

NSW HEPATITIS B AND C STRATEGIES 2014-2020

2015 MID-YEAR DATA REPORT (JAN-JUNE)



Health

Overview

The *NSW Hepatitis C Strategy 2014-2020* and the *NSW Hepatitis B Strategy 2014-2020* were launched in September 2014. These strategies describe how the NSW public health system will work with general practitioners, non-government organisations, community organisations, researchers and affected communities to form a coordinated response to hepatitis C and hepatitis B.

Both *Strategies* have an equity focus. This emphasis will require the health system to prioritise work with population groups in greatest need and in those settings and geographical locations where infections are most prevalent.

To reduce hepatitis C infections in NSW and improve the health outcomes of people living with hepatitis C in NSW, the *NSW Hepatitis C Strategy 2014-2020* outlines two targets to be achieved by 2020:

1. reduce sharing of injecting equipment among people who inject drugs by 25%; and
2. increase the number of people accessing hepatitis C treatment in NSW by 100%.

To achieve these targets the Hepatitis C Strategy identifies these key actions:

- building on established hepatitis C prevention efforts;
- improving management of chronic hepatitis C; and
- improving access to hepatitis C treatment.

To reduce hepatitis B infections in NSW and improve the health outcomes of people living with hepatitis B in NSW, the *NSW Hepatitis B Strategy 2014-2020* outlines five targets to be achieved by 2020:

1. achieve hepatitis B childhood vaccination coverage of 95%;
2. ensure all pregnant women are screened for hepatitis B;
3. ensure all babies born to hepatitis B positive mothers receive hepatitis B immunoglobulin within 12 hours of birth;
4. reduce sharing of injecting equipment among people who inject drugs by 25%; and
5. increase the number of people living with hepatitis B receiving antiviral treatment (when clinically indicated) by 300%.

To achieve these targets the Hepatitis B Strategy identifies these key actions:

- building on established hepatitis B prevention efforts;
- Increasing hepatitis B testing and diagnosis
- Improving monitoring, care and treatment for people living with hepatitis B

The Data Report has been developed to monitor progress against the targets outlined in the *NSW Hepatitis C Strategy 2014-2020* and the *NSW Hepatitis B Strategy 2014-2020*. This is the 2015 Mid-Year Data Report (Jan-June), which shows progress between 1 January to 30 June 2015. The Data Reports will be published on a 6-monthly basis.

The Data report provides an overview of the epidemiology of hepatitis C and hepatitis B and describes progress and achievements in meeting targets and priority actions of both strategies. To monitor this progress, a range of data sources have been identified for ongoing analysis and reporting purposes.

Over the lifetime of both strategies, the Ministry will work with key stakeholders to improve and enhance data systems in order to better capture activity relating to hepatitis C and hepatitis B prevention, assessment, management, and treatment.

Current progress against the targets in the *NSW Hepatitis C Strategy 2014-2020* and the *NSW Hepatitis B Strategy 2014-2020* is summarised below.

As at June 2015:

- The hepatitis B childhood vaccination coverage measured at 12 months was 92% in January to June 2015. Coverage at 24 months was 94.5%.
- The proportion of women giving birth in a public or private hospital in NSW screened for hepatitis B was 99% in January to June 2014.
- The proportion of babies born to mothers living with hepatitis B who received hepatitis B immunoglobulin (HBIG) within 12 hours of birth is 99.2% in January to June 2014.
- 16% of respondents to the NSW NSP Enhanced Data Collection survey reported receptive sharing of needles and syringes (receptive syringe sharing) in the past month in 2015, which is stable compared with 14% in 2014.
- 2,132 people with chronic hepatitis C were assessed for treatment in publicly funded health services in NSW between January to June 2015, compared with 2,027 (5% increase) in the same period in 2014¹.
- 622 people with chronic hepatitis C commenced treatment in publicly funded health services in NSW between January to June 2015, compared with 560 (11% increase) in the same period in 2014².
- 2,722 people (unique patients) with chronic hepatitis B were dispensed antiviral therapy in NSW public hospital pharmacies in the financial year 2014/15³.
- 1,205 people (unique patients) with chronic hepatitis C were dispensed antiviral therapy in NSW public hospital pharmacies in the financial year 2014/15⁴.

¹ These figures capture hepatitis C treatment assessment in liver clinics; drug and alcohol services; and Justice Health custodial settings. It excludes activity in the private sector (including private liver clinics and GPs).

² These figures capture hepatitis C treatment initiation in liver clinics; drug and alcohol services; Justice Health custodial settings; as well as patients on clinical trials. It excludes activity in the private sector (including private liver clinics and GPs).

³ This figure captures the number of people dispensed hepatitis B antiviral therapy in NSW public hospital pharmacies. It excludes people dispensed hepatitis B antiviral therapy in private hospital and community pharmacies. It also excludes data from Hunter New England LHD which was not available at the time of the report. The hepatitis B dispensing data was revised on 15 May 2016 to correct a duplication error in the analysis of the NSW iPharmacy data.

⁴ This figure captures the number of people prescribed hepatitis C antiviral therapy in NSW public hospital pharmacies. It excludes people dispensed hepatitis C antiviral therapy in private hospital and community pharmacies.

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Glossary of Terms

AMS	Aboriginal Medical Service
ADM	Automatic dispensing machine
IDC	Internal dispensing chute
HBV	Hepatitis B
HCV	Hepatitis C
LHD	Local Health District
NSP	Needle and Syringe Program
NUAA	New South Wales Users and AIDS Association
NSW	New South Wales
OST	Opioid substitution treatment
PFSHC	Publicly funded Sexual Health Clinic
PWID	People who inject drugs
RSS	Receptive syringe sharing

1. GOALS

1.1 Improve health outcomes of people living with hepatitis B

1.1.1 Burden of disease of hepatitis B

It is estimated that there are approximately 77,000 people living with chronic hepatitis B in NSW¹. Living with hepatitis B is associated with increased morbidity, mortality and health-related costs. Chronic viral hepatitis is the leading cause of liver cancer and the most common reason for liver transplantation. A significant proportion of people living with hepatitis B are not aware of their infection.

The Ministry of Health is currently developing updated incidence and prevalence modelling of infection and disease burden for hepatitis B under the BRISE² Research Program.

¹ MacLachlan JH, Allard N, Towell V, Cowie BC. The burden of chronic hepatitis B virus infection in Australia, 2011. *Australian and New Zealand Journal of Public Health*. 2013;37(5): 416-422

² BBV & STI Research, Intervention and Strategic Evaluation (BRISE), 2014-2019 – University of NSW

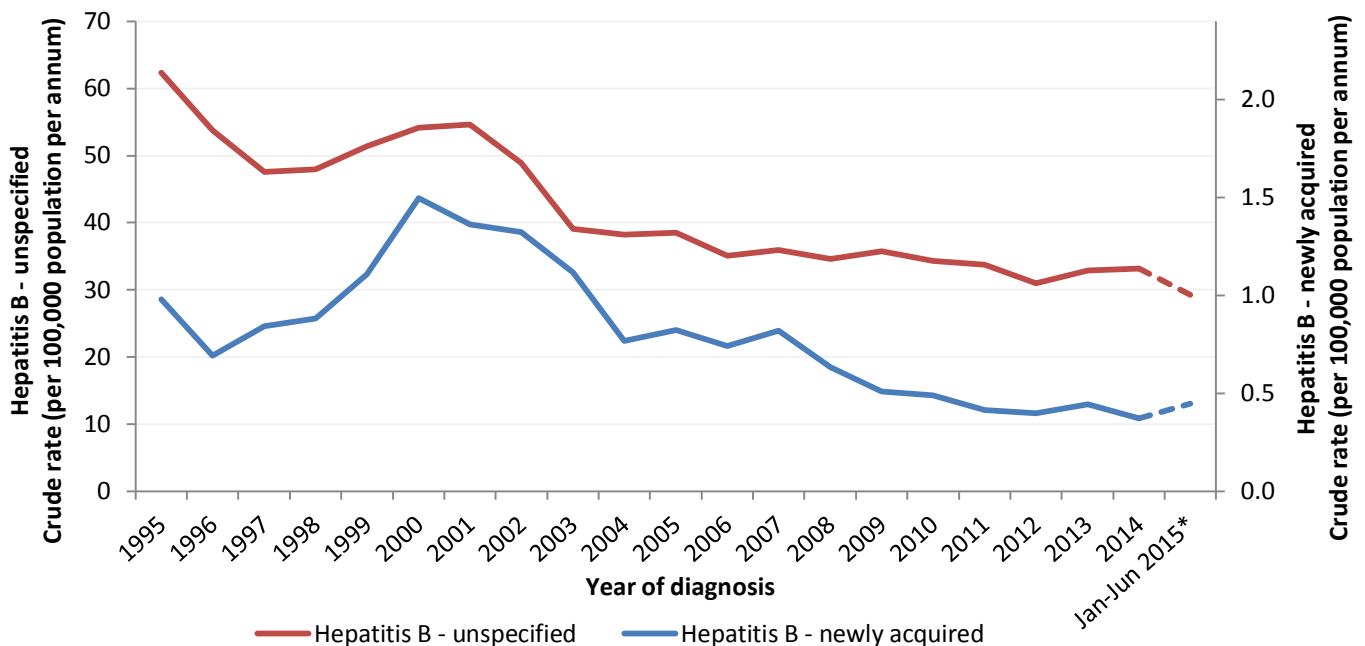
1.2 Reduce hepatitis B infections in NSW

Hepatitis B is a notifiable condition under the Public Health Act 2010, and is notified to NSW Health by laboratories³. Hospitals and doctors are also required to notify acute viral hepatitis. Notifications data provide limited information that can be used for assessing the epidemiological patterns of hepatitis B infections. This is because many infections are asymptomatic, and so people who are infected may never be tested, or only tested many years after infection, and laboratory reports do not distinguish between infection acquired recently, or years before. Furthermore, variations in notifications may reflect differences in testing patterns rather than differences in incidence of infection.

Hepatitis B is recorded as 'unspecified' when the time of infection is unknown (most notifications) or is known to be longer than two years prior to diagnosis. Hepatitis B is notified as 'newly acquired' when there is evidence that the infection was acquired within two years of diagnosis, either from serology or previous negative testing⁴. Apart from the small number of people who have evidence of a recent negative test or who are symptomatic, it is difficult to identify acute infections.

1.2.1 How many people are notified with hepatitis B in NSW?

Figure 1: Notification rates of unspecified and newly acquired hepatitis B, NSW, 1 January 1995 to 30 June 2015



Data source: NSW Notifiable Conditions Information Management System (NCIMS) and ABS population estimates (SAPHaRI), NSW Health; data extracted 24 July 2015

Note: Excludes non-NSW residents

*The rate in 2015 is based on 6 months of data between Jan-June 2015 adjusted to an annual rate and is subject to change once data between July-Dec 2015 becomes available

Comment

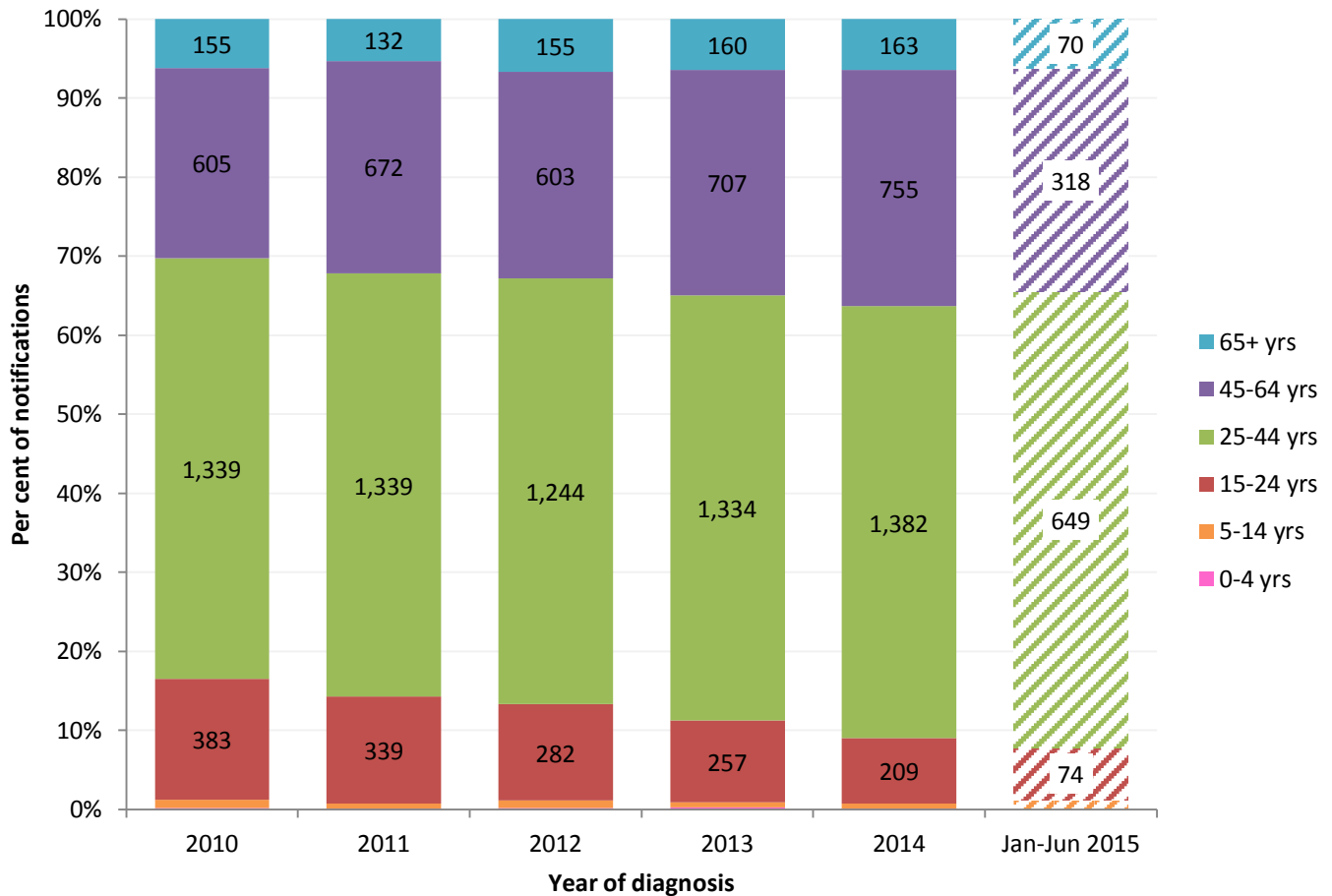
From January to June 2015, there were 1,132 hepatitis B notifications. Of these, 1,115 (98.5%) were classified as 'unspecified' and 17 (1.5%) were classified as 'newly acquired'. During this period, the notification rates of hepatitis B - unspecified and newly acquired hepatitis B in NSW residents were 29 and 0.4 per 100,000 per annum (respectively).

³ NSW Health. Disease notification [webpage]. <http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx>

⁴ NSW Health. Control guideline for Public Health Units: Hepatitis B <http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/hepb.aspx>

1.2.2 Which groups are being notified?

Figure 2: Hepatitis B notifications in NSW by age group and year of diagnosis, 1 January 2010 to 30 June 2015



Data source: NCIMS, NSW Health; data extracted 21 July 2015

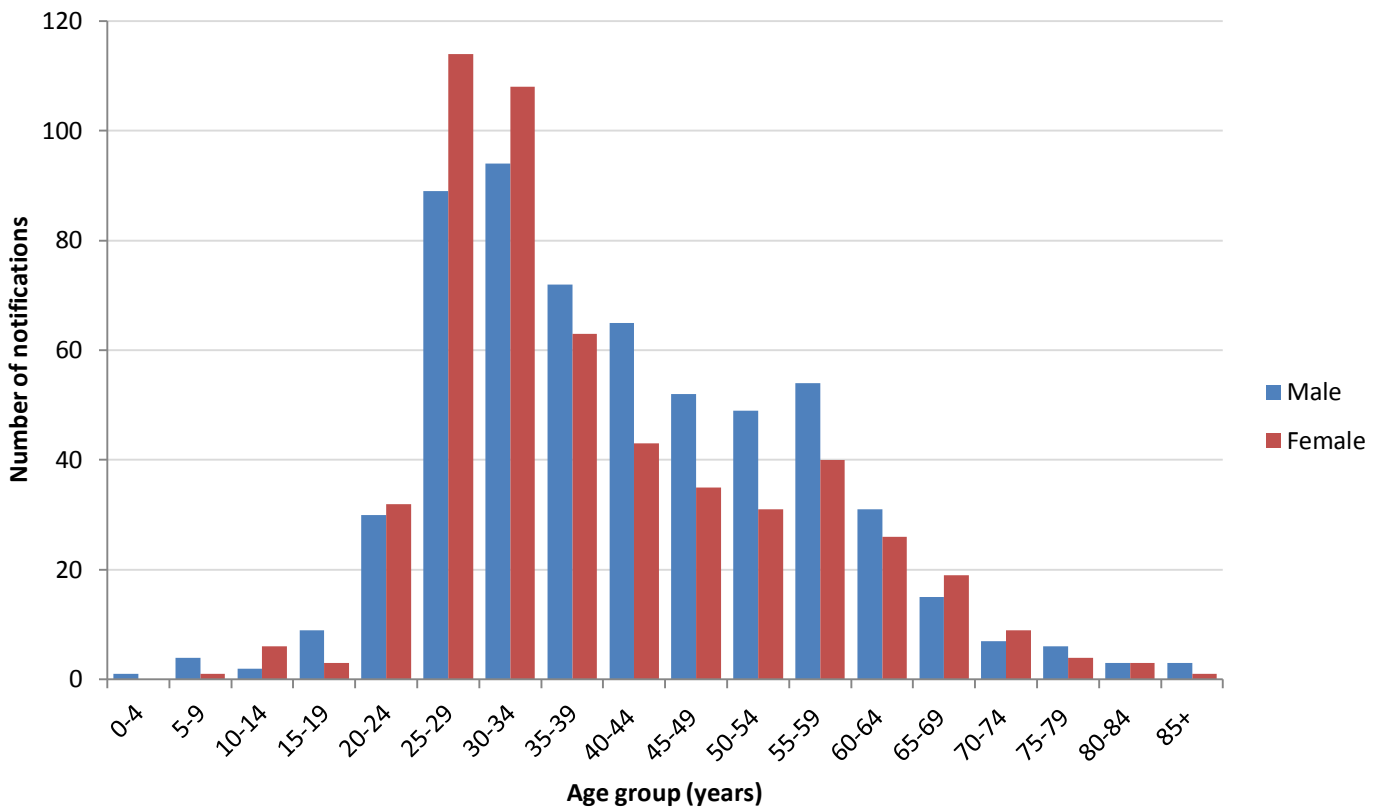
Note: Excludes non-NSW residents and persons whose age is unknown or not stated; data labels show number of notifications

Comment

Of those people newly diagnosed with hepatitis B between January and June 2015, 1 (<1%) were 0-4 years, 13 (1%) were 5-14 years, 74 (7%) were 15-24 years, 649 (58%) were 25-44 years, 318 (28%) were 45-64 years and 70 (6%) were 65 years and over.

Notifications of hepatitis B in young people aged 15 – 24 years have continued to decline over the last five to ten years, which may be related to universal routine immunisation of infants in NSW since 2000 and the catch-up program for adolescents, which ran from 2004 until 2013.

Notifications in older adults (45-64 years, and 65+ years) have increased over the last decade, possibly reflecting increased testing of people who acquired infection at birth or overseas.

Figure 3: Notifications of hepatitis B in NSW, by age group and gender, 1 January to 30 June 2015

Data source: NCIMS, NSW Health; data extracted 27 July 2015

Note: Excludes non-NSW residents, transgender persons and persons whose age or sex is unknown or not stated

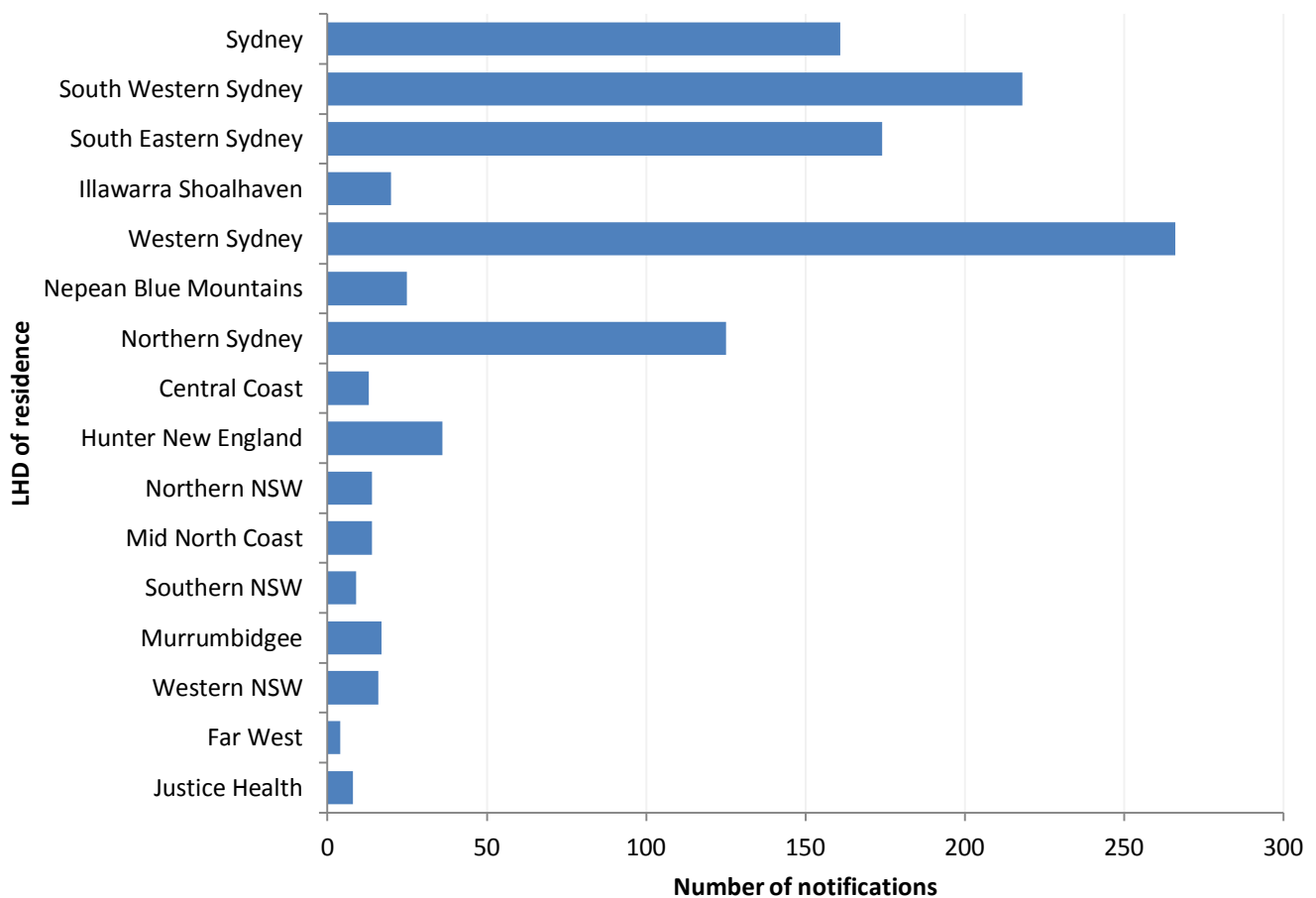
Comment

Between January and June 2015, 52.2% of hepatitis B notifications were in males and 47.7% were in females, a very similar gender distribution to 2014 (52.5% and 42.7% respectively).

The age distribution of hepatitis notifications in the first half of 2015 is broadly similar to 2014, with the most commonly diagnosed age groups being 25-29 years and 30-34 years. Females had a higher number of hepatitis B notifications than males in both of these age groups, which may be due to routine antenatal screening resulting in higher detection rates amongst pregnant women. However, in January to June 2015, there have been more notifications amongst women aged 25-29 years than women aged 30-34 years, a reversal of that seen in 2014.

1.2.3 Where are notifications occurring?

Figure 4: Notifications of hepatitis B, by LHD of residence, NSW, 1 January to 30 June 2015



Data source: NCIMS, NSW Health; data extracted 27 July 2015

Note: Excludes non-NSW residents and persons whose place of residence in NSW was not known; Justice Health data includes notifications from juvenile correctional centres

Comment

The geographic distribution of hepatitis B notifications from January to June 2015 is very similar to 2014, with five Sydney metropolitan LHDs (Western Sydney, South Western Sydney, South Eastern Sydney, Sydney and Northern Sydney LHDs) accounting for 84% of hepatitis B notifications during this period.

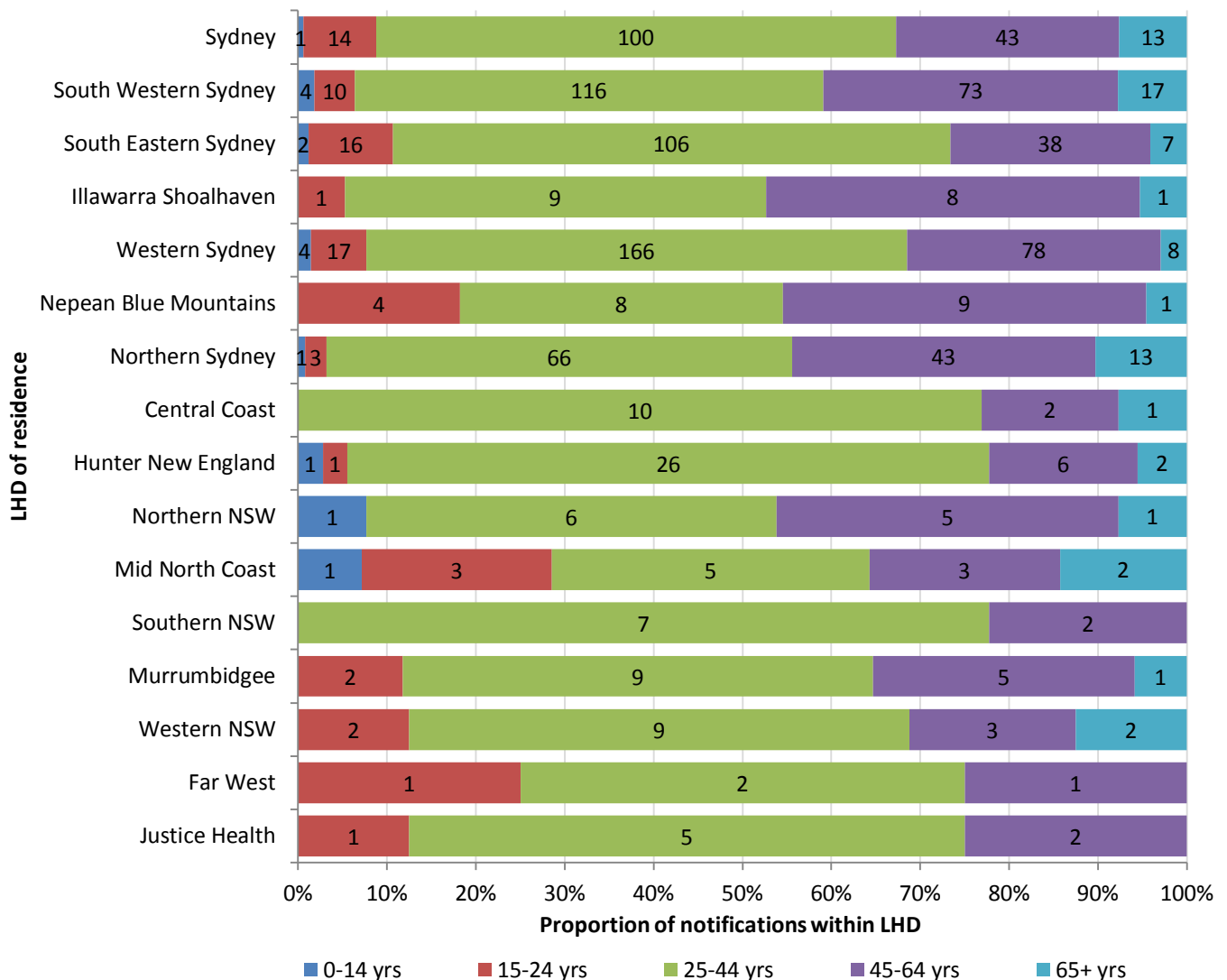
In NSW, an estimated 60% of people living with hepatitis B were born overseas⁵. In general, the proportion of people living with chronic hepatitis B reflects the proportion of the population born in a country with high prevalence of hepatitis B. The number of hepatitis B notifications in an LHD is most likely a reflection of migrant settlement patterns of people who acquired infection at birth overseas and targeted testing in these areas.

Improving monitoring, care and treatment for people living with hepatitis B is a priority under the NSW Hepatitis B Strategy 2015-2020, which is important in areas with high notifications.

To account for the substantial variation in population size between the LHDs, notification rates have been shown in Figure 6.

⁵ MacLachlan J, Cowie B. Hepatitis B Mapping Project: Estimates of chronic hepatitis B prevalence and cultural and linguistic diversity by Medicare Local, 2011 – National Report. Australasian Society for HIV Medicine. 2013

Figure 5: Notifications of hepatitis B, by LHD and age group, NSW, 1 January to 30 June 2015



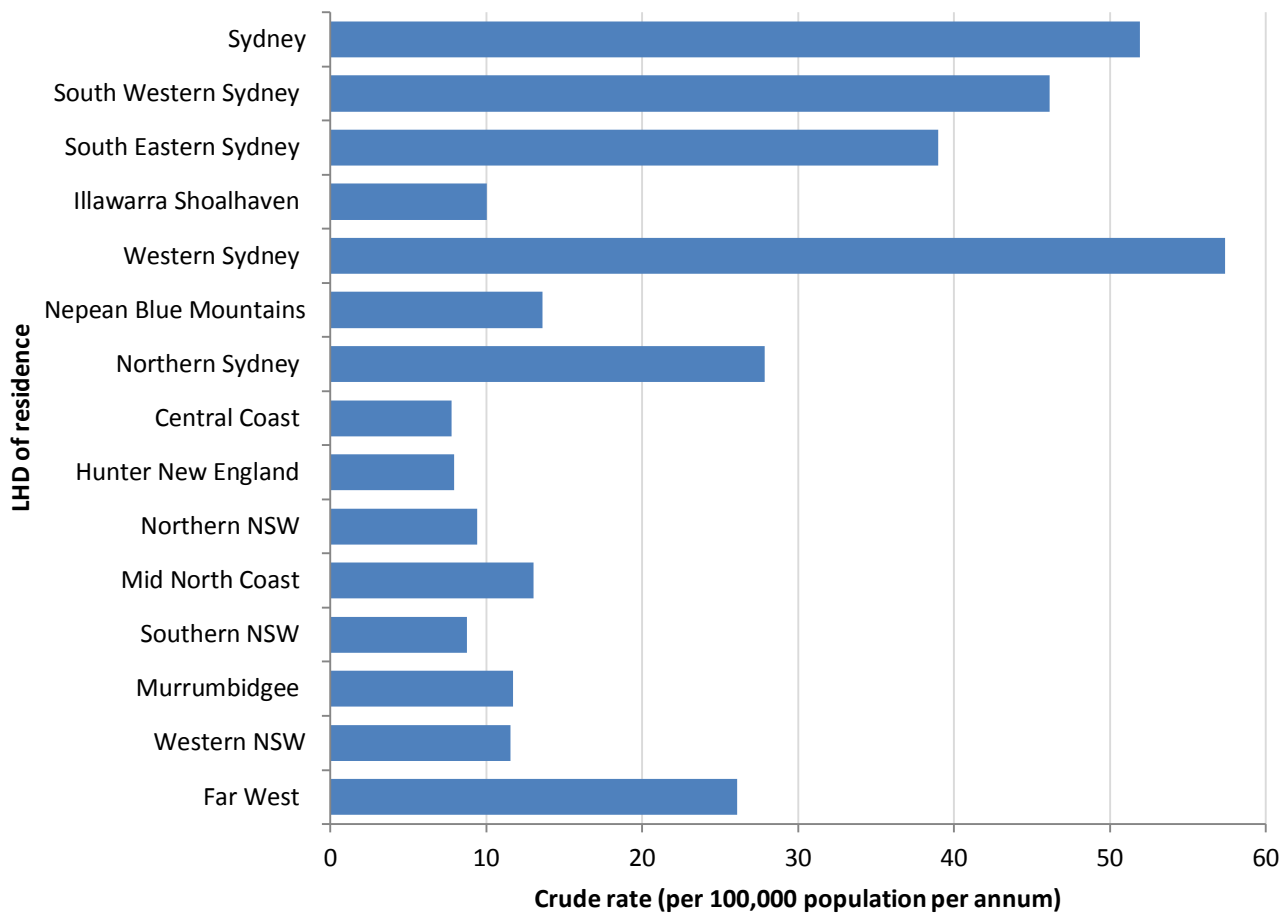
Data source: NCIMS, NSW Health; data extracted 8 Sept 2015

Note: Excludes non-NSW residents and persons whose age and/or place of residence in NSW was not known or not stated; data labels show number of notifications in age group for LHD; Justice Health data includes notifications from juvenile correctional centres

Comment

The age distribution of hepatitis B notifications by LHD can be difficult to interpret for several reasons. Differences in the number of hepatitis B notifications between LHDs is most likely a reflection of migrant settlement patterns of people who acquired infection at birth overseas and targeted testing in these areas. Due to the small number of notifications in many of the LHDs, particularly regional areas, the data from this six month period may not represent ongoing local trends.

The state-wide trend of hepatitis B notifications by age group is shown in Figure 2.

Figure 6: Notification rate of hepatitis B in NSW, by LHD of residence, 1 January to 30 June 2015*

Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 27 July 2015

Note: Excludes non-NSW residents, persons whose place of residence in NSW was not known and notifications from Justice Health

* The rate is based on 6 months of data between Jan-June 2015 adjusted to an annual rate and is subject to change once data between July-Dec 2015 becomes available

Comment

Western Sydney and Sydney Local Health Districts (LHDs) recorded the highest rates of hepatitis B notification in NSW in the first half of 2015 (57 and 52 per 100,000 respectively). South Western Sydney, South Eastern Sydney and Northern Sydney LHDs also had high rates of hepatitis B notification compared to regional and remote LHDs. These rates are most likely a reflection of migrant settlement patterns of people who acquired infection at birth overseas and targeted testing in these areas.

A notification rate has not been calculated for Justice Health as the population (the denominator) fluctuates.

1.3 Improve health outcomes of people living with hepatitis C

1.3.1 Burden of disease of hepatitis C

It is estimated that there are approximately 90,000 people living with chronic hepatitis C in NSW⁶. Living with hepatitis C is associated with increased morbidity, mortality and health-related costs. Chronic viral hepatitis is the leading cause of liver cancer and the most common reason for liver transplantation. Although rates of new hepatitis C diagnoses have slightly declined in Australia, the number of people with chronic hepatitis C has increased.

Currently treatment uptake is low, with approximately 2% of people living with hepatitis C commencing treatment each year⁷. This result is expected given that the anticipation of new interferon-free treatments has led many people to delay starting therapy. It is expected that the introduction of these new treatment regimens will lead to substantial increases in demand for hepatitis C treatment over the lifetime of the *NSW Hepatitis C Strategy 2014-2020*.

The Ministry of Health is currently developing updated incidence and prevalence modelling of infection and disease burden for hepatitis C under the BRISE⁸ Research Program.

⁶ Wilson D, Middleton M. National Blood-borne Virus and Sexually Transmissible Infections Surveillance and Monitoring Report, 2013. Sydney: The Kirby Institute, University of New South Wales; 2013

⁷ Dore G. The changing therapeutic landscape for hepatitis C. *Medical Journal of Australia*. 2012;196(10):629-632.

⁸ BBV & STI Research, Intervention and Strategic Evaluation (BRISE) 2014-2019 – University of NSW

1.4 Reduce hepatitis C infections in NSW

How often hepatitis C infection occurs (the incidence) is best obtained through observational studies. Evidence from two such studies^{9,10} suggests that the incidence of hepatitis C infection among people who inject drugs (PWID) in Sydney has declined over the past decade. These findings are consistent with other data sources indicating that the epidemiology of hepatitis C infection among PWID is changing.

Hepatitis C is a notifiable condition under the *Public Health Act 2010*, and is notified to NSW Health by laboratories¹¹. Hospitals and doctors are also required to notify acute viral hepatitis. Notifications data provide limited information that can be used for assessing the epidemiological patterns of hepatitis C infections. This is because many infections are asymptomatic, and so people who are infected may never be tested, or only tested many years after infection, and laboratory reports do not distinguish between infections acquired recently, or years before. Furthermore, variations in notifications may reflect differences in testing patterns rather than differences in incidence of infection.

Hepatitis C notifications are classified as 'unspecified' when the time of infection is unknown (most notifications) or is known to be longer than two years prior to diagnosis. Hepatitis C is classified as 'newly acquired' when there is evidence that the infection was acquired within two years of diagnosis, either from an acute hepatitis illness or previous negative testing¹². Apart from the small number of people who have evidence of a recent negative test or who are symptomatic, it is difficult to identify acute infections.

⁹ White B, Dore G, Lloyd A, Rawlinson W, Maher L. Opioid substitution therapy protects against hepatitis C virus acquisition in people who inject drugs: the HITS-c study. *MJA* 2014;201(6):326-329

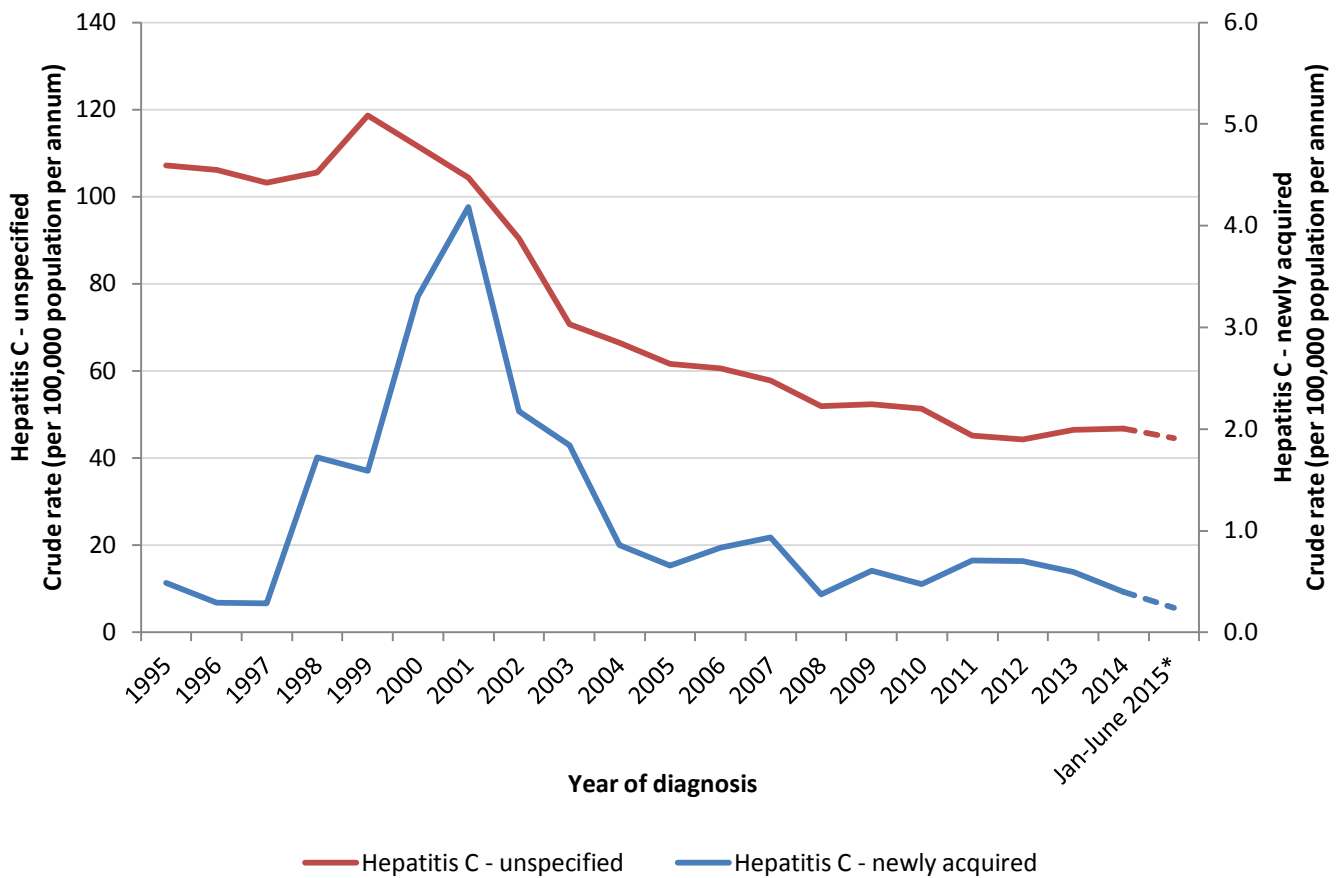
¹⁰ Maher L, Jalaludin B, Chant K, Jayasuriya R, Sladden T, Kaldor J, Sargent P. Incidence and risk factors for hepatitis C seroconversion in injecting drug users in Australia. *Addiction* 2006;101(10):1499-1508

¹¹ NSW Health. Disease notification [webpage] <http://www.health.nsw.gov.au/Infectious/Pages/notification.aspx>

¹² NSW Health. Control guideline for Public Health Units: Hepatitis C. http://www.health.nsw.gov.au/Infectious/controlguideline/Pages/hep_c_protoco.aspx#2

1.4.1 How many diagnoses of hepatitis C are notified?

Figure 7: Notification rates of newly acquired and unspecified hepatitis C, NSW, 1 January 1995 to 30 June 2015



Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 30 July 2015

Note: Excludes non-NSW residents

* The rate in 2015 is based on 6 months of data between Jan-June 2015 adjusted to an annual rate and is subject to change once data between July-Dec 2015 becomes available

Comment

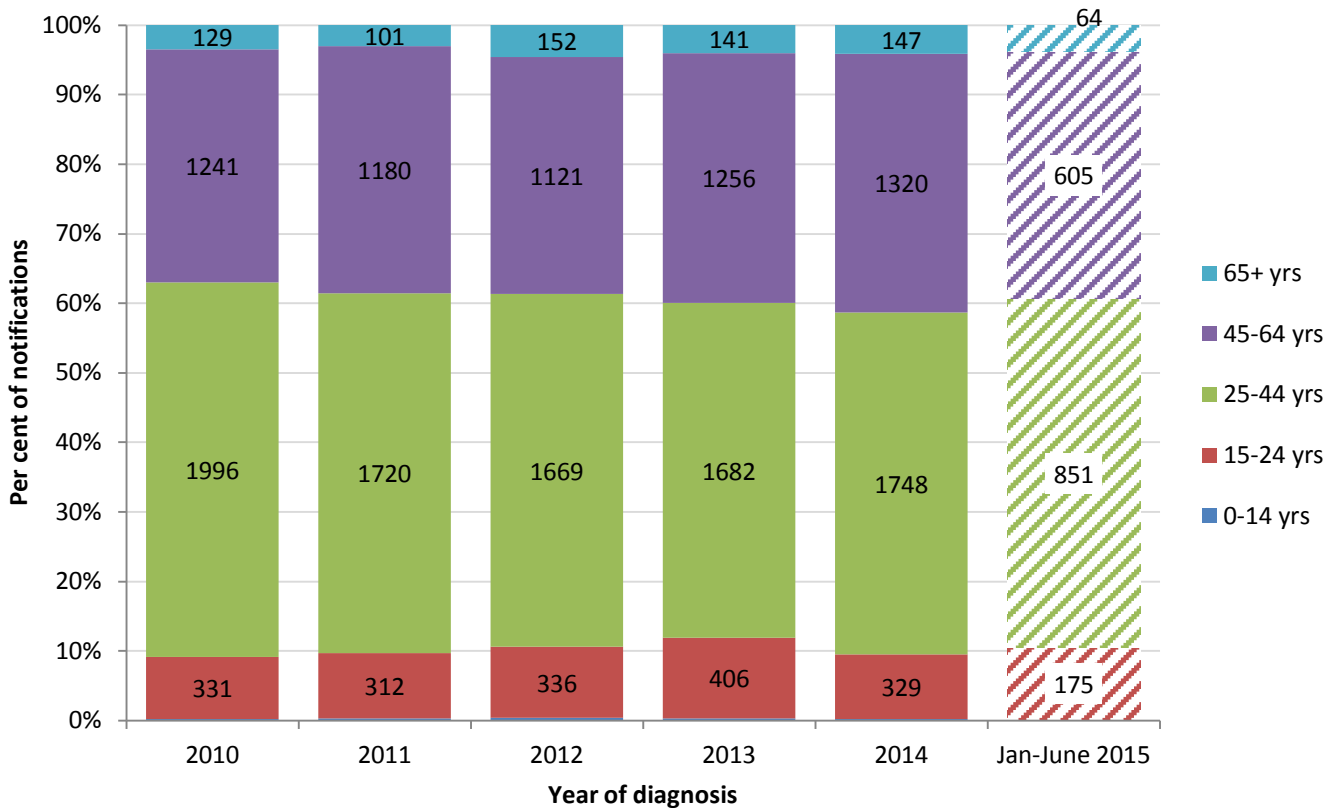
From January to June 2015, there were 1,705 hepatitis C notifications. Of these, 1,696 (99.5%) were classified as 'unspecified' and 9 (0.5%) were classified as 'newly acquired'. During this period, the notification rates of hepatitis C - unspecified and newly acquired hepatitis C in NSW residents were 45 and 0.2 per 100,000 per annum (respectively).

Notifications of newly acquired hepatitis C peaked in 2001, largely as a result of active case-finding conducted during a prospective cohort study¹³. The study recruited HCV negative injecting drug users in NSW between 1999 and 2002, and participants were followed up and tested for HCV every 3-6 months until seroconversion or study completion.

¹³ Maher L, Jalaludin B, Chant K, Jayasuriya R, Sladden T, Kaldor J, Sargent P. Incidence and risk factors for hepatitis C seroconversion in injecting drug users in Australia. *Addiction* 2006;101(10):1499-1508

1.4.2 Which groups are being notified?

Figure 8: Notifications of hepatitis C in NSW, by age group, 1 January 2010 to 30 June 2015



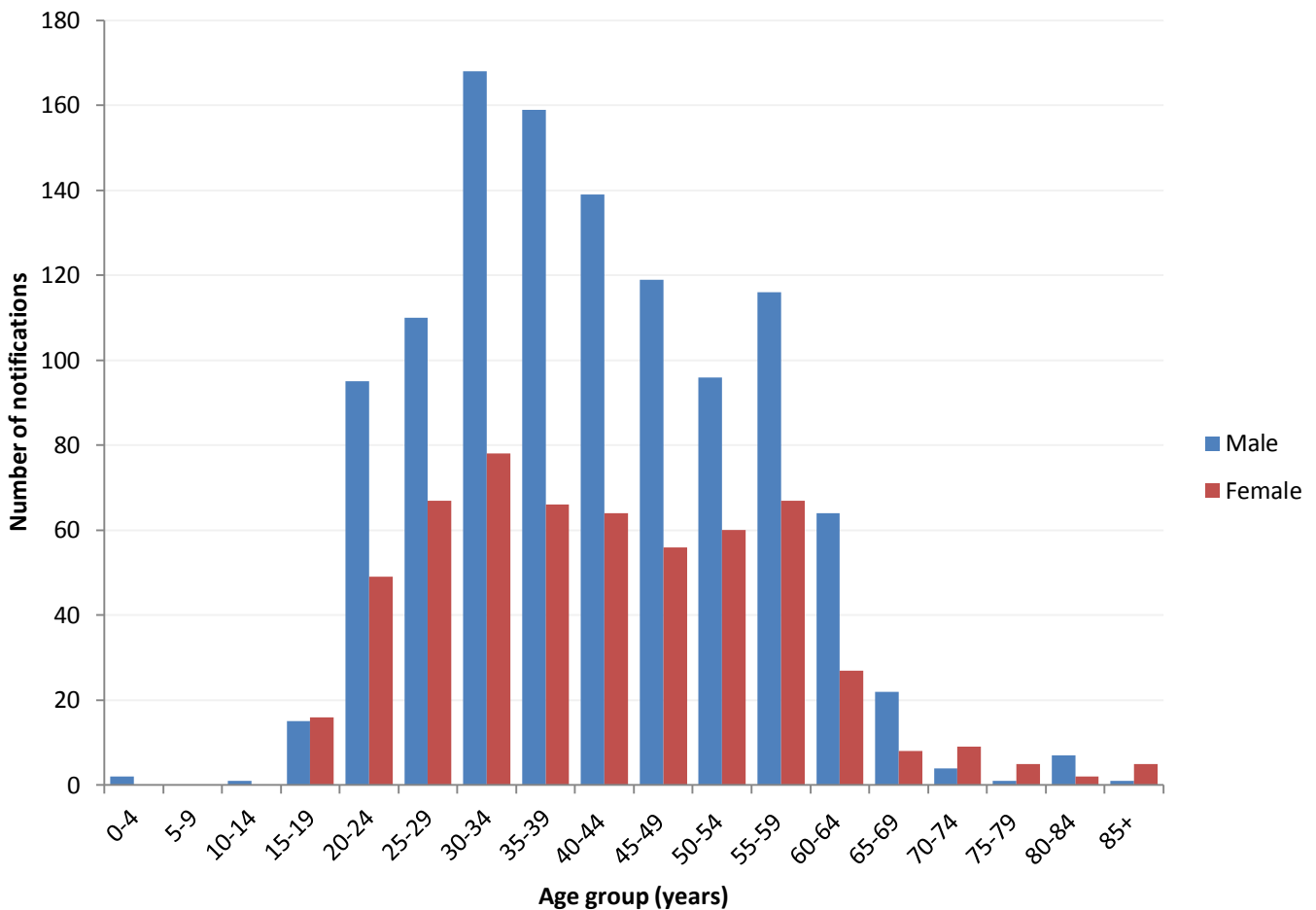
Data source: NCIMS, NSW Health; data extracted 30 July 2015

Note: Excludes non-NSW residents and persons whose age is unknown or not stated

Comment

Of those people newly diagnosed with hepatitis C between January and June 2015, 3 (<1%) were 0-14 years, 175 (10%) were 15-14 years, 851 (50%) were 25-44 years, 605 (35%) were 45-64 years and 64 (4%) were 65 years and over. This age distribution is very similar to recent years.

Figure 9: Notifications of hepatitis C in NSW, by age group and gender, 1 January to 30 June 2015



Data source: NCIMS, NSW Health; data extracted 31 July 2015

Note: Excludes non-NSW residents, transgender persons and persons whose age or sex is unknown or not stated

Comment

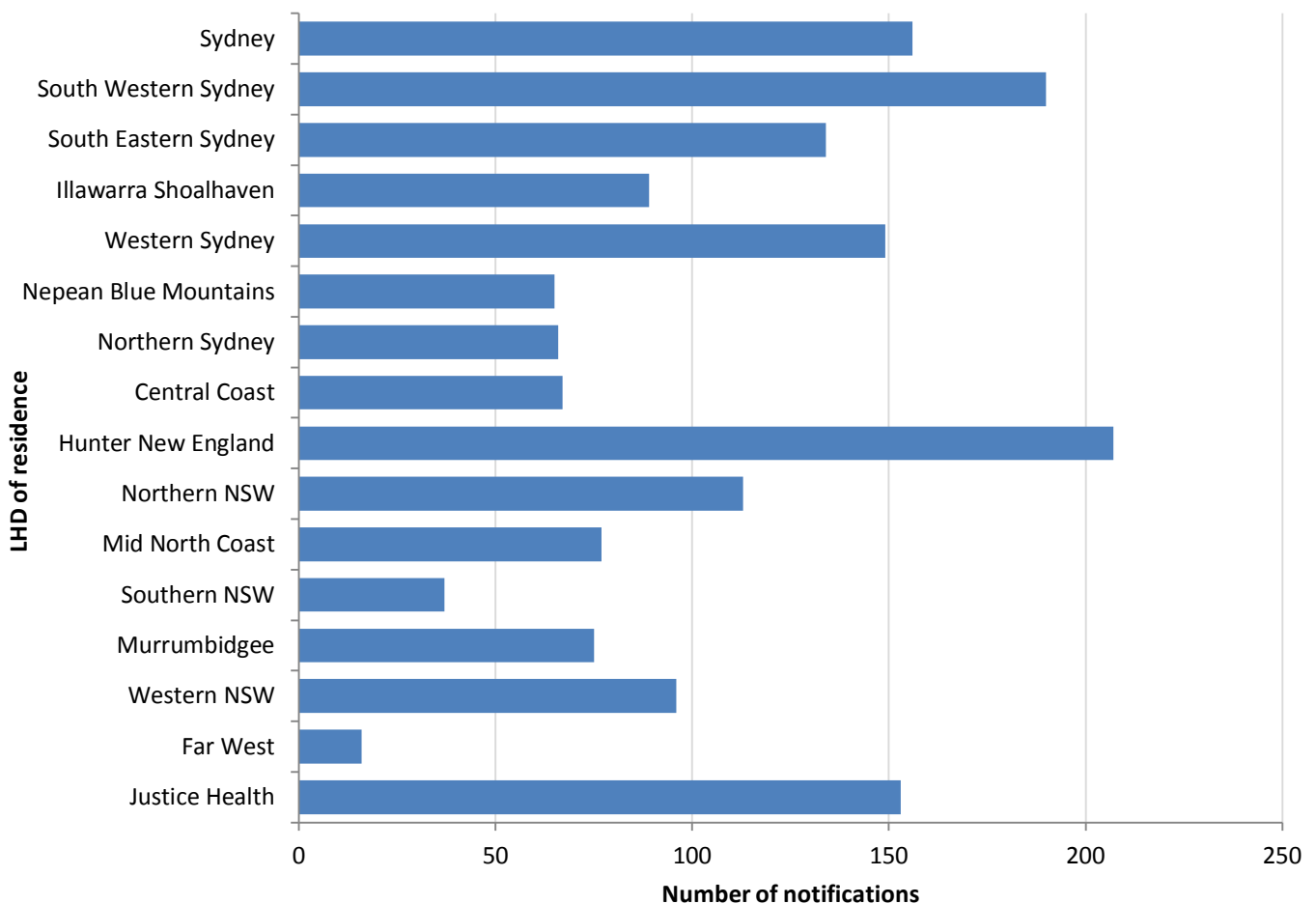
Between January and June 2015, 65.9% of hepatitis C notifications were in males and 34.1% were in females, a very similar gender distribution to 2014 (65.8% and 33.9% respectively).

For both males and females, the most commonly diagnosed age group was 30-34 years. Males had a higher number of hepatitis C notifications than females in almost all age groups. These patterns may reflect risk behaviours in males and females. Approximately two thirds of NSW respondents in the Australian NSP Survey (ANSPS) were male in all survey years over the period 1995 to 2014.¹⁴

¹⁴ Iversen J, and Maher L. Australian Needle and Syringe Program Survey National Data Report 1995-2014. The Kirby Institute, UNSW Australia, 2015.

1.4.3 Where are notifications occurring?

Figure 10: Notifications of hepatitis C, by LHD of residence, NSW, 1 January to 30 June 2015



Data source: NCIMS, NSW Health; data extracted 31 July 2015

Note: Excludes non-NSW residents and persons whose place of residence in NSW was not known; Justice Health data includes notifications from juvenile correctional centres

Comment

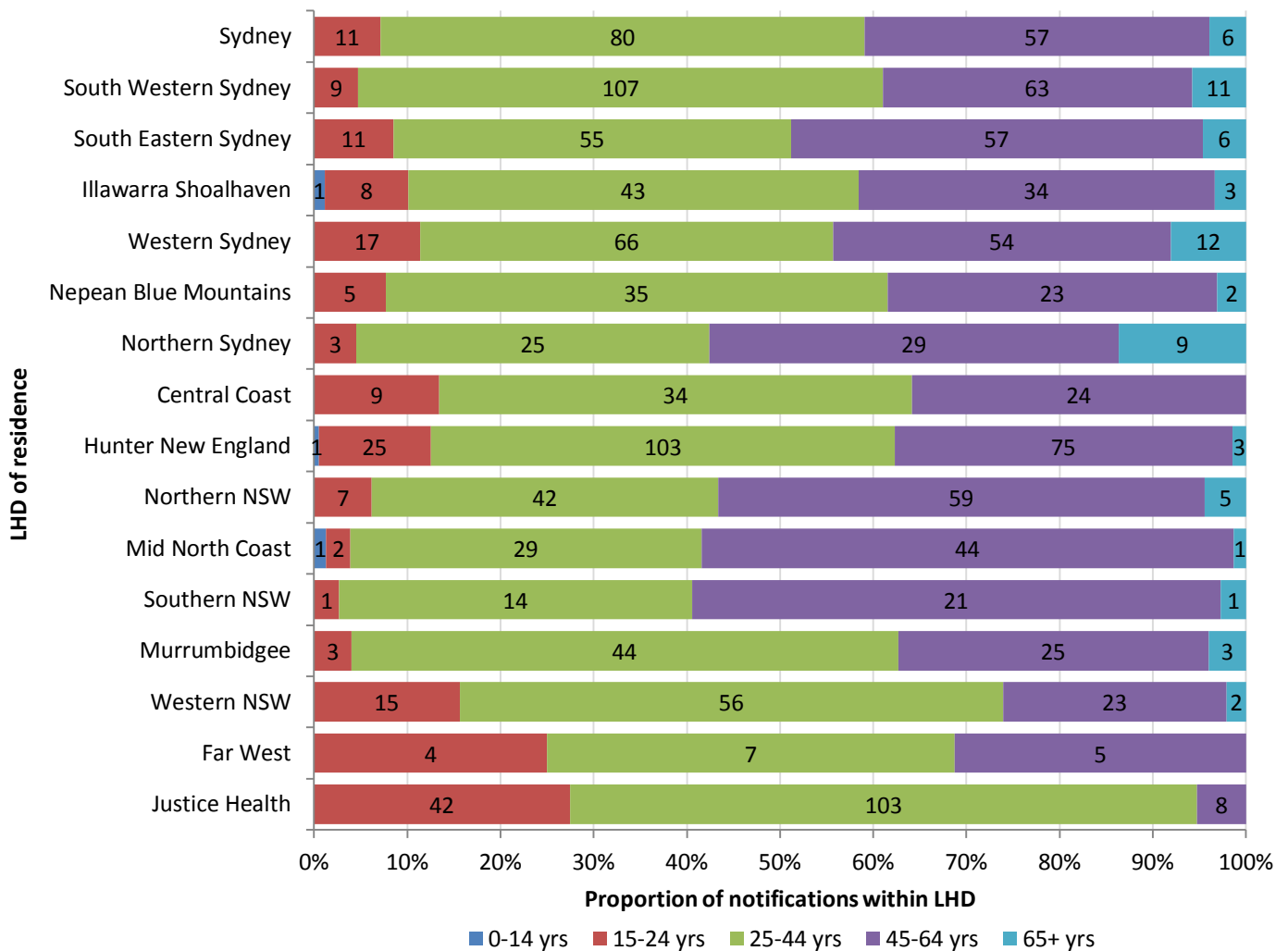
Between January and June 2015, Hunter New England LHD reported the highest number of hepatitis C notifications (207), followed by South Western Sydney LHD (190), Sydney LHD (156) and Justice Health (153). Far West LHD reported the fewest hepatitis C notifications (16) in 2014. This distribution is similar to 2014.

Justice Health provides health assessments to all people commencing full-time custody, including those remanded into custody. Screening for blood-borne and sexually transmissible infections is offered to those who self-identify risk factors. Patients may also be tested through other health services while in custody.

Supporting better management of hepatitis C and increasing access to hepatitis C treatment is a priority under the NSW Hepatitis C Strategy 2015-2020, which is important in areas with high notifications.

To account for the substantial variation in population size between the LHDs, notification rates have been shown in Figure 12.

Figure 11: Notifications of hepatitis C, by LHD and age group, NSW, 1 January to 30 June 2015



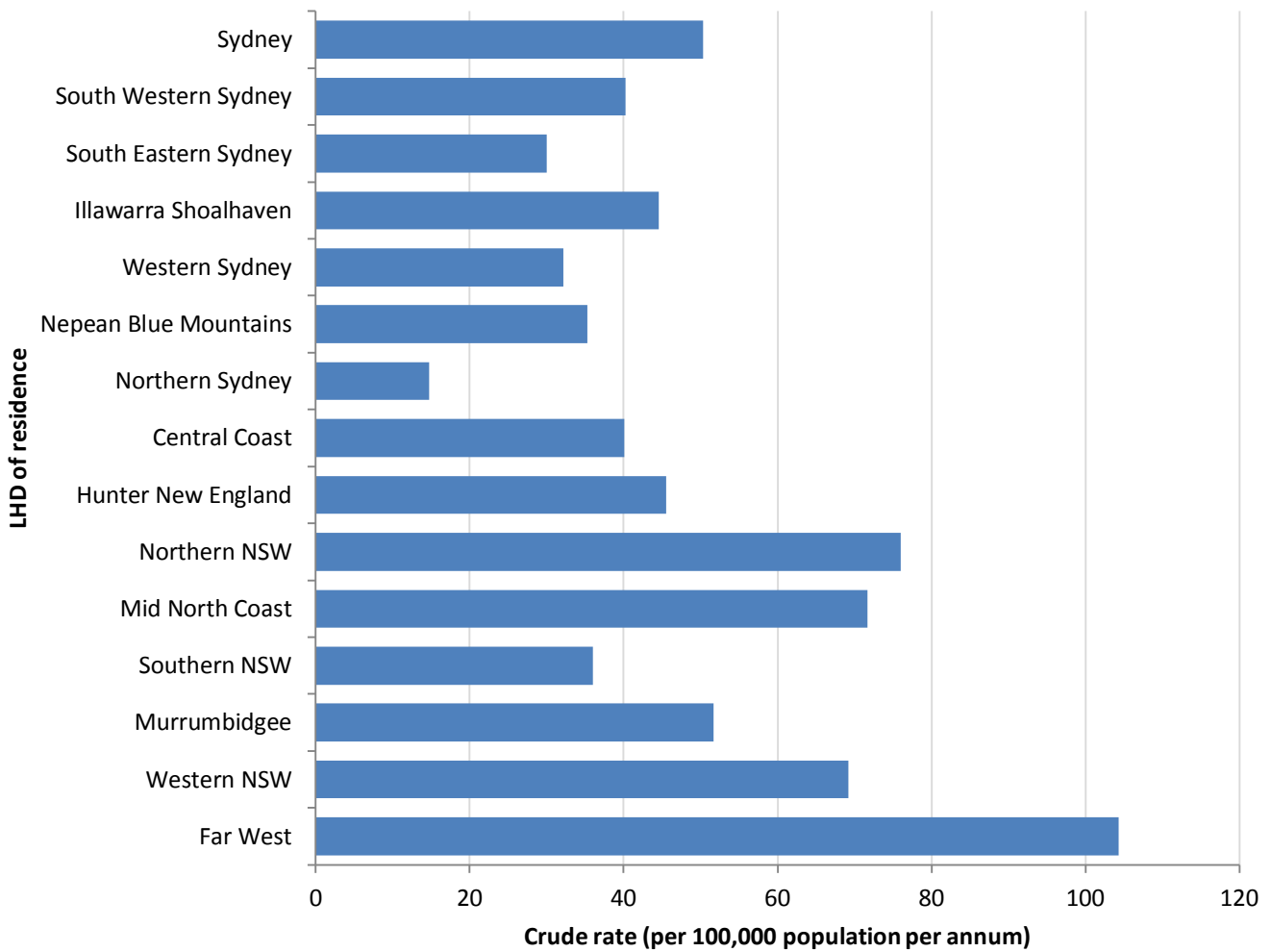
Data source: NCIMS, NSW Health; data extracted 31 July 2015

Note: Excludes non-NSW residents and persons whose age and/or place of residence in NSW was not known or not stated; data labels show number of notifications in age group for LHD; Justice Health data includes notifications from juvenile correctional centres

Comment

Justice Health reported both the highest number (42) and the highest proportion (27%) of hepatitis C notifications in 15-24 year olds during the first half of 2015. During the same period, Hunter New England LHD had the second highest number of notifications (25) in 15-24 year olds, while Far West LHD had the second highest proportion (25%) of hepatitis C notifications in the same age group.

Notifications of hepatitis C in young people are an indicator of newly acquired infections as these are the ages when injecting drug behaviours often commence, and hepatitis C infection is more likely to be acquired early in an injecting career than later. High numbers of notifications in custodial settings may be partly due to increase risk factors for hepatitis C infection in the population, targeted screening programs, and the inclusion of people who have been previously diagnosed interstate or overseas.

Figure 12: Notification rate of hepatitis C in NSW, by LHD of residence, 1 January to 30 June 2015

Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 31 July 2015

Note: Excludes non-NSW residents, persons whose place of residence in NSW was not known and notifications from Justice Health

* The rate is based on 6 months of data between Jan-June 2015 adjusted to an annual rate and is subject to change once data between July-Dec 2015 becomes available

Comment

Far West, Northern NSW, Mid North Coast and Western NSW LHDs recorded the highest rates of hepatitis C notification in NSW in January to June 2015 (104, 76, 72 and 69 notifications per 100,000 population respectively).

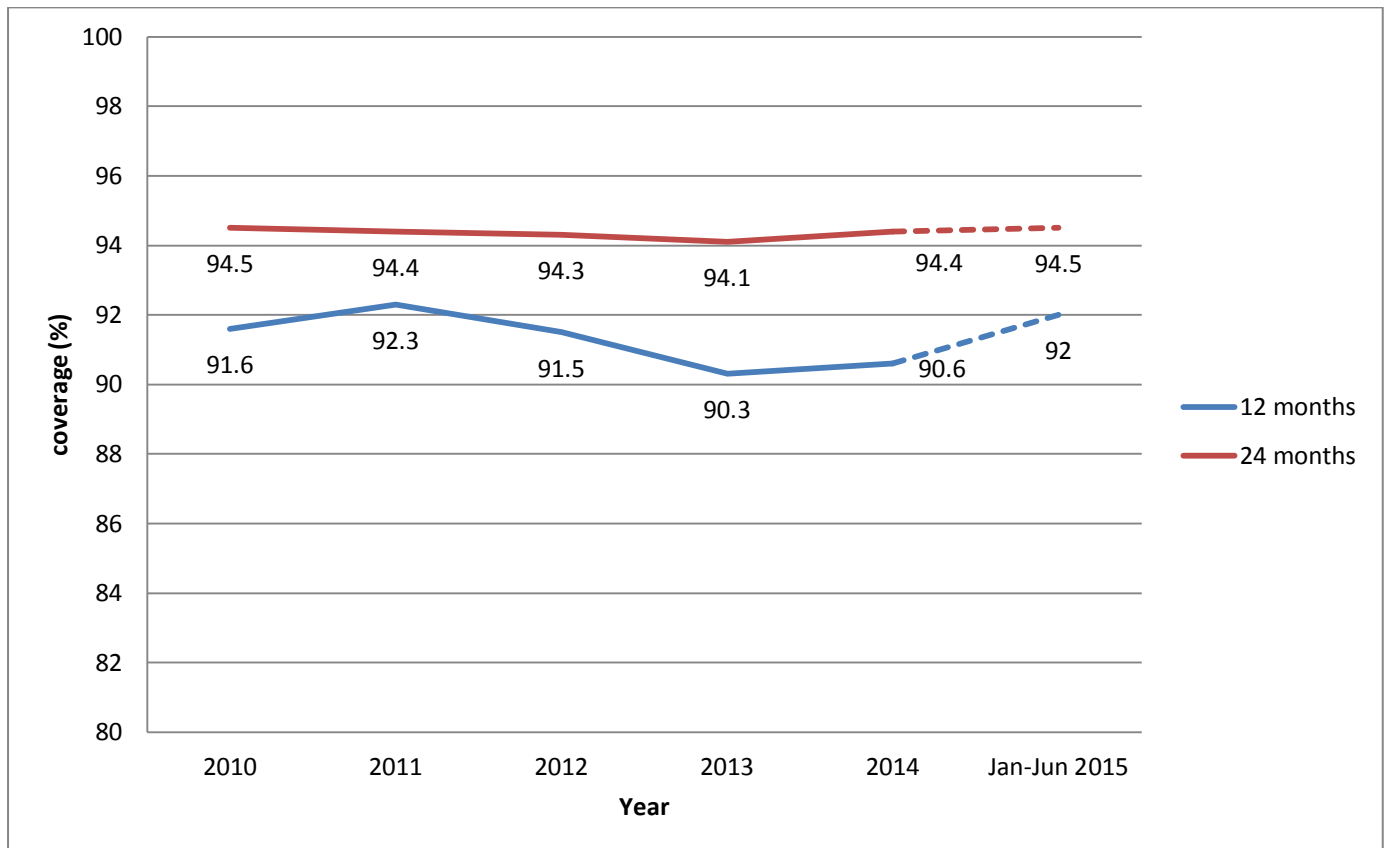
A notification rate has not been calculated for Justice Health as the population (the denominator) fluctuates.

2. PREVENT – Build on established prevention efforts

2.2 Increase childhood vaccination coverage for hepatitis B

2.2.1 What proportion of children in NSW are vaccinated for hepatitis B?

Figure 13: Proportion of infants in NSW who have received 3 doses of hepatitis B vaccine (measured at 12 and 24 months of age)



Data source: Australian Childhood Immunisation Register, Australian Government Department of Human Services

Comment

Hepatitis B vaccine is due at (birth), 6 weeks, 4 months and 6 months of age. Coverage for the 6-week, 4-month and 6-month doses measured at 12 months in January to June 2015 was 92%. Coverage for the 6-week, 4-month and 6-month doses measured at 12 months in January to June 2015 for Aboriginal children was 91%.

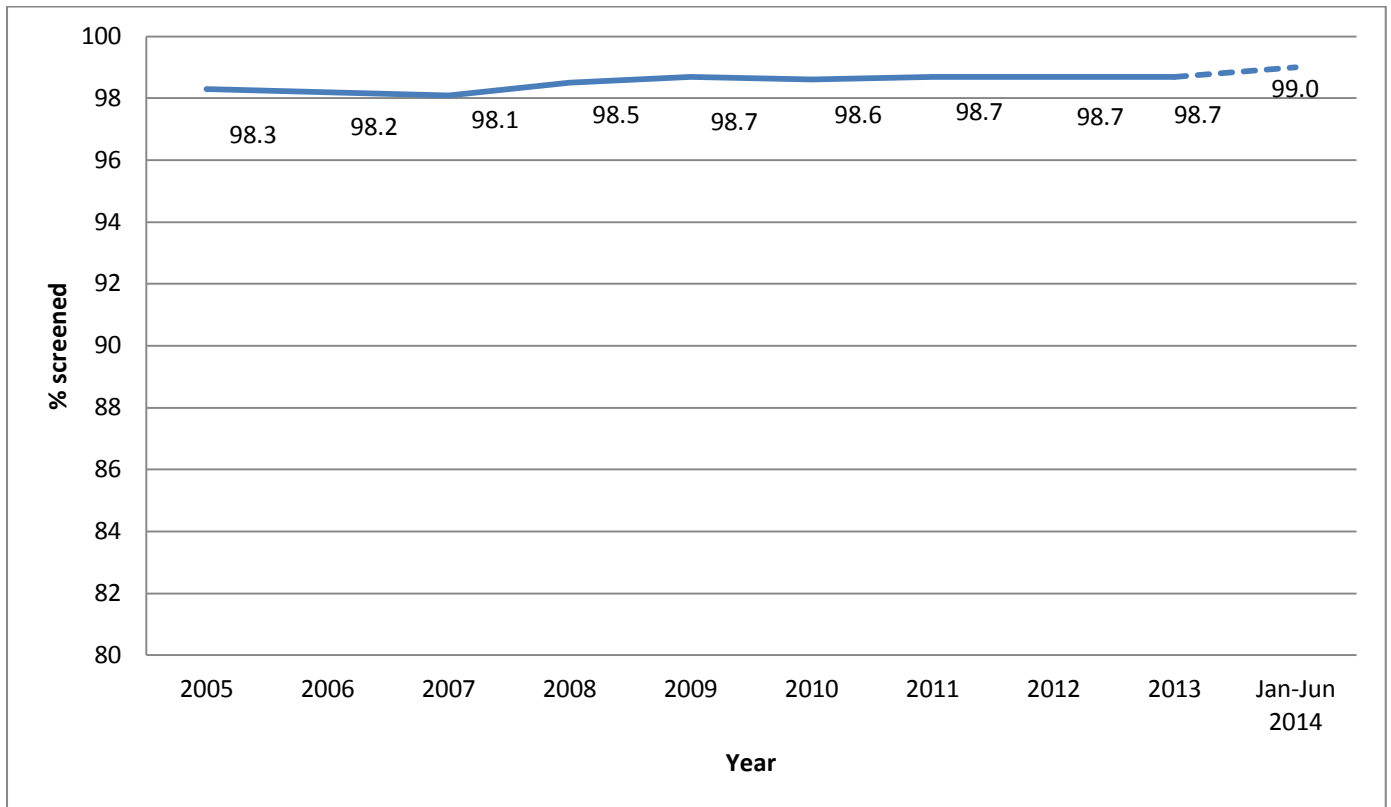
Coverage at 24 months in January to June 2015 was 94.5%, and for Aboriginal children was 96.3%. These rates are higher than at 12 months, indicating that delayed vaccination as well as under-vaccination and underreporting influence vaccination rates. (Figure 13)

Funding has been provided to all LHDs for the employment of Aboriginal Immunisation Health Workers to follow up Aboriginal children due and overdue for immunisations.

2.3 Immunisation in babies born to mothers diagnosed with hepatitis B

2.3.1 What proportion of mothers giving birth in NSW are screened for hepatitis B?

Figure 14: Proportion of women giving birth in a public or private hospital in NSW who are screened for hepatitis B



Data source: Neonatal Hepatitis B Vaccination Program Database, NSW Health

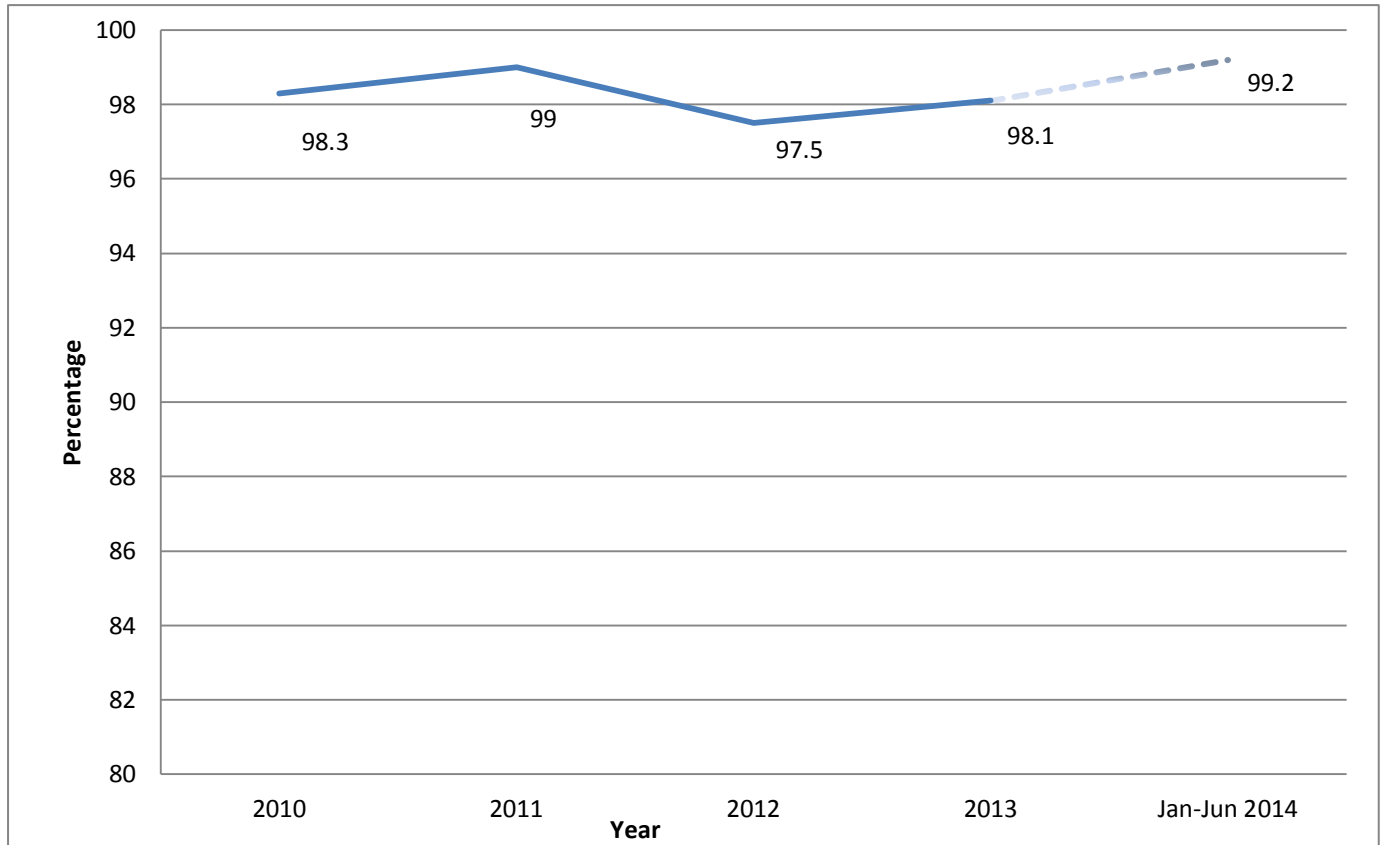
Comment

The proportion of mothers giving birth in a public or private hospital in NSW screened for hepatitis B was 99% in January to June 2014.

Figure 14 identifies the data available at the time of this report.

2.3.2 What proportion of babies born to mothers diagnosed with hepatitis B receive hepatitis B immunoglobulin in NSW on time?

Figure 15: Proportion of babies born in NSW to mothers diagnosed with hepatitis B who received hepatitis B immunoglobulin within 12 hours of birth



Data source: Neonatal Hepatitis B Vaccination Program Database, NSW Health

Comment

The proportion of babies born to mothers living with hepatitis B who receive hepatitis B immunoglobulin (HBIG) within 12 hours of birth is 99.2% in January-June 2014. (Figure 15 and Table 1)

Figure 15 and Table 1 provide the most current data available at the time of this report.

Table 1: Neonatal hepatitis B immunoglobulin administration (2009 - June 2014)

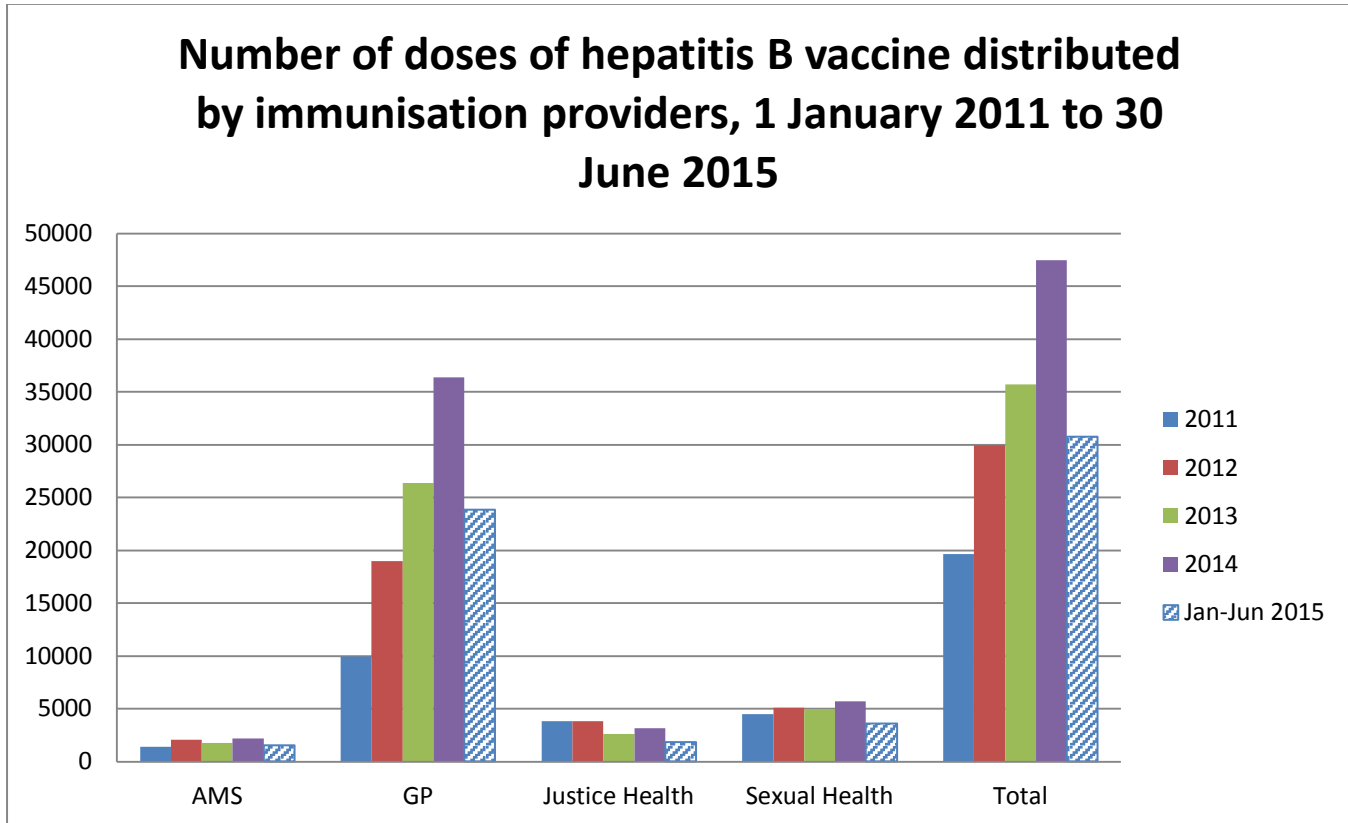
Year	No. neonates born to HBsAg+ mothers	No. neonates born to HBsAg+ mothers who received HBIG	No. neonates born to HBsAg+ mothers who received HBIG within 12 hours of birth (%)
2009	736	731	725 (98.5%)
2010	664	660	653 (98.3%)
2011	702	699	695 (99.0%)
2012	757	744	735 (97.1%)
2013	696	690	683 (98.1%)
Jan-Jun 2014	376	375	373 (99.2%)

Data source: NSW neonatal hepatitis B vaccination data collection (NSW hospitals and public health units (PHUs))

2.4 Vaccinate groups at elevated risk of hepatitis B infection

2.4.1 How many doses of hepatitis B vaccine are distributed to GPs, Aboriginal Medical Services, Sexual Health Clinics and Justice Health?

Figure 16: Number of adult doses of hepatitis B vaccine distributed to health care providers through the NSW Vaccine Centre



Data source: NSW Vaccine Centre Database

Comment

The total number of doses of adult hepatitis B vaccine distributed to health care providers in NSW has increased steadily over the last three years, more than doubling between 2011 and 2014. Distribution from 1 January to 30 June 2015 is already greater than half of 2014's total distribution for all providers.

A significant annual increase is occurring in one setting, through the distribution of hepatitis B vaccine to GPs. The overall trend in distribution of hepatitis B vaccine also increased between 2011 and 2015 to high-risk groups at Aboriginal Medical Services and Sexual Health Clinics; and remained steady to Justice Health. (Figure 16)

These data show the distribution of vaccine to providers, rather than administration of vaccines or whether the course of vaccines is completed. While much of the vaccine is expected to be administered to people recommended to be vaccinated,¹⁵ some vaccine may be administered to other people.

¹⁵ National Health and Medical Research Council (NHMRC) The Australian Immunization Handbook 10th Edition, The Australian Government 2015 <http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home>

2.5 Maintain safe behaviour for hepatitis B and hepatitis C

The NSW Needle and Syringe Program (NSP) is an evidence-based public health program that aims to prevent the transmission of blood-borne viruses among people who inject drugs and the broader community. NSPs have been part of the National HIV/AIDS Strategy since 1989, part of the National Drug Strategy since 1993, and part of the National Hepatitis C Strategy since 1999. As a result, Australia has one of the lowest prevalences of HIV among people who inject drugs globally: between 1 and 2%, compared to approximately 16% in the USA.

Studies show the effectiveness and cost-effectiveness of needle and syringe programs for HIV and hepatitis C prevention. In the decade from 2000 to 2009, needle and syringe programs directly prevented 32,000 HIV infections and over 96,000 hepatitis C infections in Australia, saving more than \$5.8 billion in health care and other costs. For every one dollar invested in NSPs, more than four dollars were returned in healthcare cost-savings.¹⁶

NSPs also provide other important services, including primary healthcare, education, referrals to other services including treatment and the safe disposal of injecting equipment. The *NSW Needle and Syringe Program Guidelines 2013* provide the framework for the delivery of the NSP in New South Wales.

2.5.1 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 2014¹⁷. In 2015, the proportion who reported receptive sharing of needles and syringes was 16%, which is stable compared with 2014 ($p=0.067$).^{18 19}

These results are broadly comparable to NSW results from the Australian NSP Survey (ANSPS). In the ANSPS, which is conducted at selected primary 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 2014.²⁰

Further information regarding RSS in the NNEDC and the ANSPS is shown in **Appendix 1**, including sample sizes and confidence intervals.

RSS was examined in more depth in the 2015 NNEDC report to investigate factors that may help to account for the observed decline in the prevalence of RSS over time. Data collection methodology and participating sites remained relatively consistent across all three years of implementation.

¹⁶ The National Centre in HIV Epidemiology and Clinical Research, *Return on investment 2: Evaluating the cost-effectiveness of needle and syringe programs in Australia*, University of NSW, 2009

¹⁷ 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.

¹⁸ 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.

¹⁹ 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-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 (see Appendix 1). The revised methodology is consistent with the ANSPS, and enables the results of the surveys to be compared.

²⁰ 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.

Between 2013 and 2015, there was a reduction in the NNEDC response rate, from 79% in 2013 to 69% in 2014 and 63% in 2015. The decline in response rate has the potential for non-participation to compromise the representativeness of the NNEDC sample and the ability to generalise findings to the broader NSP client population.

The potential of selection bias arising from changes in client participation or response rates remains an important issue to consider in future reports. It will also be valuable to include a measure of potential social desirability (i.e. reluctance to disclose risk behaviour) bias in future versions of the NNEDC, by including a measure of whether the NNEDC is self-completed or if assistance is provided by NSP staff.

Associations between RSS and demographic and drug use characteristics

The 2015 NNEDC²¹ investigated potential associations between RSS and demographic and drug use characteristics.

Respondents who injected daily in 2015 were more likely to report RSS than respondents who injected less than daily ($p < 0.001$).

No associations were observed between RSS and the type of drug last injected or between RSS and the distance or time travelled to the NSP.

RSS across priority populations was also examined. In all years, 2013-2015, respondents who reported incarceration in the previous month were significantly more likely to report RSS than respondents who had not been recently incarcerated. Among those reporting recent imprisonment in the 2015 NNEDC, 31% reported RSS in the previous month. This result was stable over the three years, 2013 to 2015 (p trend=0.322). Respondents who identified as bisexual were also significantly more likely to report RSS than heterosexual respondents ($p=0.014$).

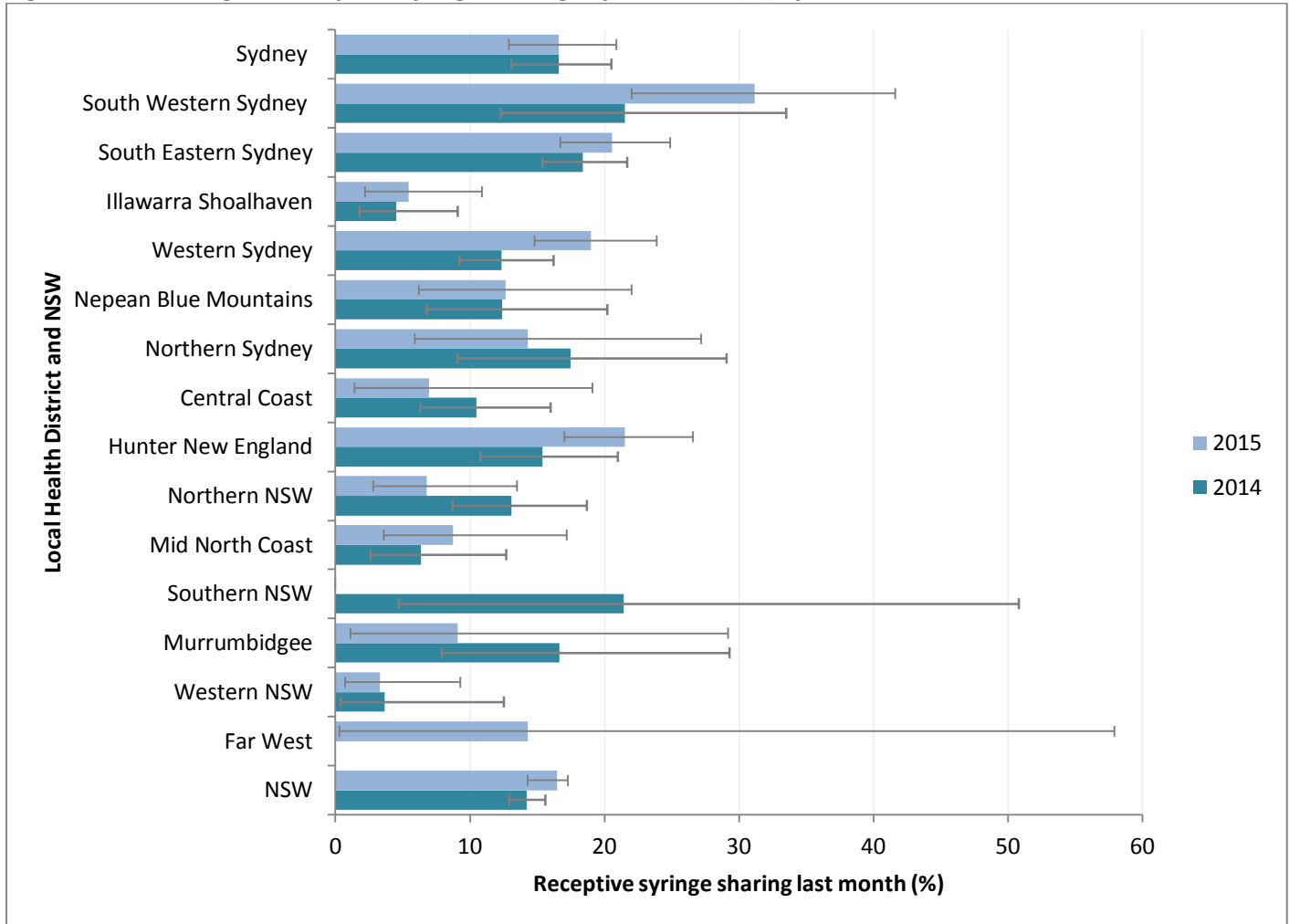
Main reason for RSS

Of the 339 respondents who reported RSS in the previous month in the 2015 NNEDC²², being aware of one's injecting partner's hepatitis C status was the most commonly reported reason for using a needle and syringe that had been previously used by someone else (20%, $n=68$).

Barriers to obtaining injecting equipment was reported as the main reason for RSS by 16% ($n=55$) of respondents. Barriers to accessing injecting equipment included a lack of transport (4%, $n=12$), inconvenient location or opening hours of NSP/Pharmacy (3%, $n=11$) and a lack of money to pay for injecting equipment (3%, $n=10$). Being in a hurry to inject was also commonly reported as the main reason for engaging in RSS, with this reason reported by one in six respondents who had receptively shared syringes in the last month (15%, $n=51$). It should be noted that one quarter (25%, $n=86$) of respondents who reported RSS did not report the main reason for receptive syringe sharing.

²¹ 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.

²² Ibid.

Figure 17: Percentage of Receptive Syringe Sharing in past month (%) by LHD, 2014 and 2015

Data source: NSW Needle and Syringe Program Enhanced Data Collection 2015. A report for the Ministry of Health by the Kirby Institute, UNSW Australia, 2015

Note: Receptive Syringe Sharing (RSS) is calculated among respondents who reported injection in previous month. **Appendix 1**, Table 1 identifies LHD sample sizes and confidence intervals of RSS in the NSW NSP Enhanced Data Collection.

Note: Data is not available for Far West NSW in 2014 due to small sample size participating in the survey.

Note: Data is not available for Southern NSW in 2015 due to small sample size participating in the survey.

Comment

The proportion of respondents who reported RSS in the previous month in the NNEDC by LHD in 2014 and 2015 is illustrated above (Figure 17). These estimates have some degree of uncertainty (thin lines represent 95% confidence intervals), with higher uncertainty among LHDs with fewer respondents. For example, in NSW the estimate for RSS in 2015 was 16% and it is 95% certain that RSS was between 14% and 17% (the 95% confidence intervals).

Estimates and 95% confidence intervals for RSS by LHD are included in **Appendix 1**.

It is important to view Figure 17 alongside Figure 19, in order to reflect on RSS in each LHD alongside the total number of units of injecting equipment distributed via the NSW NSP.

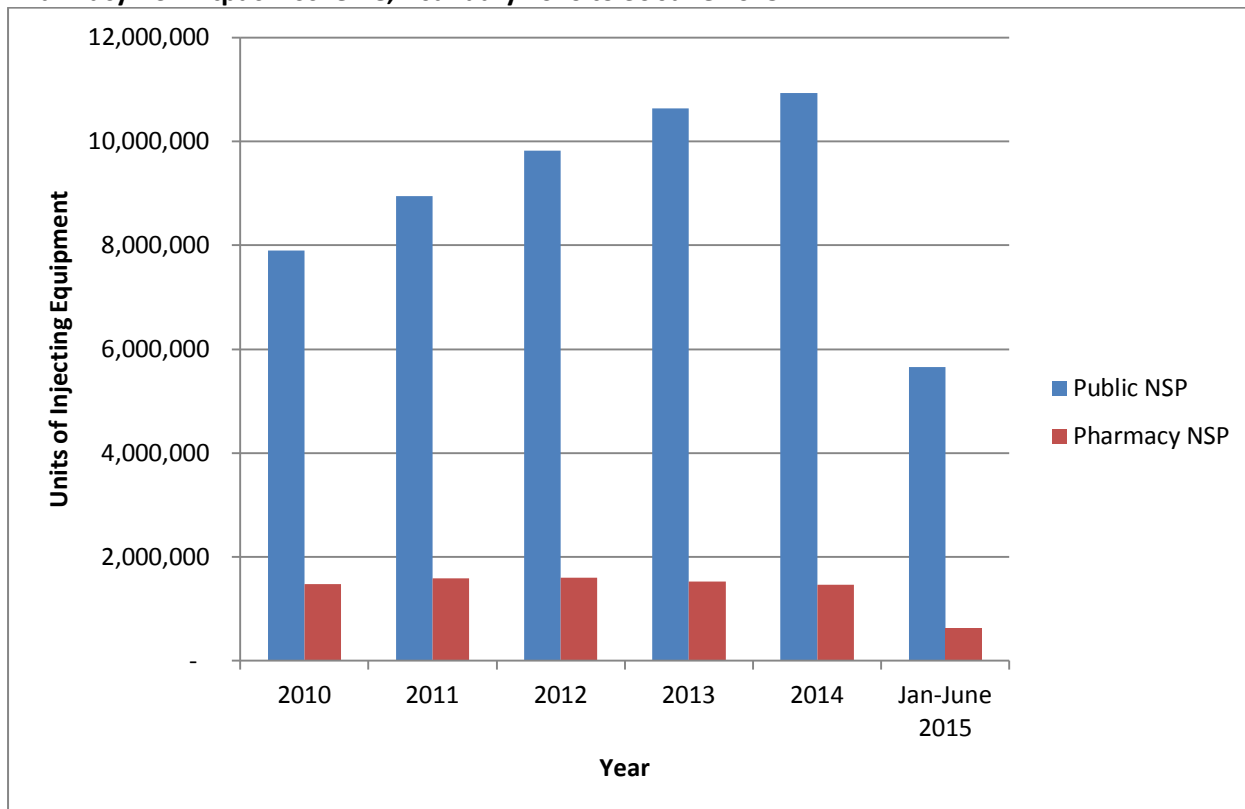
2.5.2 Who is accessing the Needle and Syringe Program in NSW?

The proportion of priority populations accessing the NSW NSP has remained relatively stable between 2014 and 2015. Among people participating in the NNEDC²³ in 2015:

- 18% identified as Aboriginal or as both Aboriginal and Torres Strait Islander (16% in 2014)
- 6% reported that their parents spoke a language other than English at home (5% in 2014)
- 5% reported being in prison in the past month (4% in 2014)
- 8% were aged less than 25 years (10% in 2014)

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

Figure 18: The total number of units of injecting equipment distributed in NSW by the public NSP and the Pharmacy NSP Fitpack[®] scheme, 1 January 2010 to 30 June 2015



Data sources:

- Public NSP - NSW Health NSP Minimum Data Set
- Pharmacy NSP - NSW Health Pharmacy Data (Pharmacy NSP Fitpack[®] scheme)
- Note: The Public NSP includes the units of injecting equipment distributed by the following services: The NSW Users and AIDS Association (NUAA); AIDS Council of NSW (ACON); and secondary outlets in Aboriginal Community Controlled Health Services (ACCHS)

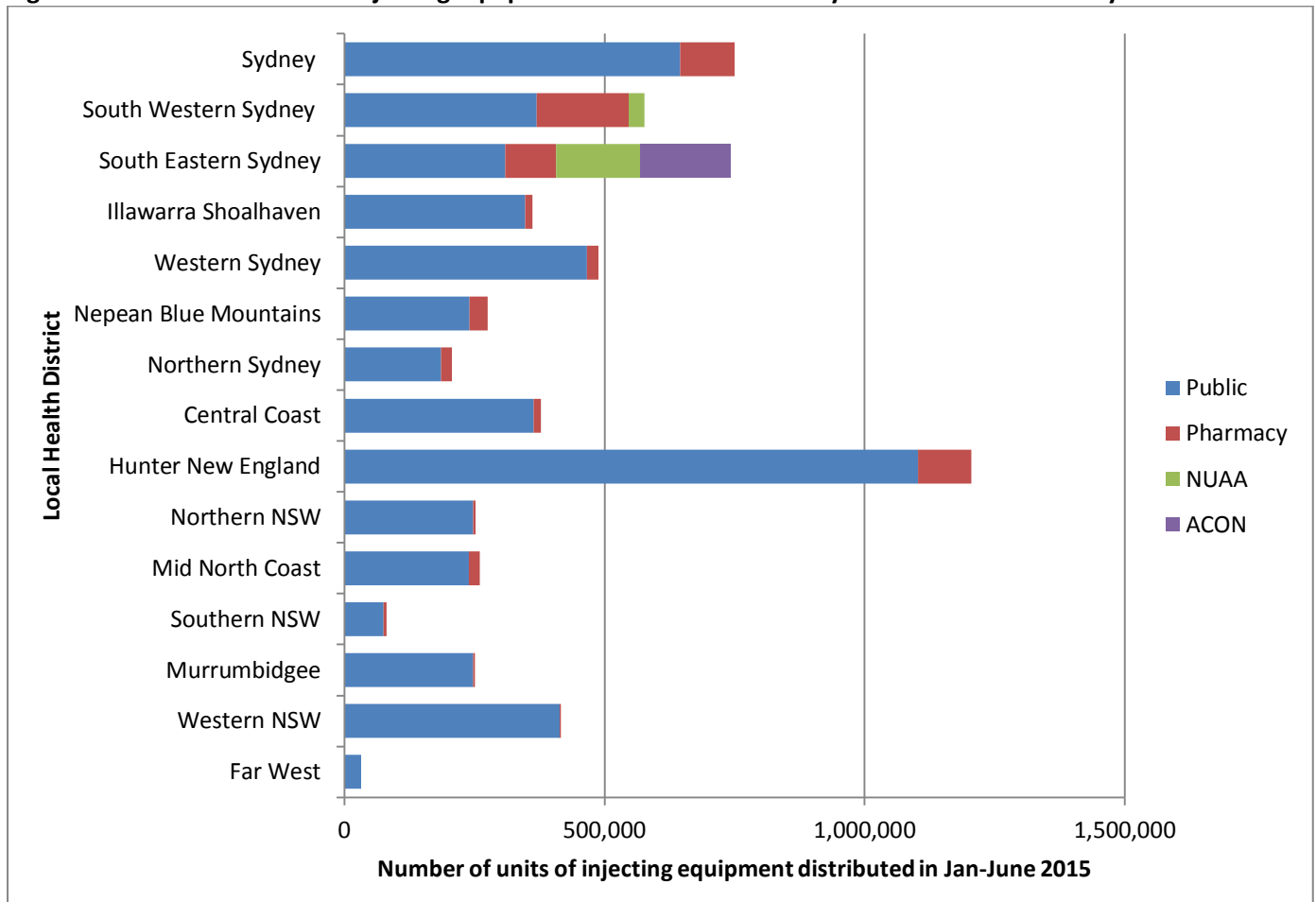
Comment

Between January to June 2015, there were 5,653,381 units of injecting equipment distributed in NSW by the Public NSP and 623,438 units distributed by the Pharmacy NSP Fitpack[®] scheme (Figure 18). This represents an increase of 397,460 additional units (7.5%) by the Public NSP and a decrease of 115,838 units (15.6%) by the Pharmacy NSP compared with the same period in 2014 (NSW Health NSP Minimum Data Set).

In the financial year ending 30 June 2015, a total of 12,668,704 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 391,807 additional units (3.2%) compared with the

²³ Currie B, Iversen J, Maher L NSW Needle and Syringe Program Enhanced Data Collection 2013 A report for the Ministry of Health by the Kirby Institute, UNSW Australia, 2014

previous 12 months. During the same period to 30 June 2015, the number of units of injecting equipment distributed by the Public NSP increased by 580,795 (5.4%), while the number of units of injecting equipment distributed by the Pharmacy NSP Fitpack[®] scheme decreased by 188,988 (12.3%).
(NSW Health NSP Minimum Data Set)

Figure 19: Number of units of injecting equipment distributed in NSW by LHD between 1 January to 30 June 2015**Data sources:**

- Public - NSW Health NSP Minimum Data Set
- Pharmacy - NSW Health Pharmacy Data (Pharmacy NSP Fitpack[®] scheme)
- NUAA – The NSW Users and AIDS Association
- ACON - AIDS Council of NSW

Notes:

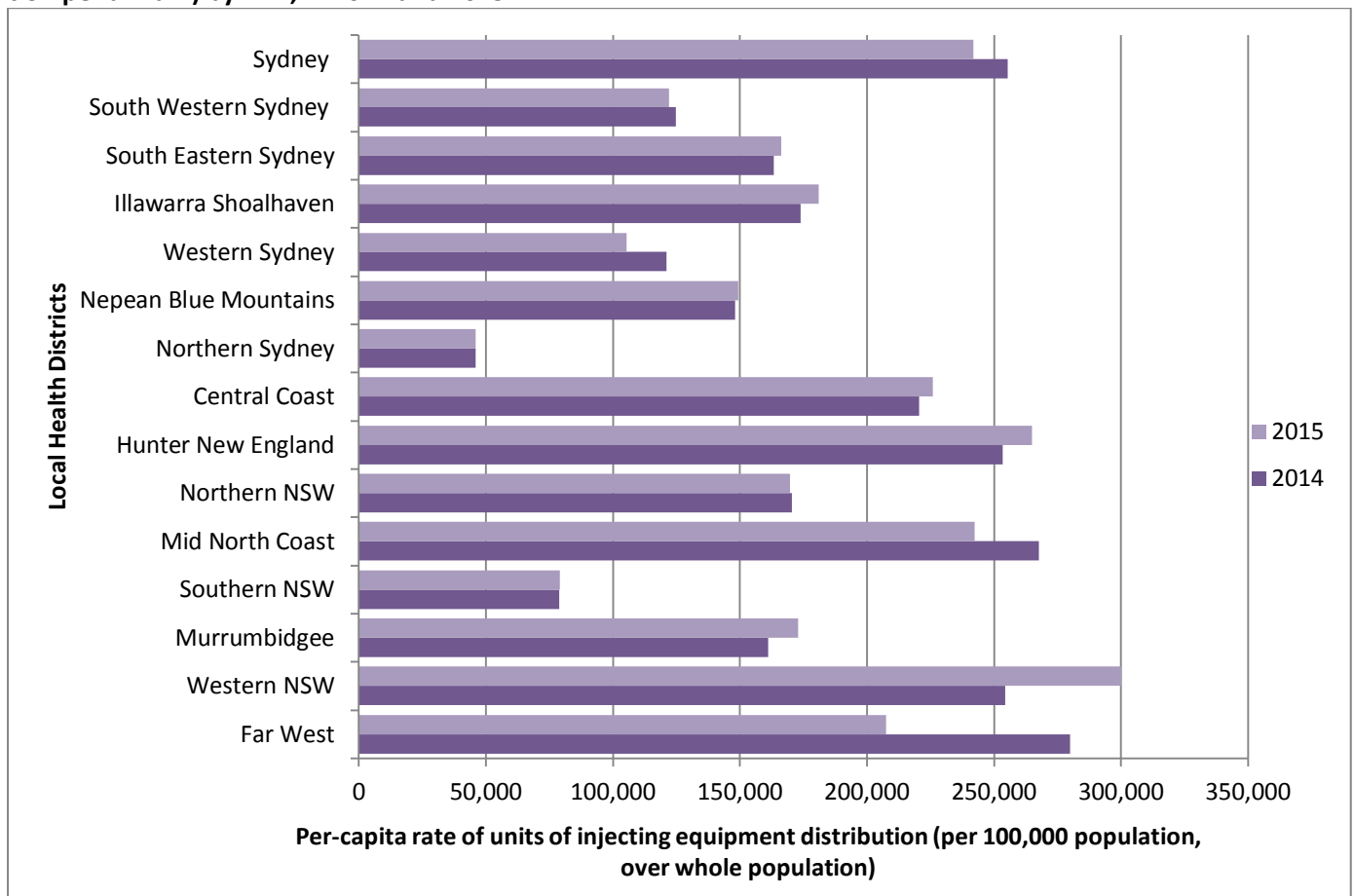
- The Public NSP includes injecting equipment distributed by secondary outlets including Aboriginal Community Controlled Health Services (ACCHS)
- South East Sydney LHD includes injecting equipment distributed by NUAA and ACON
- South Western Sydney LHD includes injecting equipment distributed by NUAA
- South Eastern Sydney LHD does not include the number of units of injecting equipment distributed by the Sydney Medically Supervised Injecting Centre (MSIC).

Comment

Between January to June 2015, the highest number of units of injecting equipment were distributed in Hunter New England, Sydney, South Eastern Sydney, South Western Sydney, and Western Sydney.

It is useful to view Figure 18 alongside Figure 19, which identifies the per-capita rate of units of injecting equipment distribution by LHD in 2014 and 2015. Of particular note is Western NSW which had the sixth-highest number of units of injecting equipment distributed between January to June 2015 (Figure 19) and the highest projected per-capita rate of units of injecting equipment distribution (Figure 20) in 2015. HNE had the highest number of units of injecting equipment distributed (Figure 19) between January to June 2015 and the second highest projected per-capita rate of units of injecting equipment distribution (Figure 20) in 2015.

Figure 20: Per-capita rate of units of injecting equipment distribution (per 100,000 population, over whole population per annum) by LHD, in 2014 and 2015



Data sources:

- Population by LHD – Based on Australian Bureau of Statistics population estimates. Population projections (2015) based on data from the NSW Department of Planning and Infrastructure (SAPHARI). Centre for Epidemiology and Evidence, NSW Ministry of Health. Data extracted 24 August 2015
- Public - NSW Health NSP Minimum Data Set
- Pharmacy - NSW Health Pharmacy Data (Pharmacy NSP Fitpack[®] scheme)
- NUAA – The NSW Users and AIDS Association
- ACON - AIDS Council of NSW

Notes:

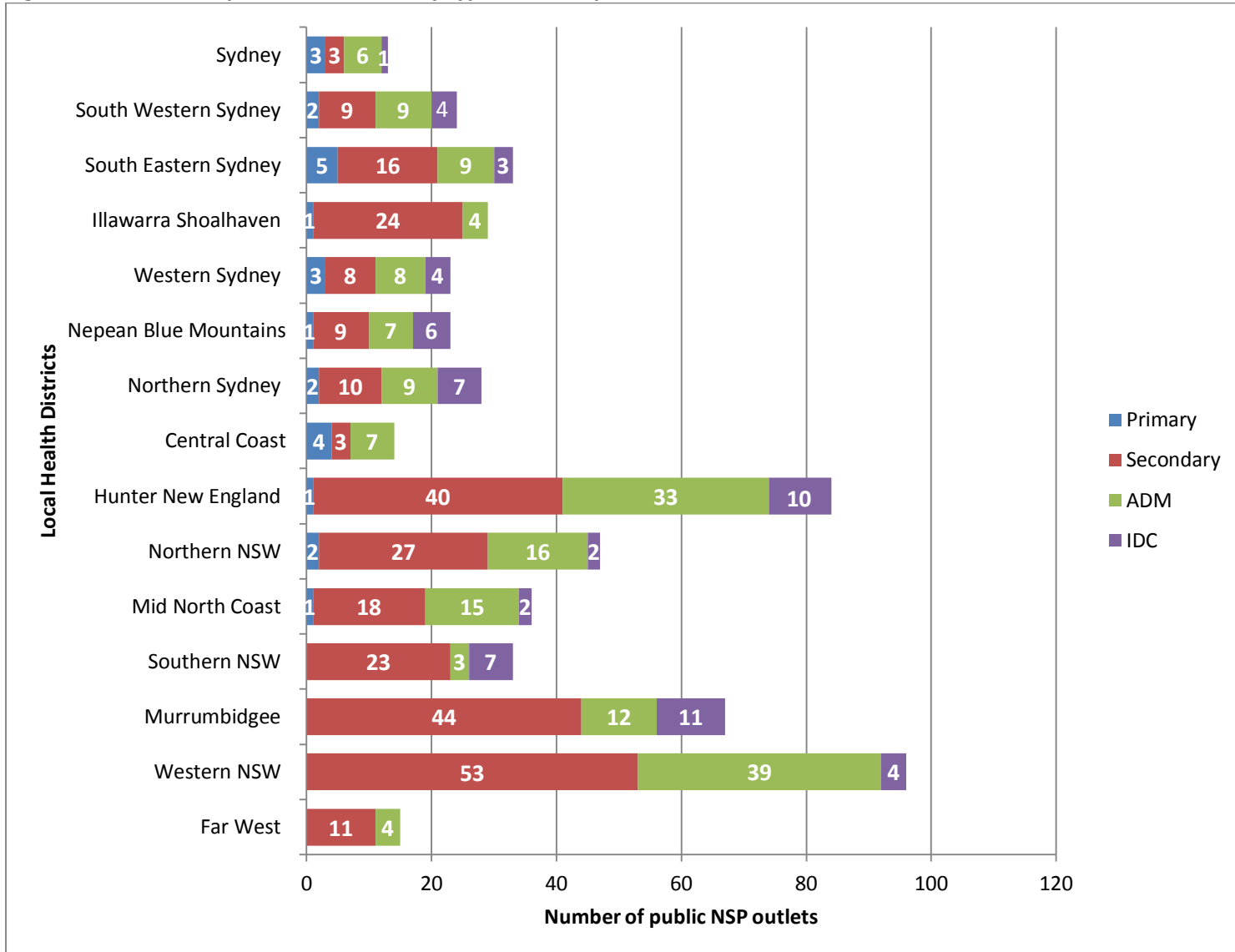
- The rate in 2015 is based on 6-months of data between Jan-June 2015 adjusted to an annual rate and is subject to change once data between July-Dec 2015 becomes available.
- The units of injecting equipment includes injecting equipment distributed by the NSW Public NSP; the Pharmacy NSP Fitpack Scheme; as well as secondary outlets in Aboriginal Community Controlled Health Services (ACCHS)
- South East Sydney LHD includes injecting equipment distributed by NUAA and ACON
- South Western Sydney LHD includes injecting equipment distributed by NUAA
- South Eastern Sydney LHD does not include the number of units of injecting equipment distributed by the Sydney Medically Supervised Injecting Centre (MSIC).

Comment

Based on activity between January to June 2015, the highest projected per-capita rate of units of injecting equipment distribution was in Western NSW, Hunter New England, Sydney, Mid North Coast, and Central Coast. This rate is subject to change once data for July-December 2015 are available.

The Ministry of Health is currently developing updated NSW PWID population size estimates by LHD under the BRISE²⁴ Research Program, which when combined with distribution data, will provide a more valuable indication of needle and syringe coverage in NSW.

²⁴ BBV & STI Research, Intervention and Strategic Evaluation (BRISE) 2014-2019 – University of NSW

Figure 21: Number of public NSP outlets by type in NSW by LHDs, 30 June 2015

Data source: NSW NSP Data Collection

Comment

As of 30 June 2015, under the public NSP there were a total of 25 primary and 298 secondary outlets; and 242 ADMs and IDCs located across NSW. The breakdown by outlet type by LHD is identified above (Figure 21).

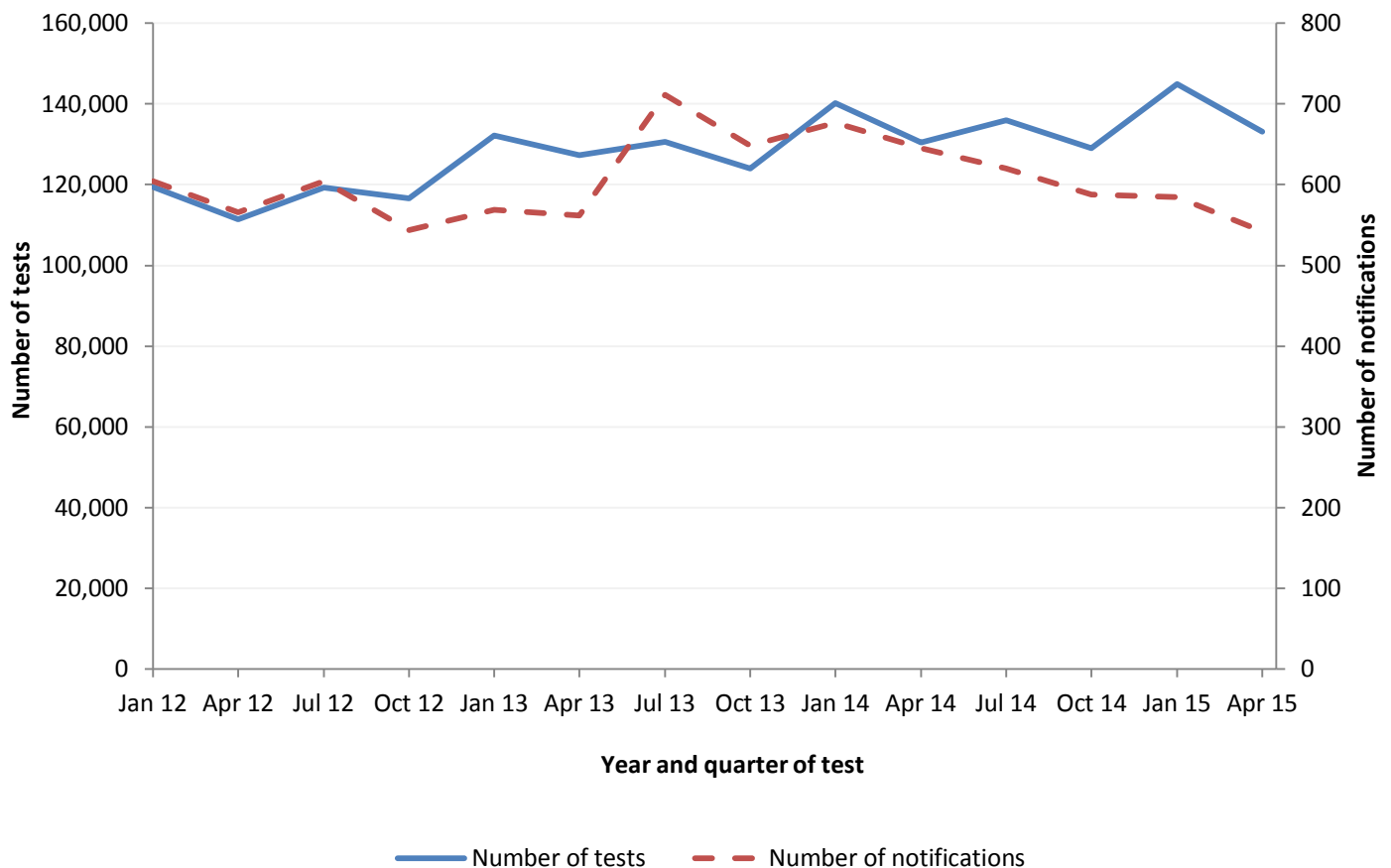
In addition, there were 511 Pharmacies participating in the Pharmacy NSW Fitpack Scheme, making a total of 1,076 NSP outlets located across NSW as at 30 June 2015. This represents an increase of 27 additional outlets (2.6%) compared with same period in 2014 (NSW NSP Data Collection).

3. TEST – Increase testing for hepatitis B and hepatitis C

3.1 Is hepatitis B virus testing increasing in NSW?

In 2012, NSW Health commenced collection of monthly testing data for selected notifiable conditions from 15 NSW public and private laboratories under the NSW denominator data project. These laboratories account for more than 90% of the total notifications for the selected conditions in NSW. Information from laboratories does not provide any indication on whether there are repeat tests on the same individual.

Figure 22: Number of tests for hepatitis B surface antigen performed at 15 NSW laboratories and number of hepatitis B notifications per quarter, 1 January 2012 – 30 June 2015

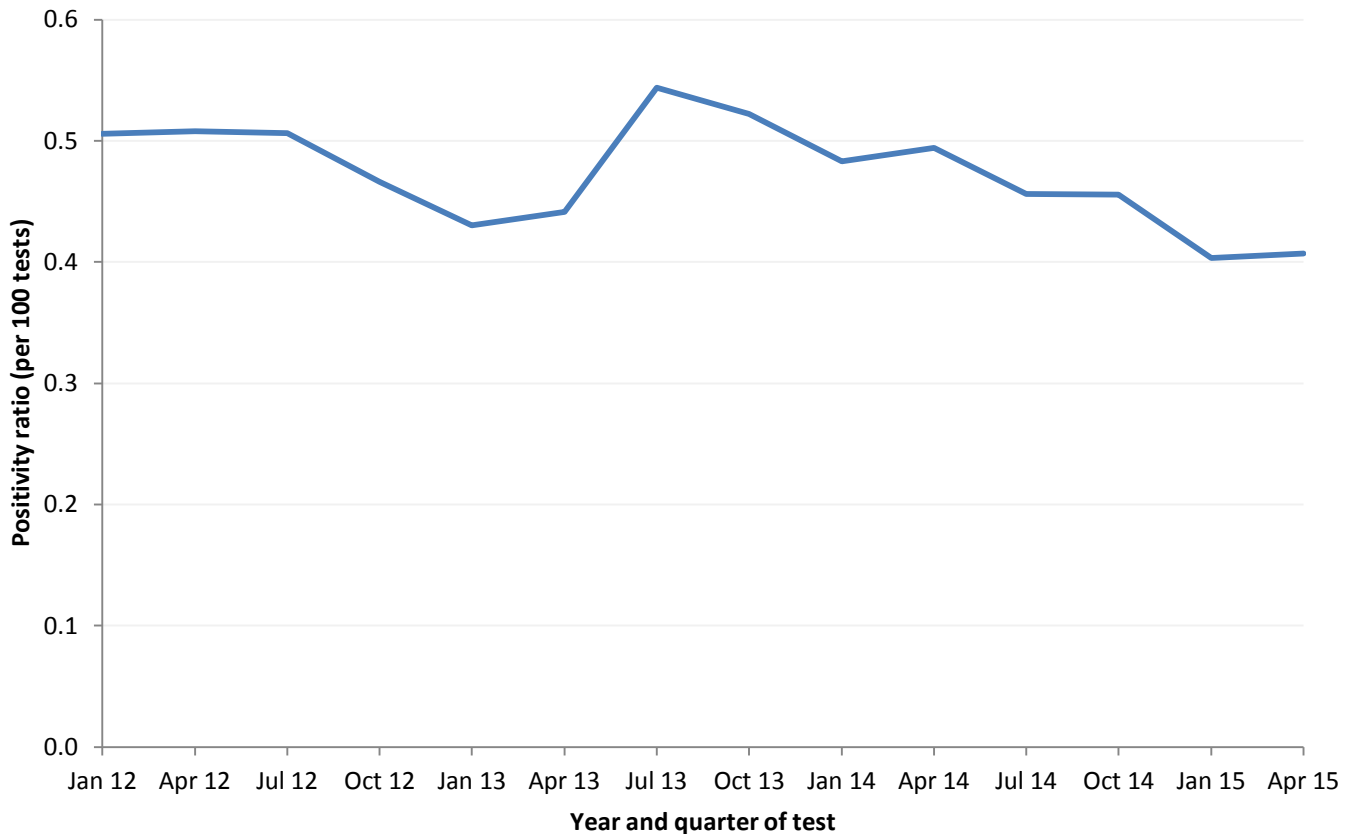


Data sources: NCIMS and NSW denominator data project, NSW Health

Note: Each quarter has been represented by the first month of that quarter eg 'Jan 12' includes data for 1 January to 31 March 2012

Comment

The number of hepatitis B tests performed in NSW is continuing to increase slightly. Between January and June 2015, 278,075 tests for hepatitis B surface antigen were performed in 15 laboratories in NSW, an average of 46,345 tests per month. The monthly average number of tests for January to June 2015 is higher than the monthly average for 2014 (44,641), 2013 (42,854) and 2012 (38,899).

Figure 23: Hepatitis B positivity ratio, NSW, 1 January 2012 – 30 June 2015

Data sources: NCIMS and NSW denominator data project, NSW Health

Note: Each quarter has been represented by the first month of that quarter eg 'Jan 12' includes data for 1 January to 31 March 2012

Comment

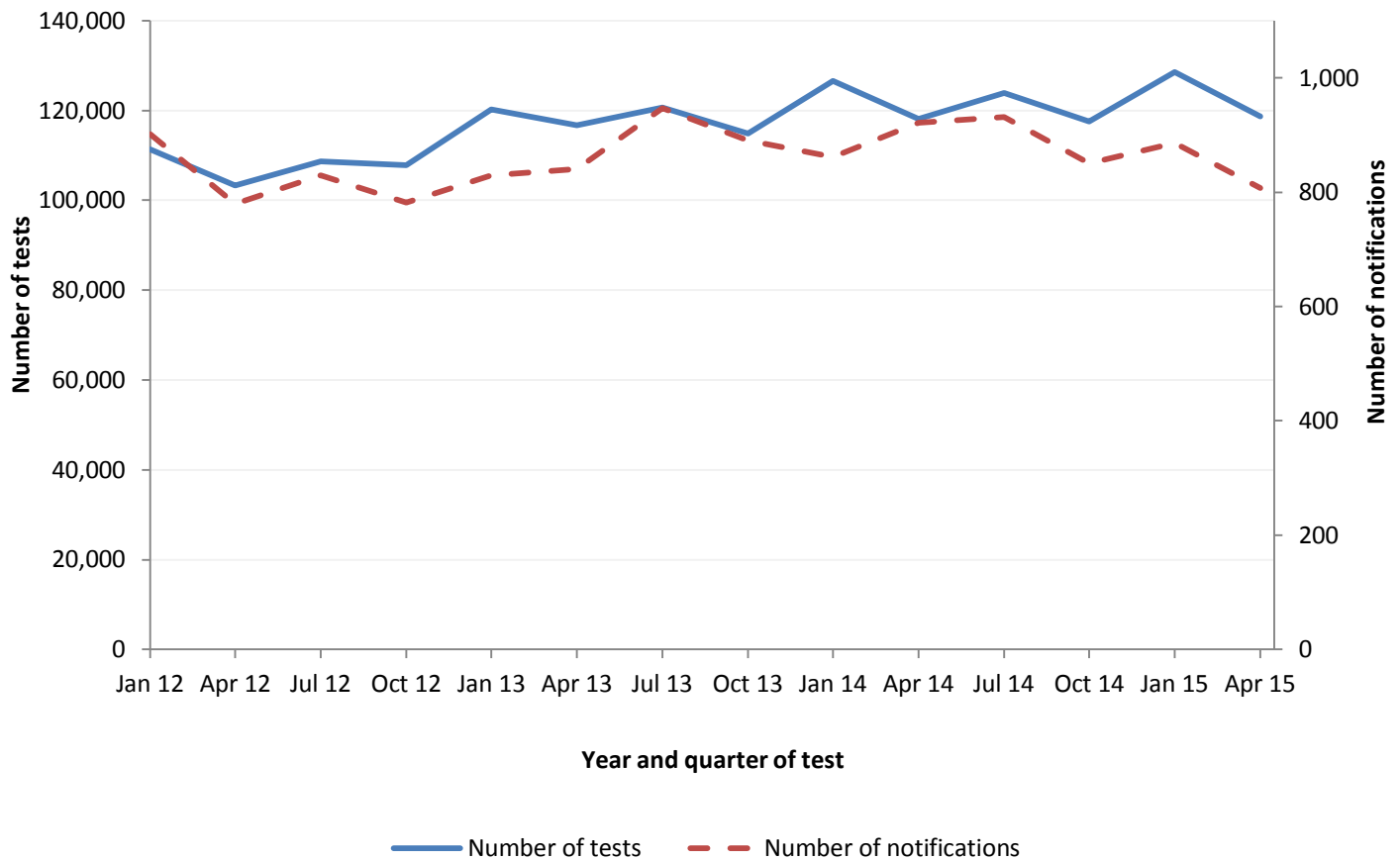
The ratio of positive hepatitis B notifications was 0.41 per 100 tests during the first half of 2015, a slight drop compared to 2014. For the full years of 2012, 2013 and 2014, the ratio has been relatively stable (0.50, 0.48 and 0.47 notifications per 100 tests respectively). Data for the second half of 2015 will reveal if this drop is sustained or a temporary fluctuation, which occurred in the first half of 2013.

The ratio of positive notifications was calculated by dividing the overall positive results notified to NSW Health by all laboratories by the total number of tests performed as reported from the participating laboratories. The overall positive results included in the analysis are for individual people notified with hepatitis B reported from all laboratories. However, the testing data are for individual tests reported from participating laboratories and may include multiple specimens per individual. As such, the ratio of positive notifications per test may be an underestimate of the per cent of people tested that are positive for the condition.

3.2 Is hepatitis C virus testing increasing in NSW?

In 2012, NSW Health commenced collection of monthly testing data for selected notifiable conditions from 15 NSW public and private laboratories under the NSW denominator data project. These laboratories account for more than 90% of the total notifications for the selected conditions in NSW. Information from laboratories does not provide any indication on whether there are repeat tests on the same individual.

Figure 24: Number of tests for hepatitis C antibody performed at 15 NSW laboratories and number of hepatitis C notifications per quarter, 1 January 2012 – 30 June 2015



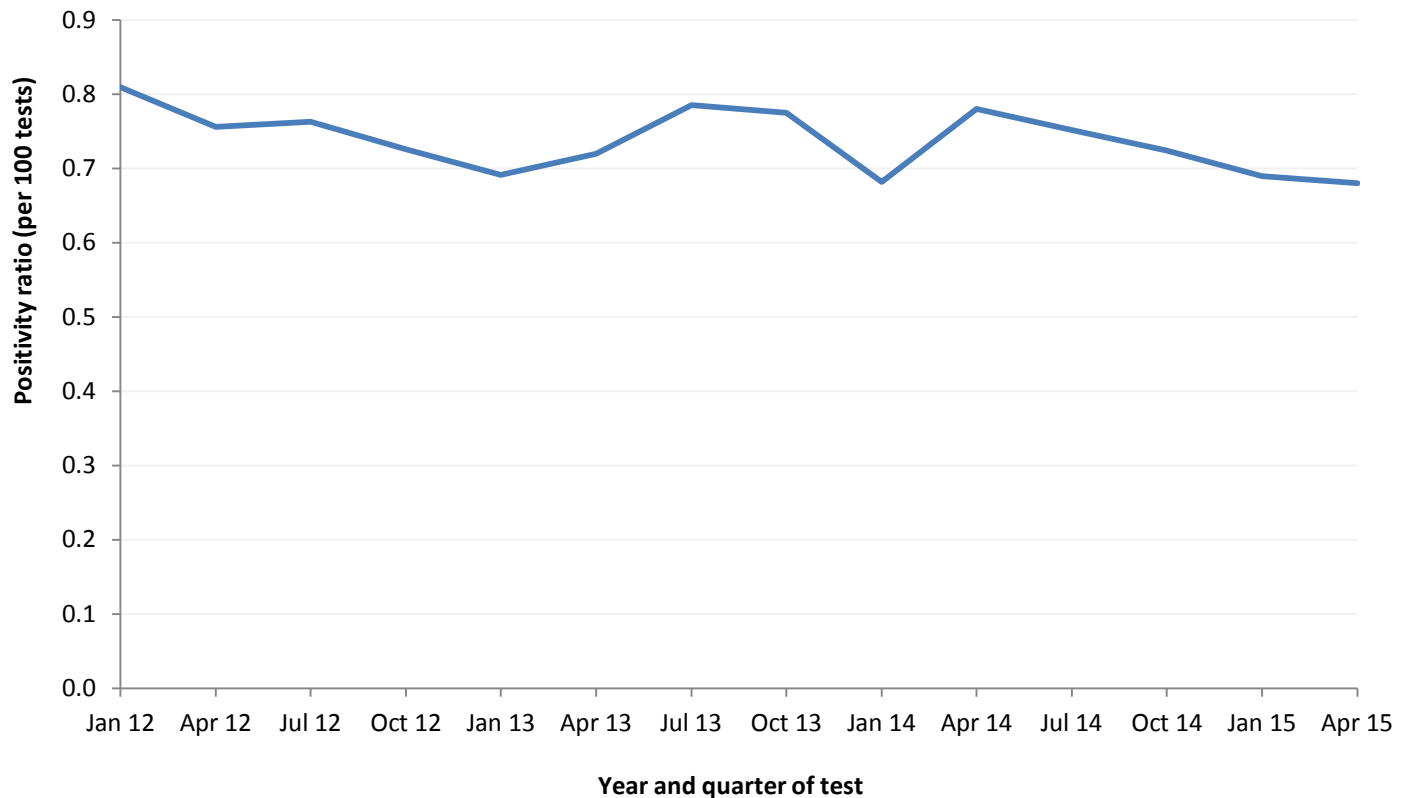
Data sources: NCIMS and NSW denominator data project, NSW Health

Note: Each quarter has been represented by the first month of that quarter eg 'Jan 12' includes data for 1 January to 31 March 2012

Comment

Between January and June 2015, 247,307 tests for hepatitis C antibody were performed in 15 laboratories in NSW, an average of 41,218 tests per month. The monthly average number of tests for January to June 2015 is marginally higher than the monthly average for 2014 (40,511), and also higher than 2013 (39,362) and 2012 (35,926).

Figure 25: Hepatitis C positivity ratio, NSW, 1 January 2012 – 30 June 2015



Data sources: NCIMS and NSW denominator data project, NSW Health

Note: Each quarter has been represented by the first month of that quarter eg 'Jan 12' includes data for 1 January to 31 March 2012

Comment

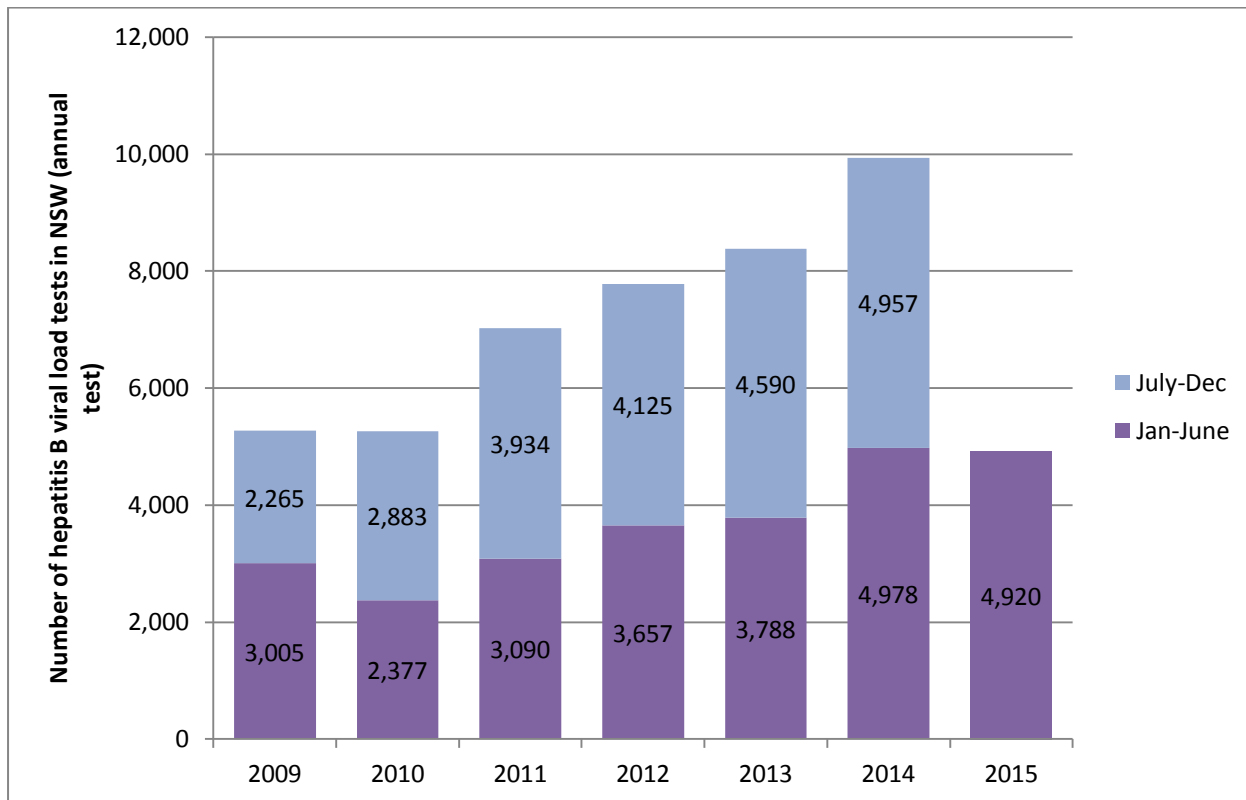
The ratio of positive hepatitis C notifications was 0.68 per 100 tests during the first half of 2015, a small decrease compared to 2014. For the full years of 2012, 2013 and 2014, the ratio has been very gradually declining (0.76, 0.74 and 0.73 notifications per 100 tests respectively).

The ratio of positive notifications was calculated by dividing the overall positive results notified to NSW Health by all laboratories by the total number of tests performed as reported from the participating laboratories. The overall positive results included in the analysis are for individual people notified with hepatitis C reported from all laboratories. However, the testing data are for individual tests reported from participating laboratories and may include multiple specimens per individual. As such, the ratio of positive notifications per test may be an underestimate of the per cent of people tested that are positive for the condition.

4. MANAGE - Improve management of hepatitis B and hepatitis C

4.1 How many people with chronic hepatitis B are having their condition monitored in NSW?

Figure 26: Number of viral load tests provided to people with chronic hepatitis B (and not receiving treatment) via Medicare in NSW, 1 January 2009 - 30 June 2015 (annual test)



Data source: Medicare Australia - Medicare Benefits Schedule (MBS) item 69482

Note: Data is based on Patient Enrolment Postcode

Note: HBV Viral load tests (MBS item 69482) are covered annually under Medicare, so this data indicates the number of people tested.

Comment

Between January and June 2015, there were 4,920 viral load tests provided to people with chronic hepatitis B not receiving treatment in NSW. This represents a 1% reduction compared to the same period in 2014 (4,978 tests).

(Figure 26)

People living with chronic hepatitis B should either be receiving treatment or being monitored while not on treatment through an annual viral load test.^{25 26}

The Ministry of Health is currently developing updated incidence and prevalence modelling of infection and disease burden for hepatitis B under the BRISE²⁷ Research Program. This will improve estimates of people with hepatitis B in NSW who are not being monitored.

²⁵ HBV viral load testing under the Medicare Benefits Schedule (MBS) is used as a surrogate for guideline-based monitoring of people living with chronic hepatitis B who are not receiving treatment. Viral load testing is covered annually under MBS (item 69482) in line with the recommended guidelines. Those who are receiving antiviral therapy are monitored via a different MBS item (69483) for their viral load tests.

²⁶ Hepatitis B Mapping Project: Estimates of chronic hepatitis B diagnosis, monitoring and treatment by Medicare Local, 2012/13 – National Report. Published by the Australasian Society for HIV Medicine (ASHM)

²⁷ BBV & STI Research, Intervention and Strategic Evaluation (BRISE), 2014-2019 – University of NSW

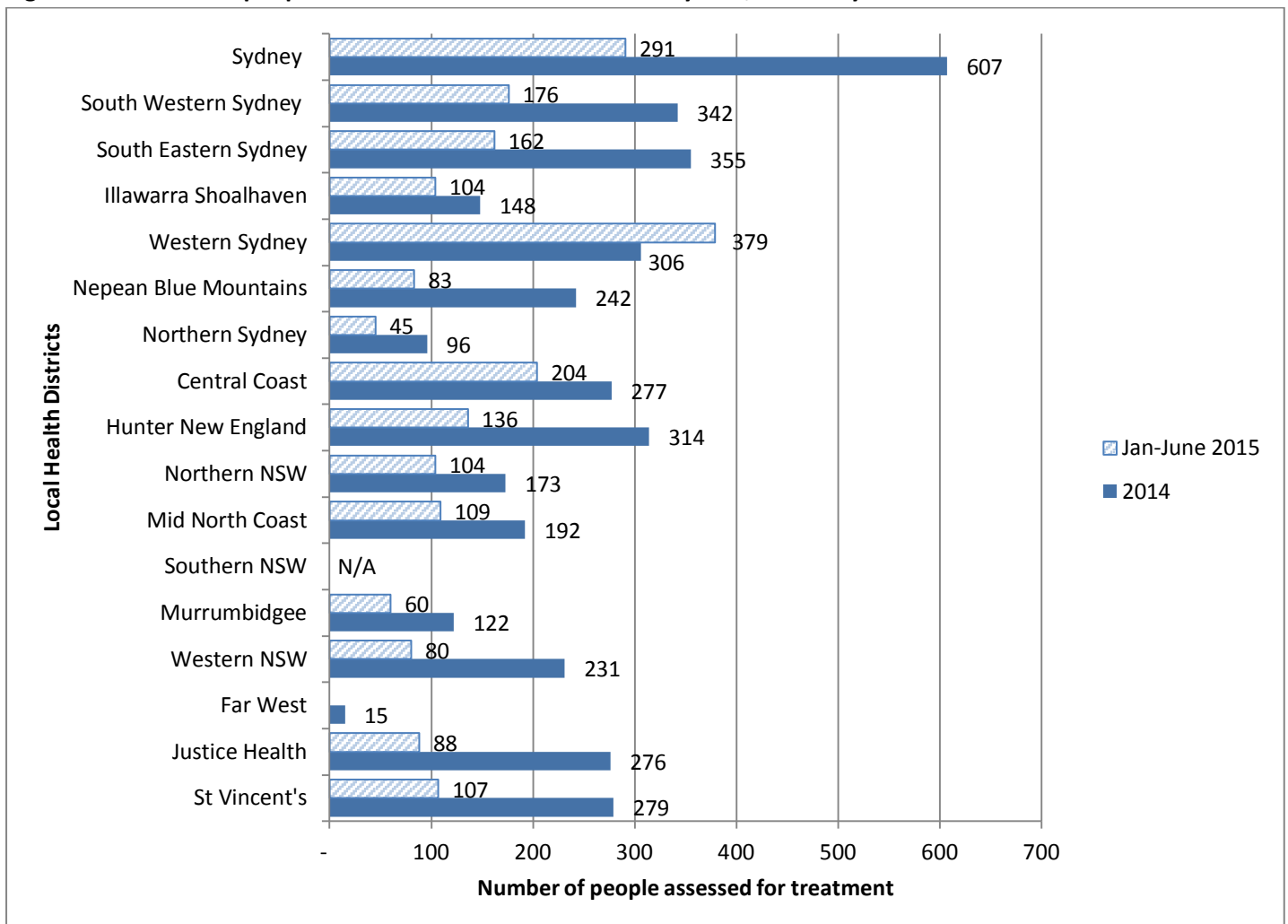
4.3 How many people with chronic hepatitis C are assessed for treatment in NSW?

Between January to June 2015, the number of people with chronic hepatitis C assessed for treatment suitability in publicly funded health services in NSW was **2,132**, a 5% increase compared to the same period in 2014 (2027). To increase the number of people with hepatitis C who are assessed for treatment suitability is a key priority in the NSW Hepatitis C Strategy 2014-2020.

The data captures the number of people assessed for treatment in publicly funded liver clinics; drug and alcohol services; Justice Health; and St Vincent's Health Network.

4.4 Where are people with chronic hepatitis C assessed for treatment in NSW?

Figure 27: Number of people assessed for treatment in NSW by LHD, 1 January 2014 to 30 June 2015



Data source: NSW Health Hepatitis C Minimum Data Set

Note: Data was not available for Southern NSW, 1 January 2014 to 30 June 2015

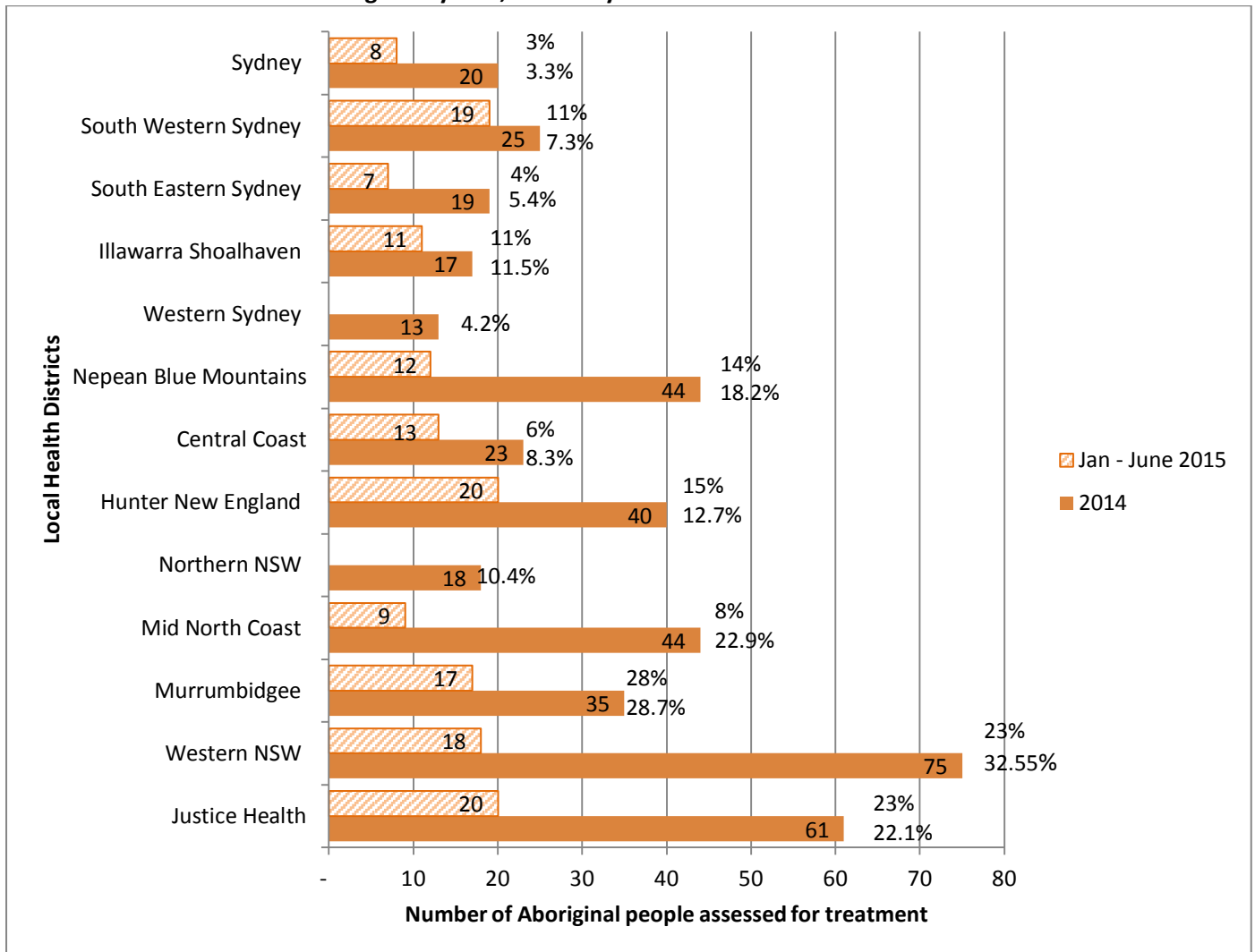
Note: The number of people assessed for treatment is 5 or less in Far West, 1 January to 30 June 2015

Note: NSW Health does not currently collect data on hepatitis C from the Sydney Children's Hospital Network

Comment

Between January to June 2015, the highest number of people assessed for hepatitis C treatment occurs in Western Sydney, Sydney, and Central Coast LHDs. Of particular note is Western Sydney which has surpassed the number of people assessed for hepatitis C treatment in 2014 during this period (Figure 27).

Figure 28: Number of Aboriginal people assessed for hepatitis C treatment in NSW and % of people assessed for treatment in NSW who are Aboriginal by LHD, 1 January 2014 to 30 June 2015



Data source: NSW Health Hepatitis C Minimum Data Set

Note: Data was not available for Southern NSW between 1 January 30 2014 to June 2015

Note: The number of Aboriginal people assessed for treatment is **zero** between 1 January 30 2014 to June 2015 in Northern Sydney

Note: The number of Aboriginal people assessed for treatment is **5 or less** between 1 January 2014 to 30 June 2015 in:

- St Vincent's Health Network; and
- Far West

The number of Aboriginal people assessed for treatment is **5 or less** between 1 January to 30 June 2015 in:

- Western Sydney; and
- Northern NSW

Comment

Of the 2,132 people assessed for hepatitis C treatment in NSW between 1 Jan – 30 June 2015, 8% (165 people) reported to be Aboriginal and/or Torres Strait Islander people and 90.5% were non-Indigenous. Indigenous status was unknown, not stated or missing for the remaining 1.5%. The Ministry of Health is producing this data by LHD, to be reported in the next Data Report.

It is useful to view Figure 28 alongside: Table 2, which identifies the proportion of Aboriginal people of total population by LHD (in 2011); and Table 3, which identifies the proportion of NSW Aboriginal adult custodial population. For instance, in the period between January to June 2015, 23% of people assessed for treatment in NSW Justice Health Custodial settings were Aboriginal people, which is consistent with the proportion of Aboriginal adult custodial population (daily average) in NSW, which was 23.7% in 2013/14.

Table 2: The proportion of Aboriginal people of total population by LHD in 2011

LHD	Aboriginal proportion of total population in 2011
Sydney	1.1%
South Western Sydney	1.6%
South Eastern Sydney	0.9%
Illawarra Shoalhaven	2.4%
Western Sydney	1.6%
Nepean Blue Mountains	2.5%
Northern Sydney	3.8%
Central Coast	2.1%
Hunter New England	4.0%
Northern NSW	3.8%
Mid North Coast	4.5%
Southern NSW	2.7%
Murrumbidgee	3.9%
Western NSW	8.6%
Far West	9.7%

Data source: ABS statistics 2011

Table 3: The proportion of Aboriginal adult custodial population in NSW in 2012/13 and 2013/14

Justice health, custodial settings	Aboriginal proportion of NSW adult custodial population (daily average)
2013/14	23.7%
2012/13	22.9%

Data source: ABS statistics, Corrective Services NSW, Australia

5. TREAT - Improve access to hepatitis B and hepatitis C treatment

5.1 How many people in NSW are on hepatitis B antiviral treatment?

Public Pharmacy dispensing data indicates that in the 12 months between 1 July 2014 to 30 June 2015, **2,722** people with hepatitis B were dispensed hepatitis B antiviral therapy at least once in NSW public hospital pharmacies²⁸.

This data captures the number of people dispensed hepatitis B antiviral therapy in NSW public hospital pharmacies, but is an underestimate of the number of people dispensed hepatitis B treatment in NSW because it excludes people dispensed hepatitis B antiviral therapy in private hospital and community pharmacies.

It does not include people who are accessing treatment through other sources, including those who purchase hepatitis B treatment from overseas or receive antiviral treatment through clinical trials. This total figure also excludes data from Hunter New England LHD, Broken Hill Health Service, and Sydney Children's Hospital Network, which was not available at the time of reporting.

In the period between January 2013 to December 2013, **5,871** people with chronic hepatitis B were dispensed hepatitis B antiviral therapy in public hospital, private hospital and community pharmacies²⁹. This includes all people accessing hepatitis B treatment subsidised through the Pharmaceutical Benefits Scheme, as part of the Highly Specialised Drugs Programme.

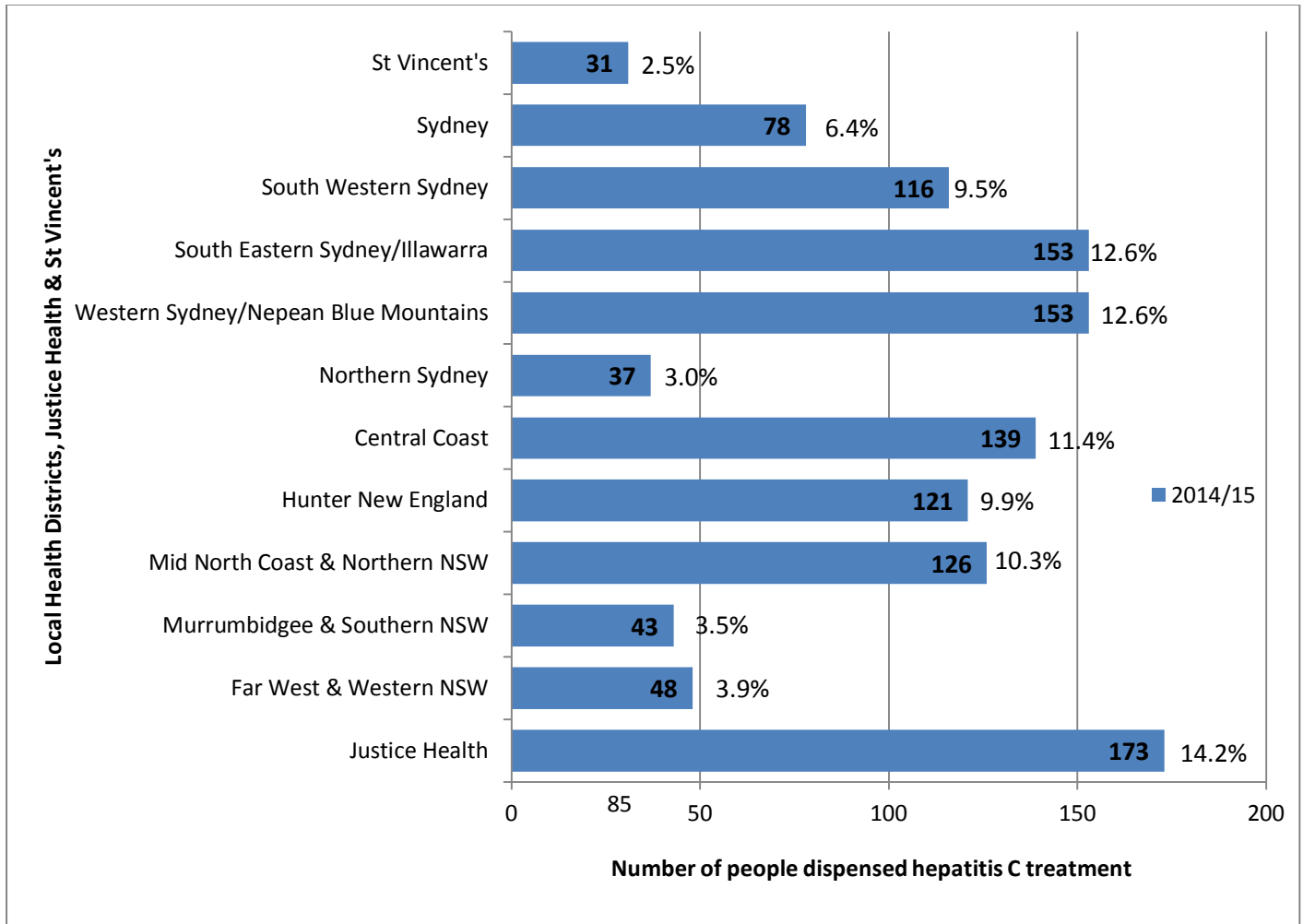
The NSW Ministry of Health is working towards accessing more comprehensive dispensing data.

²⁸ Data source: eHealth NSW iPharmacy data and data submitted directly by Western Sydney, Nepean Blue Mountains LHDs. The hepatitis B and hepatitis C dispensing data was revised on 15 May 2016 to correct a duplication error in the analysis of the NSW iPharmacy data (incorporated above). Note that the total number of people dispensed hepatitis B therapy in 2014/15 excludes data from Hunter New England LHD which was not available at the time of this report. In scope patients include anyone who received one or more of the following medications for the treatment of hepatitis B in 2014/15 peginterferon alfa-2a; peginterferon alfa-2b; interferon alfa-2a; lamivudine; adefovir; entecavir; tenofovir; or telbivudine.

²⁹ Hepatitis B Mapping Project: Estimates of chronic hepatitis B diagnosis, monitoring and treatment by Medicare Local, 2012/13 – National Report. Published by the Australasian Society for HIV Medicine (ASHM).

5.2 How many people in NSW are on hepatitis C antiviral treatment and where are they receiving treatment?

Figure 29: Number of patients dispensed hepatitis C antiviral treatment in NSW by LHD of dispensing pharmacy, 1 July 2014 – 30 June 2015³⁰



Data source: eHealth NSW iPharmacy data; and data submitted by Western Sydney, Nepean Blue Mountains, Hunter New England LHDs.

Notes:

- The hepatitis B and hepatitis C dispensing data was revised on 15 May 2016 to correct a duplication error in the analysis of the NSW iPharmacy data (incorporated above).
- This figure captures the number of people dispensed hepatitis C antiviral therapy in NSW public hospital pharmacies. It excludes people dispensed hepatitis C antiviral therapy in private hospital based pharmacies and community pharmacies.
- The data is an underestimate of the number of people dispensed hepatitis C treatment in NSW because it excludes people receiving antiviral treatment through clinical trials.
- In Sydney Children's Hospital Network, the number of people dispensed treatment was zero in 2014/15.
- The numbers displayed in Figure 28 add up to a total that is greater than the overall total for 1/7/14-30/6/15. This is because a small number of cross-LHD patient flows are not eliminated.

³⁰ In scope patients include anyone who received one or more of the following medications for the treatment of hepatitis C in 2014/15: Simeprevir, peginterferon alfa-2a; peginterferon alfa-2b; peginterferon alfa-2a and ribavirin; peginterferon alfa-2b and ribavirin; telaprevir; or boceprevir.

Comment

Pharmacy dispensing data indicates that in the 12 months between 1 July 2014 to 30 June 2015, **1,205** people with hepatitis C were dispensed hepatitis C antiviral therapy at least once in NSW public hospital pharmacies³¹. This includes all people accessing hepatitis C treatment subsidised through the Pharmaceutical Benefits Scheme, as part of the Highly Specialised Drugs Programme.

This data captures the number of people dispensed hepatitis C antiviral therapy in NSW public hospital pharmacies, including therapy prescribed by general practice and specialists.

The data is an underestimate of the number of people dispensed hepatitis C treatment in NSW because it excludes people dispensed hepatitis C antiviral therapy in private hospital based pharmacies and community pharmacies. It excludes people receiving hepatitis C antiviral treatment through clinical trials. It also excludes people who may be accessing treatment through other sources, including those who purchase hepatitis C treatment from overseas. (Figure 29)

The NSW Ministry of Health is working towards accessing more comprehensive dispensing data.

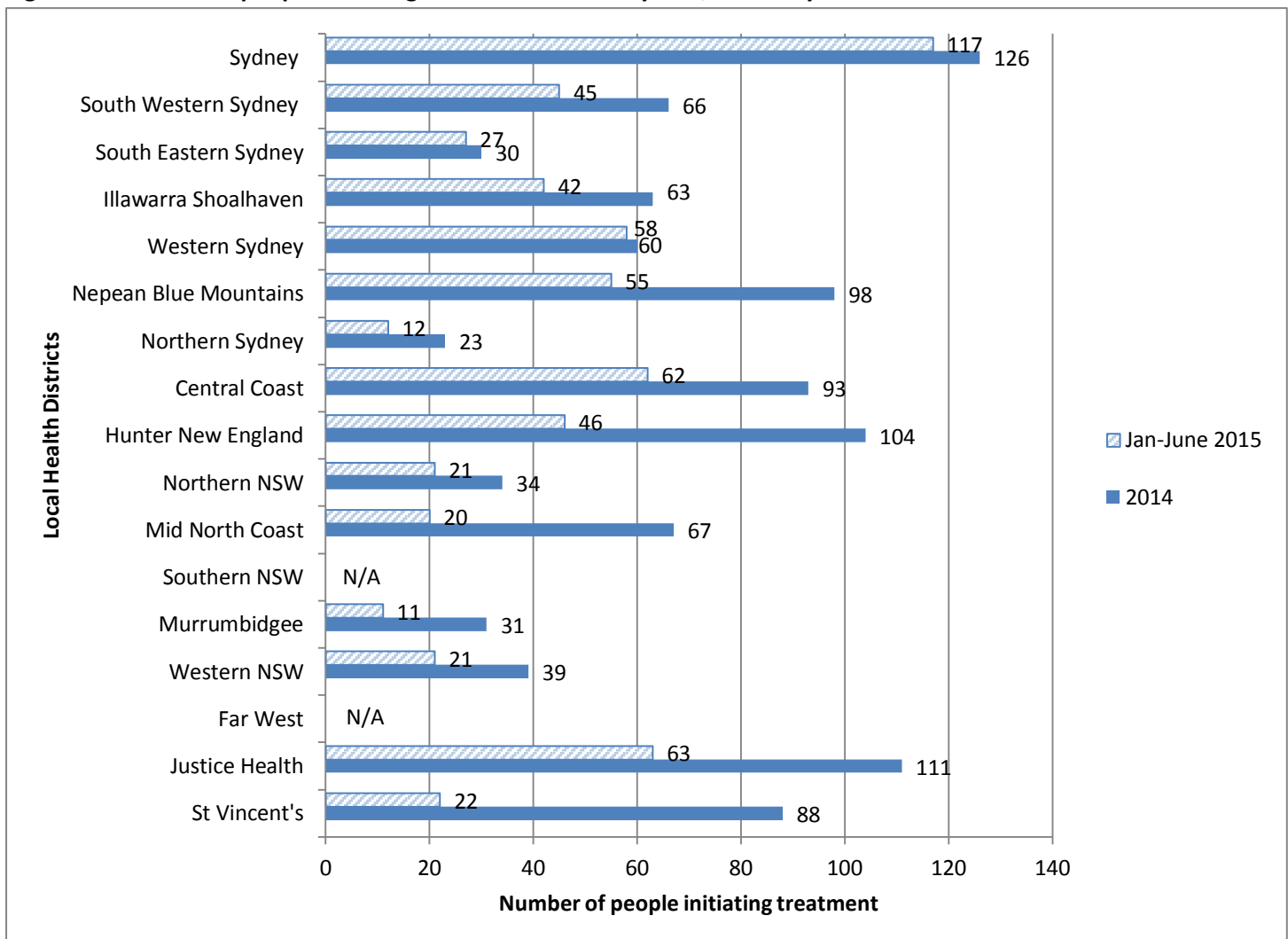
³¹ Data source: Health Share NSW iPharmacy data and data submitted directly by Western Sydney, Nepean Blue Mountains LHDs. Note, the hepatitis B and hepatitis C dispensing data was revised on 15 May 2016 to correct a duplication error in the analysis of the NSW iPharmacy data.

5.3 How many people in NSW with chronic hepatitis C are initiating treatment and where are they receiving this treatment?

Between January to June 2015, the number of people with chronic hepatitis C initiating treatment in publicly funded health services in NSW was **622**, an 11% increase compared to the same period in 2014 (560). To increase the number of people accessing hepatitis C treatment is a key priority in the NSW Hepatitis C Strategy 2014-2020.

The data captures the number of people assessed for treatment in publicly funded liver clinics; drug and alcohol services; Justice Health; and St Vincent's Health Network. The data also includes the number of patients on clinical trials. The total number of patients on clinical trials who initiated hepatitis C treatment was 160 between 1 January to 30 December 2014 and 86 between 1 January to 30 June 2015.

Figure 30: Number of people initiating treatment in NSW by LHD, 1 January 2014 to 30 June 2015



Data source: NSW Health Hepatitis C Minimum Data Set

Note: Data was not available for Southern NSW, 1 January 2014 to 30 June 2015

Note: The number of people initiating treatment is 5 or less in Far West, 1 January 2014 to 30 June 2015

Note: NSW Health does not currently collect data on hepatitis C from the Sydney Children's Hospital Network

Comment

Between January to June 2015, the number of people initiating treatment has increased compared to the same time last year in most LHDs, particularly in Sydney, South Western Sydney, South Eastern Sydney, Illawarra Shoalhaven, Central Coast and Western Sydney LHDs.

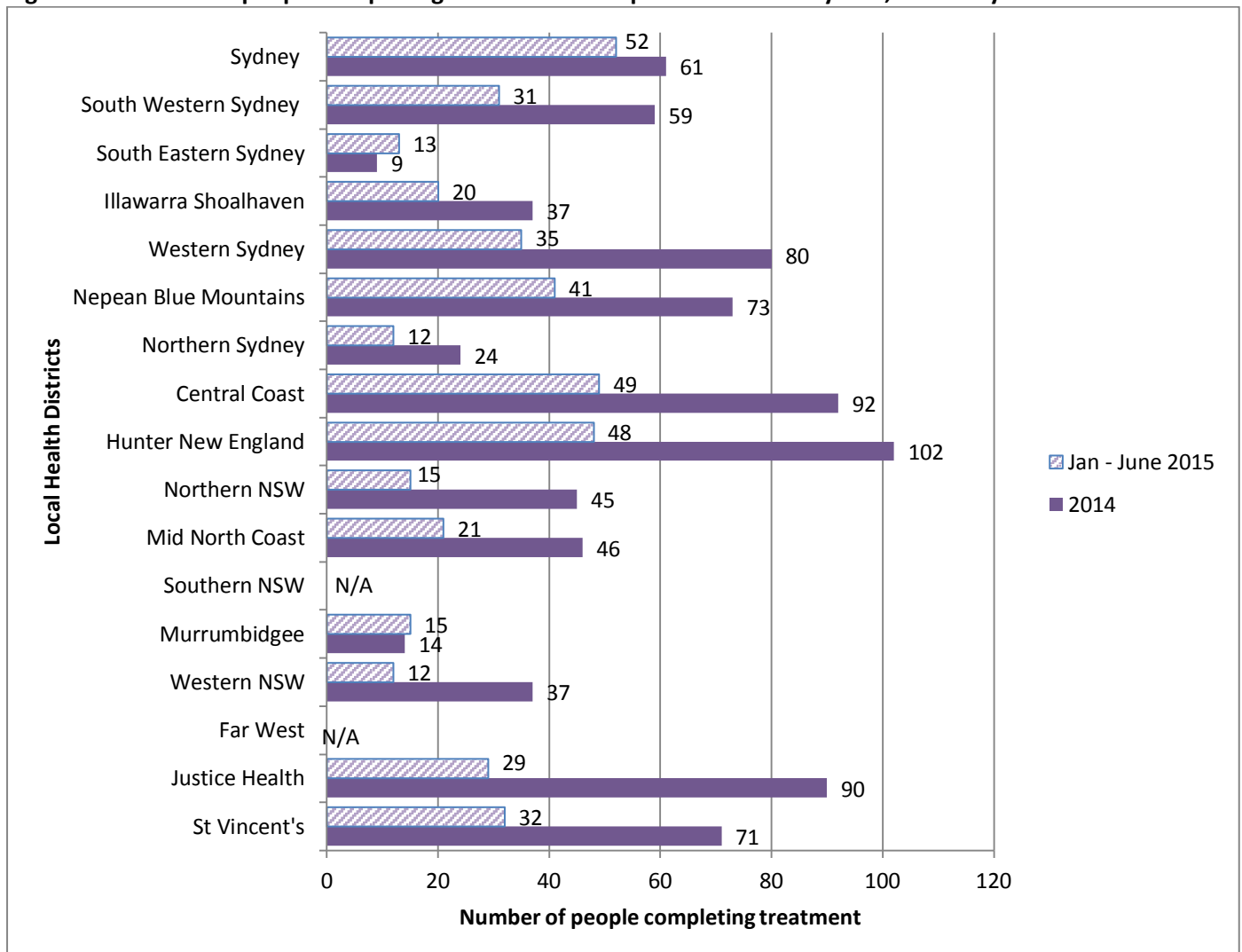
Of the 622 people who initiated hepatitis C treatment in NSW between 1 Jan – 30 June 2015, 6% (36 people) reported to be Aboriginal and/or Torres Strait Islander people and 90.5% were non-Indigenous. Indigenous status was unknown, not stated or missing for the remaining 3.5%. The Ministry of Health is producing this data by LHD, to be reported in the next Data Report.

5.4 How many people in NSW are completing hepatitis C treatment and where are they receiving this care?

Between 1 January to 30 June 2015, the number of people completing treatment for hepatitis C in publicly funded health services in NSW was 427, a 3% increase compared to the same period in 2014 (414).

The data indicates the number of people completing hepatitis C treatment in publicly funded liver clinics; drug and alcohol services; Justice Health; and St Vincent's Health Network. The data also includes the number of patients on clinical trials. The total number of patients on clinical trials who completed hepatitis C treatment was 146 between 1 January to 30 December 2014 and 78 between 1 January to 30 June 2015.

Figure 31: Number of people completing treatment for hepatitis C in NSW by LHD, 1 January 2014 to 30 June 2015



Data source: NSW Health Hepatitis C Minimum Data Set

Note: Data was not available for Southern NSW, 1 January 2014 to 30 June 2015

Note: The number of people completing treatment is 5 or less in Far West, 1 January 2014 to 30 June 2015

Note: NSW Health does not currently collect data on hepatitis C from the Sydney Children's Hospital Network

Comment

The number of people completing treatment in publicly funded health services in Local Health Districts, St Vincent's Health Network, as well as Justice Health is identified above (Figure 31).

Appendix 1

Table 1: NSW NSP Enhanced Data Collection - Receptive syringe sharing (RSS) last month by LHD (n, %, CI) in 2014 & 2015

RSS among respondents who reported injection in previous month (excluding respondents with missing RSS data)

	2014				2015			
	N ^o RSS	%	Total N	95% CIs	N ^o RSS	%	Total N	95% CIs
SYDNEY	69	16.6%	416	13.1 - 20.5	60	16.6%	361	12.9 – 20.9
SOUTH WESTERN SYDNEY	14	21.5%	65	12.3 - 33.5	29	31.2%	93	22.1 – 41.6
SOUTH EASTERN SYDNEY	111	18.4%	603	15.4 - 21.7	80	20.6%	389	16.7 – 24.9
ILLAWARRA SHOALHAVEN	7	4.5%	155	1.8 - 9.1	7	5.4%	129	2.2 – 10.9
WESTERN SYDNEY	45	12.4%	364	9.2 - 16.2	58	19.0%	305	14.8 – 23.9
NEPEAN BLUE MOUNTAINS	13	12.4%	105	6.8 - 20.2	10	12.7%	79	6.2 – 22.0
NORTHERN SYDNEY	11	17.5%	63	9.1 - 29.1	7	14.3%	49	5.9 – 27.2
CENTRAL COAST	18	10.5%	172	6.3 - 16.0	3	7.0%	43	1.4 - 19.1
HUNTER NEW ENGLAND	32	15.4%	208	10.8 - 21.0	65	21.5%	302	17.0 – 26.6
NORTHERN NSW	25	13.1%	191	8.7 - 18.7	7	6.8%	103	2.8 – 13.5
MID NORTH COAST	7	6.4%	110	2.6 - 12.7	7	8.8%	80	3.6 – 17.2
SOUTHERN NSW	3	21.4%	14	4.7 - 50.8	0	0.0%	6	--
MURRUMBIDGEE	9	16.7%	54	7.9 - 29.3	2	9.1%	22	1.1 – 29.2
WESTERN NSW	2	3.6%	55	0.4 - 12.5	3	3.3%	91	0.7 – 9.3
FAR WEST	0	0.0%	3	--	1	14.3%	7	0.3 – 57.9
NNEDC NSW	366	14.2%	2,578	12.9 - 15.6	339	16%	2059	14.3 – 17.3

Table 2: Comparable Australian NSP survey data - NSW respondents

RSS among NSW respondents who reported injection in previous month (excluding respondents with missing RSS data)

ANSPS NSW year	N ^o RSS	%	Total N	95% CIs
2008	140	19%	744	16.1 - 21.8
2009	112	17%	672	13.9 - 19.7
2010	83	17%	483	13.9 - 20.9
2011	58	11%	544	8.2 - 13.6
2012	82	14%	573	11.5 - 17.4
2013	75	13%	560	10.7 - 16.5
2014	105	16%	653	13.3 - 19.1

