSW HIV Snapshot: *Link to 2nd edition Snapshot be inserted before publication*

To monitor progress in meeting the targets set by the Strategy, a range of data sources have been identified and a strategy for data collection, analysis and reporting is in place.

In Quarter 1 2014,

- 103 people newly diagnosed with HIV in NSW were notified, a 32% increase on notifications in the first quarter of 2013 and 8% decrease compared to notifications in the first quarter of 2012. Of these 103 notifications, 87(84%) were in men who have sex with men, compared to 79% in quarter 1, 2013 and 82% in quarter 1, 2012.
- 55% of NSW residents newly diagnosed with HIV infection had evidence of early stage infection, a higher proportion than that reported for new diagnoses in the same quarter in 2013 (40%) and 2012 (48%)
- HIV testing continued to increase both overall in NSW, and among high risk populations. Of note testing increased particularly in key inner city Sydney areas.
- Data from public sexual health and HIV clinics indicate 88% of people living with HIV who attended these services in the year ending 31 March 2014 were on antiretroviral treatment.

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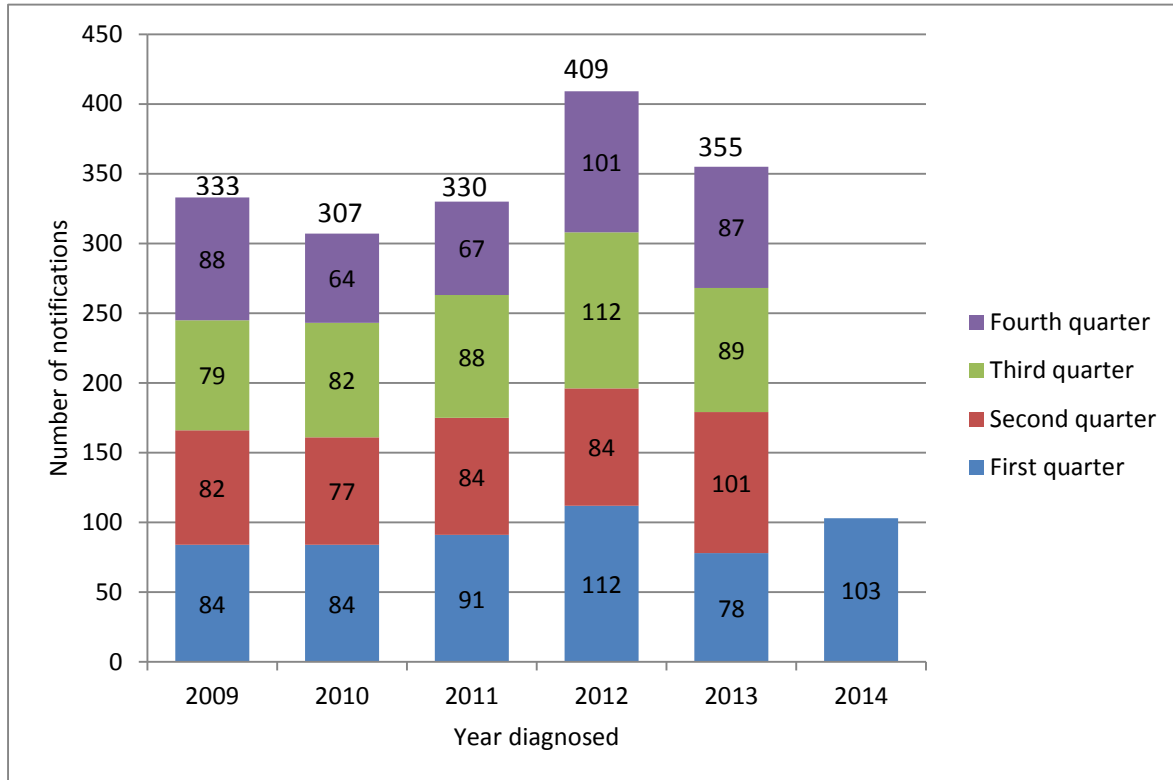
Glossary of Terms

ART	Antiretroviral treatment
HIV	Human Immunodeficiency Virus
LHD	Local Health District
MSM	Men who have sex with men
NSP	Needle and syringe program
NSW	New South Wales
PWID	People who inject drugs
PFSHC	Publicly Funded Sexual Health Clinic
SGCPS	Sydney Gay Community Periodic Survey

1. Reduce HIV transmission

1.1 How many cases are notified?

Figure 1: Number of NSW residents newly diagnosed with HIV infection per quarter and notified to NSW Health, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Comment

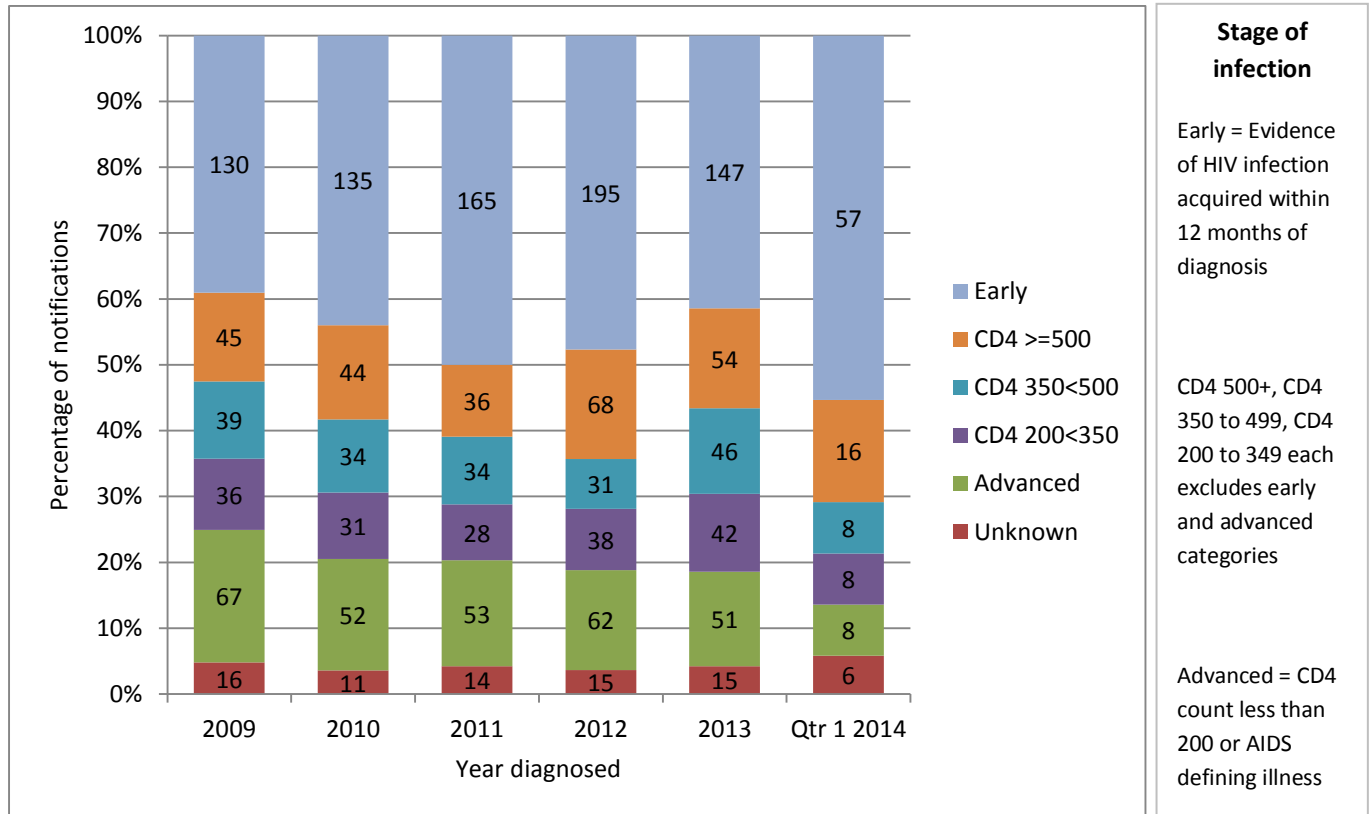
In the period 01 January 2014 to 31 March 2014, 103 NSW residents were newly diagnosed with HIV infection and notified to NSW Health (Figure 1). This was a 32 per cent (%) increase compared with the first quarter 2013 and an 8% decrease compared with the first quarter 2012.

Of these 103, 87 (84%) self-reported as being men who have sex with men (MSM). This is a slightly greater proportion compared with 62 of 78 (79%) new diagnoses first quarter 2013, and 92 of 112 (82%) in first quarter 2012. This may reflect an impact of recent HIV testing strategies which have targeted MSM, though more data in the coming quarters is needed to determine if there is any true trend change over time.

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 give an indication as to the timeliness of diagnosis.

Figure 2: Number and percentage of HIV notifications by stage of infection at diagnosis¹, 1 January 2009 to 31 March 2014



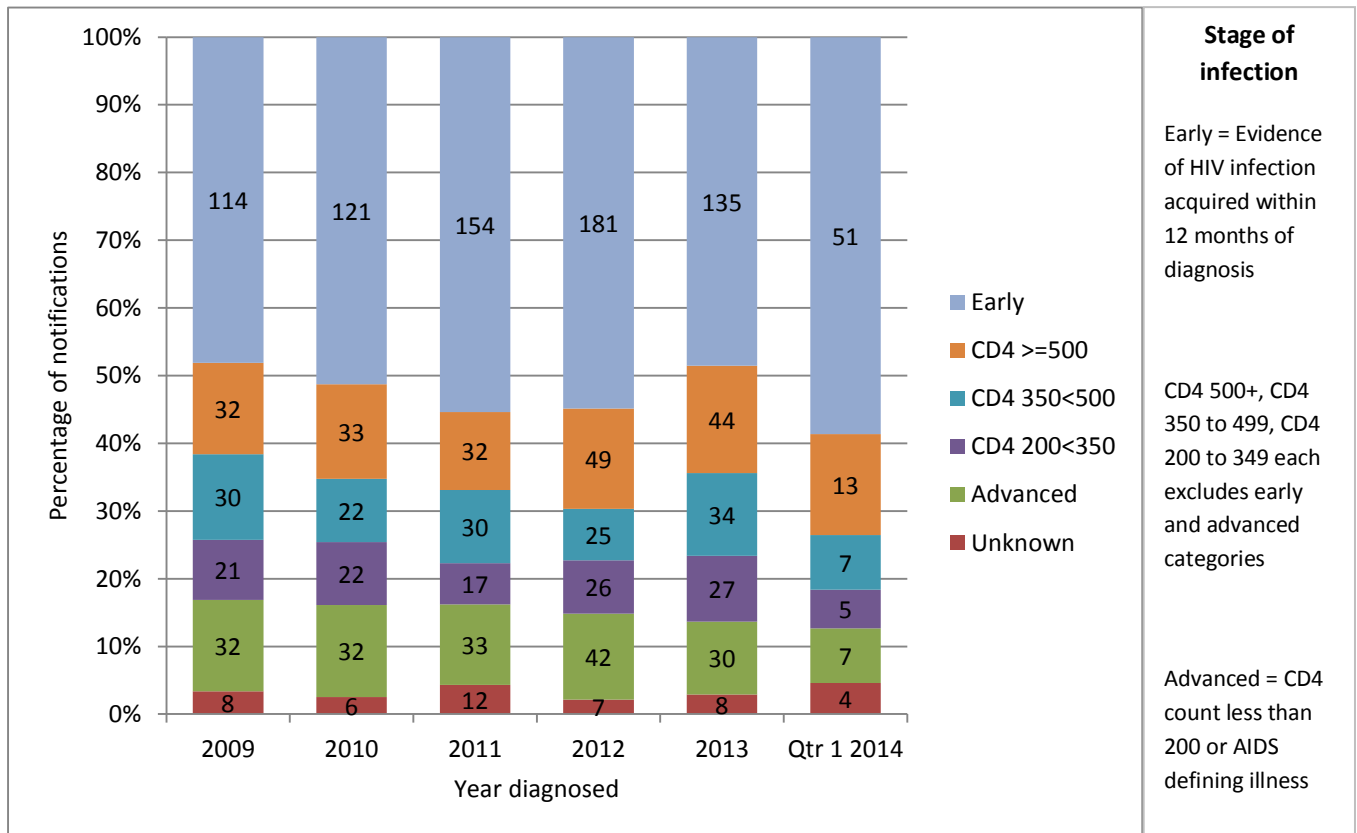
Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

¹Evidence of early stage infection was defined as notification of a sero conversion 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 first quarter 2014, 57 of 103 (55%) NSW residents newly diagnosed with HIV infection presented with evidence of early stage infection, which was a higher proportion compared with the first quarters of previous five years 2009 to 2013 (44%, 42%, 53%, 48% and 40% respectively). It was also higher than for full years 2009 to 2013 (39%, 44%, 50%, 48% and 41% respectively) (Figure 2).

Figure 3: Number and percentage of HIV notifications in MSM by stage of infection at diagnosis¹, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

¹Evidence of early stage infection was defined as notification of a sero-conversion illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or presentation with an AIDS defining illness at diagnosis

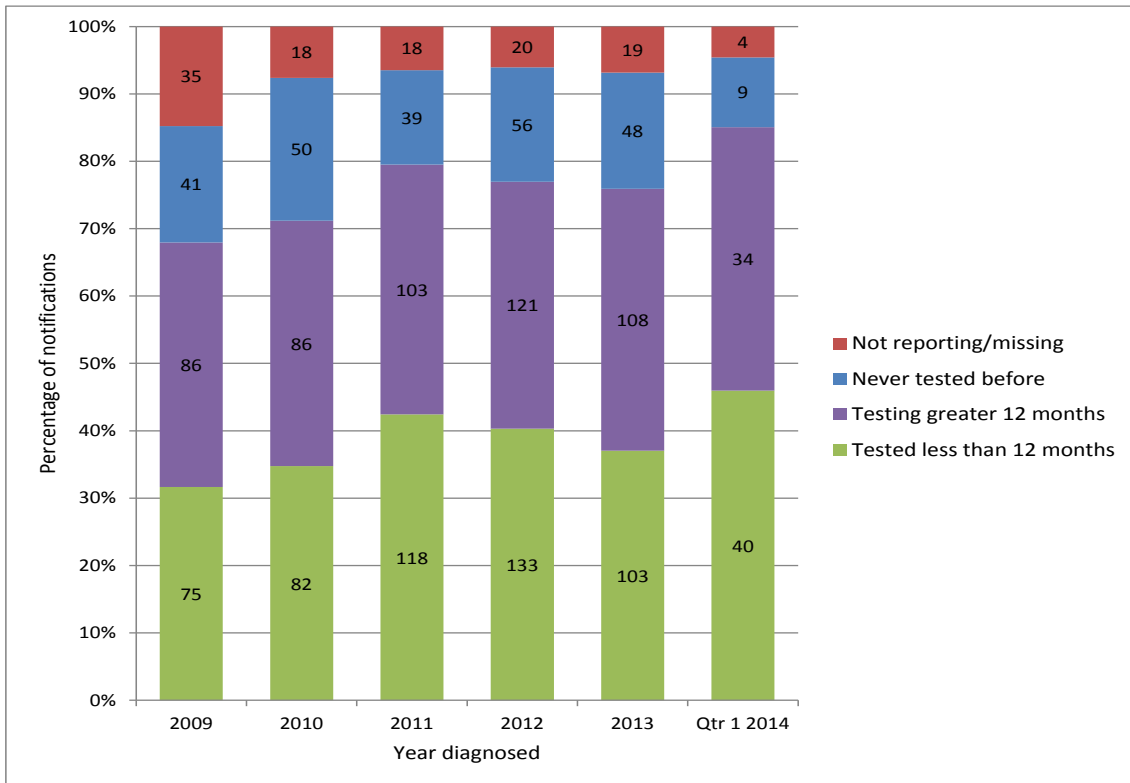
Comment

When examining stage of infection at diagnosis among newly diagnosed MSM in first quarter 2014, 51 of 87 (59%) presented with evidence of early stage infection, which was a higher proportion compared with the first quarters of the previous five years 2009 to 2013 for MSM (48%, 51%, 57%, 54% and 45% respectively) (Figure 3). It was also higher than for the full years of 2009 to 2013 (48%, 51%, 55%, 55% and 49% respectively).

One of the aims of the HIV testing strategies implemented by NSW is to achieve more timely diagnosis of people infected with HIV, so as to link them with appropriate care and treatment as soon as possible and identify and trace all contacts in a timely manner, to reduce the opportunity for ongoing transmission and new infections.

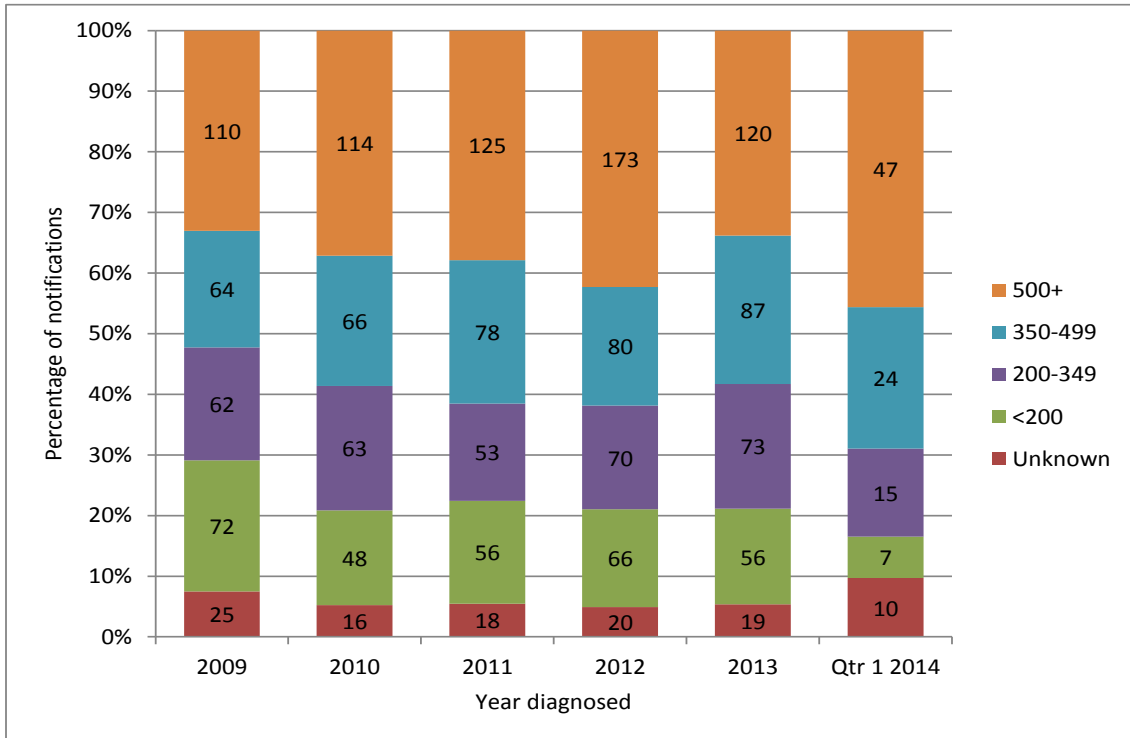
The higher proportion of cases in early stage infection, combined with the data showing increased testing in MSM, suggests that the increase in new diagnoses in quarter 1 2014 reflects earlier diagnoses in newly acquired cases rather than an increase in incidence. However, more data in the coming quarters is needed to determine if there is any true trend change over time.

Figure 4: Number and proportion of HIV notifications in MSM by HIV testing history, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Figure 5: Number and percentage of HIV notifications by CD4 count cells/ μ L category, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Comment

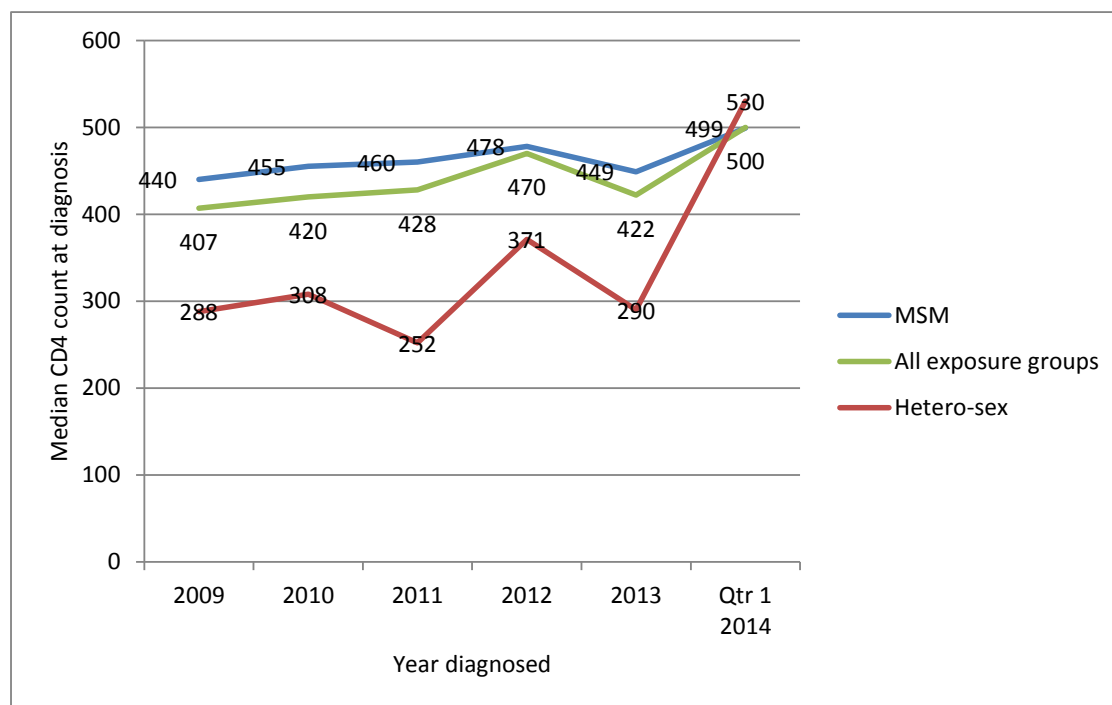
Among NSW residents newly diagnosed with HIV in first quarter 2014, 22 (21%) had a CD4 count less than (<) 350 cells/ μ L at diagnosis, an indicator for late diagnosis. This is a lower proportion with a CD4 < 350 compared with the first quarters of the previous five years 2009 to 2013 (32%, 35%, 35%, 39% and 35% respectively) (Figure 5, Table 1).

Table 1: Number of HIV notifications by CD4 count (cells/ μ L), 1 January 2009 to 31 March 2014

Diagnosed	Unknown	<200	200-349	350-499	500+	Total
2009	25 (8%)	72 (22%)	62 (19%)	64 (19%)	110 (33%)	333
2010	16 (5%)	48 (16%)	63 (21%)	66 (21%)	114 (37%)	307
2011	18 (5%)	56 (17%)	53 (16%)	78 (24%)	125 (38%)	330
2012	20 (5%)	66 (16%)	70 (17%)	80 (20%)	173 (42%)	409
2013	19 (5%)	56 (16%)	73 (21%)	87 (25%)	120 (34%)	355
Qtr 1 2014	10 (10%)	7 (7%)	15 (15%)	24 (23%)	47 (46%)	103
Total	108 (6%)	305 (17%)	336 (18%)	399 (22%)	689 (38%)	1837

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014.

Figure 6: Median CD4 count of all HIV notifications and for the two major risk groups, 1 January 2008 to 31 March 2014

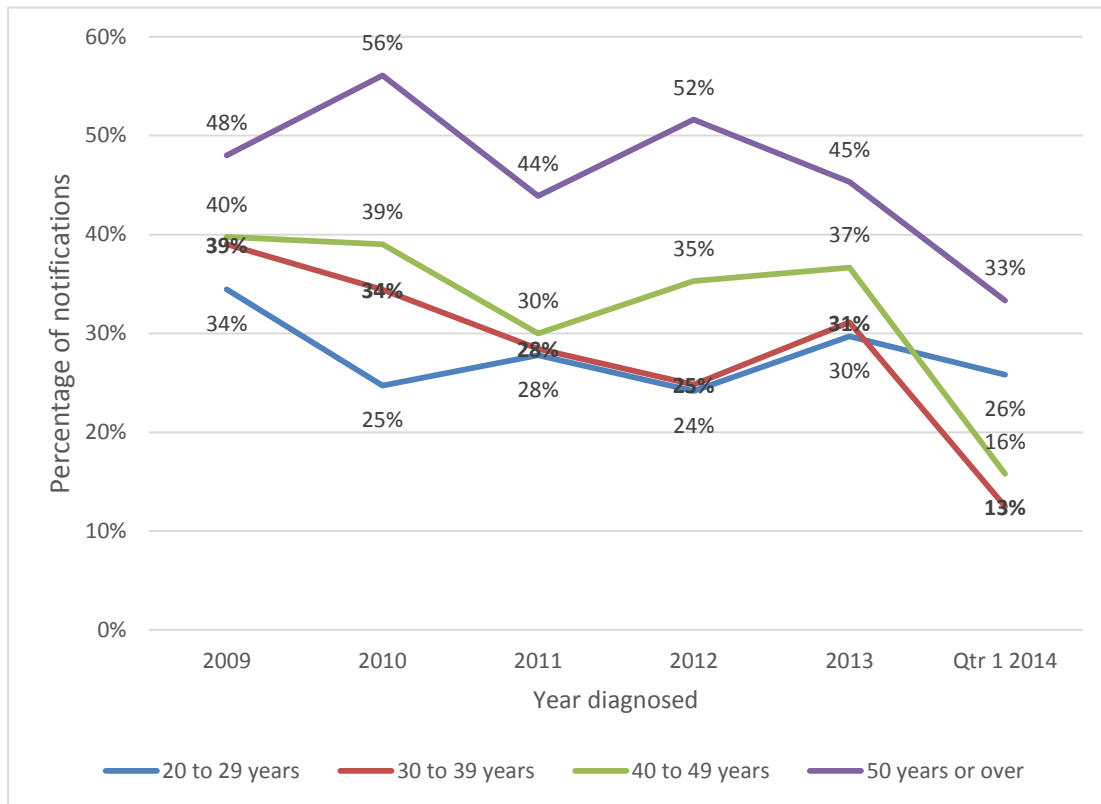


Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014.

Comment

The median CD4 count for NSW residents newly diagnosed with HIV infection in the first quarter of 2014 appears elevated, for all cases combined and for MSM (Figure 6). The increase in median CD4 among those newly diagnosed reporting heterosexual contact as their HIV risk factor, is due to very small numbers for the quarter. A slightly higher median CD4 count at diagnosis for MSM may again reflect earlier, more timely diagnosis, an objective of HIV testing strategies.

Figure 7: Percentage of HIV notifications with clinical or immunological evidence of late diagnosis¹ by age group, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

¹Clinical or immunological evidence of a late diagnosis included a CD4 count less than 350 or an AIDS defining illness within three months of diagnosis, in the absence of evidence of a laboratory confirmed negative or indeterminate HIV test in the 12 months prior to diagnosis. Please note: this definition of “late” has changed and tightened since the 2013 fourth quarter and annual report.

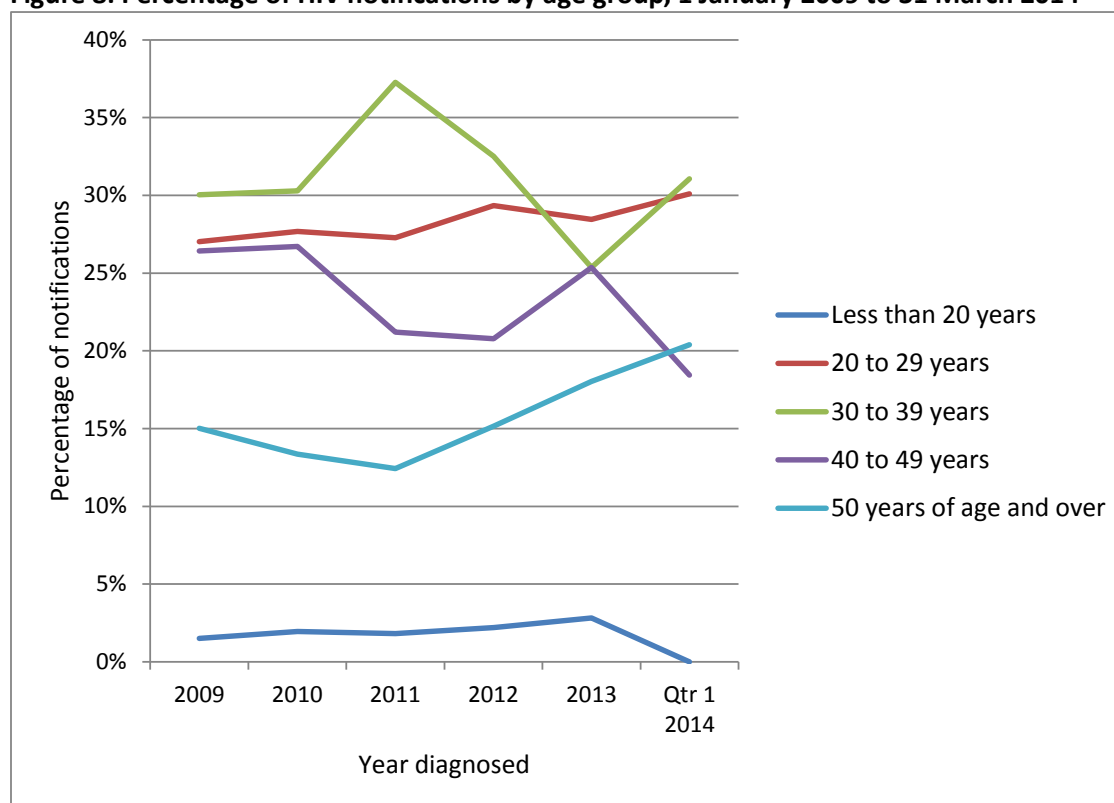
Comment

In general, the data shows that the older the age group, the greater is the proportion of newly diagnosed people within that age group with clinical or immunological evidence of late diagnosis (Figure 7). The age category “less than 20 years” was excluded from Figure 7 due to very low numbers. The 50 years and over age group has a higher proportion of people with evidence of late diagnosis compared with younger age groups. However, in the first quarter 2014, compared with the years 2009 to 2013, in all age groups shown, including the 50 years of age and over age group, the proportion of people newly diagnosed presenting with evidence of late stage diagnosis was lower. This again, may reflect a positive impact of HIV testing strategies.

1.3 Which groups are being notified?

With respect to gender, 101 (98%) of 103 NSW residents newly diagnosed with HIV infection in the first quarter 2014 were male and only 2 (2%) were female (See Appendix A).

Figure 8: Percentage of HIV notifications by age group, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Comment

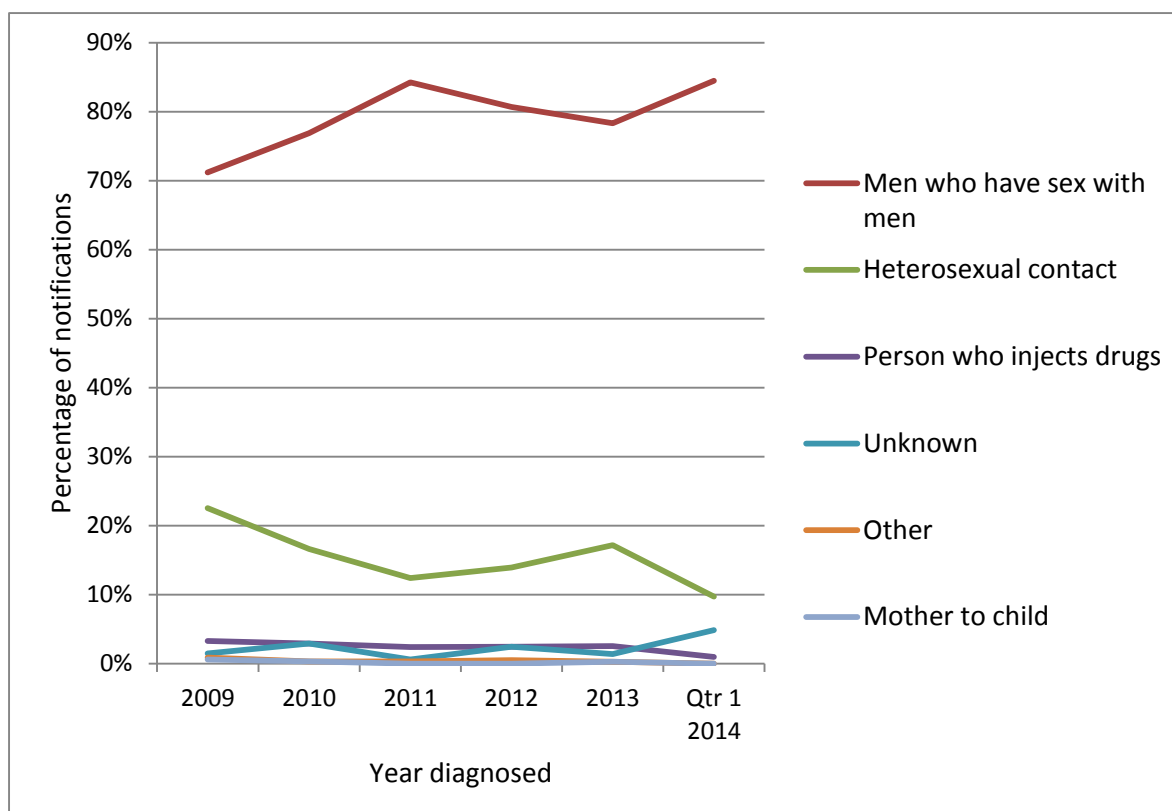
With respect to age at HIV diagnosis, of 103 NSW residents newly diagnosed with HIV infection in the first quarter 2014, none were less than 20 years of age, 31 (30%) were 20 to 29 years, 32 (31%) were 30 to 39 years, 19 (18%) were 40 to 49 years and 21 (20%) were 50 years or over (Figure 8, Table 2).

Table 2: Number and per cent of HIV notifications by age group, 1 January 2009 to 31 March 2014

Diagnosed	Less than 20	20 to 29 years	30 to 39 years	40-49 years	50 years+	Total
2009	5 (2%)	90 (27%)	100 (30%)	88 (26%)	50 (15%)	333
2010	6 (2%)	85 (28%)	93 (30%)	82 (27%)	41 (13%)	307
2011	6 (2%)	90 (27%)	123 (37%)	70 (21%)	41 (12%)	330
2012	9 (2%)	120 (29%)	133 (33%)	85 (21%)	62 (15%)	409
2013	10 (3%)	101 (28%)	90 (25%)	90 (25%)	64 (18%)	355
Qtr 1 2014	0 (%)	31 (30%)	32 (31%)	19 (18%)	21 (20%)	103
Total	36 (2%)	517 (28%)	571 (31%)	434 (24%)	279 (15%)	1837

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Figure 9: Percentage of HIV notifications by risk exposure category, 1 January 2009 to 31 March 2014



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Among the 103 NSW residents newly diagnosed with HIV infection in the first quarter of 2014, 87 (84%) reported being MSM, 10 (10%) reported acquiring HIV through heterosexual sex, 1 (1%) were PWID and 5 (5%) had unknown exposure to HIV (Figure 9, Table 3). The proportion of people newly diagnosed reported as MSM in the first quarter 2009 to 2013 were 82%, 75%, 87%, 82% and 79% respectively.

Table 3: Number and percentage of HIV notifications by reported HIV risk exposure, 1 January 2009 to 31 March 2014

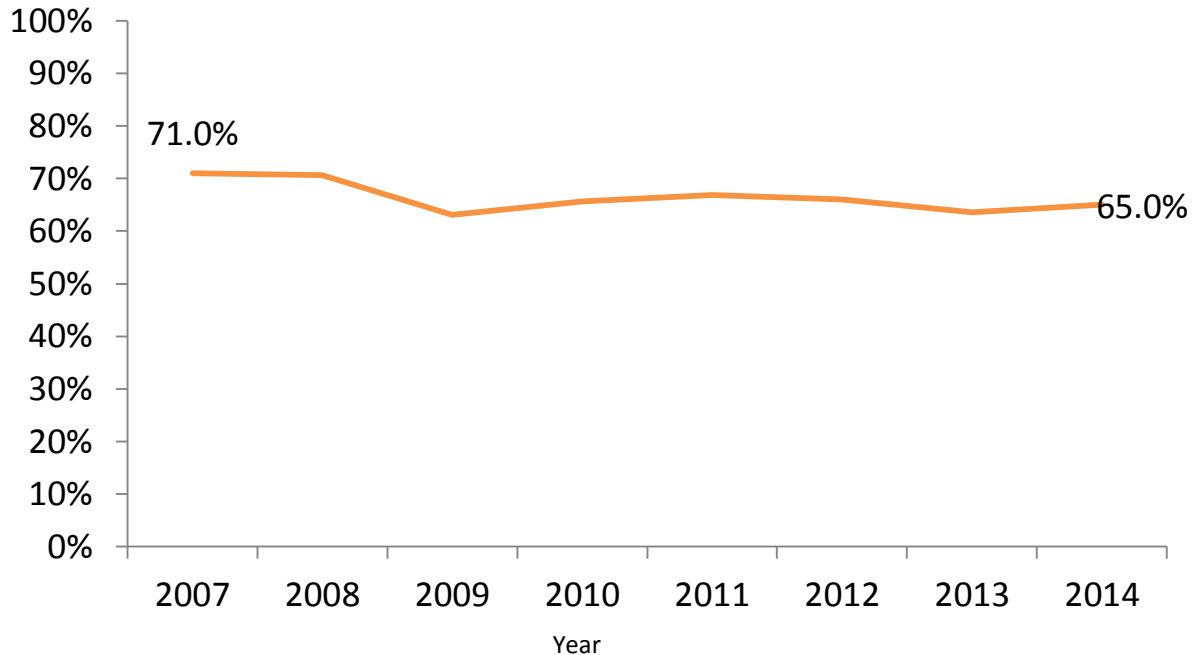
Diagnosed	MSM	Hetero-sex	PWID	Unknown	Other	MTC	Total
2009	237 (71%)	75 (23%)	11 (3%)	5 (2%)	3 (1%)	2 (1%)	333
2010	236 (77%)	51 (17%)	9 (3%)	9 (3%)	1 (0%)	1 (0%)	307
2011	278 (84%)	41 (12%)	8 (2%)	2 (1%)	1 (0%)	(0%)	330
2012	330 (81%)	57 (14%)	10 (2%)	10 (2%)	2 (0%)	(0%)	409
2013	278 (78%)	61 (17%)	9 (3%)	5 (1%)	1 (0%)	1 (0%)	355
Qtr 1 2014	87 (84%)	10 (10%)	1 (1%)	5 (5%)	(0%)	(0%)	103
Total	11124 (65%)	1536 (9%)	551 (3%)	3450 (20%)	318 (2%)	45 (0%)	17024

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014.

2. Maintain safe behaviour

2.1 How many men who have sex with men use condoms with casual sex partners?

Figure 10: Condom use reported by MSM with casual sexual partners in NSW, 2007-2014



Data source: Sydney Gay Community Periodic Survey (February, 2014)

The February 2014 figure represent behaviour in the previous 6 months and are therefore reflective of behaviours in the latter part of 2013.

Among gay men with casual sexual partners surveyed, 65% reported practicing safe sex¹. Safe sex among gay men with casual male partners has remained stable since 2009. Other NSW surveys to assess condom use at the population level will be conducted in early 2014 (see appendix B).

2.2 How accessible are NSP services in NSW?

There are 1029 NSP outlets located across NSW including 346 primary and secondary NSPs, 496 pharmacies and 187 Automatic Dispensing Machines (ADMs) and Internal Dispensing Chutes (IDCs). This represents an increase of 57 additional outlets (5%) across NSW compared to the same period in 2012. 2013/2014 data for NSW NSP outlets will be available as of 1 July 2014. This will be presented in the Quarter 2 2014 HIV Data Report.

3,027,529 units of injecting equipment were distributed in NSW in quarter 1 2014. This represents an increase of 98,462 additional units (3%) compared with the same period in 2013.

Data source: NSP Data Collection

¹ Practicing safe sex is defined as always protected or avoided anal sex

2.3 How many people are using new injecting equipment in NSW?

According to the Australian NSP Survey National Data report, the proportion of People Who Inject Drugs (PWID) in NSW who reported using only new injecting equipment in the past month increased slightly between 2008 and 2012 from 79% to 83% respectively.

In 2013, the first annual NSW NSP Enhanced Data Collection survey was conducted. The purpose of the survey is to collect NSP client demographic, behavioral 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. In 2013, among all respondents surveyed, 20% reported receptive sharing of injecting equipment in the last month. The next data point for this survey is due in May 2014. This will be presented in the Quarter 2 2014 HIV Data Report.

Data source: New South Wales NSP Enhanced Data Collection 2013 and Australian NSP Survey National Data report

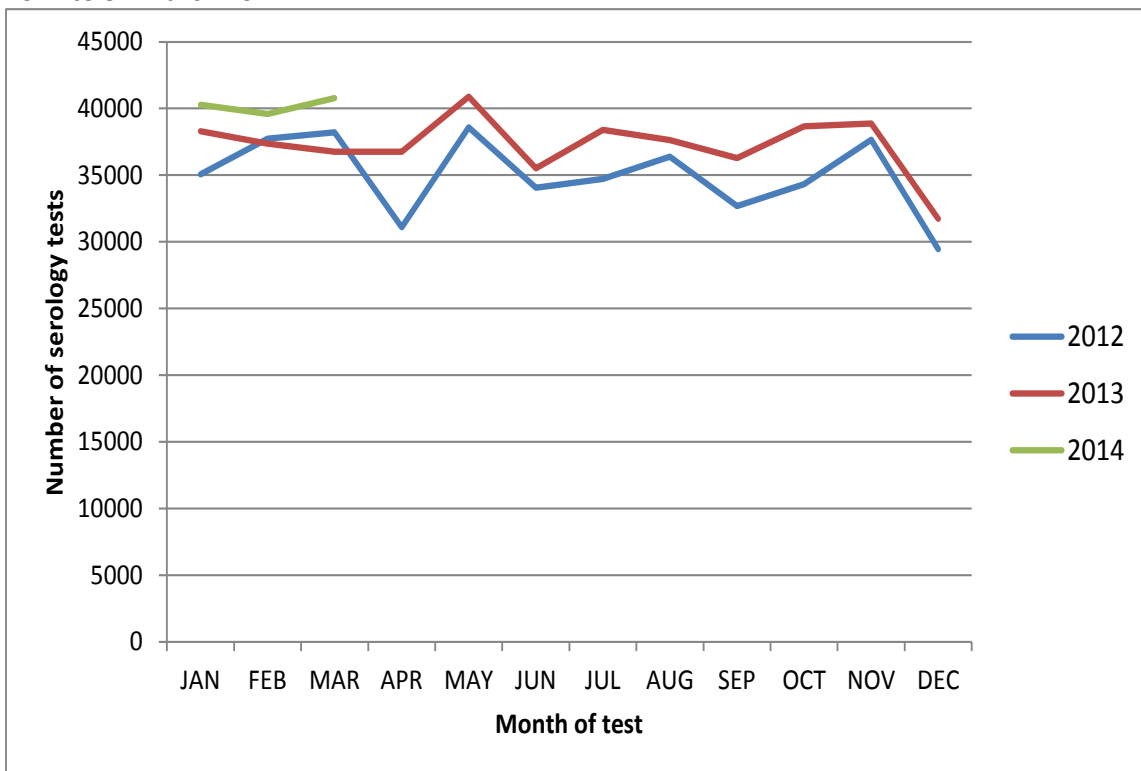
3. Increase HIV testing

3.1 Is HIV testing increasing in NSW?

3.1.1 NSW overall

In 2012, NSW Health commenced a project to collate 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 11: Number of HIV serology tests performed at 15 NSW laboratories per month, 1 January 2012 to 31 March 2014



Date source: NSW denominator data project

Comment

In the first quarter of 2014, there were 120,658 HIV serology tests performed in 15 laboratories in NSW, up from 110,994 in the first quarter of 2012 (a 9% increase) and 112,441 in the first quarter 2013 (a 7% increase) (Figure 11).

3.1.2 Local Health Districts

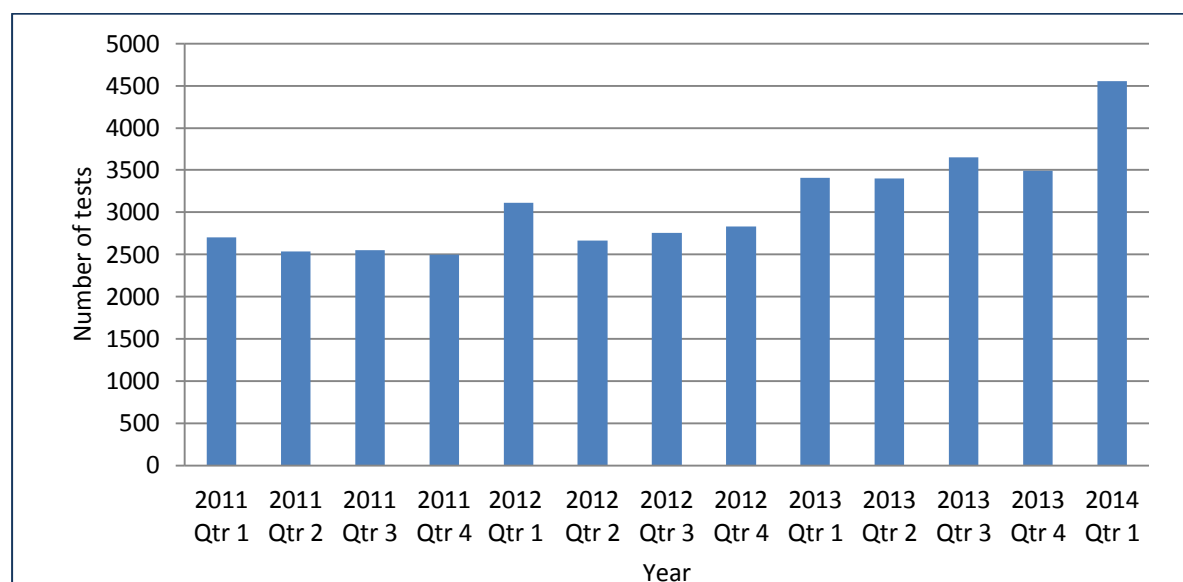
Data on HIV testing is available from Publicly Funded Sexual Health Clinics (PFSHCs) in all LHDs however the time periods and the type of data is not uniform due to different data management systems. Key differences in the availability of data are summarised in Table 4.

Table 4: Summary of testing data availability from Publicly Funded Sexual Health Clinics in NSW

	Total number of HIV tests and positivity per quarter	Number of HIV tests and positivity per quarter by priority population
	<i>Available from</i>	<i>Available from</i>
South Eastern Sydney LHD	January 2011	July 2013
Western Sydney LHD Nepean Blue Mountains LHD North Sydney LHD Northern NSW LHD Illawarra Shoalhaven LHD	January 2011	January 2011
All other LHDs	July 2013	July 2013

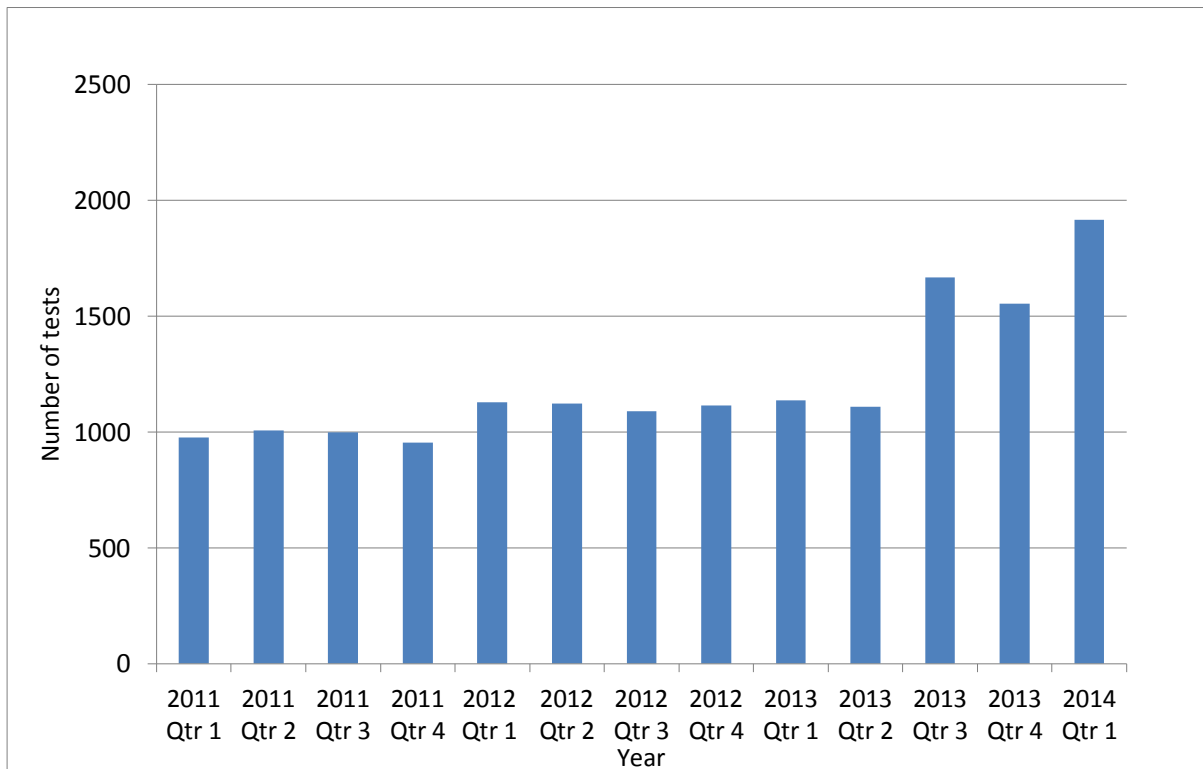
Figure 12 and 13 display the number of HIV tests done in PFSHCs between 1 January 2011 and 31 March 2014 in LHDs where this data is available (Table 4). Both rapid HIV testing and HIV serology are included. Figure 12 displays data from South Eastern Sydney LHD and Figure 13 displays aggregated data from Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs.

Figure 12: Number of HIV tests performed in South Eastern Sydney Local Health District Publicly Funded Sexual Health Clinics, January 2011 to March 2014



Data source: South Eastern Sydney Local Health District

Figure 13: Number of HIV tests performed in five Local Health District Publicly Funded Sexual Health Clinics, January 2011 to March 2014



Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs

Comment

In PFSHCs in South Eastern Sydney LHD and 5 LHDs with smaller numbers of high risk populations (Figures 12 & 13), there have been year on year increases in the number of HIV tests performed. In the first quarter of 2014, overall HIV testing increased by 33% compared with average number of tests per quarter in 2013.

In Quarter 1 2014, 8,837 HIV tests were done in all PFHSCs in NSW. When services which did not previously provide testing data are excluded, this represents an increase of 21% compared to quarter 3 2013 and 23% compared to quarter 4 2013.²

Data from NSW laboratories and PFSHCs indicate that in Quarter 1 2014 HIV testing increased both overall in NSW and among high risk populations. Testing increased particularly in key inner Sydney city areas, continuing trends from previous quarters. To reduce the number of undiagnosed HIV infections in the community, populations with ongoing risk of HIV infection need to continue to engage in frequent HIV testing.

² Data unavailable from St George and Prince of Wales Hospitals (South Eastern Sydney LHD), South West Sydney LHD and St Vincent's Hospital in Quarter 3 2013, and from St George and Prince of Wales Hospitals (South Eastern Sydney LHD) and St Vincent's Hospital in Quarter 4 2013.

3.2 Where is HIV testing being done?

Apart from PFSHCs, HIV testing takes place in a range of other clinical and community settings (see 3.4). A large proportion of testing occurs in the private sector, especially in general practice. A better understanding of HIV testing practices in different clinical settings including drug and alcohol services and maternity services will be possible from early 2014 when new laboratory based reporting systems are in place.

3.2.1 General practice

Table 5 display the number of HIV tests done and positivity for 3 clinics with high caseloads of men who have sex with men (MSM) clients located in South Eastern Sydney LHD between 1 January 2012 and 31 March 2014.

Table 5: HIV testing and positivity among general practice clinics with high caseloads of MSM

Year	Q	Total tests*	Men test- ed~	Positives	Positivity
2012	1	1807	1720	26	1.5%
	2	1553	1464	25	1.7%
	3	1639	1559	36	2.3%
	4	1612	1556	35	2.3%
	Total	6611	4938	122	2.5%
2013	1	1732	1651	32	1.9%
	2	1656	1569	26	1.7%
	3	1847	1744	26	1.5%
	4	1775	1687	16	1.0%
	Total	7010 (+6%)	5174 (+5%)	100 (-18%)	1.9 (-0.6%)
2014	1	1943	1885	18	1.0%

*Raw number of tests per time period

~Unique men tested per time period

Data source: eTEST study (2014)

Comment

In three general practice clinics with high caseloads of MSM located in South East Sydney LHD, there have been an overall 6% increase in HIV testing, and a 5% increase among male clients in 2013 compared 2012. In the first quarter of 2014, HIV testing increased by 11% overall and by 13% among men compared with average number of tests per quarter in 2013.

3.2.2 Survey data

Table 6: Location of last HIV test among HIV-negative and untested/unknown status who were tested in the past 12 months

Where last HIV test took place	n	%
GP	635	48.8%
Clinic/hospital	526	40.4%
Community based ACON aTEST	113	8.7%
Other	27	2.1%
Total	1955	100%

Data source: Sydney Gay Community Periodic Survey (February 2014)

Comment

The majority of gay men surveyed who reported having an HIV test in the past 12 months, reported that their last HIV tests took place in general practice or a public hospital service, 48.8% and 40.4% respectively.³ Data collection in the survey on community based services commenced in 2013. Future reports will provide comment on witnessed trends regarding these data.

3.3 Who is being tested for HIV?

3.3.1 LHD data

To reduce the pool of undiagnosed HIV infection, testing should be targeted to high risk populations. Table 7 summarises the available data from PFSHCs on HIV testing in priority population groups. In the 5 LHDs for which historic data is available, HIV testing numbers for all priority populations in quarter 1 2014 was higher than the average number of tests per quarter in 2013.

Table 7: Summary of data on HIV testing in priority populations, Publicly Funded Sexual Health Clinics, NSW

Priority Population	% of HIV tests in <u>all</u> PFSHCs, Quarter 1 2014*	Number of tests in Q 1 2014 in PFSHCs in <u>5</u> LHDs [#]	% increase from quarterly average in 2013 in PFSHCs in <u>5</u> LHDs [#]
Men who have sex with men (MSM)	54%	746	33%
Sex workers [^]	15%	290	29%
People who inject drugs (PWID) [^]	7%	141	99% [©]
Aboriginal people ^x	4%	95	37% [~]

*Excludes Central Coast LHD who were unable to provide testing data by priority population for this quarter.

[#]These LHDs had data available for the whole period of interest (Table 2)

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

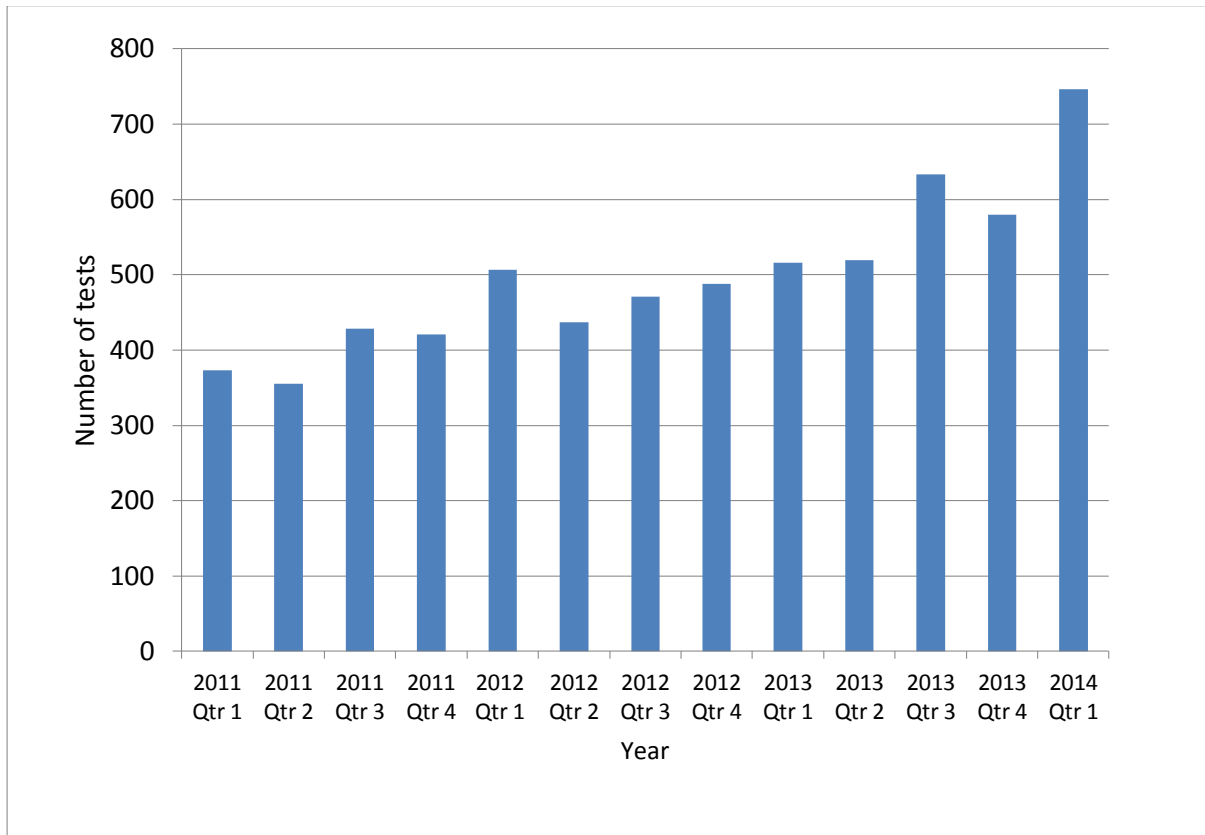
[©]Large increase in part due to improved data collection

[~]Large increase in Western Sydney LHD

^x also excludes data from Northern NSW and Mid North Coast LHDs who were unable to provide testing data by Aboriginality for this quarter

³ excludes HIV-positive men and men who said they hadn't been tested for HIV

Figure 14: Number of HIV tests performed in men who have sex with men (MSM) in five Local Health District Publicly Funded Sexual Health Clinics, 1 January 2011 to 31 March 2014



Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs

Comment

In PFSHCs in 5 LHDs where longer term trend data is available (Table 4), there have been consistent increases in the number of HIV tests done in MSM (Figure 14). In Quarter 1 2014, there were 746 HIV tests done in MSM, an increase of 33% on the average number of tests per quarter in 2013. Positivity at 1% was lower in quarter 1 2014 than in previous quarters. Data from future quarters is required to determine if this is an ongoing trend.

Graphs displaying testing trend data for Sex Workers, PWID and Aboriginal and Torres Strait Islander people are in Appendix C.

Sydney Sexual Health Centre, part of South Eastern Sydney LHD performs the highest number of HIV tests compared with other Sexual Health Services in NSW. Of the 3,598 tests done by this clinic in Quarter 1, 2,232 (62%) were for MSM. 20 were positive yielding a 0.9% positivity rate among MSM clients.

In Sydney LHD, 583 of the 886 tests (66%) done in Quarter 1 were for MSM. 14 were positive yielding a 2.4% rate among MSM clients.

The recent high positivity rates in some LHDs suggest that: 1) the push to increase testing is well targeted to MSM and 2) the increase in testing has not yet reached saturation point.

Saturation of testing is likely to have occurred when testing numbers are high, high risk populations are well targeted and positivity is low. Aiming for and maintaining this triad is important for ensuring a negligible pool of undiagnosed HIV infection.

In summary, data from PFSHCs indicates that priority populations are being reached by public services. Achieving further increases in testing, particularly in MSM are important to identify and link HIV infected individuals to care, as well as to reduce the pool of undiagnosed infection in NSW that contributes to ongoing HIV transmission.

3.3.2 Survey data⁴

In a survey in February 2014 of gay men who had not been diagnosed with HIV, 76% reported an HIV test in the last 12 months. This is a significant increase from 71% in the same survey in 2013 and the highest level recorded since the survey began in 1996. Among these men who had a test, there was an increase in 2014 in the proportion who had three or more HIV tests in the previous 12 months (Table 8).

Table 8: Number of HIV tests in the past 12 months among non-HIV-positive men who reported being tested within 12 months

	2013		2014	
	n	%	n	%
One	602	40.8	532	38.9
Two	573	38.8	493	36.1
Three or four	262	17.7	296	21.7
Five or more	40	2.7	45	3.3

Data source: Sydney Gay Community Periodic Survey (February, 2014)

3.4 How is testing being made more accessible?

3.4.1 Rapid testing

Rapid HIV testing is part of a suite of initiatives to encourage people from high risk populations to be tested regularly for HIV. Rapid testing offers choice and convenience to people who do not routinely access conventional testing. It is intended to complement, not replace conventional testing.

There are 19 sites in NSW performing rapid HIV testing, including community based sites, public sexual health clinics and general practice. In quarter 1 2014, 3,642 HIV rapid tests were done in NSW, this includes approximately 900 tests done in community sites. Since June, three 'fixed' community sites and three 'pop up' sites have been operational. 35 of the total 3,642 tests performed in NSW were positive (0.9%).

⁴ Upcoming data sources NSW Health will begin to collect data from NSW residents about testing for HIV in the last 12 months. This is via the NSW Population Health Survey. This will be presented in the Quarter 2 2014 HIV Data Report.

Though the number of clients tested in community sites to date is relatively small, preliminary data show that a high proportion were MSM who reported high risk behaviour (45–55%), or had never previously tested for HIV (15 - 20%), or had not tested in the last 12 months (25-35%). A 'pop-up' a[TEST] rapid HIV testing site was set up on Oxford St Sydney for 6 weeks over the Mardi Gras period in February and March 2014. At this site, 580 people had a rapid test, 85% were MSM and 48% reported as "high risk" clients. 12 of the total 580 tests performed were positive (2.06%) and 5 of the men with HIV had a concurrent STI.

The majority of rapid testing in quarter 1 2014 was conducted in PFSHCs. Complete data on the profile of clients tested at PFSHCs is not available, however a snapshot of sites suggest that clients may have less high risk behaviour and test more regularly than clients testing at community sites. However, larger numbers and more complete data are necessary to identify any significant difference in the profile of clients seen in clinic versus community based sites.

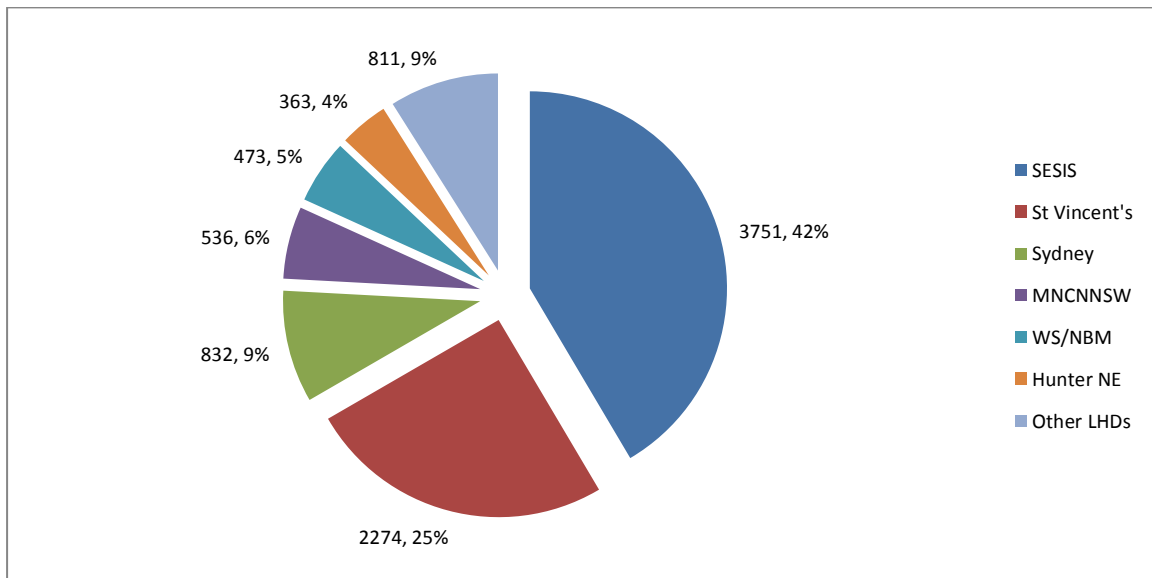
Data source: Sydney Rapid HIV Testing Study, Rapid testing Evaluation Framework, The Albion Centre Oraquick study, Sydney Sexual Health Centre and Lismore Sexual Health Centre

4 Increase HIV treatment

4.1 How many people in NSW are on antiretroviral treatment?

In December 2013, Health Share NSW completed the NSW rollout of a standardised ipharmacy system. The system enables the collection of data from LHDs about pharmacy dispensing activities including dispensing of antiretroviral treatment (ART) for HIV. Due to the roll out of this new system, 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. Pharmacy dispensing data indicates that in the one year period from 1 April 2013 to 31 March 2014, at least 8,773 people living with diagnosed HIV in NSW were on ART.

Figure 15: Number of patients dispensed ART in NSW by LHD of dispensing pharmacy, 1 April 2013 to 31 March 2014

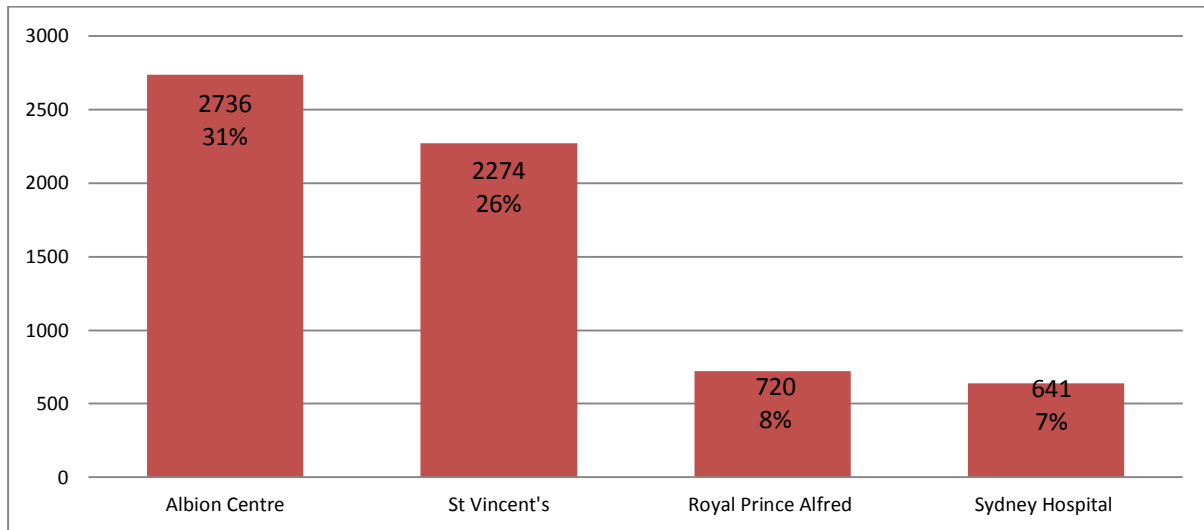


Data source: Health Share NSW ipharmacy data and data submitted by Western Sydney, Nepean Blue Mountains and Hunter New England LHDs

Notes:

1. Northern NSW, Mid North Coast, South Western Sydney, Justice Health, Murrumbidgee and Southern NSW LHDs coming online with the ipharmacy system late in 2013.
2. The numbers displayed in the graph add up to a figure greater than the overall total of 7,887 for 1/1/13 -31/12/13 and 8773 for 1/4/13 – 31/3/14. This is because the small number of cross-LHD patient flows are not eliminated
3. 'Other' includes Northern Sydney 267 (3%) & 273 (3%) ; Central Coast 145 (2%) & 148 (2%); South West Sydney 135 (2%) & 201 (2%); Far West/Western NSW 67 (1%) & 75 (1%); Murrumbidgee/Southern NSW 20 (0%) & 61 (1%); Childrens Hospital Network 17 (0%) & 18 (0%); Justice Health 14 (0%) & 35 (0%).

Figure 16: Number of unique patients dispensed ART between 1 April 2013 to 31 March 2014 in the highest volume ART dispensing pharmacies.



Data source: Health Share NSW ipharmacy data

Percentages are pharmacy volume as a percentage of the NSW client total.

Comment

The figure of 8,773 people living with diagnosed HIV in NSW on ART is an underestimate as the pharmacies of six LHDs came online late in 2013. Complete ART dispensing data from these six LHDs will become available by mid-2014.

The majority of ART dispensing (73%) occurred through pharmacies in the inner metropolitan area with almost a third of patients receiving ART through the Albion Centre pharmacy (31%) and almost a quarter through the St Vincent's Hospital pharmacy (26%).

By mid-2014, more comprehensive ART dispensing data will be available including data on ART initiations, the LHD of residence of patients, prescriber location and drug combinations.

4.2 What are the current antiretroviral treatment prescribing patterns?

4.2.1 LHDs

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 2014 was collected and analysed. Table 9 summarises the main results.

Table 9: Summary of data on clients who received HIV care in NSW public sexual health and HIV services between 1 April 2013 and 31 March 2014*

Total number of patients who received care between April 2013 and March 2014	5098
Number (%) of patients for whom treatment information was available	4796 (94%)
Number (%) on ART	4230 (88%)
Number (%) not on ART[^]	566 (12%)
<i>Number (%) not on ART with CD4 count < 350</i>	<i>106 (19%)</i>
<i>Number (%) not on ART with CD4 count between 350 - 499</i>	<i>111 (20%)</i>
<i>Number (%) not on ART with CD4 count > 500</i>	<i>348 (61%)</i>
Number who initiated ART	528
<i>Number (%) initiated at a CD4 count <350</i>	<i>144 (27%)</i>
<i>Number (%) initiated at a CD4 count between 350 - 500</i>	<i>125 (24%)</i>
<i>Number (%) initiated at a CD4 count >500</i>	<i>259 (49%)</i>

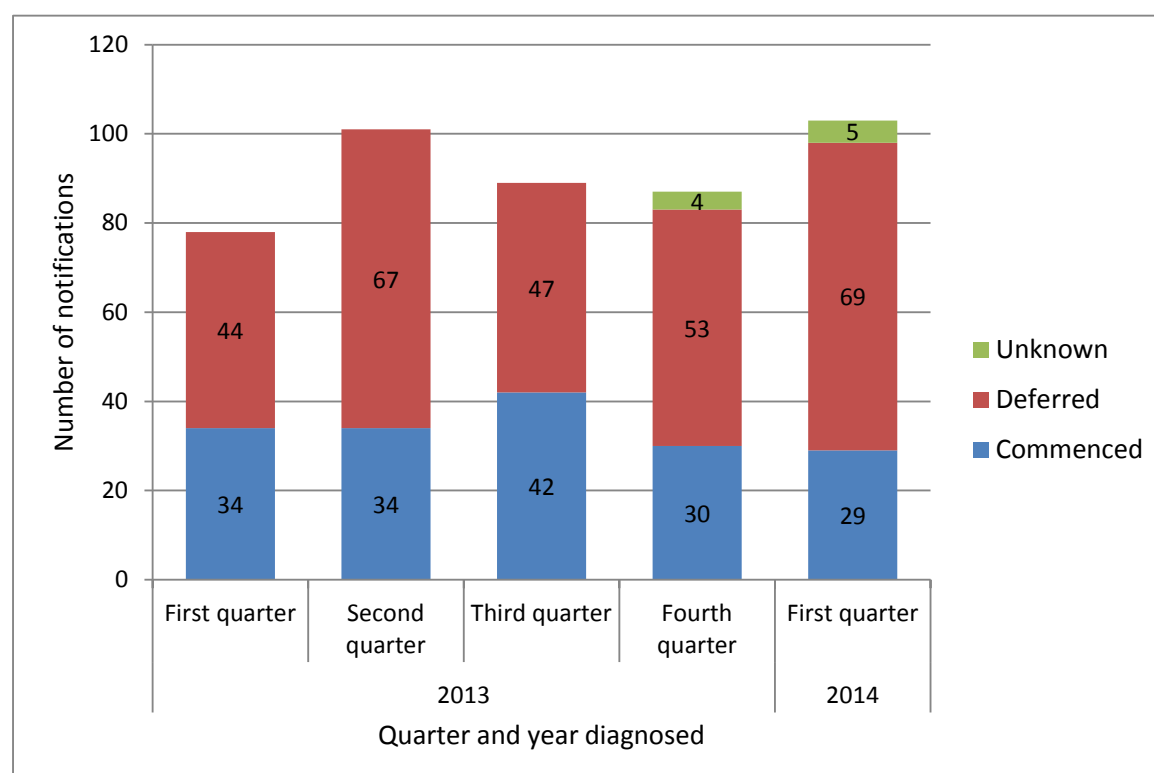
[^]Includes ART naïve clients and clients who have stopped ART

*slight decrease from year ending December 2013 observed due to previous overestimate of total number of patients and unavailability of detailed treatment information from St Vincents Hospital.

In the year ending 31 March 2014, 5,098 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 88%.

4.2.2 ART initiation

Since 2013, doctors completing a HIV notification form have been required to report whether a person diagnosed with HIV initiated ART near diagnosis. The time required to obtain complete notification information from doctors, verify the information and finalise a notification, varies from case to case. Therefore the time to ascertain ART initiation near diagnosis is not equal for every person newly diagnosed. However, these data still give some indication of the uptake of ART close to the time of diagnosis (Figure 17).

Figure 17: Number of NSW residents diagnosed per quarter by uptake of antiretroviral therapy close to the time of diagnosis, 1 January 2013 to 31 March 2014

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Table 10: CD4 count at diagnosis and antiretroviral therapy (ART) uptake close to the time of diagnosis for 103 NSW residents newly diagnosed with HIV infection in the first quarter 2014

CD4 count (cells/ μ L) at diagnosis	ART commenced	ART deferred	Unknown	Total
200 or less	4	2	1	7
200 - 349	5	10		15
350 - 499	5	19		24
500 or above	14	32	1	47
Unknown	1	6	3	10
Total	29 (28%)	69 (67%)	5 (5%)	103

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Comment

Since 2013, notifications of HIV infection in NSW have included information on ART initiation. Of 103 NSW residents newly diagnosed with HIV infection in the first quarter of 2014, 29 (28%) commenced ART close to the time of diagnosis, 69 (67%) had deferred ART and for 5 (5%) ART status near diagnosis was unknown. Compared with previous quarters, the uptake of ART close to the time of diagnosis does not appear to be increasing (Figure 17). Among 69 cases with ART deferred 12 (17%) had a CD4 count less than 350, and 31 (45%) had a CD4 less than 500 (Table 10). The PBS restriction of a CD4 count threshold of 500 cells/ μ L for ART initiation was removed on 1 April 2014.

Table 11: Doctor reported reasons for deferring ART initiation in NSW residents newly diagnosed January to March 2014

Doctor reported reason for deferring ART initiation post diagnosis	Number (%)
To commence soon*	15 (22%)
Not Clinically Indicated**	14 (20%)
Awaiting genotyping, further results	10 (14%)
Patient coming to terms with diagnosis and options	6 (9%)
Patient away or going overseas	5 (7%)
Medicare ineligible***	4 (6%)
Patient declined	4 (6%)
Too early	3 (4%)
Treatment required for other condition	3 (4%)
Lost to follow up	2 (3%)
Social or psychosocial reasons	1 (1%)
May enter clinical trial	1 (1%)
In referral process	1 (1%)
Total	69

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

*1 subsequently died

** Of 14 cases with ART reported to be deferred due to it not being clinically indicated, 13 had a CD4 of 500+ at diagnosis.

*** Of four cases reported to be Medicare ineligible, three were at SHCs and 1 was with an S100 GP. Of the three cases at SHCs, one was going to return overseas in order to access ART, one was considering buying generic ARTs and another was considering importing ART or going on a clinical trial to access treatment.

Comment

The reasons reported by treating doctors for deferring ART are listed in Table 11. It appeared that a further 25 (36%) people newly diagnosed were likely to start ART soon (see reasons: "To commence soon" and "Awaiting genotyping, further results"); this suggests that to ask doctors to report on ART uptake close to the time of diagnosis is too early in the current context. Data on treatment of people newly diagnosed from 2013 onwards are being collected from managing clinicians at least six months post diagnosis to more accurately ascertain linkage to care, HIV treatment status and viral load.

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. NSW residents newly diagnosed with HIV infection by year of diagnosis and case characteristics, to 31 March 2014

	2008 n (%)	2009 n (%)	2010 n (%)	2011 n (%)	2012 n (%)	2013 n (%)	Quarter 1 2014 n (%)	1981–31 March 2014 n (%)
Total	325 (100%)	333 (100%)	307 (100%)	330 (100%)	409 (100%)	355 (100%)	103 (100%)	17024 (100%)
Gender								
Male	293 (90.2%)	292 (87.7%)	282 (91.9%)	309 (93.6%)	372 (91.0%)	325 (91.5%)	101 (98.1%)	15658 (92.0%)
Female	32 (9.8%)	39 (11.7%)	23 (7.5%)	21 (6.4%)	36 (8.8%)	27 (7.6%)	2 (1.9%)	1080 (6.3%)
Transgender	0 (0.0%)	2 (0.6%)	2 (0.7%)	0 (0.0%)	1 (0.2%)	3 (0.8%)	0 (0.0%)	38 (0.2%)
Not stated	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	248 (1.5%)
Aboriginal peoples								
Aboriginal	8 (2.5%)	9 (2.7%)	7 (2.3%)	5 (1.5%)	11 (2.7%)	8 (2.3%)	2 (1.9%)	154 (0.9%)
Non-Aboriginal	301 (92.6%)	314 (94.3%)	291 (94.8%)	322 (97.6%)	391 (95.6%)	341 (96.1%)	99 (96.1%)	9910 (58.2%)
Not stated	16 (4.9%)	10 (3.0%)	9 (2.9%)	3 (0.9%)	7 (1.7%)	6 (1.7%)	2 (1.9%)	6960 (40.9%)
Age in years								
0 – 4	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	40 (0.2%)
5 - 14	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	58 (0.3%)
15 - 19	3 (0.9%)	3 (0.9%)	5 (1.6%)	6 (1.8%)	9 (2.2%)	9 (2.5%)	0 (0.0%)	302 (1.8%)
20 - 24	39 (12.0%)	33 (9.9%)	29 (9.4%)	34 (10.3%)	44 (10.8%)	37 (10.4%)	17 (16.5%)	2067 (12.1%)
25 - 29	58 (17.8%)	57 (17.1%)	56 (18.2%)	56 (17.0%)	76 (18.6%)	64 (18.0%)	14 (13.6%)	3370 (19.8%)
30 - 39	107 (32.9%)	100 (30.0%)	93 (30.3%)	123 (37.3%)	133 (32.5%)	90 (25.4%)	32 (31.1%)	6250 (36.7%)
40 - 49	84 (25.8%)	88 (26.4%)	82 (26.7%)	70 (21.2%)	85 (20.8%)	90 (25.4%)	19 (18.4%)	3300 (19.4%)
50 - 59	24 (7.4%)	40 (12.0%)	29 (9.4%)	35 (10.6%)	42 (10.3%)	47 (13.2%)	15 (14.6%)	1147 (6.7%)
60 +	10 (3.1%)	10 (3.0%)	12 (3.9%)	6 (1.8%)	20 (4.9%)	17 (4.8%)	6 (5.8%)	403 (2.4%)
Not reported	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	87 (0.5%)
HIV risk exposure								
Men having sex with men (MSM)	236 (72.6%)	219 (65.8%)	228 (74.3%)	268 (81.2%)	318 (77.8%)	265 (74.6%)	82 (79.6%)	10650 (62.6%)
MSM and injects drugs	11 (3.4%)	18 (5.4%)	8 (2.6%)	10 (3.0%)	12 (2.9%)	13 (3.7%)	5 (4.9%)	474 (2.8%)
Heterosexual contact	64 (19.7%)	75 (22.5%)	51 (16.6%)	41 (12.4%)	57 (13.9%)	61 (17.2%)	9 (8.7%)	1535 (9.0%)
Person who injects drug	12 (3.7%)	11 (3.3%)	9 (2.9%)	8 (2.4%)	10 (2.4%)	9 (2.5%)	1 (1.0%)	551 (3.2%)
Haemophilia, coagulation disorders, or blood tissue recipient	0 (0.0%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	276 (1.6%)
Vertical	0 (0.0%)	2 (0.6%)	1 (0.3%)	0 (0.0%)	0 (0.0%)	1 (0.3%)	0 (0.0%)	45 (0.3%)
Other / undetermined	2 (0.6%)	7 (2.1%)	10 (3.3%)	3 (0.9%)	12 (2.9%)	6 (1.7%)	6 (5.8%)	3493 (20.5%)

	2008 n (%)	2009 n (%)	2010 n (%)	2011 n (%)	2012 n (%)	2013 n (%)	Quarter 1 2014 n (%)	1981– 31 March 2014 n (%)
Local Health District of residence								
South Eastern Sydney	117 (36.0%)	107 (32.1%)	110 (35.8%)	128 (38.8%)	150 (36.7%)	125 (35.2%)	31 (30.1%)	5309 (31.2%)
Sydney	78 (24.0%)	90 (27.0%)	77 (25.1%)	83 (25.2%)	111 (27.1%)	90 (25.4%)	26 (25.2%)	2776 (16.3%)
Northern Sydney	25 (7.7%)	38 (11.4%)	19 (6.2%)	24 (7.3%)	23 (5.6%)	26 (7.3%)	6 (5.8%)	943 (5.5%)
Western Sydney	26 (8.0%)	21 (6.3%)	20 (6.5%)	31 (9.4%)	25 (6.1%)	26 (7.3%)	10 (9.7%)	677 (4.0%)
South Western Sydney	16 (4.9%)	22 (6.6%)	23 (7.5%)	18 (5.5%)	31 (7.6%)	29 (8.2%)	8 (7.8%)	599 (3.5%)
Hunter New England	14 (4.3%)	16 (4.8%)	16 (5.2%)	10 (3.0%)	14 (3.4%)	18 (5.1%)	7 (6.8%)	443 (2.6%)
Nepean Blue Mountains	7 (2.2%)	3 (0.9%)	3 (1.0%)	4 (1.2%)	5 (1.2%)	3 (0.8%)	1 (1.0%)	248 (1.5%)
Illawarra Shoalhaven	3 (0.9%)	5 (1.5%)	8 (2.6%)	5 (1.5%)	9 (2.2%)	7 (2.0%)	5 (4.9%)	215 (1.3%)
Central Coast	6 (1.8%)	5 (1.5%)	5 (1.6%)	4 (1.2%)	10 (2.4%)	6 (1.7%)	3 (2.9%)	187 (1.1%)
Northern NSW	4 (1.2%)	4 (1.2%)	9 (2.9%)	11 (3.3%)	5 (1.2%)	5 (1.4%)	3 (2.9%)	183 (1.1%)
Mid North Coast	8 (2.5%)	6 (1.8%)	3 (1.0%)	4 (1.2%)	3 (0.7%)	6 (1.7%)	1 (1.0%)	133 (0.8%)
Western NSW	3 (0.9%)	3 (0.9%)	4 (1.3%)	3 (0.9%)	7 (1.7%)	5 (1.4%)	0 (0%)	116 (0.7%)
Murrumbidgee	3 (0.9%)	1 (0.3%)	6 (2.0%)	2 (0.6%)	3 (0.7%)	2 (0.6%)	0 (0%)	57 (0.3%)
Southern NSW	3 (0.9%)	6 (1.8%)	1 (0.3%)	2 (0.6%)	7 (1.7%)	4 (1.1%)	0 (0%)	50 (0.3%)
Albury	0 (0.0%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	2 (0.5%)	1 (0.3%)	0 (0%)	25 (0.1%)
Far West	0 (0.0%)	2 (0.6%)	0 (0.0%)	0 (0.0%)	2 (0.5%)	0 (0.0%)	0 (0%)	8 (0.0%)
Justice Health	1 (0.3%)	1 (0.3%)	1 (0.3%)	0 (0.0%)	1 (0.2%)	1 (0.3%)	1 (1.0%)	6 (0.0%)
Unknown	11 (3.4%)	2 (0.6%)	1 (0.3%)	1 (0.3%)	1 (0.2%)	1 (0.3%)	1 (1.0%)	5049 (29.7%)
Total	325	333	307	330	409	355	103	17024

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 7 May 2014

Appendix B: Recent inclusions in the NSW Population Health Survey to support monitoring and evaluation for the NSW HIV Strategy

NSW Population Health Survey

In the last quarter of 2013 two additional questions were included in the Survey. These questions will continue for the whole of the 2014 Survey:

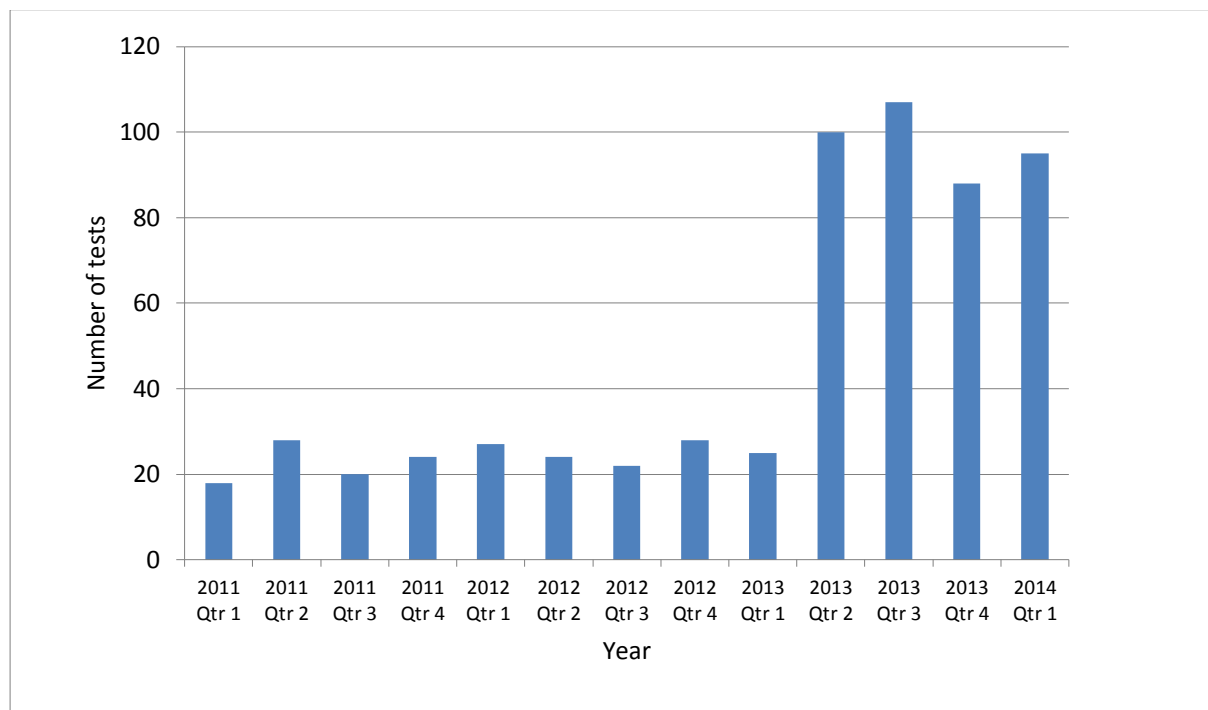
1. Sexual identity
2. 'Have you had an HIV test in the last 12 months?'
 - Yes, No, Don't know, refuse

In the first quarter of 2014 two additional questions will be included in the Survey. These questions will continue for the whole of the 2014 Survey:

1. 'Have you had sex without a condom in the last 12 months?'
 - Yes, no, don't know, refuse
2. 'Have you had a STI test in the previous last 12 months?'
 - Yes, No, Don't know, refuse

Appendix C: HIV Testing Figures

Figure 18: Number of HIV tests performed in Aboriginal people in five Local Health District Publicly Funded Sexual Health Clinics, 1 January 2011 to 31 March 2014*

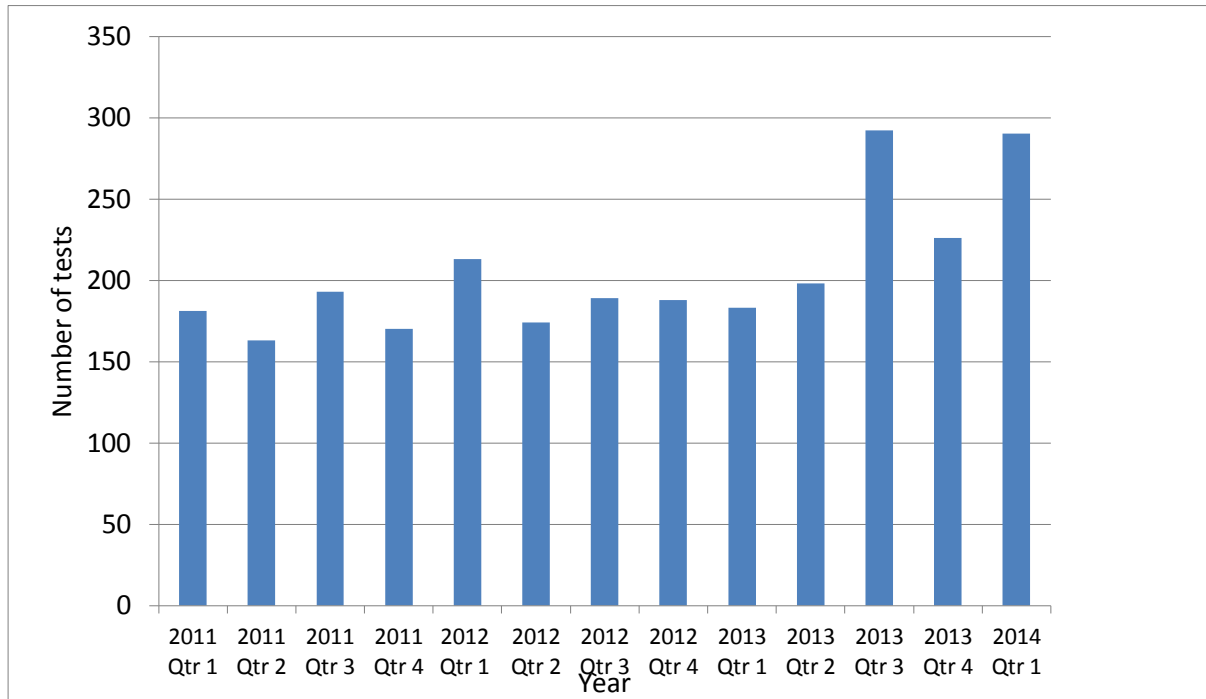


*data from Northern NSW missing for Q1 2014

Note: Increase largely driven by Western Sydney LHD

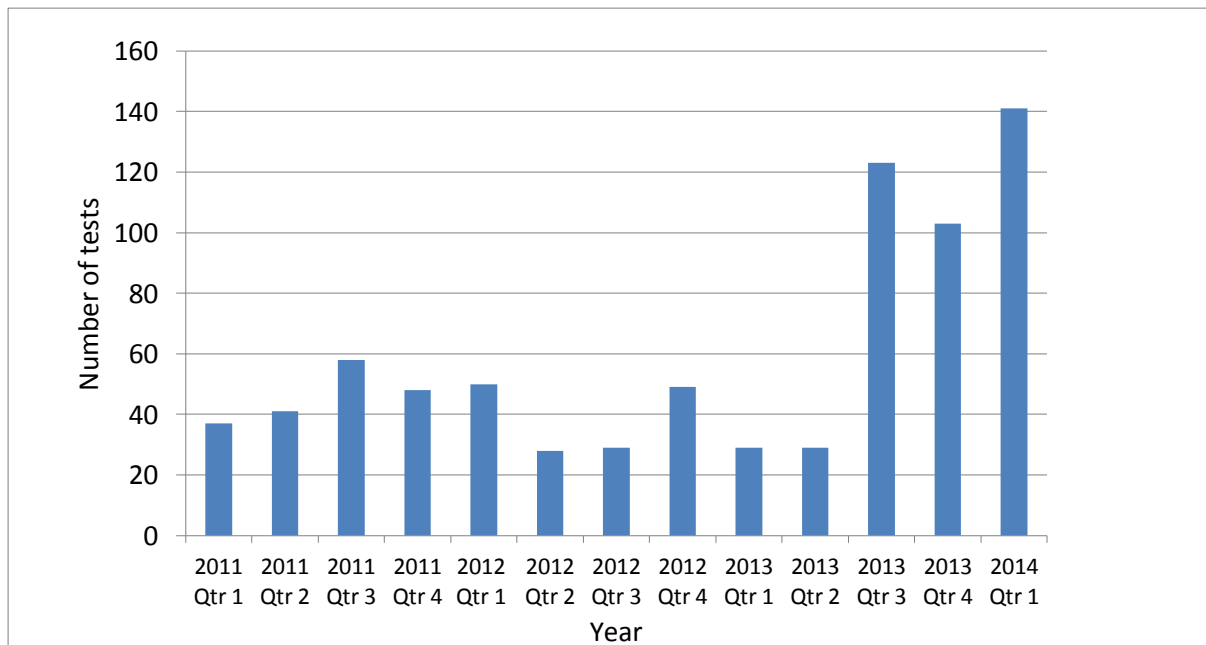
Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs

Figure 19: Number of HIV tests performed in clients who were ever sex workers in five Local Health District Publicly Funded Sexual Health Clinics, 1 January 2011 to 31 March 2014



Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs

Figure 20: Trend in number of HIV tests performed in clients who ever injected drugs in five Local Health District Publicly Funded Sexual Health Clinics, 1 January 2011 to 31 December 2013



Note: large increase in part due in part to improved data collection

Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs