# NSW HIV Strategy 2012 – 2015

# 2013 Annual 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 2013

- 357 people newly diagnosed with HIV infection were notified in NSW. This represents a 13% decrease in comparison to 2012. In 2012, there was a 24% increase in notifications compared with 2011. Among men who have sex with men, there was a 16% decrease in 2013 in comparison to 2012.
- 40% of NSW residents newly diagnosed with HIV infection had evidence of early stage infection, a lesser proportion than that reported for new diagnoses in 2012 (47%) and 2011 (50%).
- HIV testing increased both overall in NSW, and among high risk populations. Of note, testing increased in key inner Sydney city areas and in Western Sydney.
- Data from public sexual health and HIV clinics indicate that approximately 90% of people living with HIV who attended these services in 2013 were on antiretroviral treatment.

## Table of Contents

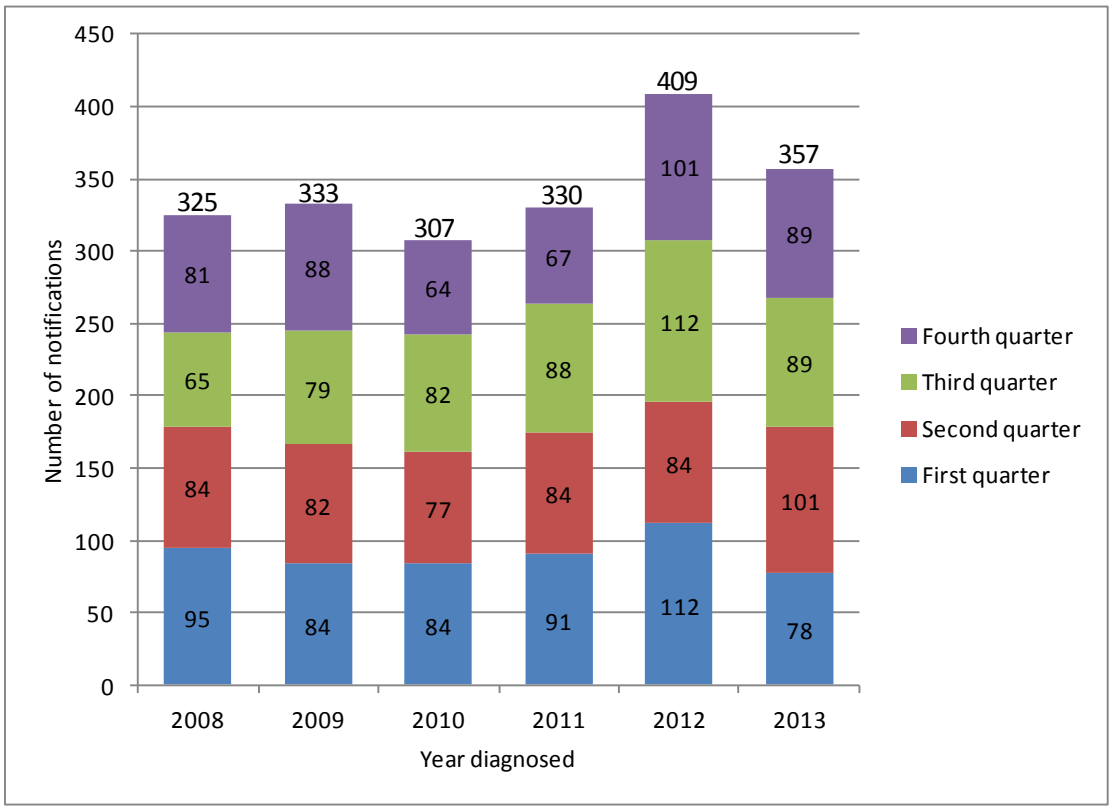
## Glossary of Terms

| | |
|---|---|
| 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 2008 to 31 December 2013**




Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

Comment

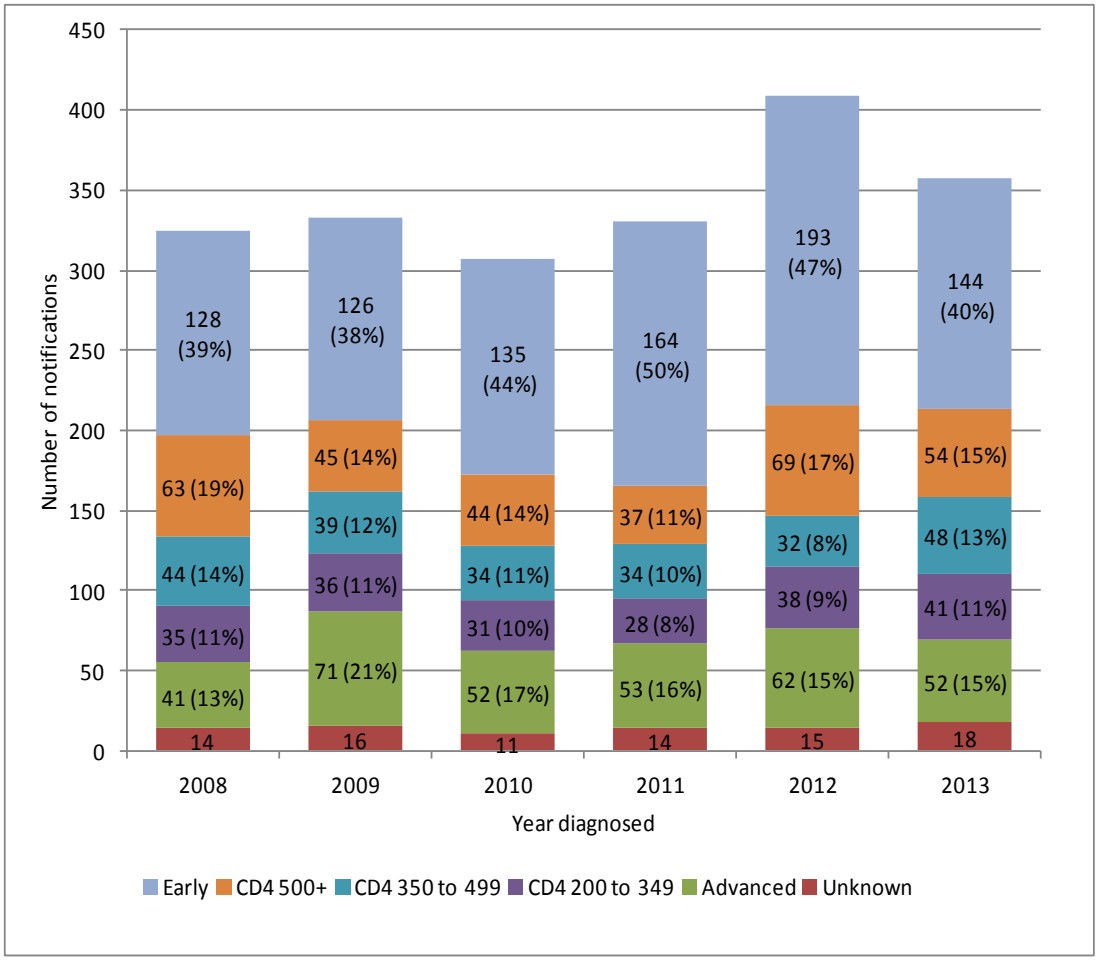
In 2013, 357 NSW residents were newly diagnosed with HIV infection and notified to NSW Health. This was a 13% decrease compared to the number newly diagnosed in 2012. Of these 357, 278 (78%) were reported as men who have sex with men (MSM). This compares with 330 MSM related new diagnoses in 2012, which represents a 16% decrease in the number of new diagnoses in this major at-risk group.

In 2013 the crude rate of newly diagnosed HIV infection in NSW residents dropped to 4.8 per 100,000 residents from 5.6 per 100,000 in 2012.

## 1.2 What proportion of HIV notifications are newly acquired infections?

Trends in CD4 count and stage of infection at diagnosis provide an indication as to whether the time between HIV infection and diagnosis is likely to be reducing in the population.

**Figure 2: Number and percentage of HIV notifications by stage of infection at diagnosis[1], 1 January 2008 to 31 December 2013**




**Stage of infection**

Early = Evidence of HIV infection acquired within 12 months of diagnosis

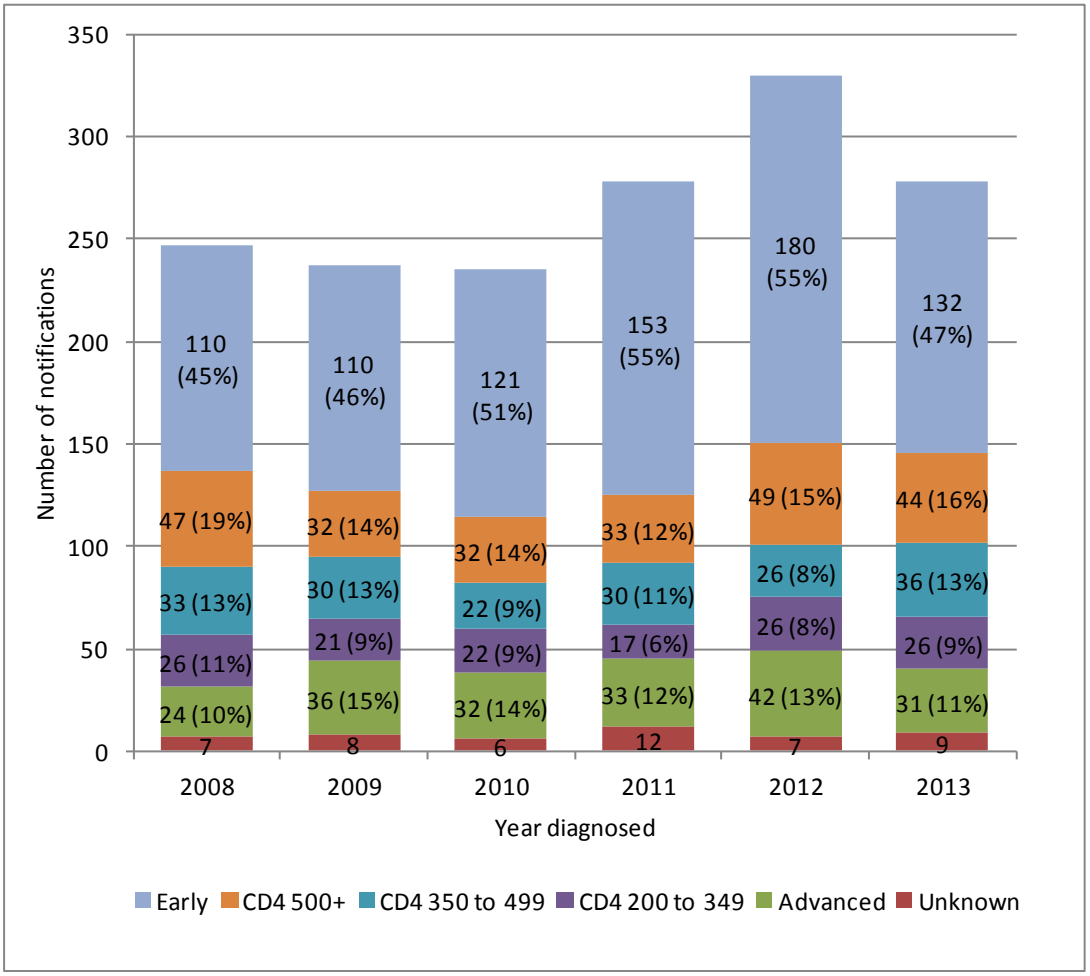
CD4 500+, CD4 350 to 499, CD4 200 to 349 each excludes early and advanced categories

Advanced = CD4 count less than 200 or AIDS defining illness

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

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

**Figure 3: Number and percentage of HIV notifications in MSM by stage of infection at diagnosis[1], 1 January 2008 to 31 December 2013**




**Stage of infection**

Early = Evidence of HIV infection acquired within 12 months of diagnosis

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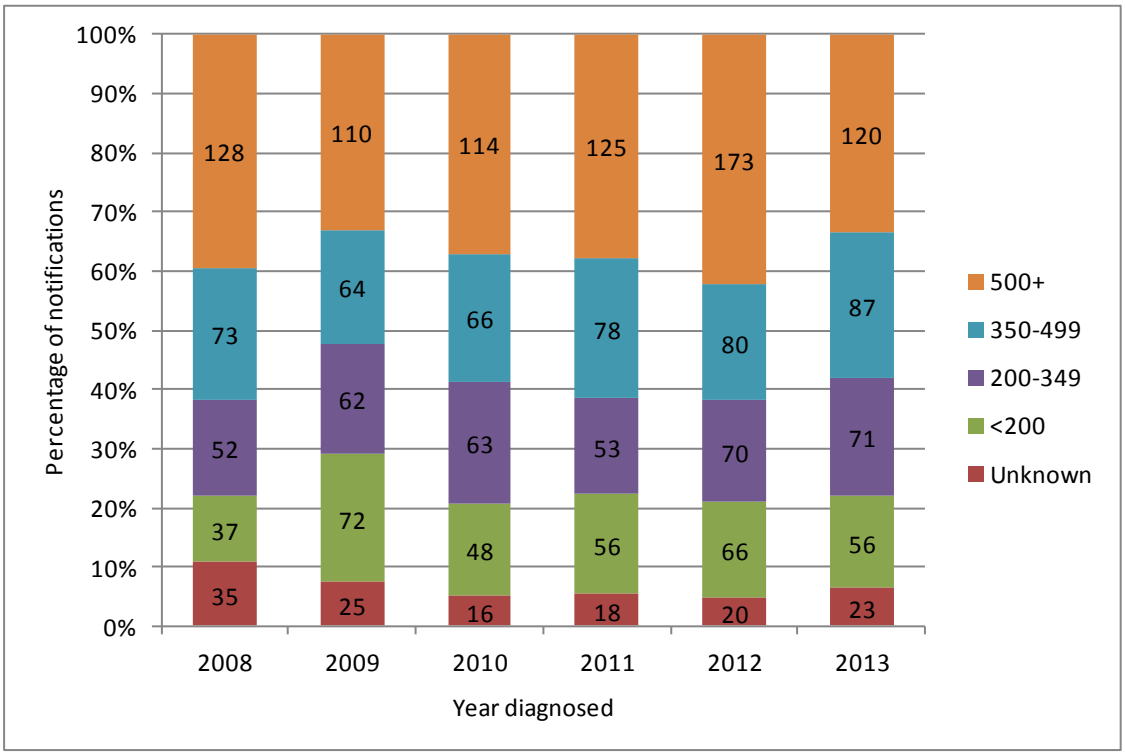
[1]Evidence of early stage infection was defined as notification of a seroconversion illness or negative or indeterminate HIV test within 12 months of diagnosis, irrespective of CD4 or presentation with an AIDS defining illness at diagnosis

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

Comment

In 2013, 40% of the total number of NSW residents newly diagnosed with HIV infection had evidence of early stage infection, a lesser proportion than that reported for new diagnoses in 2012 (47%) and 2011 (50%). A greater proportion of MSM (47%) had evidence of early stage infection at diagnosis compared to all exposures combined (40%). This was a smaller proportion than for MSM newly diagnosed in 2012 and 2011 (55% in both years).

**Figure 4: Number and percentage of HIV notifications by CD4 count category, 1 January 2008 to 31 December 2013**

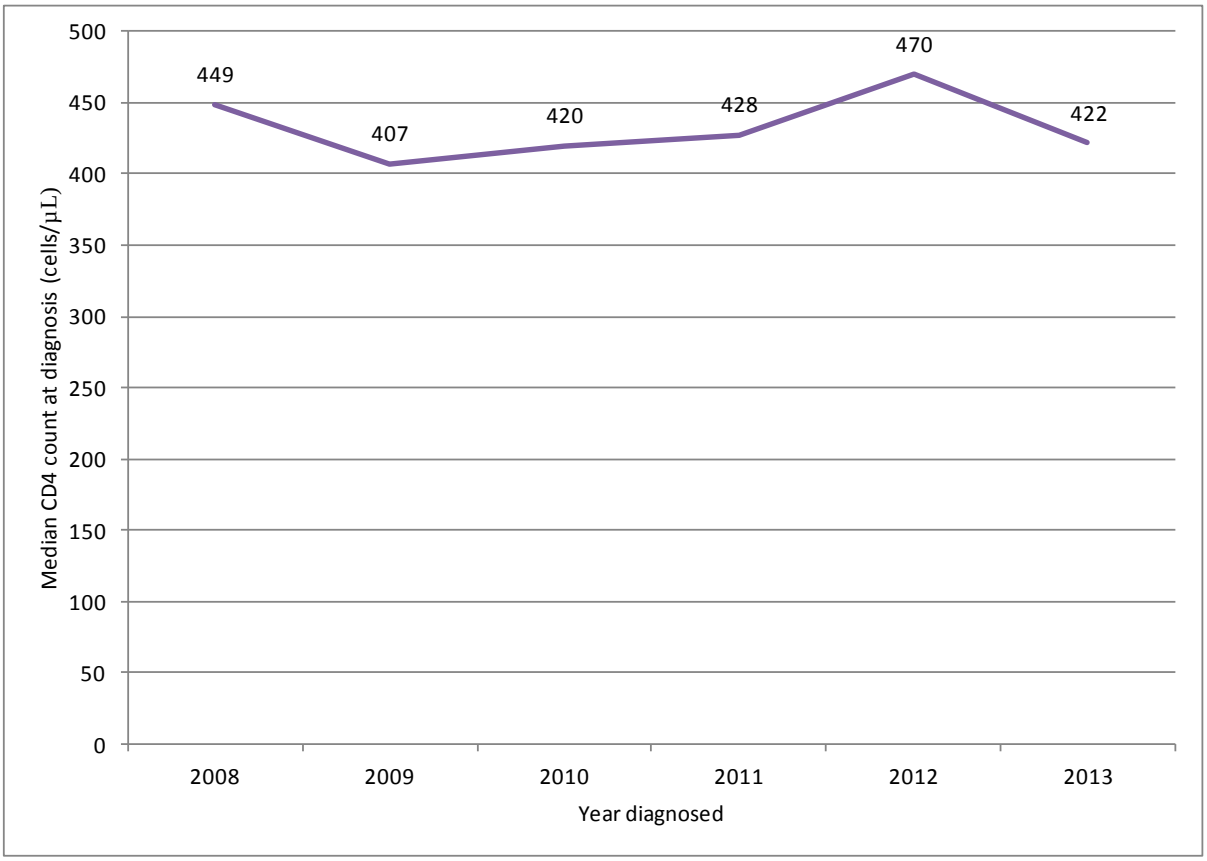



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

Comment

The proportion of newly diagnosed NSW residents with a CD4 count < 350 cells/µL at diagnosis has remained stable since 2008. A CD4 count < 350 cells/µL is a proxy for late diagnosis.

**Figure 5: Median CD4 count of HIV notifications, 1 January 2008 to 31 December 2013**




Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014.

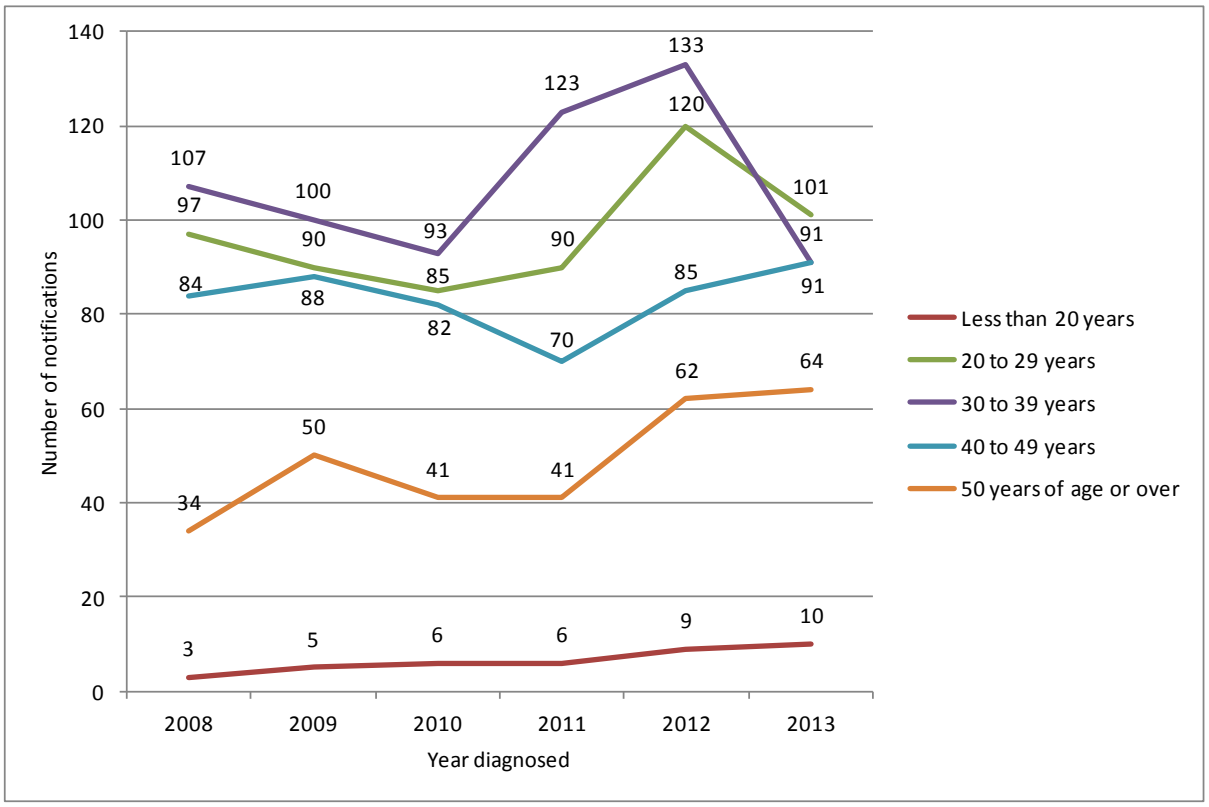
Comment

The median CD4 count for NSW residents newly diagnosed with HIV infection has been fairly stable over the past six years.

## 1.3 Which groups are being notified?

Among the 357 NSW residents newly diagnosed with HIV infection in 2013, 325 (91%) were male, 28 (8%) were female, 3 (<1%) were transgender and 1 (<1%) was of unknown gender. This gender pattern is consistent with previous years (appendix A).

**Figure 6: Number of HIV notifications by age group, 1 January 2008 to 31 December 2013**

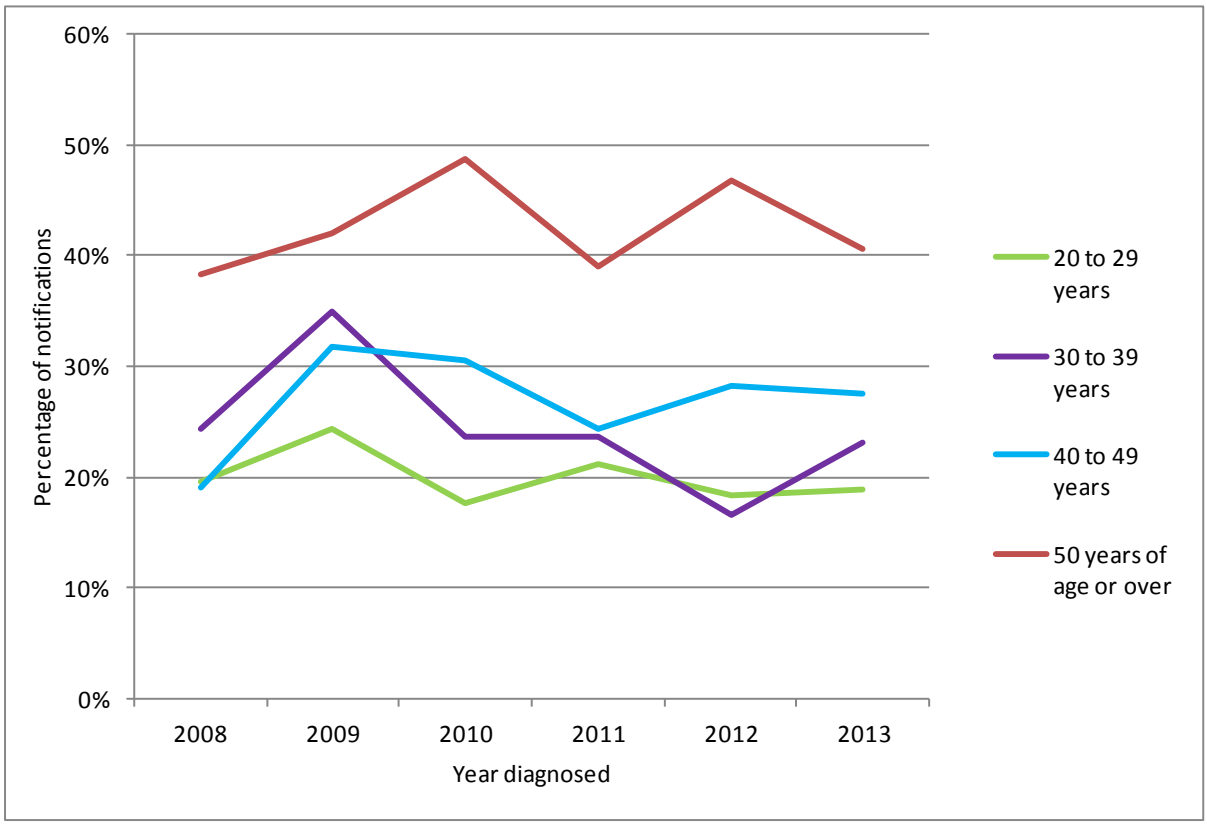



Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

Comment

In 2013, 64 (18%) of notifications were among people 50 years of age or over, which continues an upward trend in the proportion of annual notifications being aged 50 years of age or over since 2008, when 10% of notifications were in this age category at diagnosis. The number newly diagnosed aged less than 20 years is low but is steadily increasing. When age group specific rates of notifications were analysed for this period, the rate of notifications in people less than 20 years was increasing by 23% each year and the rate of notifications in people 50 years of age and over was increasing by 9% each year. Age group specific rates for people aged 20 to 29, 30 to 39 and 40 to 49 were statistically unchanged between 2008 and 2013.

**Figure 7: Percentage of HIV notifications with clinical or immunological evidence of late diagnosis[1] by age group, 1 January 2008 to 31 December 2013**



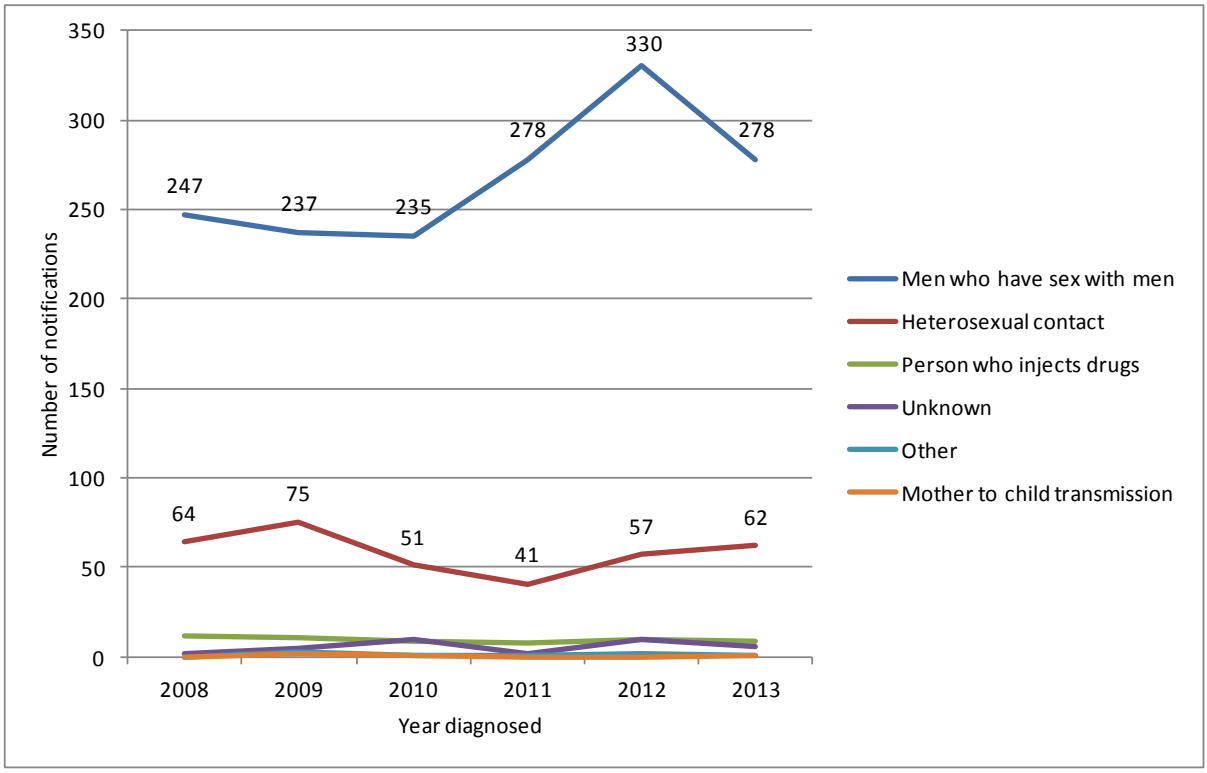

[1]Clinical or immunological evidence of a late diagnosis included a CD4 count less than 350 or an AIDS defining illness at diagnosis, in the absence of evidence of a seroconversion illness or a negative or indeterminate HIV test in the 12 months before diagnosis.

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

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. 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 distinctly higher proportion of people with evidence of late diagnosis compared with all younger age groups. These data suggest that people in older age groups are not being tested as frequently as those in younger age groups.

**Figure 8: Number of HIV notifications by risk exposure category, 1 January 2008 to 31 December 2013**




Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014.

Among the 357 NSW residents newly diagnosed with HIV infection in 2013, 278 (78%) were MSM. 62 (17%) acquired HIV through heterosexual sex, 9 (3%) through injecting drugs, 1 (>1%) through mother to child transmission (which occurred overseas), 1 (<1%) through an 'other' mode of transmission and 6 (2%) through an 'unknown' mode of transmission. This pattern is similar to previous years (Table 1).

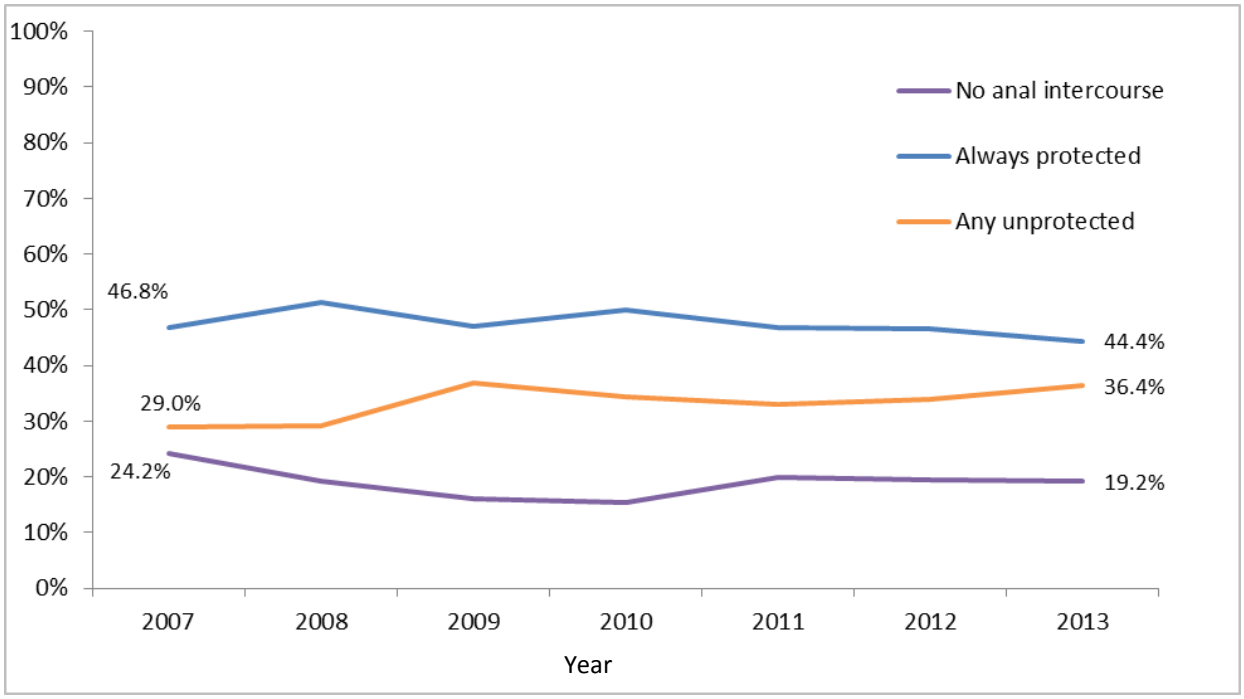
**Table 1: Number and percentage of HIV notifications by reported HIV risk exposure, 1 January 2008 to 31 December 2013**

| Year diagnosed | Men who have sex with men | Heterosexual contact | Person who injects drugs | Other | Mother to child | Unknown | Total |
|---|---|---|---|---|---|---|---|
| **2008** | 247 (76%) | 64 (20%) | 12 (4%) | 0% | 0% | 2 (1%) | 325 |
| **2009** | 237 (71%) | 75 (23%) | 11 (3%) | 3 (1%) | 2 (1%) | 5 (2%) | 333 |
| **2010** | 235 (77%) | 51 (17%) | 9 (3%) | 1 (<1%) | 1 (<1%) | 10 (3%) | 307 |
| **2011** | 278 (84%) | 41 (12%) | 8 (2%) | 1 (<1%) | 0% | 2 (1%) | 330 |
| **2012** | 330 (81%) | 57 (14%) | 10 (2%) | 2 (<1%) | 0% | 10 (2%) | 409 |
| **2013** | 278 (78%) | 62 (17%) | 9 (3%) | 1 (<1%) | 1 (<1%) | 6 (2%) | 357 |
| **Total** | **1605 (78%)** | **350 (17%)** | **59 (3%)** | **8 (< 1%)** | **4 (<1%)** | **35 (2%)** | **2061** |

# 2. Maintain safe behaviour

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

**Figure 9: Condom use reported by MSM with casual sexual partners in NSW, 2007-2013**




Data source: Sydney Gay Community Periodic Survey (February, 2013)

The 2013 figures represent behaviour in the previous 6 months and are therefore reflective of behaviours in the latter part of 2012.

Among 1,565 gay men with casual sexual partners surveyed, 995 (64%) reported practicing safe sex[1]. The next survey will take place in early 2014 and will reflect behaviour in 2013. This will be presented in the Quarter 1 2014 HIV Data Report. 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?

As of the end of 2013 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.

In 2013 10,635,134 units of injecting equipment were distributed in NSW. This represents an increase of 959,649 additional units (10%) compared with the same period in 2012.
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.

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

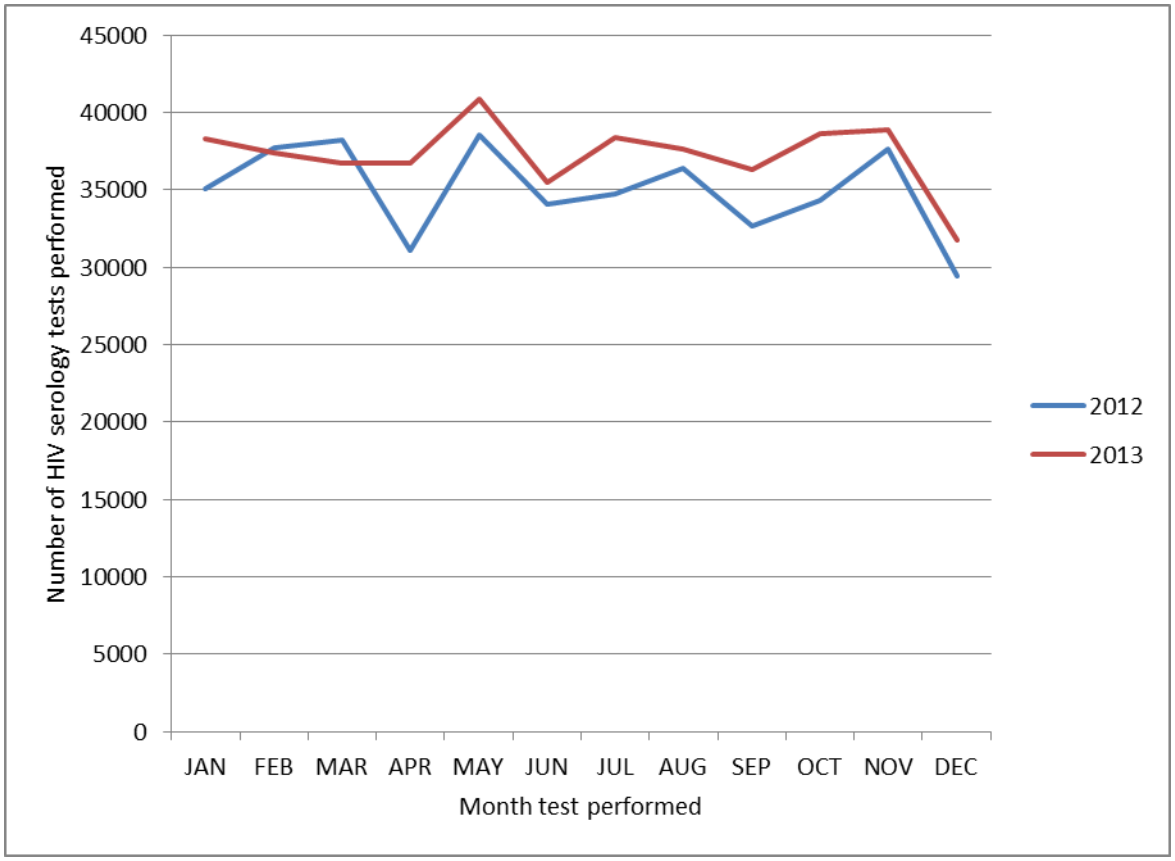
# 3. Increase HIV testing

## 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 10: Number of HIV serology tests performed at 15 NSW laboratories per month, 1 January 2012 to 31 December 2013**




Date source: NSW denominator data project

Comment

In 2013, there were 447,186 HIV serology tests performed in 15 laboratories in NSW compared to 419,968 in the same period in 2012 (Figure 10). This is an increase of 27,218 tests (6.5%). In quarter 4 2013 HIV testing increased by 8.5% (145,547 tests) compared with quarter 4 2012 (134,119 tests). Testing activity usually declines in the October to December period due to public holidays. Clients who were tested using a rapid HIV test are captured by this data as almost all had parallel serology done as part of a study. In order to maximise the detection of undiagnosed infections, testing should be targeted to people at high risk of HIV infection.

### 3.1.2 Local Health Districts

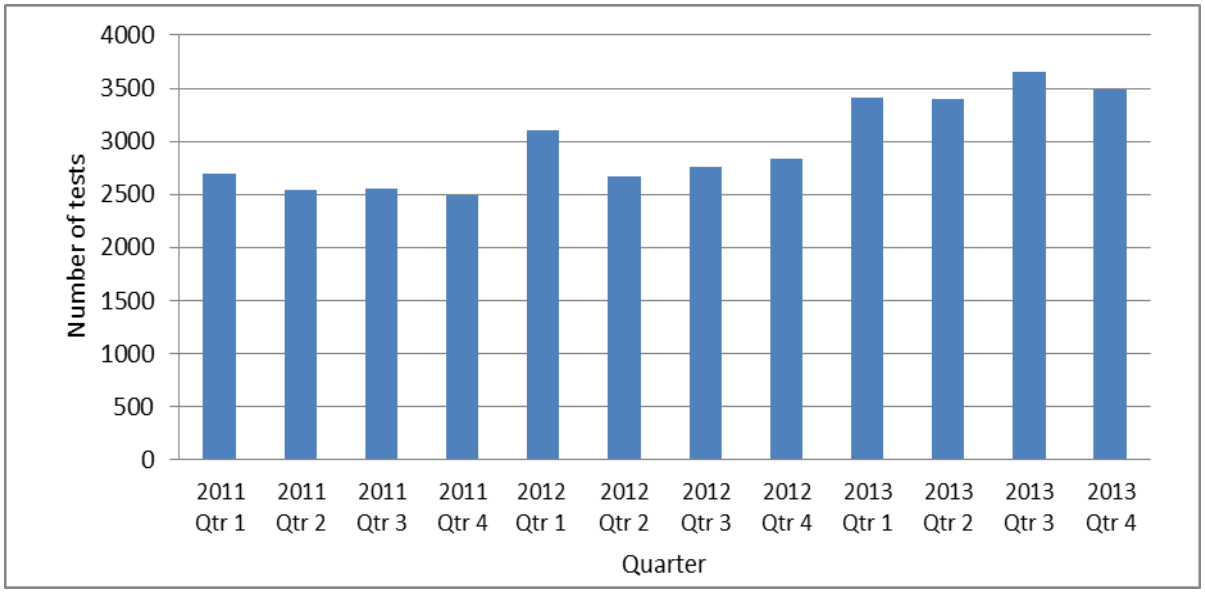
Data on HIV testing is available from Publicly Funded Sexual Health Clinics (PFSHCs) in all LHDs however the time periods and the type of data is not uniform due to different data management systems. Key differences in the availability of data are summarised in Table 2.

**Table 2: Summary of testing data availability from Publicly Funded Sexual Health Clinics in NSW**

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

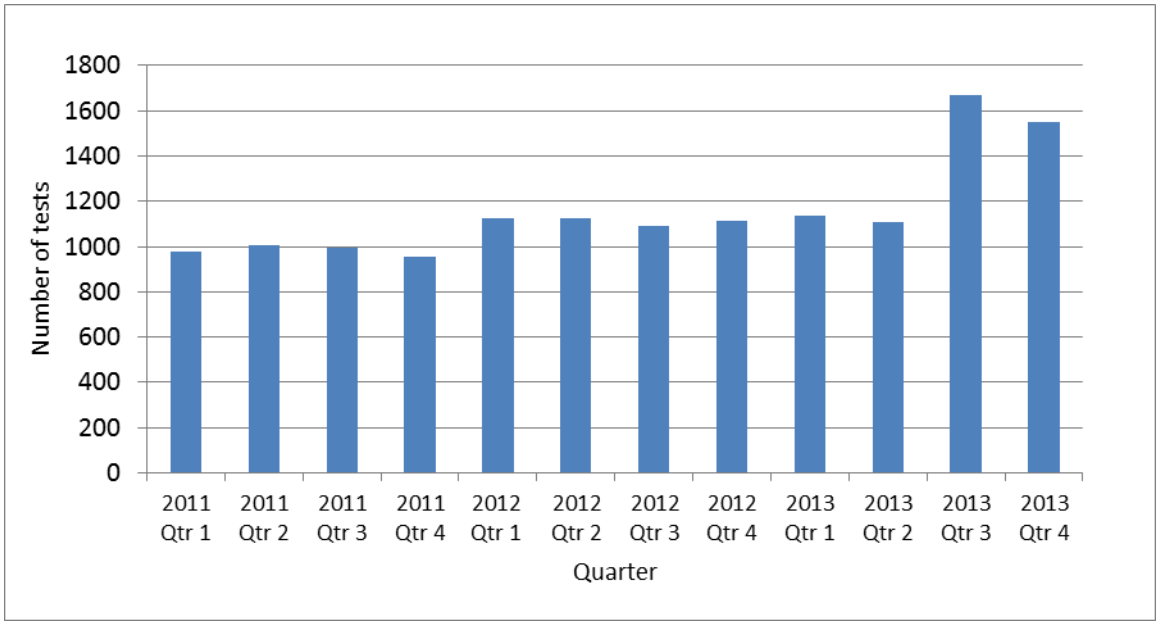
Figure 11 and 12 display the number of HIV tests done in PFSHCs between 1 January 2011 and 31 December 2013 in LHDs where this data is available (Table 2). Both rapid HIV testing and HIV serology are included. Figure 11 displays data from South Eastern Sydney LHD and Figure 12 displays aggregated data from Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs.

**Figure 11: Number of HIV tests performed in South Eastern Sydney Local Health District Publicly Funded Sexual Health Clinics, January 2011 to December 2013**




Data source: South Eastern Sydney Local Health District

**Figure 12: Number of HIV tests performed in five Local Health District Publicly Funded Sexual Health Clinics, January 2011 to December 2013**




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 11 & 12), there have been year on year increases in the number of HIV tests performed. In 2013, overall HIV testing increased 23% compared with the same period in 2012.

Testing numbers from PFSHCs make up a relatively small proportion of the overall testing volume in NSW (~5%), but account for greater than 13% of the additional 27,218 tests done in 2013 compared with 2012.

In Quarter 4 2013, 6,942 HIV tests were done in all PFHSCs in NSW. This is stable compared to the 6,831 tests done in Quarter 3 2013. Testing numbers usually decline slightly in the October to December period due to public holidays. Notable exceptions are Sydney LHD and Hunter New England where testing numbers increased in Quarter 4 2013 compared with Quarter 3 (641 vs 579 tests, 11% increase and 448 vs 398, 13% increase respectively).

Data from NSW laboratories and PFSHCs indicate that in 2013 HIV testing increased both overall in NSW and among high risk populations. Of note, testing increased in key inner Sydney city areas and in Western Sydney. 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.

## 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.

## 3.3 Who is being tested for HIV?

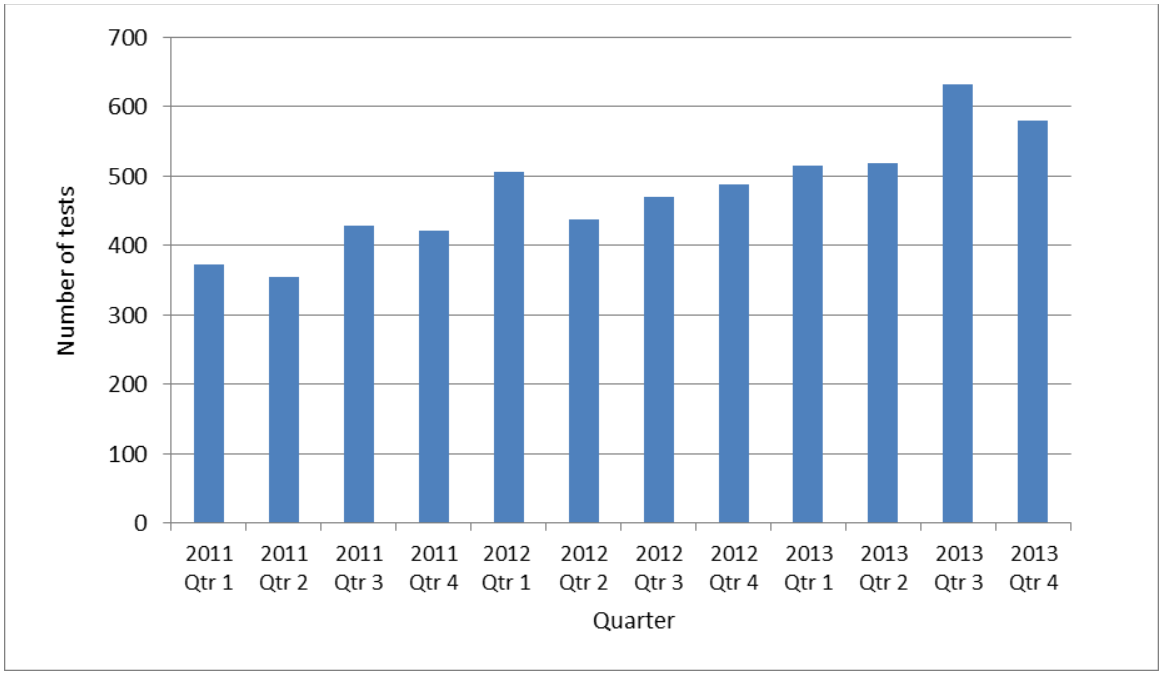
To reduce the pool of undiagnosed HIV infection, testing should be targeted to high risk populations. Table 3 summarises the available data from PFSHCs on HIV testing in priority population groups.

**Table 3: Summary of data on HIV testing in priority populations, Publicly Funded Sexual Health Clinics, NSW**

| Priority Population | % of HIV tests in all PFSHCs* | Number of tests in 2013 in PFSHCs in 5 LHDs# | *% increase from 2012 in PFSHCs in 5 LHDs#* |
|---|---|---|---|
| Men who have sex with men (MSM) | 40% | 2,248 | *18%* |
| Sex workers^ | 16% | 899 | *18%* |
| People who inject drugs (PWID)^ | 7% | 284 | *82%©* |
| Aboriginal people | 3% | 320~ | *220%~* |

*based on a Quarter 4 snapshot and consistent with activity data
#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

**Figure 13: 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 December 2013**




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 2), there have been year on year increases in the number of HIV tests done in MSM (Figure 13). In 2013, testing in MSM increased 18% compared with 2012. The rise in the number of tests in quarters 3 and 4 2013 is mirrored by an increase in positivity from a baseline of approximately 1.5% in 2012 and early 2013 to above 2% in quarters 3 and 4 2013.

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 2,551 tests done in this clinic in quarter 4, 1,578 (62%) were for MSM. 12 were positive yielding a 0.8% positivity rate among MSM clients.

In Sydney LHD, of the 641 tests done in Quarter 4, 365 (57%) were for MSM. 9 were positive yielding a 2.5% 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.

## 3.4 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.

As at 31 December 2013, 19 sites in NSW were performing rapid HIV testing. Three different types of rapid tests were in use. In 2013, 5,500 HIV rapid tests were done in NSW, this includes approximately 800 tests done in community sites, the first of which opened in June 2013. Since June, three 'fixed' community sites and two 'pop up' sites have been operational.

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, or had never previously tested for HIV (10 - 20%), or had not tested in the last 12 months (15-30%). The median age of clients varied between sites from around 31 years at a[TEST] Surry Hills to 38 years at the Darlinghurst Pop Up site. Building on experience in 2013, community testing models have expanded over the 2014 Mardi Gras period with promising early results.

The majority of rapid testing in 2013 was conducted in PFSHCs. 39 of the 4,467 tests performed were positive (0.9%). 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.

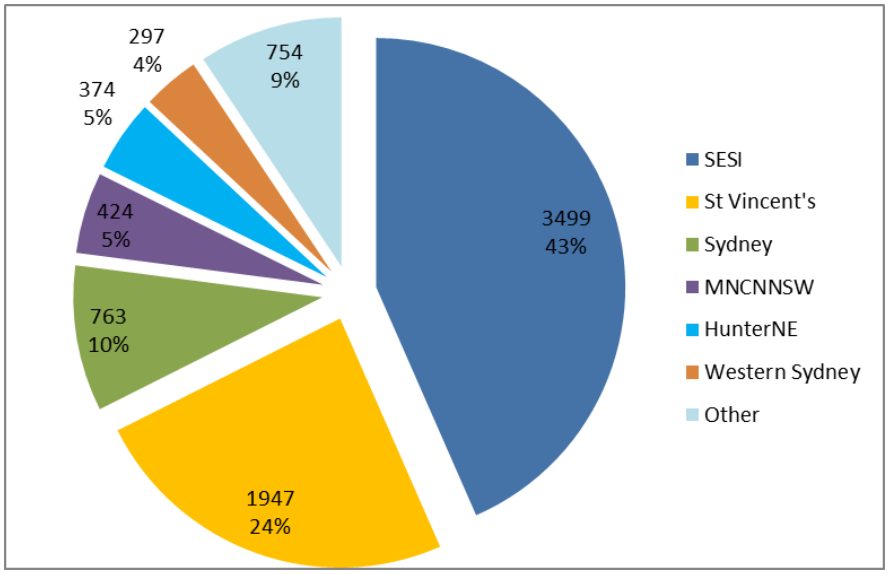
Data source: Sydney Rapid HIV Testing Study, Rapid testing Evaluation Framework, The Albion Centre Oraquick study, Sydney Sexual Health Centre and Lismore Sexual Health Centre

# 4 Increase HIV treatment

## 4.1 How many people in NSW are on antiretroviral treatment?

In December 2013, Heath 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 is the first year for which actual treatment numbers can be ascertained. Past estimates were based on modelled data therefore comparisons should be made with caution. Pharmacy dispensing data indicates that in 2013, at least 7,887 people living with diagnosed HIV in NSW were on ART.

**Figure 14: Number of patients dispensed ART in NSW by LHD of dispensing pharmacy, 1 January to 31 December 2013**

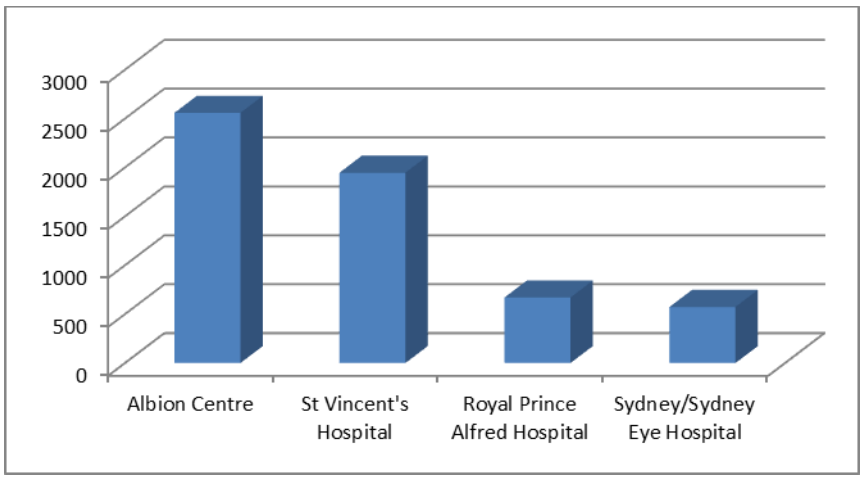



Data source: Health Share NSW ipharmacy data and data submitted by Western Sydney, Nepean Blue Mountains and Hunter New England LHDs

Notes:

1. Northern NSW, Mid North Coast, South Western Sydney, Justice Health, Murrumbidgee and Southern NSW LHDs came online late in 2013
2. The numbers displayed in the graph add up to a figure greater than the overall total of 7,887. This is because the small number of cross-LHD patient flows are not eliminated
3. 'Other' includes Northern Sydney 267 (3%); Central Coast 145 (2%); South West Sydney 135 (2%); Nepean Blue Mountains 89 (1%); Far West/Western NSW 67 (1%); Murrumbidgee/Southern NSW 20 (0%); Childrens Hospital Network 17 (0%); Justice Health 14 (0%).

**Figure 15: Number of unique patients dispensed ART in 2013 in the highest volume ART dispensing pharmacies**




Data source: Health Share NSW ipharmacy data

Comment

The figure of 7,887 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 dispensing occurred through pharmacies in the inner metropolitan area with almost a third of patients receiving ART through the Albion Centre pharmacy (32%) and almost a quarter through the St Vincent's Hospital pharmacy (24%).

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 2013 was collected and analysed. Table 4 summarises the main results.

**Table 4: Summary of data on clients who received HIV care in NSW public sexual health and HIV services in 2013[#]**

| Total number of patients who received care in 2013 | 5210 |
|---|---|
| **Number (%) of patients for whom treatment information was available** | 4885 (94%) |
| **Number (%) on ART** | 4348 (89%) |
| **Number (%) not on ART[^]** | 537 (11%) |
| ***Number (%) not on ART with CD4 count < 350**** | *92 (20%)* |
| ***Number (%) not on ART with CD4 count between 350 - 499**** | *102 (22%)* |
| ***Number (%) not on ART with CD4 count > 500**** | *269 (58%)* |
| **Number who initiated ART in 2013*** | 445 |
| ***Number (%) initiated at a CD4 count <350*** | *109 (24%)* |
| ***Number (%) initiated at a CD4 count between 350 - 500*** | *117 (26%)* |
| ***Number (%) initiated at a CD4 count >500*** | *219 (49%)* |

[#]Only the HIV clinics of Prince of Wales Hospital and St George Hospital were unable to provide treatment data
[^]Includes ART naïve clients and clients who have stopped ART
*Not currently available from St Vincent's Hospital

In 2013, 5,210 clients with HIV received care in public HIV and sexual health clinics in NSW. This number is an underestimate as complete annual data could not be obtained from the HIV clinics of Prince of Wales or St George Hospitals. The available data indicates that treatment coverage in public clinics is high at approximately 90%.

### 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 near the time of diagnosis.

**Table 5: CD4 count category at diagnosis and antiretroviral therapy (ART) status at the time of notification completion for 357 NSW residents newly diagnosed with HIV infection in 2013**

| CD4 at diagnosis, 2013 only | ART commenced | ART deferred | Unknown | Total |
|---|---|---|---|---|
| **< 200** | 39 | 16 | 1 | **56** |
| **200-349** | 36 | 35 | | **71** |
| **350-499** | 32 | 53 | 2 | **87** |
| **500+** | 26 | 94 | | **120** |
| **Unknown** | 2 | 15 | 9 | **23** |
| **Total** | **135 (38%)** | **213 (60%)** | **13 (2%)** | **357** |

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014

**Table 6: Doctor reported reasons for ART deferral among NSW residents newly diagnosed in 2013**

| Doctor reported reason for deferring ART initiation | Number (%) |
|---|---|
| Not clinically indicated* | 64 (30%) |
| In assessment, awaiting genotyping or other results | 29 (14%) |
| ARV declined by patient | 24 (11%) |
| Treatment required for other condition** | 19 (9%) |
| Patient coming to terms with diagnosis and options | 16 (8%) |
| Intention to start soon | 15 (7%) |
| Patient away or going overseas | 14 (7%) |
| Not eligible for Medicare | 12 (6%) |
| Lost to follow up | 5 (2%) |
| Not specified | 3 (1%) |
| Patient moving elsewhere in NSW or interstate | 3 (1%) |
| Social or psychosocial reasons | 2 (1%) |
| Likely elite controller: low or undetectable VL | 2 (1%) |
| In referral process | 2 (1%) |
| Deceased | 2 (1%) |
| Clinical trial | 1 (<1%) |
| **Total** | **213** |

Date source: NSW HIV/AIDS database, Health Protection NSW, extracted 20 February 2014
*Of 64 cases with ART deferred, 1 (2%) was in advanced stage infection, 7 (11%) had a CD4 350-499, 34 (53%) were in early stage infection and 1 (2%) was unknown. 21 (33%) had a CD4 greater than 500. The PBS restriction of a CD4 threshold of 500cells/µL for ART initiation will be removed in April 2014
** One of 19 subsequently died

Comment

Since 2013, notifications of newly diagnosed HIV infection in NSW have included information on ART initiation. Of 357 NSW residents newly diagnosed with HIV infection in 2013, 135 (38%) commenced ART close to the time of diagnosis. Among 213 cases with ART deferred 24% had a CD4 count less than 350, and 49% had a CD4 less than 500 (Table 5). The reasons reported by treating doctors for deferring ART are listed in Table 6. It appeared that a further 44 (21%) people newly diagnosed were likely to start ART soon (see reasons: “In assessment, await genotyping or other results” and “Soon to start ART”). People newly diagnosed from 2013 onwards will be followed up through their clinicians to more accurately ascertain their HIV treatment and viral load status and whether they are retained in care or not.

# 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 Dec 2013

| | 2007 n (%) | 2008 n (%) | 2009 n (%) | 2010 n (%) | 2011 n (%) | 2012 n (%) | 2013 n (%) | 1981– 2013 n (%) |
|---|---|---|---|---|---|---|---|---|
| **Total** | **386 (100%)** | **325 (100%)** | **333 (100%)** | **307 (100%)** | **330 (100%)** | **409 (100%)** | **357 (100%)** | **16920 (100%)** |
| **Gender** | | | | | | | | |
| Male | 344 (89.1%) | 293 (90.2%) | 292 (87.7%) | 282 (91.9%) | 309 (93.6%) | 372 (91.0%) | 325 (91.0%) | 15554 (91.9%) |
| Female | 41 (10.6%) | 32 (9.8%) | 39 (11.7%) | 23 (7.5%) | 21 (6.4%) | 36 (8.8%) | 28 (7.8%) | 1079 (6.3%) |
| Transgender | 1 (0.3%) | 0 (0.0%) | 2 (0.6%) | 2 (0.7%) | 0 (0.0%) | 1 (0.2%) | 3 (0.8%) | 38 (0.2%) |
| Not stated | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 249 (1.5%) |
| **Aboriginal peoples** | | | | | | | | |
| Aboriginal | 5 (1.3%) | 8 (2.5%) | 9 (2.7%) | 7 (2.3%) | 5 (1.5%) | 11 (2.7%) | 8 (2.2%) | 152 (0.9%) |
| Non-Aboriginal | 338 (87.6%) | 301 (92.6%) | 313 (94.0%) | 291 (94.8%) | 322 (97.6%) | 390 (95.4%) | 341 (95.5%) | 9805 (57.9%) |
| Not stated | 43 (11.1%) | 16 (4.9%) | 11 (3.3%) | 9 (2.9%) | 3 (0.9%) | 8 (1.9%) | 8 (2.2%) | 6963 (41.2%) |
| **Age in years** | | | | | | | | |
| 0 – 4 | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 1 (0.3%) | 0 (0.0%) | 0 (0.0%) | 0 | 40 (0.2%) |
| 5 - 14 | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 58 (0.3%) |
| 15 - 19 | 1 (0.3%) | 3 (0.9%) | 3 (0.9%) | 5 (1.6%) | 6 (1.8%) | 9 (2.2%) | 9 (2.5%) | 302 (1.8%) |
| 20 - 24 | 33 (8.5%) | 39 (12.0%) | 33 (9.9%) | 29 (9.4%) | 34 (10.3%) | 44 (10.8%) | 37 (10.4%) | 2050 (12.1%) |
| 25 - 29 | 61 (15.8%) | 58 (17.8%) | 57 (17.1%) | 56 (18.2%) | 56 (17.0%) | 76 (18.6%) | 64 (17.9%) | 3354 (19.8%) |
| 30 - 39 | 146 (37.8%) | 107 (32.9%) | 100 (30.0%) | 93 (30.3%) | 123 (37.3%) | 133 (32.5%) | 91 (25.5%) | 6220 (36.8%) |
| 40 - 49 | 94 (24.4%) | 84 (25.8%) | 88 (26.4%) | 82 (26.7%) | 70 (21.2%) | 85 (20.8%) | 91 (25.5%) | 3280 (19.4%) |
| 50 - 59 | 41 (10.6%) | 24 (7.4%) | 40 (12.0%) | 29 (9.4%) | 35 (10.6%) | 42 (10.3%) | 47 (13.2%) | 1132 (6.7%) |
| 60 + | 10 (2.6%) | 10 (3.1%) | 10 (3.0%) | 12 (3.9%) | 6 (1.8%) | 20 (4.9%) | 17 (4.8%) | 397 (2.3%) |
| Not reported | 0.0 (0.1%) | 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) | 257 (66.6 %) | 236 (72.6%) | 219 (65.8%) | 227 (73.9%) | 268 (81.2%) | 318 (77.8%) | 265 (74.2%) | 10563 (62.4%) |
| MSM and injects drugs | 11 (2.8%) | 11 (3.4%) | 18 (5.4%) | 8 (2.6%) | 10 (3.0%) | 12 (2.9%) | 13 (3.6%) | 469 (2.8%) |
| Heterosexual contact | 63 (16.3%) | 64 (19.7%) | 76 (22.8%) | 51 (16.6%) | 41 (12.4%) | 57 (13.9%) | 62 (17.4%) | 1530 (9.0%) |
| Person who injects drug | 14 (3.6%) | 12 (3.7%) | 11 (3.3%) | 9 (2.9%) | 8 (2.4%) | 10 (2.4%) | 9 (2.5%) | 550 (3.3%) |
| Haemophilia, coagulation disorders, or blood tissue recipient | 1 (0.0%) | 0 (0.0%) | 1 (0.3%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 276 (1.6%) |
| Vertical | 0 (0.0%) | 0 (0.0%) | 2 (0.6%) | 1 (0.3%) | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 45 (0.3%) |
| Other / undetermined | 40 (10.4%) | 2 (0.6%) | 6 (1.8%) | 11 (3.6%) | 3 (0.9%) | 12 (2.9%) | 7 (2.0%) | 3487 (20.6%) |
| **Local Health District of residence** | | | | | | | | |
| South Eastern Sydney | 128 (33.2%) | 118 (36.3%) | 105 (31.5%) | 109 (35.5%) | 123 (37.3%) | 149 (36.4%) | 124 (34.7%) | 5274 (31.2%) |
| Sydney | 89 (23.1%) | 77 (23.7%) | 92 (27.6%) | 76 (24.8%) | 88 (26.7%) | 112 (27.3%) | 87 (24.4%) | 2746 (16.2%) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Northern Sydney | 34 (8.8%) | 25 (7.7%) | 38 (11.4%) | 19 (6.2%) | 24 (7.3%) | 23 (5.6%) | 25 (7.0%) | 943 (5.6%) |
| Western Sydney | 26 (6.7%) | 26 (8.0%) | 21 (6.3%) | 20 (6.5%) | 31 (9.4%) | 25 (6.1%) | 27 (7.6%) | 683 (4.0%) |
| South Western Sydney | 25 (6.5%) | 16 (4.9%) | 22 (6.6%) | 25 (8.1%) | 18 (5.5%) | 30 (7.3%) | 34 (9.5%) | 623 (3.7%) |
| Hunter New England | 19 (4.9%) | 14 (4.3%) | 16 (4.8%) | 16 (5.2%) | 10 (3.0%) | 14 (3.4%) | 18 (5.0%) | 445 (2.6%) |
| Nepean Blue Mountains | 3 (0.8%) | 7 (2.2%) | 3 (0.9%) | 3 (1.0%) | 4 (1.2%) | 5 (1.2%) | 3 (0.8%) | 247 (1.5%) |
| Illawarra Shoalhaven | 9 (2.3%) | 3 (0.9%) | 5 (1.5%) | 8 (2.6%) | 5 (1.5%) | 9 (2.2%) | 7 (2.0%) | 211 (1.2%) |
| Central Coast | 10 (2.6%) | 6 (1.8%) | 5 (1.5%) | 5 (1.6%) | 4 (1.2%) | 10 (2.4%) | 6 (1.7%) | 185 (1.1%) |
| Northern NSW | 4 (1.0%) | 4 (1.2%) | 4 (1.2%) | 9 (2.9%) | 11 (3.3%) | 5 (1.2%) | 5 (1.4%) | 183 (1.1%) |
| Mid North Coast | 3 (0.8%) | 8 (2.5%) | 6 (1.8%) | 3 (1.0%) | 4 (1.2%) | 3 (0.7%) | 6 (1.7%) | 135 (0.8%) |
| Western NSW | 4 (1.0%) | 3 (0.9%) | 3 (0.9%) | 4 (1.3%) | 3 (0.9%) | 7 (1.7%) | 5 (1.4%) | 116 (0.7%) |
| Murrumbidgee | 2 (0.5%) | 3 (0.9%) | 1 (0.3%) | 6 (2.0%) | 2 (0.6%) | 3 (0.7%) | 2 (0.6%) | 57 (0.3%) |
| Southern NSW | 3 (0.8%) | 3 (0.9%) | 6 (1.8%) | 1 (0.3%) | 2 (0.6%) | 8 (2.0%) | 4 (1.1%) | 53 (0.3%) |
| Albury | 0 (0.0%) | 0 (0.0%) | 1 (0.3%) | 1 (0.3%) | 0 (0.0%) | 2 (0.5%) | 1 (0.3%) | 25 (0.1%) |
| Far West | 0 (0.0%) | 0 (0.0%) | 2 (0.6%) | 0 (0.0%) | 0 (0.0%) | 2 (0.5%) | 0 (0.0%) | 8 (0.0%) |
| Justice Health | 0 (0.0%) | 1 (0.3%) | 1 (0.3%) | 1 (0.3%) | 0 (0.0%) | 1 (0.2%) | 1 (0.3%) | 5 (0.0%) |
| Unknown | 27 (7.0%) | 11 (3.4%) | 2 (0.6%) | 1 (0.3%) | 1 (0.3%) | 1 (0.2%) | 2 (0.6%) | 4981 (29.4%) |
| **Total** | **386** | **325** | **333** | **307** | **330** | **409** | **357** | **16920** |

## 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:

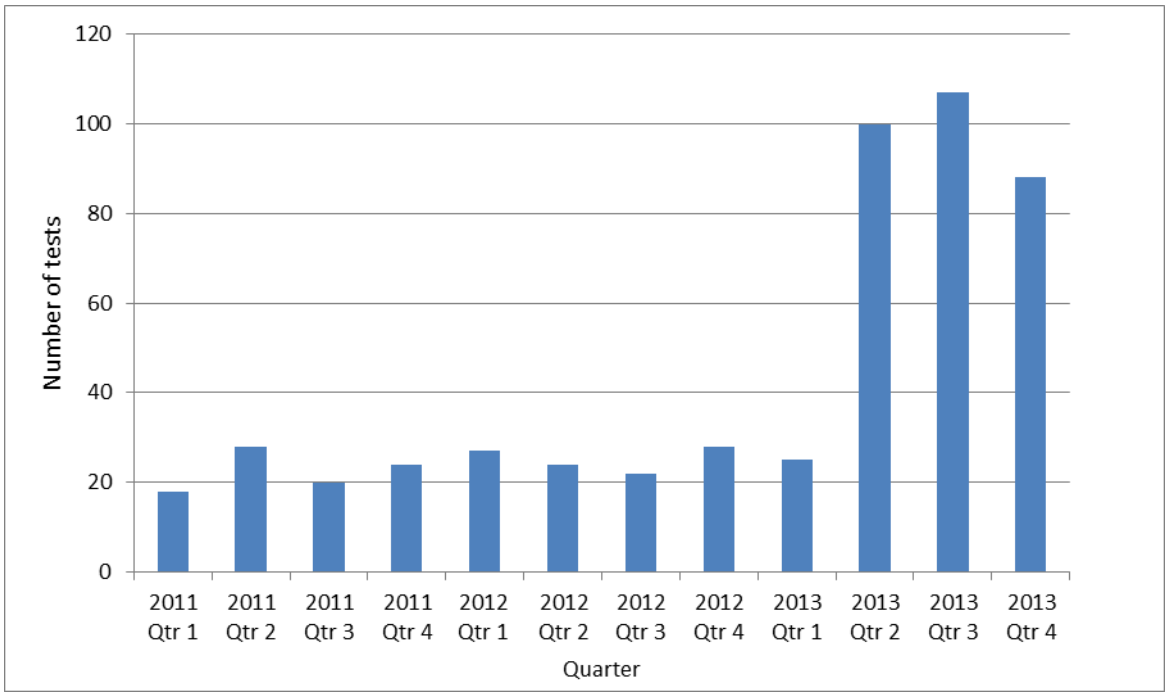
1. Sexual identity
2. 'Have you had an HIV test in the last 12 months?'
   - Yes, No, Don't know, refuse

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

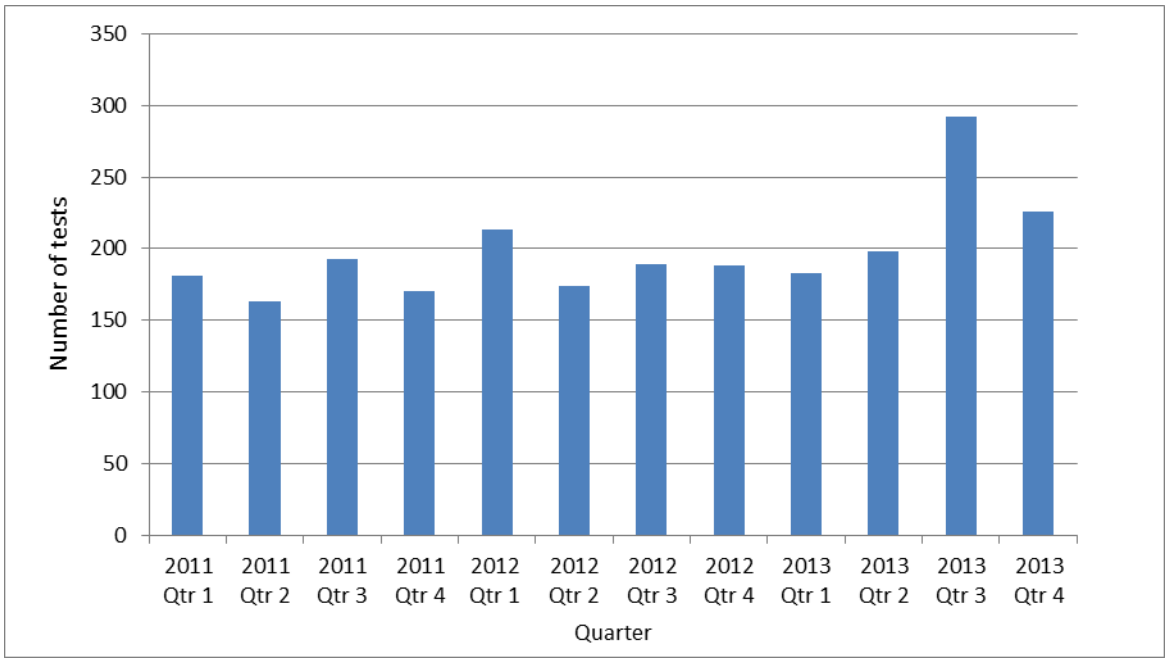
**Figure 16: Number of HIV tests performed in Aboriginal people in five Local Health District Publicly Funded Sexual Health Clinics, 1 January 2011 to 31 December 2013**




Note: Increase largely driven by Western Sydney LHD

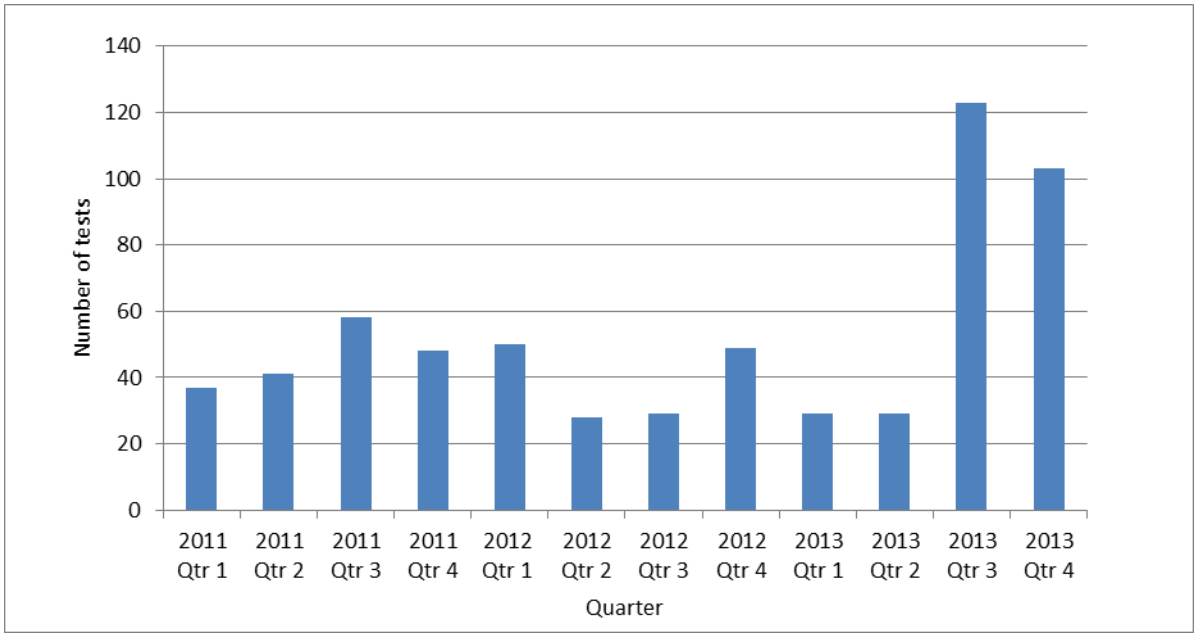
Data source: PFSHCs in Western Sydney, North Sydney, Nepean Blue Mountains, Northern NSW and Illawarra Shoalhaven LHDs

**Figure 17: 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 December 2013**




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

**Figure 18: 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