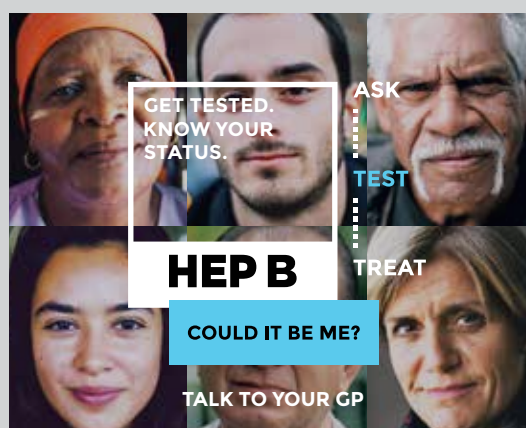


NSW HEPATITIS B AND HEPATITIS C STRATEGIES 2014–2020 DATA REPORT

2019 Annual Data Report



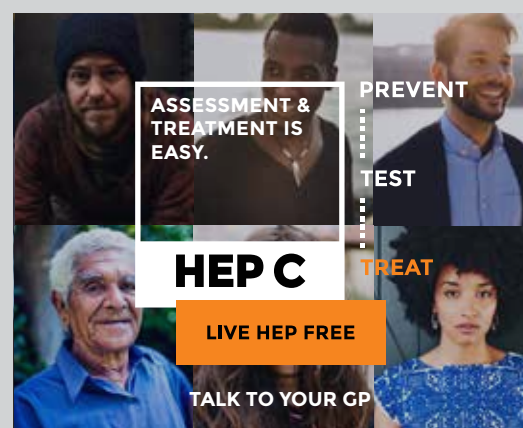
GET TESTED.
KNOW YOUR
STATUS.

ASK
TEST
TREAT

HEP B

COULD IT BE ME?
TALK TO YOUR GP

A collage of four diverse people's faces. A central white box contains the text 'GET TESTED. KNOW YOUR STATUS.' To the right, a vertical dotted line separates the words 'ASK', 'TEST', and 'TREAT'. Below the collage, a blue box contains 'HEP B', and another blue box contains 'COULD IT BE ME? TALK TO YOUR GP'.



ASSESSMENT &
TREATMENT IS
EASY.

PREVENT
TEST
TREAT

HEP C

LIVE HEP FREE
TALK TO YOUR GP

A collage of four diverse people's faces. A central white box contains the text 'ASSESSMENT & TREATMENT IS EASY.' To the right, a vertical dotted line separates the words 'PREVENT', 'TEST', and 'TREAT'. Below the collage, an orange box contains 'HEP C', and another orange box contains 'LIVE HEP FREE TALK TO YOUR GP'.

Policy Context

Hepatitis C

The *NSW Hepatitis C Strategy 2014-2020* continues the NSW Government's commitment to reduce hepatitis C infections and improve the health outcomes of people living with hepatitis C.

The PBS listing of new hepatitis C treatments in 2016, during the life of the Strategy, has increased the focus on improving access to treatment in key settings, particularly for people who inject drugs.

The Ministry of Health has committed to the elimination of hepatitis C in NSW by 2028.

Key Data

Hepatitis C (testing, treatment, prevention)		
	2019	Change since 2018
Number of tests for hepatitis C antibody	567,182	2.7% decrease (582,937)
Progress towards elimination	35% of the estimated number of people with hepatitis C initiated treatment (at 31 December 2019)	3 percentage point increase (26% at 31 December 2017)
Number of units of injecting equipment distributed	14,515,017	7% increase (13,558,302)
Number of people participating in the Opioid Treatment Program	21,421	2% increase (20,103)

Key Messages

It is now possible to eliminate hepatitis C as a public health concern

The direct acting antiviral hepatitis C treatments (DAAs) are cost effective, safe, and highly effective with a cure rate of greater than 95 per cent. The scale up of the DAAs for hepatitis C is a system priority for NSW.

Accessing high quality hepatitis C treatment in primary care is possible

Increased treatment uptake in primary care will improve equity by allowing the public health system to focus on people with complex health conditions. Ongoing support will be provided to increase access to treatment in primary care, including Aboriginal Controlled Community Health Services (ACCHSs).

Strengthening treatment efforts for people who inject drugs is critical

A focus on key settings including Needle and Syringe Programs (NSPs), alcohol and other drug (AOD) services and custodial settings will improve access to treatment for people who inject drugs.

Access to sterile needles and syringes and opioid treatment programs continue to be important in the prevention of hepatitis C transmission.

Policy Context

Hepatitis B

The *NSW Hepatitis B Strategy 2014-2020* continues the NSW Government's commitment to reduce hepatitis B infections and improve the health outcomes for people living with hepatitis B.

The Hepatitis B Strategy strengthens our efforts across prevention, testing, treatment and monitoring, building on achievements and prioritising the additional activities required to reduce hepatitis B infections in NSW.

The range of key settings needed for action include antenatal care services, Aboriginal Community Controlled Health Services, general practice and primary care, and corrective services.

Key Data

Hepatitis B (treatment, monitoring, and screening)				
		2019	Change since 2018	
Number of tests for hepatitis B surface antigen		635,549	1.7% decrease (646,827)	
Residents dispensed with hepatitis B treatment		10,245	2.0% increase (10,049)	
Number of viral load tests		16,160	5.1% decrease (17,044)	
Hepatitis B vaccines	Proportion of infants in NSW who have received 3 doses of hepatitis B vaccine	12 months	94.9%	0.4 percentage point increase (94.5%)
		24 months	96.2%	0.1 percentage point increase (96.3%)
Proportion of women giving birth who are screened for hepatitis B		99.1% (in 2017)	0.4 percentage point increase (98.7% in 2018)	

Key Messages

Ongoing efforts are required to support GPs to prescribe HBV treatment and monitor patients

It is essential that primary care plays a greater role in testing, treatment and monitoring in all districts, with a focus on the five districts with the highest prevalence.

Hepatitis B primary prevention programs are critical components

This includes the hepatitis B childhood vaccination program; screening pregnant women for hepatitis B; ensuring all babies born to hepatitis B positive mothers receive immunoglobulin within 12 hours of birth; and providing hepatitis B vaccine for high risk groups.

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SHPN: (CPH) 190383

Glossary of Terms

ACCHS	Aboriginal community controlled health service
ADM	Automatic dispensing machine
HBV	Hepatitis B
HCV	Hepatitis C
CALD	Culturally and linguistically diverse
IDC	Internal dispensing chute
LHD	Local health district
MSIC	Medically supervised injecting centre
NNEDC	NSW Needle and Syringe Program Enhanced Data Collection
NSP	Needle and syringe program
NUAA	New South Wales Users and AIDS Association
NSW	New South Wales
OAT	Opioid agonist treatment
OTP	Opioid treatment program
PFSHC	Publicly funded sexual health clinic
PWID	People who inject drugs
RSS	Receptive syringe sharing

Hepatitis C

1. Hepatitis C notification data and hepatitis C infection

Hepatitis C notification data provides limited information that can be used for assessing the epidemiological patterns of hepatitis C infection. This is because many infections are asymptomatic, 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. Also, variations in notifications may reflect differences in testing patterns rather than differences in incidence of infection.

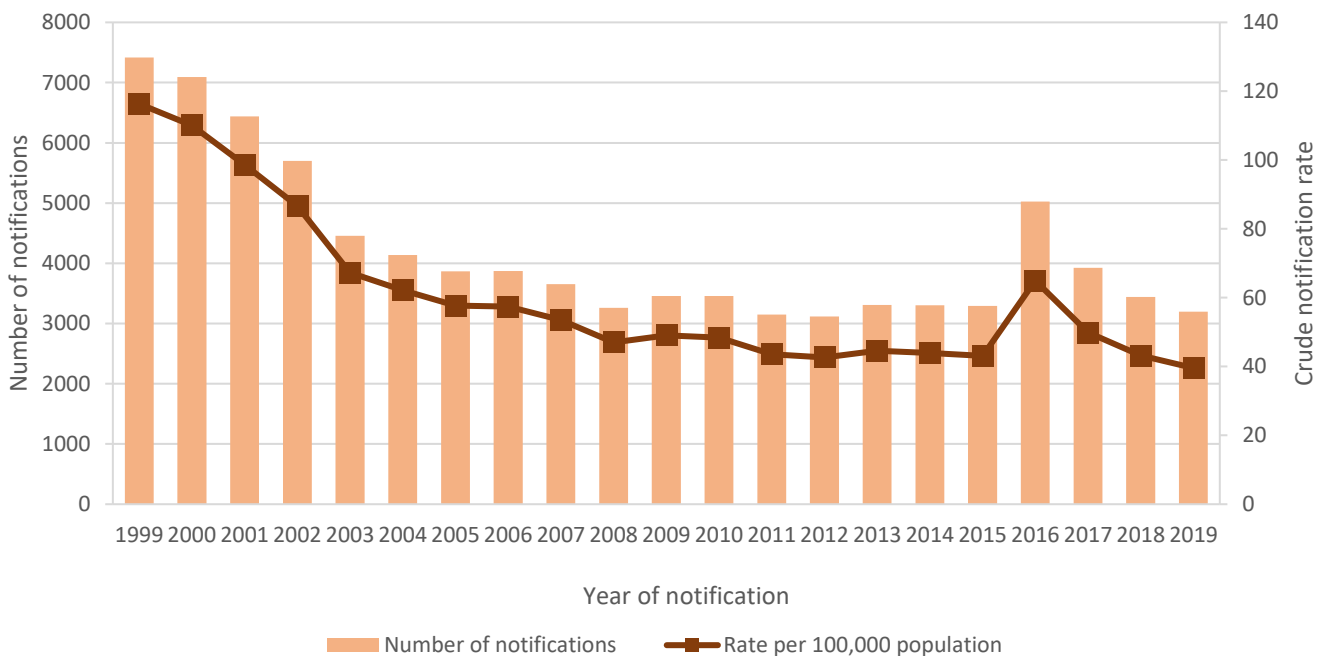
Hepatitis C RNA is a marker of active infection. Hepatitis C RNA testing is recommended for all patients who have a positive hepatitis C antibody test. It's important to note that there may be multiple tests for each individual tested for hepatitis C. However, an individual with multiple positive hepatitis C tests will only generate one notification.

1.1 How many diagnoses of hepatitis C are notified?

Hepatitis C data changed in 2018/19 following two data activities:

- In 2019, a project was undertaken to identify and remove duplicates from the NSW notifiable conditions information management system (NCIMS). This had the effect of reducing the number of hepatitis C notifications in previous years.
- From 1 January 2016, laboratories have reported positive qualitative and quantitative HCV RNA test results. Two retrospective NCIMS HCV RNA data imports for the period 1 January 2016 to 31 December 2018 were conducted, one in 2018 and one in 2019. This had the effect of increasing hepatitis C notifications from 2016 to 2018.

Figure 1: Number and rate of hepatitis C notifications, NSW, 1999-2019



Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents. Year of notification is based on calculated onset date.

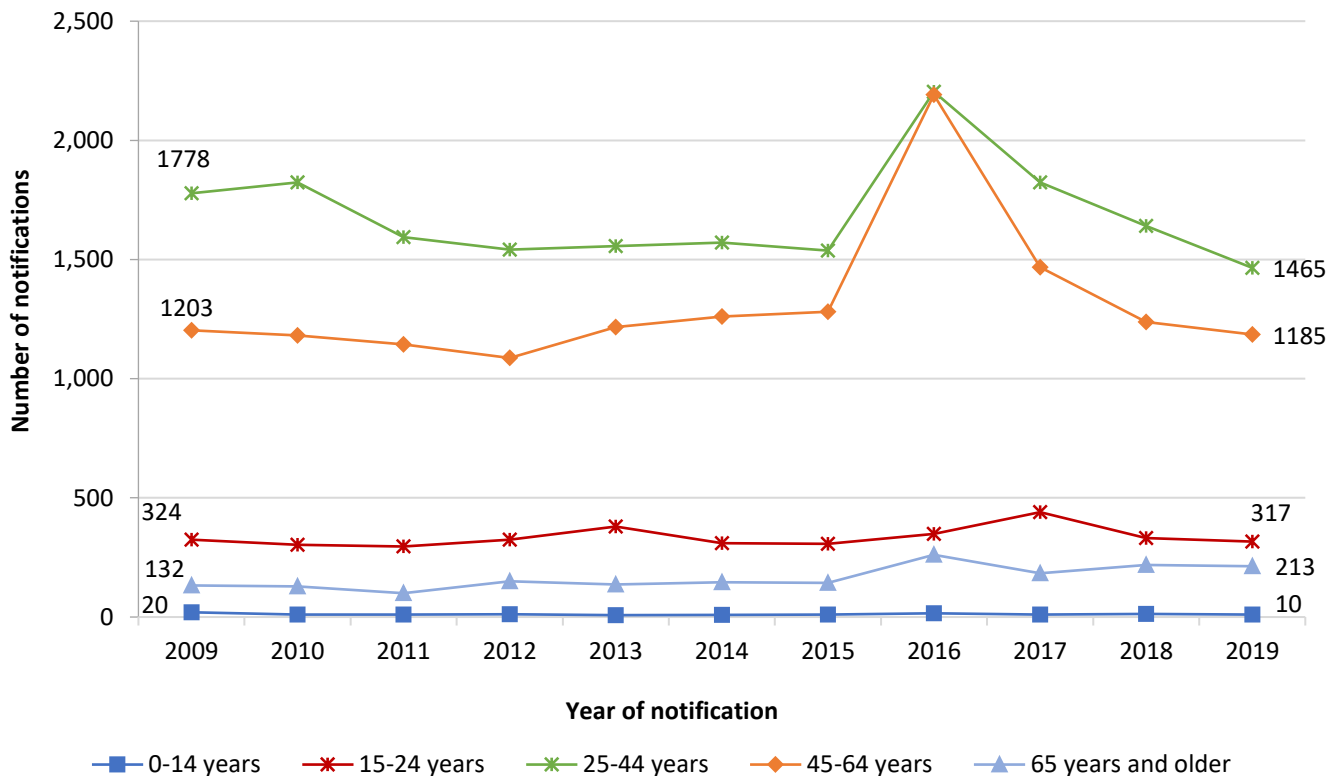
In 2019:

- There were 3,195 hepatitis C notifications in NSW.

- The hepatitis C notification rate was 40 notifications per 100,000 population, which represents a 7% decrease compared with 2018 when the rate was 43 notifications per 100,000 population.
- The notification rate has declined each year since the sharp increase in 2016, the year direct acting antivirals (DAAs) became available in Australia.

1.2 Which groups are being notified?

Figure 2: Number of hepatitis C notifications by age group, NSW, 2009-2019



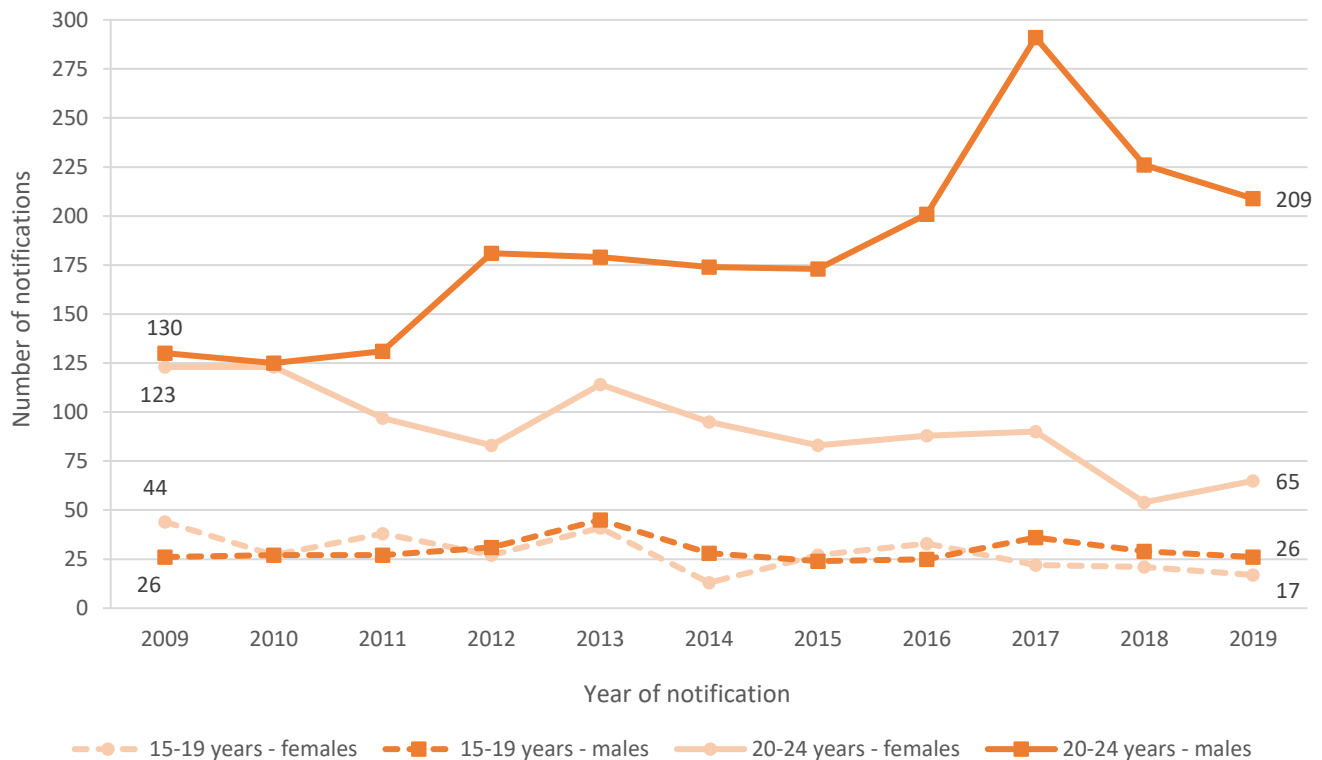
Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents and persons whose age is not stated. Year of notification is based on calculated onset date.

In 2019:

- The largest number of hepatitis C notifications continued to occur amongst people aged 25-44 years. Compared to 2018, the number of notifications in this age group declined by 11%. Hepatitis C notifications also declined in the 15-24 years and 45-64 years age groups, with 5% and 4% reductions respectively compared to 2018.
- Hepatitis C notifications remained largely stable amongst people aged 65+ years and people aged 0-14 years compared to 2018. Hepatitis C infections in children are usually acquired through mother-to-child transmission during pregnancy or birth.

Figure 3: Number of hepatitis C notifications in people aged between 15 and 24 years, by age group and gender, NSW, 2009-2019



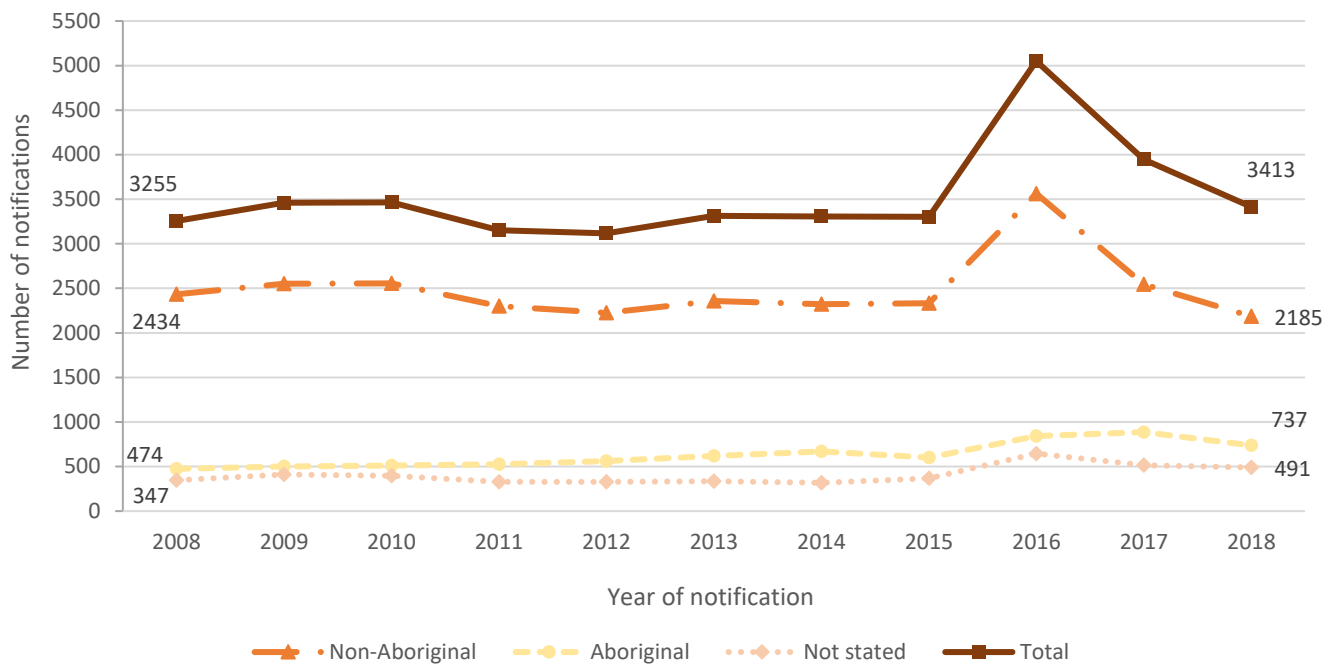
Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents, transgender persons (due to small numbers), and persons whose age or sex is not stated. Year of notification is based on calculated onset date.

In 2019:

- The number of hepatitis C notifications continued to decline amongst males aged 20 to 24 years, with an 8% decrease compared with 2018. By contrast, the number of hepatitis C notifications amongst females in the same age range increased by 20% while remaining at a low level compared to males.
- Amongst males and females aged 15-19 years, the number of notifications remained small and declined 10% and 19% respectively compared to 2018.

Note: Notifications of hepatitis C in young people may be an indicator of recently acquired infections as these are the ages when injecting drug behaviours often commence, and hepatitis C infection is more likely to be acquired soon after initiation. However, the number of hepatitis C infections that are detected (and subsequently notified) is dependent on the number of people in this age group who are tested.

Figure 4: Number of hepatitis C notifications by Aboriginality, NSW, 2008-2018

Data source: Communicable Diseases Register, NSW Ministry of Health (via SAPHaRI); data extracted 21 May 2020.

Note: At the time of reporting, data was available up to 31 December 2018.^{1,2} Excludes non-NSW residents. Year of notification is based on calculated onset date.

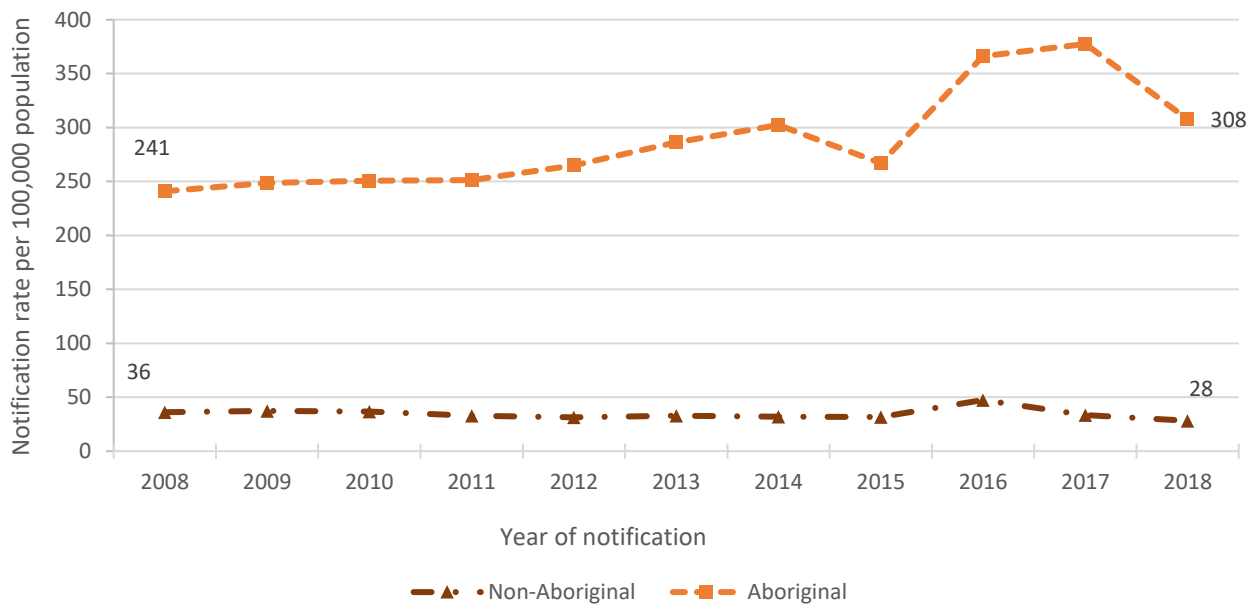
- From 2008 to 2018, 38,776 notifications for hepatitis C were recorded in the Communicable Diseases Register (CDR).
- Of these, 18% were in Aboriginal people (n=6,928) and 71% (n=27,365) were in non-Aboriginal people. For 12% of notifications (n=4,483) during this time period, Aboriginality was not stated after data linkage.

Note: Trends in the Aboriginal population are difficult to interpret due to variation in the yearly number of people for whom Aboriginal status was not stated, and the relatively high proportion of incomplete data compared to the proportion who are Aboriginal people.

Differences in notification numbers captured in the CDR compared to previous reports are due to improved record linkage and inclusion of NCIMS records that were unable to be matched to any of the other contributing data sources.

¹ Work is currently underway to update the data contained in the Communicable Diseases Register and this will be published in future reports.

² See **Appendix: Table 5** for details about methodology

Figure 5: Hepatitis C notification rate by Aboriginality, NSW, 2008-2018

Data source: Communicable Diseases Register, NSW Ministry of Health (via SAPHaRI) and ABS population estimates (via SAPHaRI); data extracted 21 May 2020. Note: At the time of reporting, data was available up to 31 December 2018.^{1,2} Excludes non-NSW residents and persons whose Aboriginal status was not stated. Year of notification is based on calculated onset date.

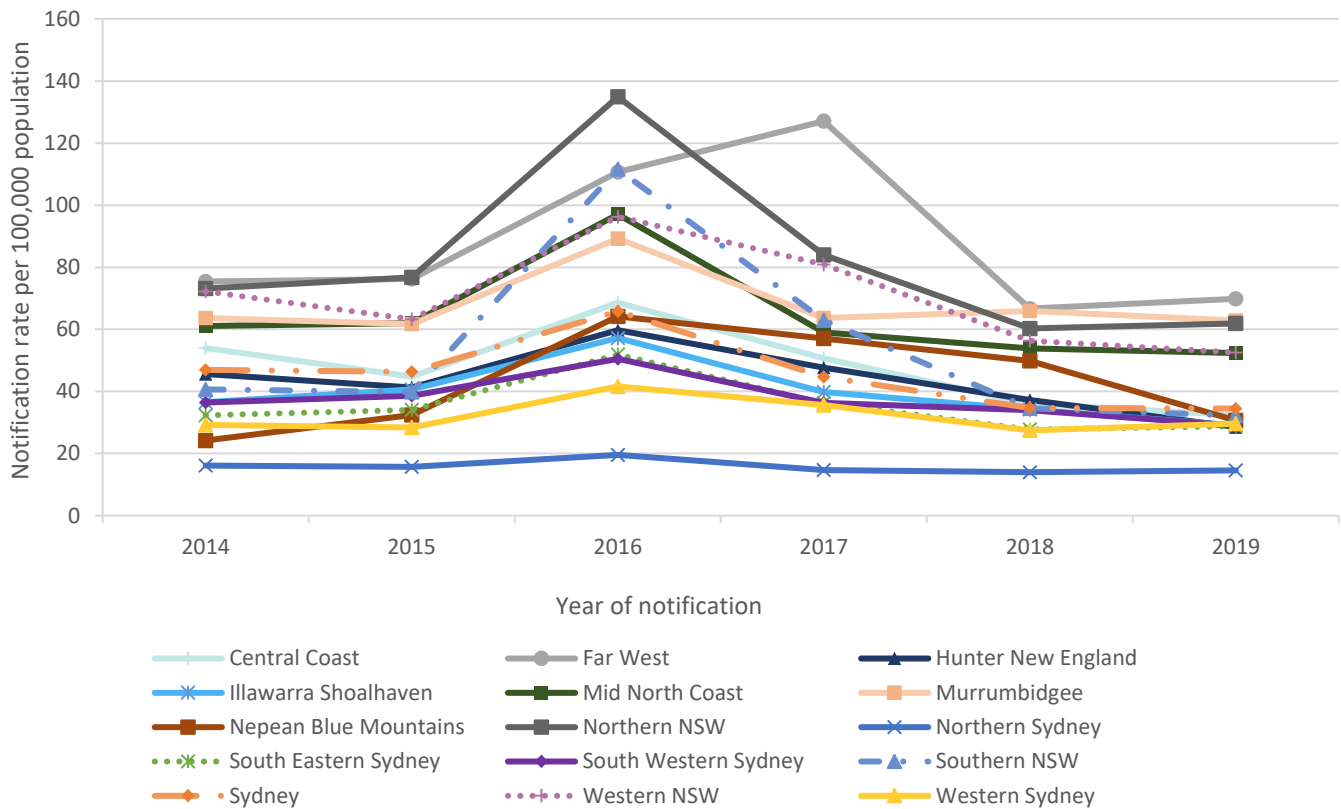
- Amongst those whose Aboriginal status was stated, the hepatitis C notification rate in Aboriginal people was 308 notifications per 100,000 population in 2018, which is 11 times as high as the rate of 28 notifications per 100,000 population in non-Aboriginal people.

Note: As the number of notifications among Aboriginal people is relatively small, yearly fluctuations in the rate should be interpreted with caution. Changes in notification rates may be due to variation in incidence of disease, screening rates and/or the number of people for whom Aboriginal status was not stated (see Figure 4). Screening rates for hepatitis C may be higher in Aboriginal populations than in non-Aboriginal populations, contributing to higher rates of notification.

Differences in notification numbers captured in the CDR compared to previous reports are due to improved record linkage and inclusion of NCIMS records that were previously unable to be matched to any of the other contributing data sources.

1.3 Where are notifications occurring?

Figure 6: Hepatitis C notification rate by LHD of residence, NSW, 2014-2019



Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents and persons whose place of residence in NSW was not stated. Year of notification is based on calculated onset date.

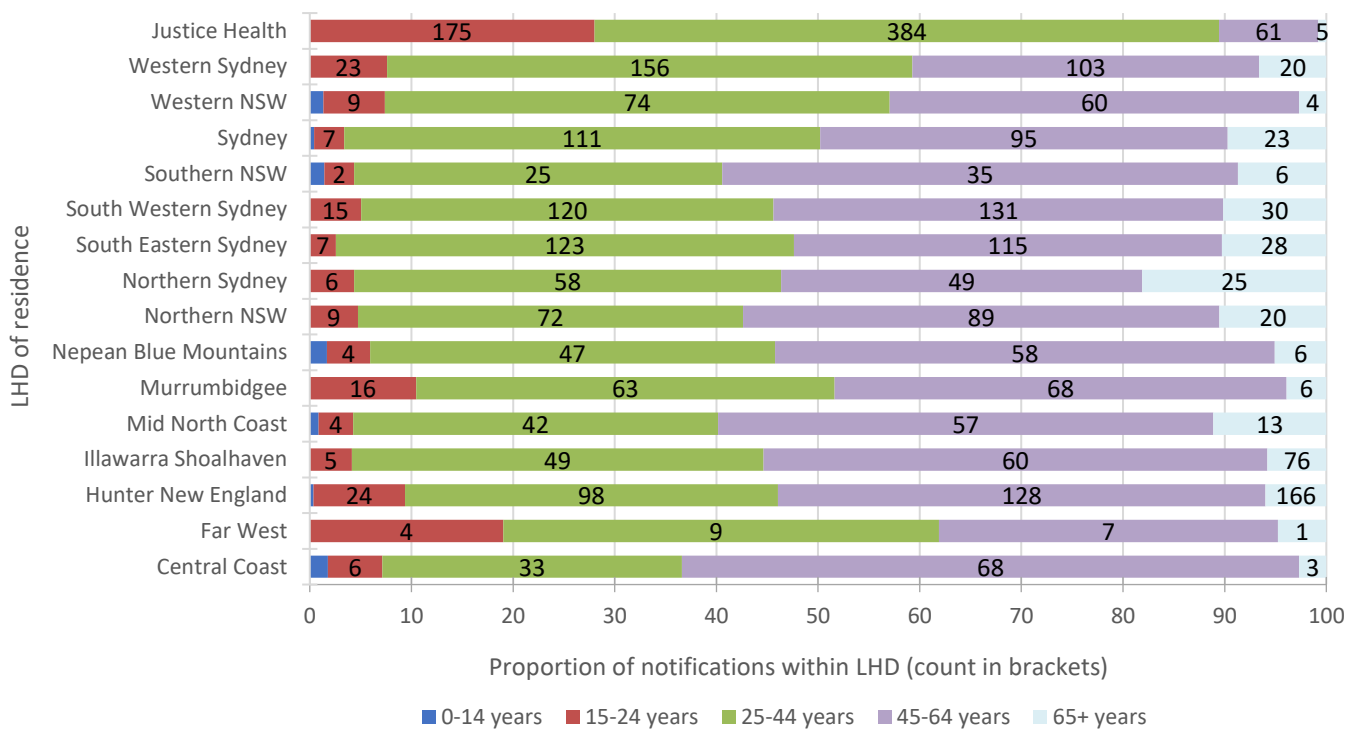
In 2019:

- Far West, Murrumbidgee and Northern NSW LHDs had the highest hepatitis C notification rates in NSW.
- Compared with 2018, hepatitis C notification rates decreased in most LHDs, with small increases between 3% and 8% observed in Northern NSW, Northern Sydney, South Eastern Sydney, and Western Sydney.
- Compared with 2018, the largest declines in hepatitis C notification rates occurred in the Nepean Blue Mountains and Hunter New England LHDs, with 39% and 23% decreases respectively.

Note: Local changes in notification rates can be difficult to interpret due to a range of factors. Because hepatitis C is often asymptomatic, people may be tested many years after infection and testing patterns vary across time and settings. Local health promotion campaigns and screening programs targeting at-risk populations can result in increased testing and better detection rates.

There is substantial variation in population size between the LHDs. For LHDs with a smaller population, such as Far West NSW, a small change in the number of notifications can have a large impact on the annual rate.

Notification rates have not been calculated for Justice Health as the population (the denominator) fluctuates considerably and data are available only for the annual number of incarcerations, not the number of people incarcerated.

Figure 7: Notifications of hepatitis C by age group and LHD, NSW, 2019

Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents and persons whose place of residence in NSW was not stated. Year of notification is based on calculated onset date. Data labels indicate the number of notifications by age group for each LHD.

In 2019:

- As in previous years, the largest number and highest proportion of hepatitis C notifications amongst 15 to 24-year-olds were reported by Justice Health.
- Of the 317 hepatitis C notifications in people aged 15-24 years in 2019, 175 (55%) were from Justice Health.

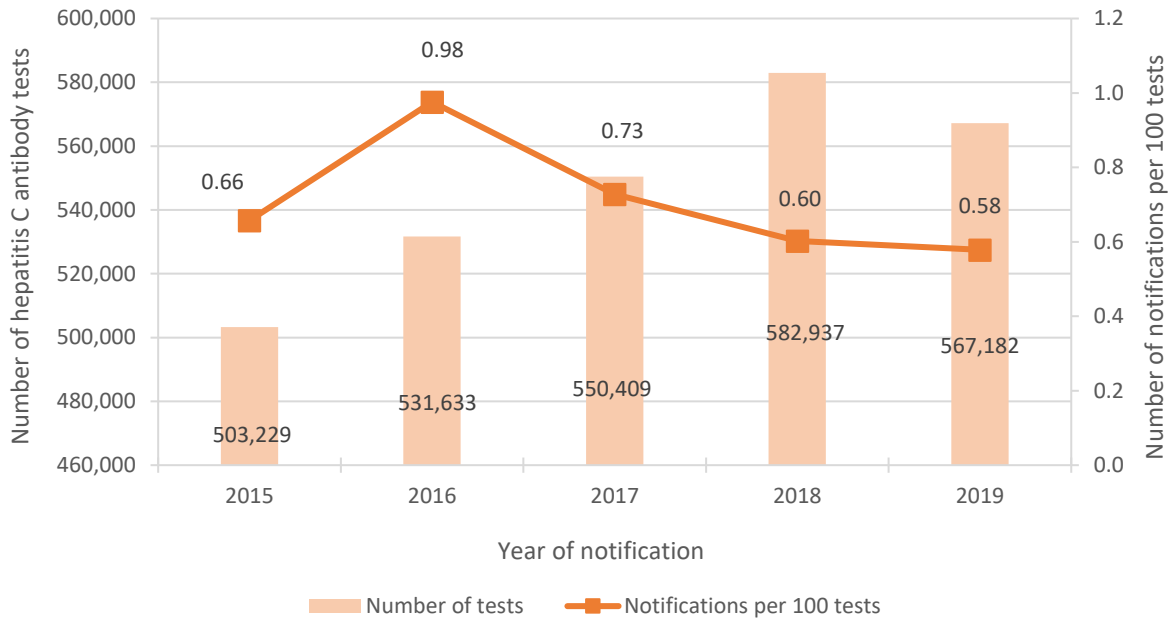
Note: Notifications of hepatitis C in young people are an indicator of newly acquired infections as this is the age when injecting drug behaviours often commence. Hepatitis C infection is more likely to be acquired soon after initiation of risk behaviours. High numbers of notifications in custodial settings may be partly due to a higher proportion of people with 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.

Hepatitis C infections in children are usually acquired through mother-to-child transmission during pregnancy or birth.

2. Testing for hepatitis C

2.1 Is hepatitis C testing increasing?

Figure 8: Number of tests for hepatitis C antibody and notification to test ratio³, NSW, 2015-2019



Data sources: NSW denominator data project, NSW Health

In 2019:

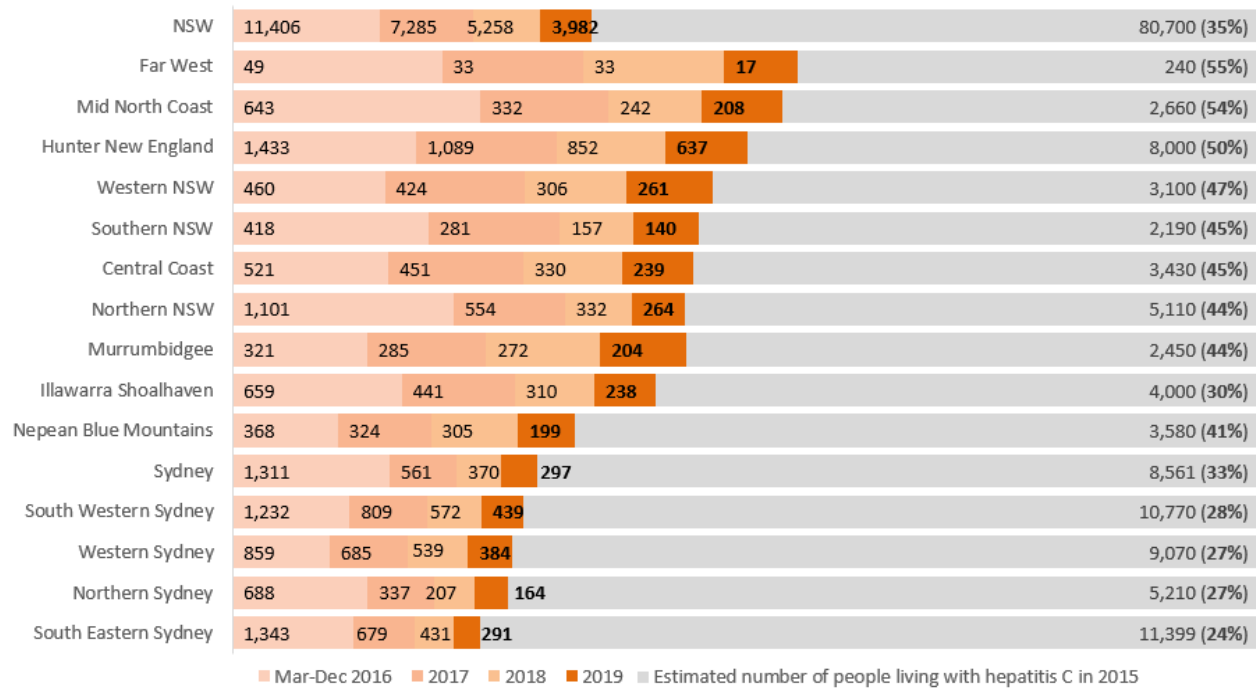
- The number of hepatitis C tests performed in NSW decreased slightly from its peak in 2018. In 2019, 567,182 tests for hepatitis C antibody were performed in 15 laboratories in NSW, a 2.7% decrease from 2017 (582,937 tests).
- The hepatitis C notification to test ratio in 2019 was 0.58, lower compared with 2018 (0.60).

³ See **Appendix: Table 4** for more details about methodology

3. Hepatitis C treatment access

3.1 How many people are accessing hepatitis C treatment?

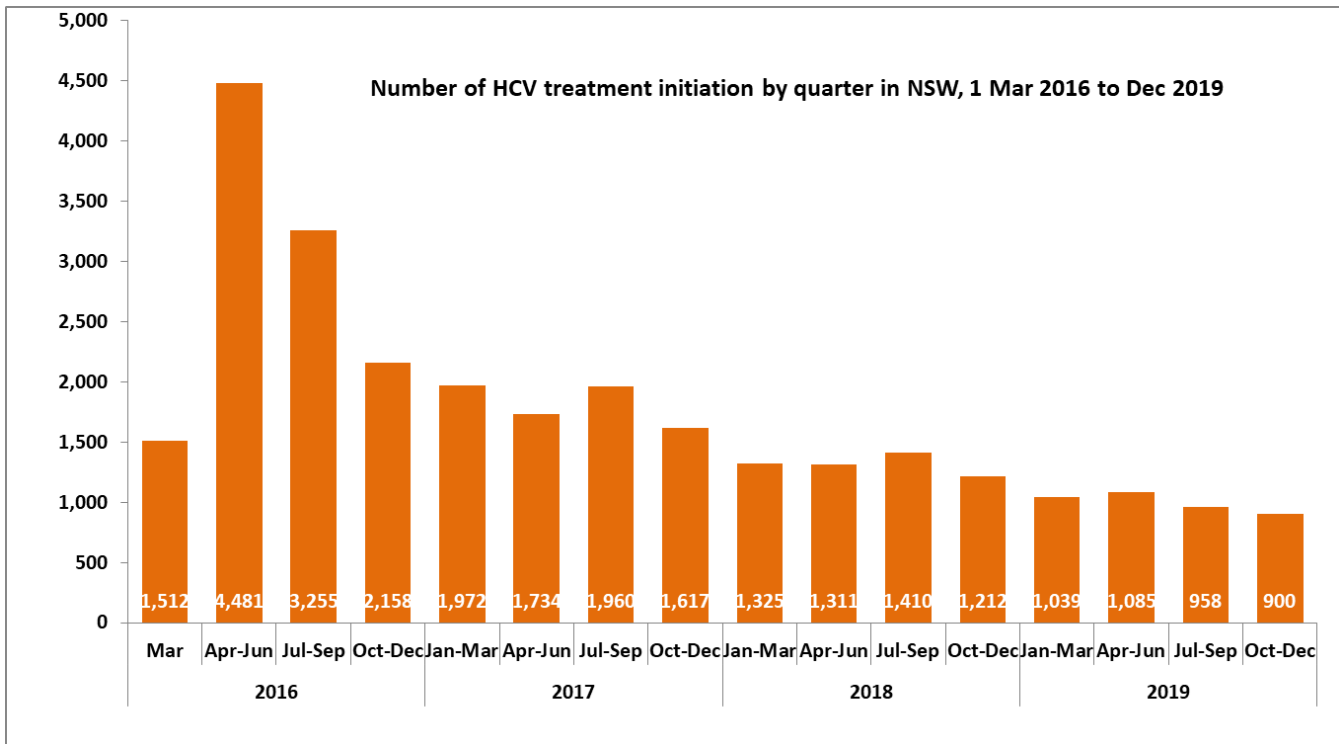
Figure 9: Number of residents initiating hepatitis C treatment in NSW between 1 March 2016 and 31 December 2019 by LHD of patient residence, compared to the estimated number of people living with hepatitis C in 2015



Data source: PBS data (treatment initiation); The Kirby Institute, 2017 Estimates and Projections of the Hepatitis C Virus Epidemic in NSW: Summary Report; Numbers include treatment initiated in Justice Health.

- Between 1 January to 31 December 2019, 3,982 people initiated hepatitis C treatment.
- As of December 2019, 35 per cent (27,931) of the estimated 80,700 people in NSW with hepatitis C have initiated treatment.

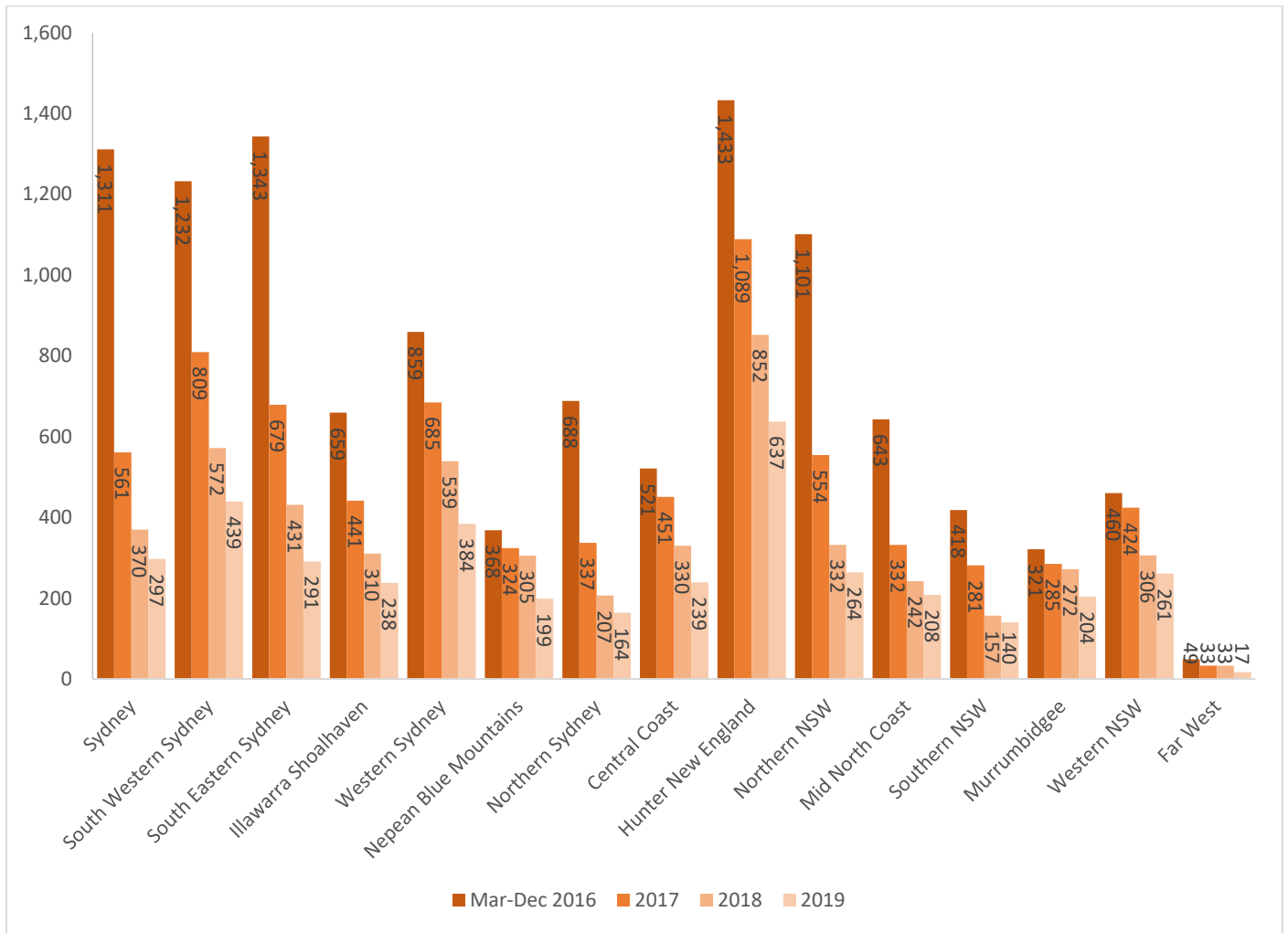
Figure 10: Number of residents initiating hepatitis C treatment in NSW by quarter, 1 March 2016 - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

- The number of residents initiating hepatitis C treatment each quarter continues to decrease. Between October and December 2019, 900 people initiated hepatitis C treatment.
- Further efforts are needed by districts to actively find people with hepatitis C and link them to treatment services.

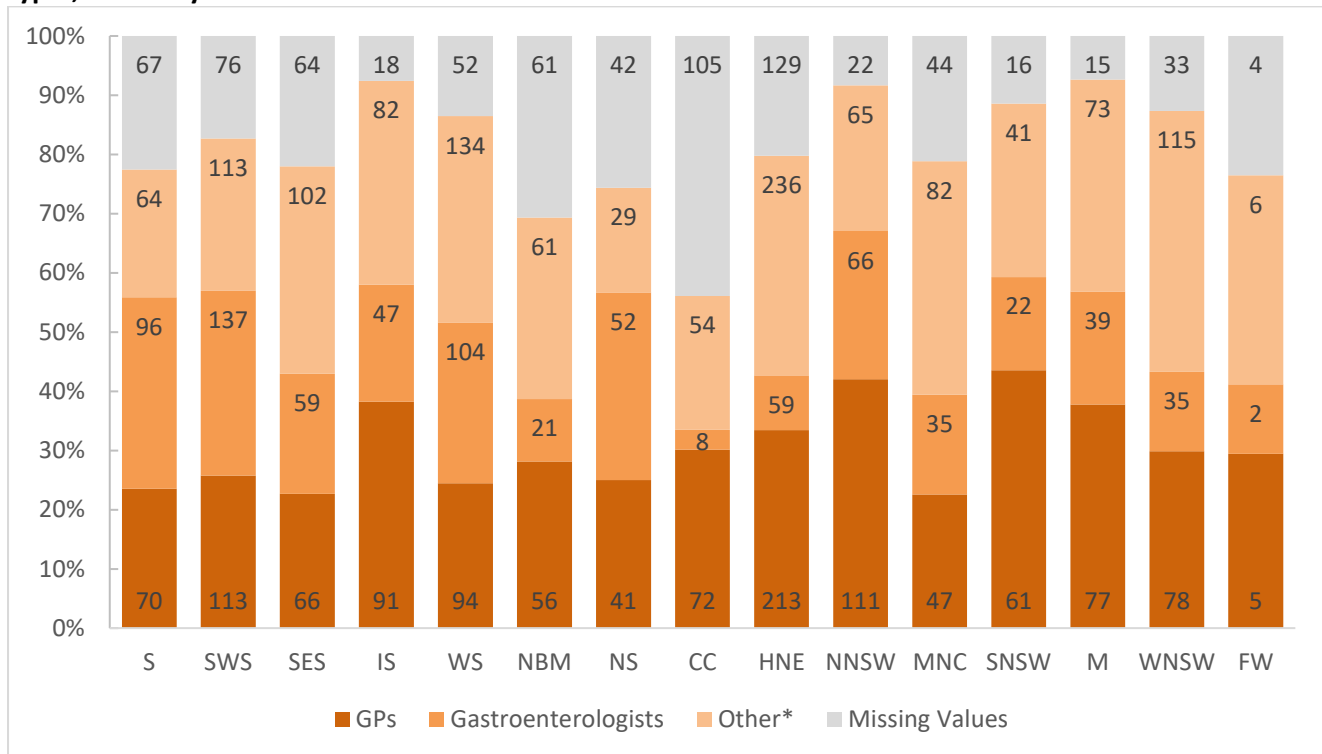
Figure 11: Number of residents initiating hepatitis C treatment in NSW by LHD by year, 1 March 2016 - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

- The number of residents initiating hepatitis C treatment has decreased across all LHDs each year since March 2016.
- LHDs are implementing locally tailored strategies to increase testing and treatment, including in general practice.

Figure 12: Number of people in NSW dispensed hepatitis C treatment by LHD of patient residence, by prescriber type⁴, 1 January - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

Note: The Figure identifies the number of NSW residents who initiated hepatitis C treatment by specialist or a GP by LHD of patient residence.

- From 1 January to 31 December 2019, the proportion of NSW residents initiating hepatitis C treatment by a general practitioner (GP) was 59 per cent.

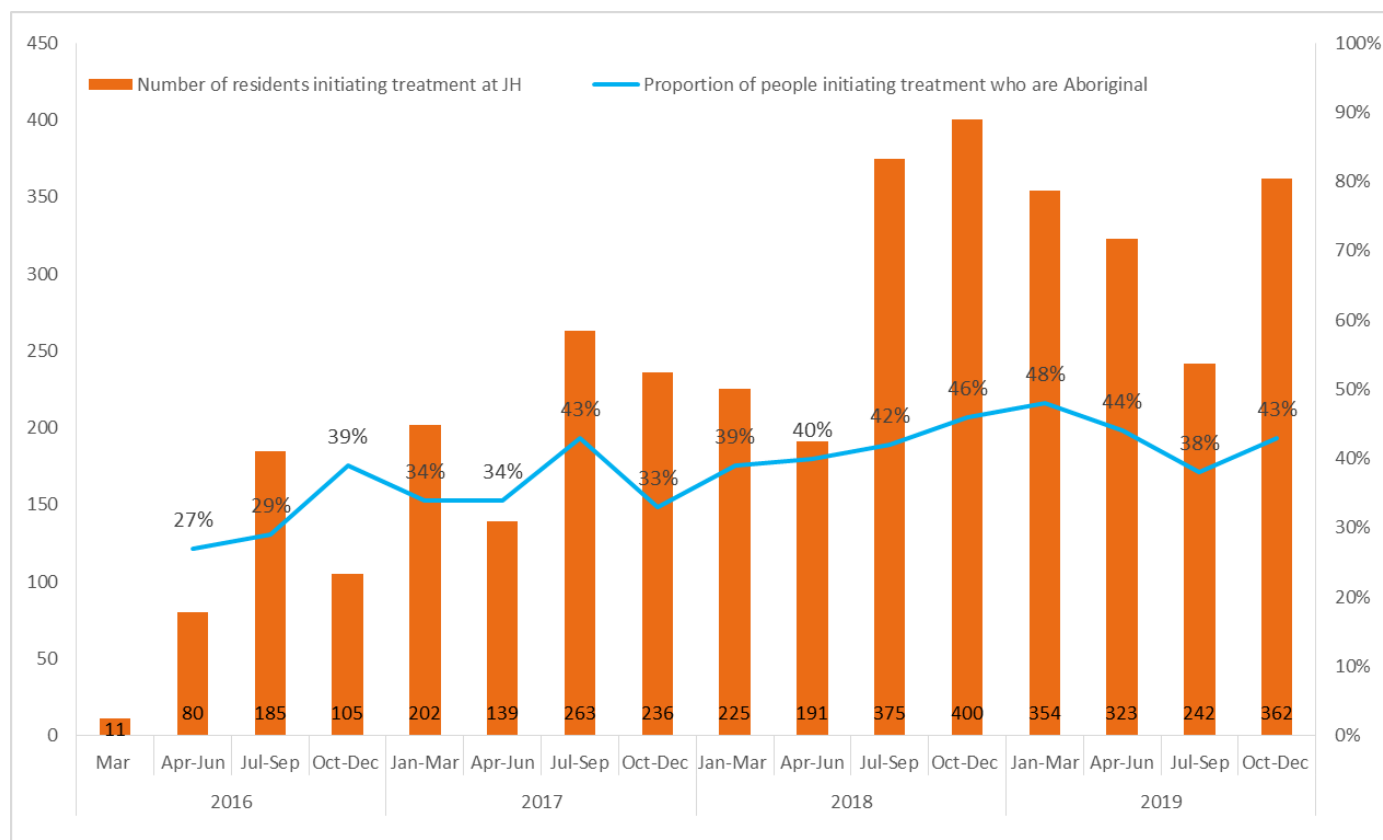
Note: The number and proportion stated in NSW includes people who initiated treatment at Justice Health Settings. The number and proportion of people initiating treatment across LHDs exclude Justice Health Settings.

⁴ The prescriber type is a derived field that indicates the specialty of the health professional providing the prescription. It is derived for each quarter based on the prescriber's registered specialties and the Medicare services they have provided that quarter. As a result, it may change over time and should be interpreted with this limitation noted. Other includes non-vocationally registered GP, pathology, immunology and allergy, public health medicine, surgery, psychiatry, respiratory and sleep medicine, dermatology, college trainee, paediatric medicine, medical oncology, ophthalmology, palliative medicine, nephrology, geriatric medicine, nurse practitioner, and haematology specialists.

People in custodial settings are a priority population in the NSW Hepatitis C Strategy 2014-2020

Hepatitis C prevalence in NSW prisons is 20 to 30 times higher than in the wider community. Those with a history of injecting drug use are often marginalised in the community and find it difficult to access treatment. Justice Health has a unique opportunity to access and treat people with hepatitis C in custody.

Figure 13: Number of people initiating treatment in Justice Health, including the number and proportion of people who identify as Aboriginal, 1 January 2016 - 31 December 2019



Data source: Data were from Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data between 1 March 2016 and 30 June 2018 (number of people initiated on treatment) and NSW Health Hepatitis C Minimum Data Set (proportion of people initiated on treatment who are Aboriginal). From 1 July 2018 to 31 December 2019, data were reported by Justice Health.

- Between 1 March 2016 and 31 December 2019, 3,693 NSW residents initiated hepatitis C treatment in Justice Health settings.
- In 2019, a total of 1,281 NSW residents initiated hepatitis C treatment in Justice Health; the proportion of those initiating treatment who are Aboriginal people decreased from 48% in first quarter to 38% in the third quarter, then increased to 43% in the fourth quarter in 2019.
- Throughout 2017 to 2019, screening and treatment has been scaled up across all correctional centres state-wide.

Note: In 2017, the Hepatitis in Prisons Elimination (HIPE) Program commenced in NSW prisons. The HIPE initiative involves broad screening, concurrent treatment with new DAA, and the ongoing review of new admissions at targeted correctional centres with stable populations. As of December, 2019, the virtual elimination of hepatitis C has been achieved in twelve correctional centres in NSW.

4. Hepatitis C prevention investment

Access to sterile injecting equipment and drug treatment programs are proven, cost-effective ways to prevent hepatitis C transmission. A continued harm reduction approach, combined with other complementary prevention strategies, is central to prevention efforts in NSW.

The NSW Needle and Syringe Program needs to be flexible and targeted, ensuring that sterile injecting equipment is readily available in the areas of highest need and for those most at risk of infection.

4.1 Who is accessing the Needle and Syringe Program?

The proportion of priority populations accessing the NSW NSP has remained relatively stable between 2016 and 2019. Among people participating in the NSW Needle and Syringe Program Enhanced Data Collection (NNEDC) in 2019:

- 19 per cent identified as Aboriginal and/or Torres Strait Islander
- 25 per cent of respondents had experienced homelessness
- 10 per cent reported being imprisoned in the past year
- 23 per cent reported a mental health issue

Data source: NSW Needle and Syringe Program Enhanced Data Collection 2019 (NNEDC)

Note: The NNEDC provides an annual snapshot of NSW client demographic and drug use behaviour. In 2019 all 15 LHDs participated at 49 sites. Please note that this data does not provide an accurate reflection of the population across NSW nor comparisons between local health districts. The survey is a snapshot only, with 49 of the 337 primary and secondary outlets surveyed in 2019. The NSW NSP also includes automatic dispensing machines and pharmacies that are not captured as part of the survey.

4.2 What proportion of people use other people's used needles and syringes (receptive syringe sharing)?

Among respondents in the 2019 NNEDC, reports of receptive syringe sharing (RSS) in the previous month remained stable at 20%. There were no associations with an increased risk of RSS and homosexual identity, homelessness and recent imprisonment. This is in contrast to previous years where associations have been observed between RSS and sexual identity frequency of injection, recent homelessness and living with a mental health issue. Twenty four per cent of respondents reported being prescribed opioid agonist treatment (OAT), which was associated with decreased RSS.

4.3 How many units of injecting equipment are distributed by the Needle and Syringe Program?

- As of June 2019, the public NSW NSP had 32 primary outlets, 342 secondary outlets, 159 automatic dispensing machines (ADMs) and 72 internal dispensing chutes (IDCs).

Note: The type and number of NSP outlets by LHD is at **Appendix Figure 30**

- The number of units of injecting equipment distributed in NSW increased from 14,515,017 in 2018 to 15,395,545 in 2019. This included:
 - 13,567,434 units dispensed at public outlets
 - 1,828,111 units dispensed at NSW pharmacies

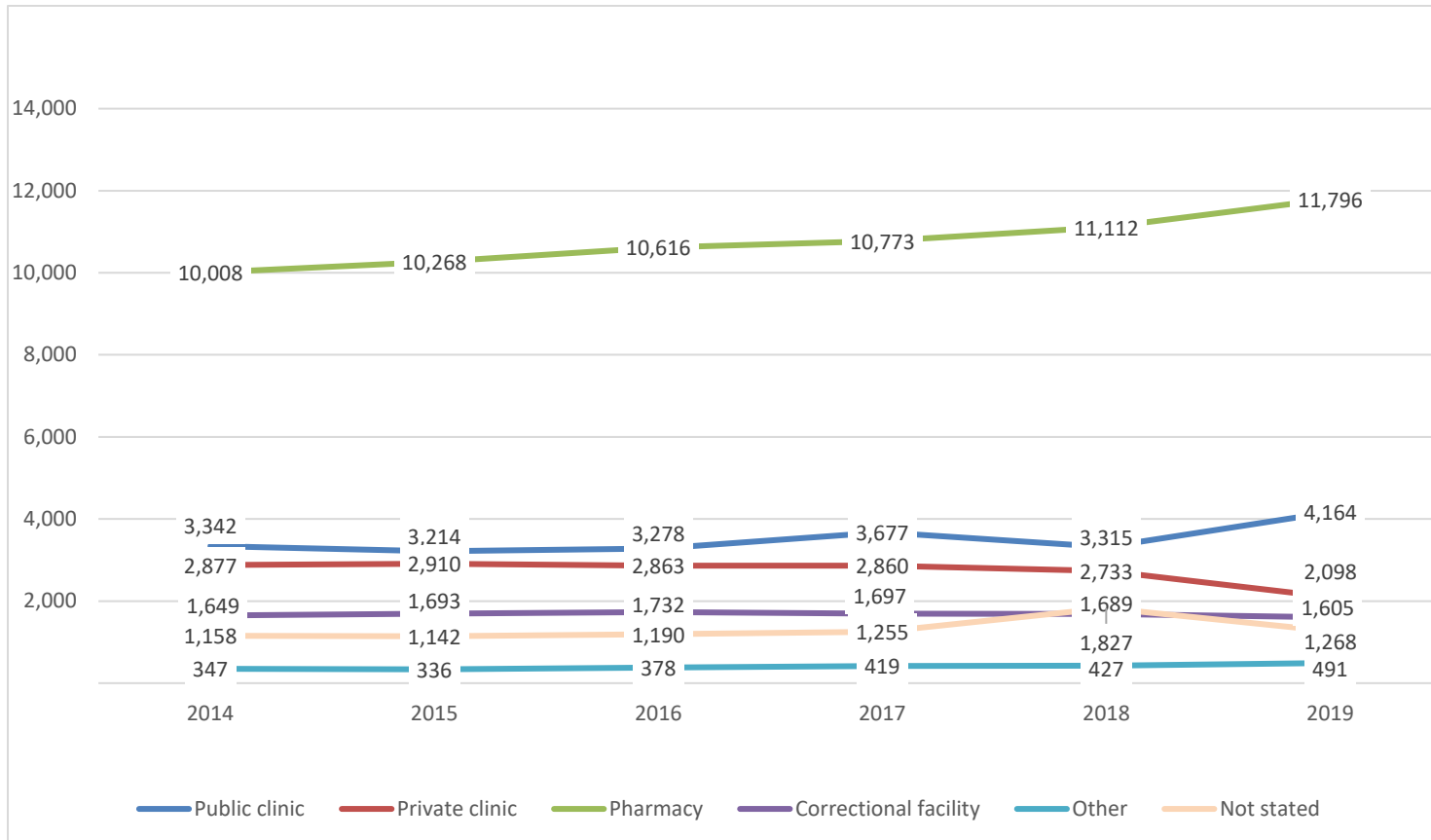
Note: The total includes additional units ordered from The Pharmacy Guild of Australia (NSW Branch) by individual pharmacies, but not allocated to an LHD.

Note: The number of units of injecting equipment distributed by LHD is at **Appendix Table 4**

4.4 How many people in NSW are receiving opioid pharmacotherapy treatment?

It is essential that the Needle and Syringe Program is complemented by other initiatives such as drug and alcohol treatment programs that reduce injecting risk behaviour.

Figure 14: Number of people participating in the Opioid Treatment Program, by dosing point, at 30 June, 2014 – 2019



Data source: National Opioid Pharmacotherapy Statistics Annual Data 2014-2019

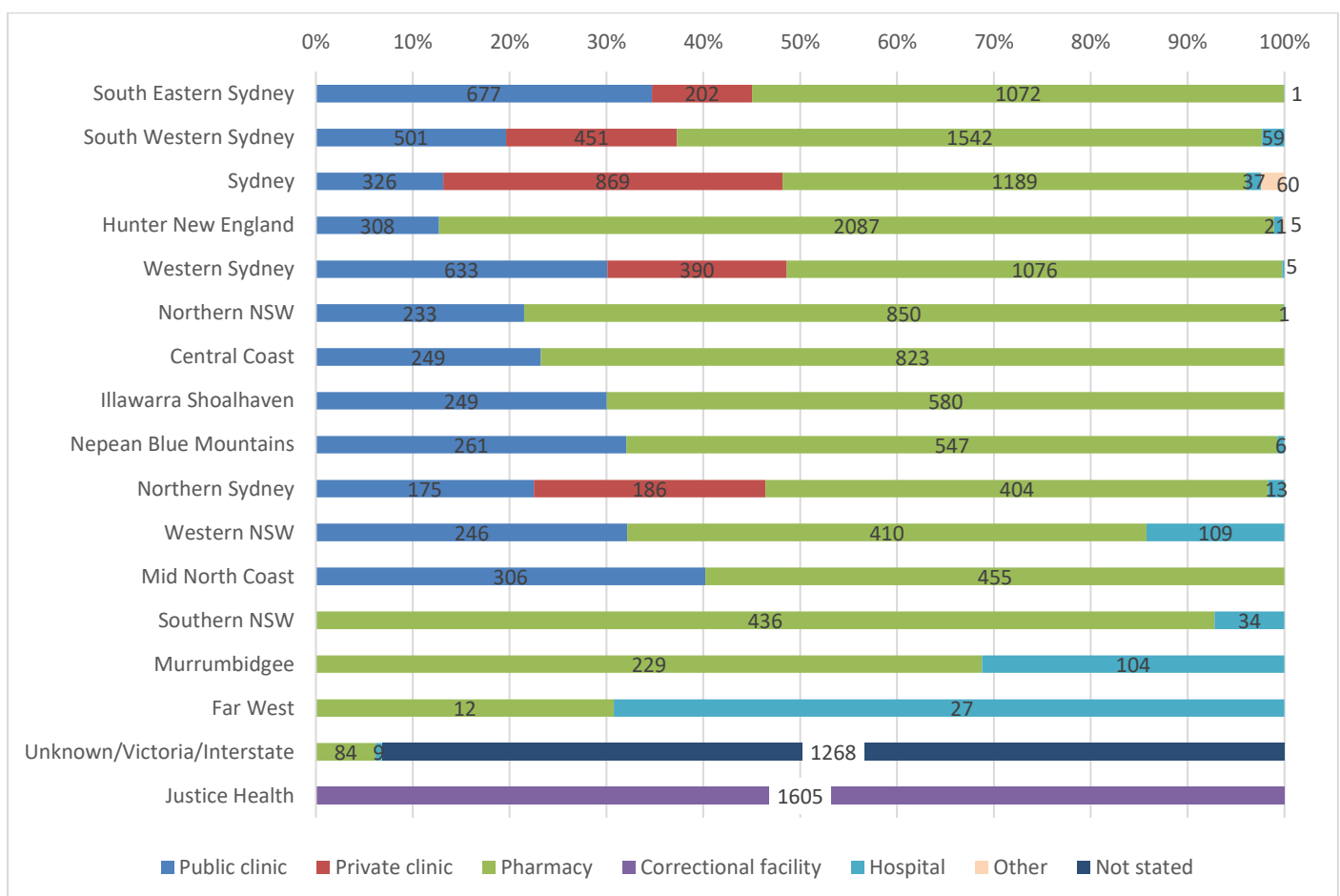
- In 2019, 21,422 clients had active authorities for opioid pharmacotherapy treatment in various dosing settings on a snapshot day of the program (NOPSAD 2019).
- Between 30 June 2014 and 30 June 2019 community pharmacy dosing was consistently the most common dosing point in each time period. In 2019, over 55 per cent of clients (11,796) received treatment at a community pharmacy; 19 per cent of clients (4,164) received treatment at a public clinic; and 10 per cent of clients (2,098) received treatment at a private clinic. “Other” (491) accounts for clients dosed in hospital and community health settings, and “Not Stated” (1,268) accounts for clients that may have moved dosing point but the data has not been updated with the Pharmaceutical Regulatory Unit.

Specialist opioid treatment clinics (public or private) are usually the most appropriate supervised administration or dosing points for highly complex clients (with high risk drug use and co-morbid conditions) who require greater clinical support. For less complex and stable clients treatment is available in primary care settings through general practitioners and community pharmacy. Clients assessed by clinicians as sufficiently stable in public clinics can transition to the primary care setting, which may be more convenient for them. Conversely, a client undergoing a period of instability should be referred to a specialist public clinic for treatment, where available.

A key outcome of the investment in the Opioid Treatment Program (OTP) is enhanced accessibility to opioid treatment for vulnerable populations. Low risk clients are permitted to be inducted onto methadone or buprenorphine in primary care settings. This increases treatment provision through GPs as historically most clients were initiated in public OTP clinics. From July 2018 onwards non-accredited prescribers are permitted to induct up to 20 clients onto buprenorphine and manage 10 stable referred methadone clients. Free online and face to face training for opioid treatment is available through www.otac.org.au.

A new formulation of buprenorphine was introduced in NSW in 2019 known as depot buprenorphine. It is administered as a long-acting subcutaneous injection, either weekly or monthly depending on the medication dosage. To date, depot buprenorphine has been administered from specialist opioid treatment clinics, but it is now also available from general practitioners. It is anticipated that there will be increasing take-up of the new formulation over time.

Figure 15: Number of people participating in the Opioid Treatment Program, by dosing point, by LHD, at 30 June 2019



Data source: Pharmaceutical Drugs and Addiction System (PHDAS), NSW Health up to June 2019; Electronic Recording and Reporting Controlled Drug System (ERRCD), NSW Health from Oct 2017

- The highest number of people participating in the OTP was in South Eastern Sydney, South Western Sydney, Sydney, Hunter New England, Western Sydney, and Justice Health.
- The highest number of people treated in public clinics occurs in South Eastern Sydney, Western Sydney, and South Western Sydney.
- The highest number of people treated in private clinics occurs in Sydney, South Western Sydney and Western Sydney.

-
- The highest number of people treated in community pharmacies occurs in Hunter New England, South Western Sydney, Sydney, Western Sydney and South Eastern Sydney.
 - Hospital dosing is usually provided as either an inpatient or outpatient service. In regional and remote LHDs like Far West, Western and Murrumbidgee, hospital dosing usually is provided where no viable alternative for supervised administration is available.
 - The large proportion of Not Stated dosing points for clients is from records not being updated with Pharmaceutical Regulatory Unit, but the clients are generally in the Pharmacy sector. This could be because prescribers do not always notify PRU when they change the supervised administration location of their clients.

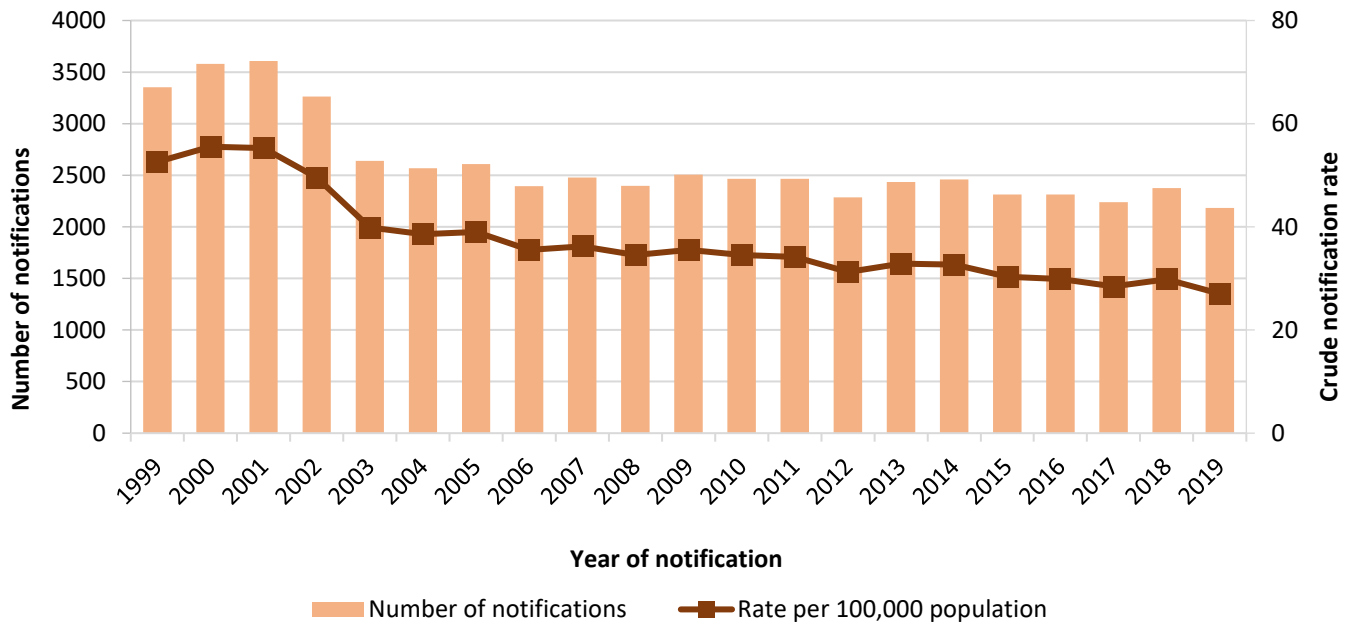
Hepatitis B

5. Hepatitis B notification data and hepatitis B infections

Hepatitis B notification data provide limited information to assess the epidemiological patterns of hepatitis B infection. This is because many infections are asymptomatic. As a result, people who are infected may never be tested, or only tested many years after infection. Laboratory reports do not distinguish between infections acquired recently and those acquired many years ago. Furthermore, variation in notification numbers may reflect differences in testing patterns over time rather than changes in the incidence of infection.

5.1 How many diagnoses of hepatitis B are notified?

Figure 16: Number and rate of hepatitis B notifications, NSW, 1999-2019



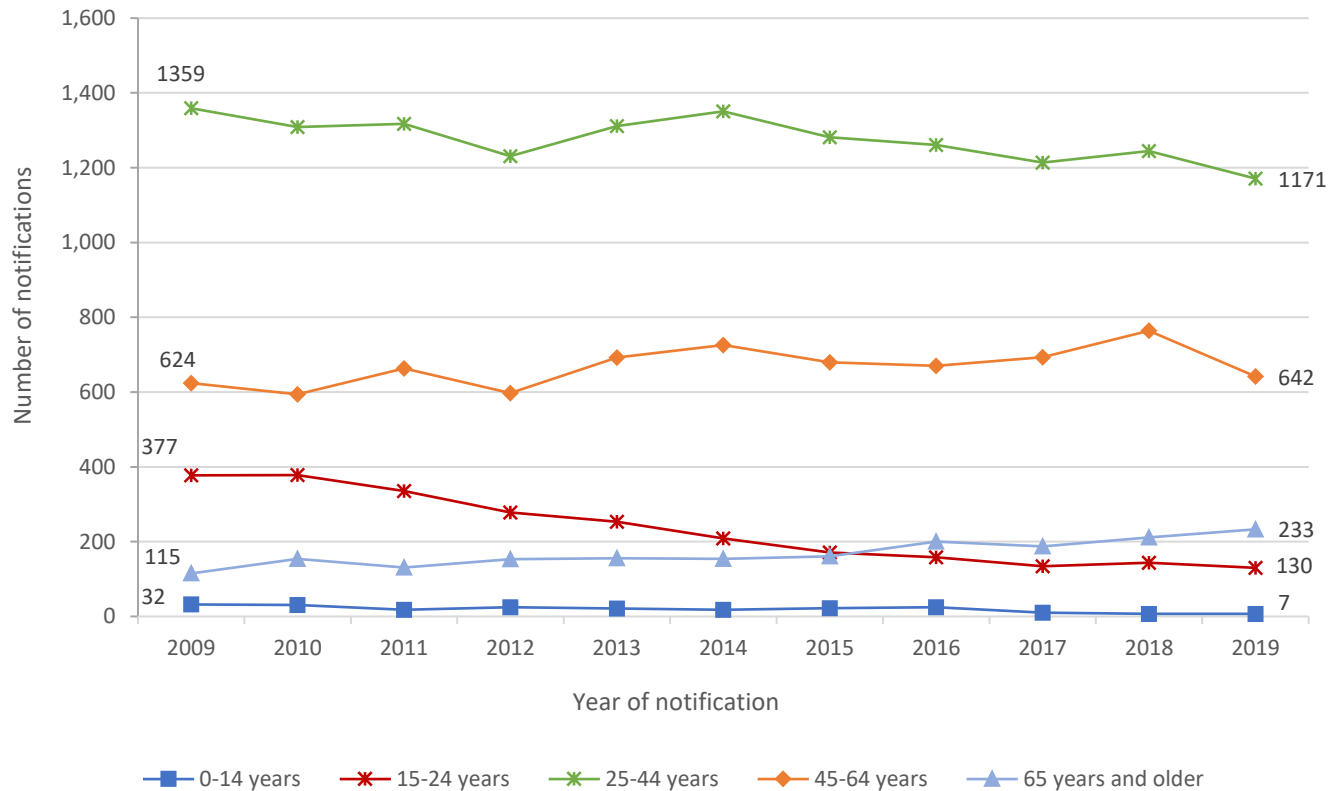
Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 21 May 2020.
Note: Excludes non-NSW residents. Year of notification is based on calculated onset date.

In 2019:

- There were 2,183 hepatitis B notifications in NSW.
- The hepatitis B notification rate has declined in NSW since 2001 and stabilised in recent years. In 2019, there was a 11% decrease compared to the previous year, with 27 notifications per 100,000 population compared to 30 notifications per 100,000 population in 2018.

5.2 Which groups are being notified?

Figure 17: Hepatitis B notifications in NSW by age group and year of diagnosis, 2009-2019

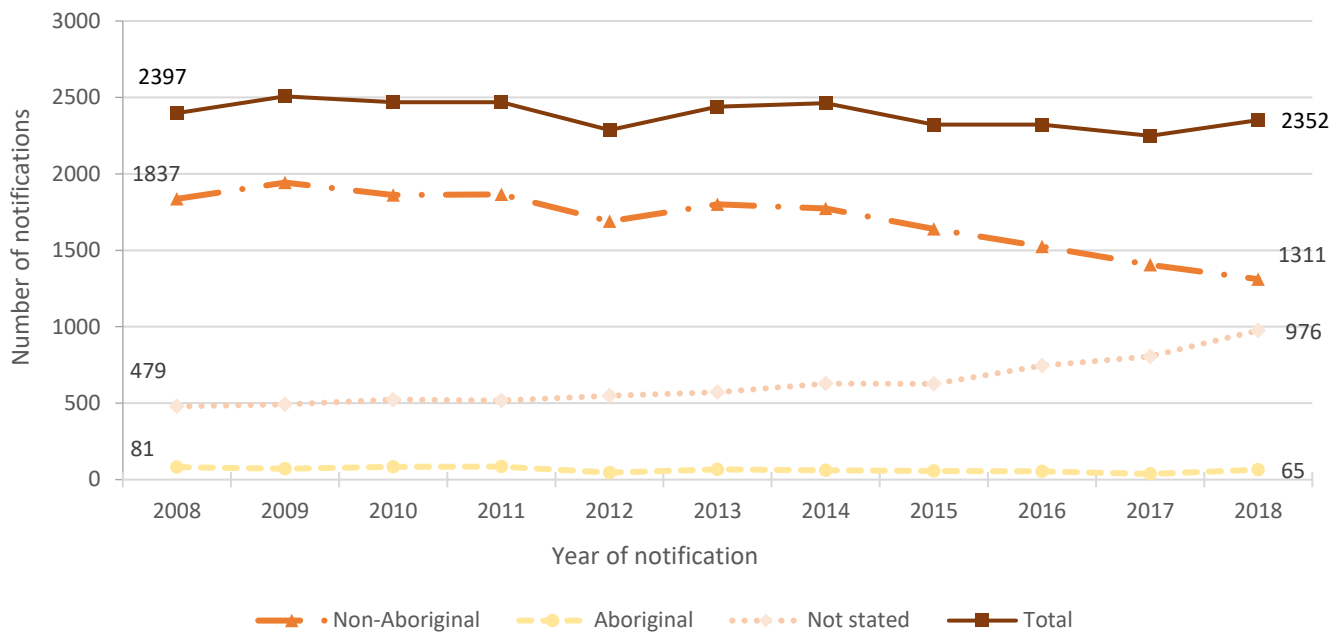


Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents and persons whose age is not stated. Year of notification is based on calculated onset date.

In 2019:

- The largest number of hepatitis B notifications continued to occur amongst people aged 25-44 years. Compared to 2018, the number of notifications in this age group declined by 6%.
- The number of hepatitis B notifications also declined in the 15-24 years and 45-64 years age groups, with 10% and 16% reductions respectively compared to 2018. The continued downward trend in the younger age group may be related to the catch-up immunisation program for adolescents, which was introduced as a school-based program in 2004, and to universal routine immunisation of infants which commenced in NSW in May 2000.
- Hepatitis B notifications increased by 11% amongst people aged 65+ years.
- A very small number of hepatitis B notifications continued to occur amongst people aged 0-14 years with seven notifications received in 2019, the same as in 2018.

Figure 18: Hepatitis B notifications by Aboriginality, NSW, 2008-2018

Data source: Communicable Diseases Register, NSW Ministry of Health (via SAPHaRI); data extracted 21 May 2020.

Note: At the time of reporting, data was available up to 31 December 2018.^{5,6} Excludes non-NSW residents. Year of notification is based on calculated onset date.

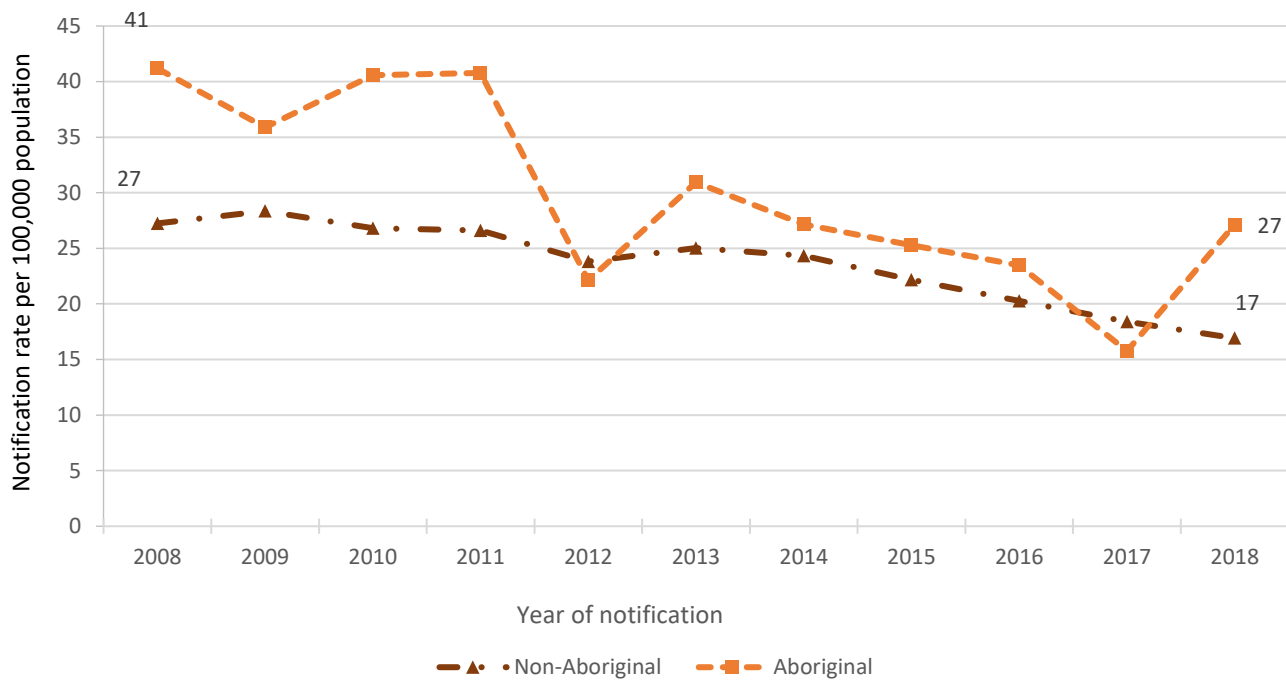
- From 2008 to 2018, 26,275 notifications for hepatitis B were recorded in the Communicable Diseases Register (CDR).
- Of these, 3% were in Aboriginal people (n=708) and 71% (n=18,652) were in non-Aboriginal people. For 26% of notifications (n=6,915) during this time period, Aboriginality was not stated after data linkage.

Note: Trends in the Aboriginal population are difficult to interpret due to variation in the yearly number of people for whom Aboriginal status was not stated, and the high proportion of incomplete data compared to the proportion who are Aboriginal people.

Differences in notification numbers captured in the CDR compared to previous reports are due to improved record linkage and inclusion of NCIMS records that were unable to be matched to any of the other contributing data sources.

⁵ Work is currently underway to update the data contained in the Communicable Diseases Register and this will be published in future reports.

⁶ See **Appendix: Table 5** for details about methodology

Figure 19: Hepatitis B notification rate by Aboriginality, NSW, 2008-2018

Data source: Communicable Diseases Register, NSW Ministry of Health (via SAPHaRI) and ABS population estimates (via SAPHaRI); data extracted 21 May 2020. Note: At the time of reporting, data was available up to 31 December 2018.^{1,2} Excludes non-NSW residents and persons whose Aboriginal status was not stated. Year of notification is based on calculated onset date.

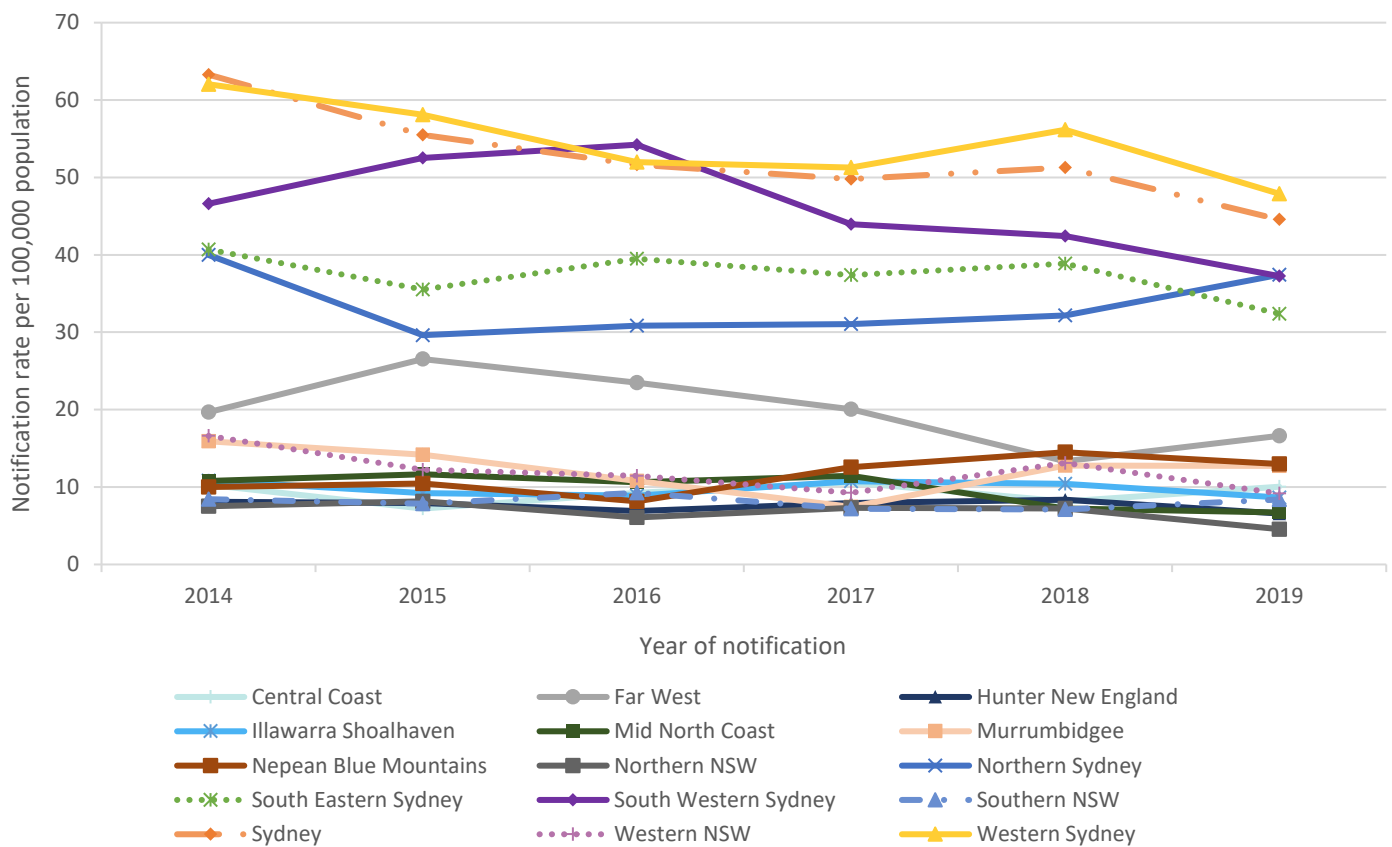
- Amongst those whose Aboriginal status was stated, the hepatitis B notification rate in Aboriginal people was 27 notifications per 100,000 population in 2018. The notification rate among non-Indigenous people was 17 notifications per 100,000 population. The notification rate in Aboriginal people has fluctuated considerably since 2008 and has been closer to the non-Aboriginal rate in previous years. The overall trend during this time period indicates a higher level of hepatitis B notifications in Aboriginal people compared to non-Indigenous people.

Note: As the number of notifications among Aboriginal people is small, yearly fluctuations in the rate should be interpreted with caution. Changes in notification rates may be due to variation in incidence of disease, screening rates and/or the number of people for whom Aboriginal status was not stated (see Figure 18). Screening rates for hepatitis B may be higher in Aboriginal populations than in non-Aboriginal populations, contributing to higher rates of notification.

Differences in notification numbers captured in the CDR compared to previous reports are due to improved record linkage and inclusion of NCIMS records that were previously unable to be matched to any of the other contributing data sources.

5.3 Where are notifications occurring?

Figure 20: Hepatitis B notification rate, by LHD of residence, NSW, 2014-2019



Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Excludes non-NSW residents and persons whose place of residence in NSW was not stated. Year of notification is based on calculated onset date.

In 2019:

- Western Sydney and Sydney LHDs reported the highest rates of hepatitis B notification in NSW in 2019 at 48 and 45 notifications per 100,000 population respectively. South Western Sydney, Northern Sydney, and South Eastern 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 amongst people who acquired their infection at birth overseas and targeted testing in these areas.
- Among non-metropolitan LHDs, small numbers of notifications mean that rates may vary considerably year to year and changes should be interpreted with caution. In 2019, Far West had the highest notification rate among non-metropolitan LHDs with 17 notifications per 100,000 population; however, this only reflects a total of five notifications received in 2019 compared to four in 2018.

Note: Local changes in the notification rate can be difficult to interpret due to a range of factors, particularly changes in migrant settlement patterns of people who acquired infection at birth overseas. Because hepatitis B is often asymptomatic, people may be tested many years after infection and testing patterns vary across time and settings. Local health promotion campaigns and screening programs targeting at-risk populations can result in increased testing and better detection rates.

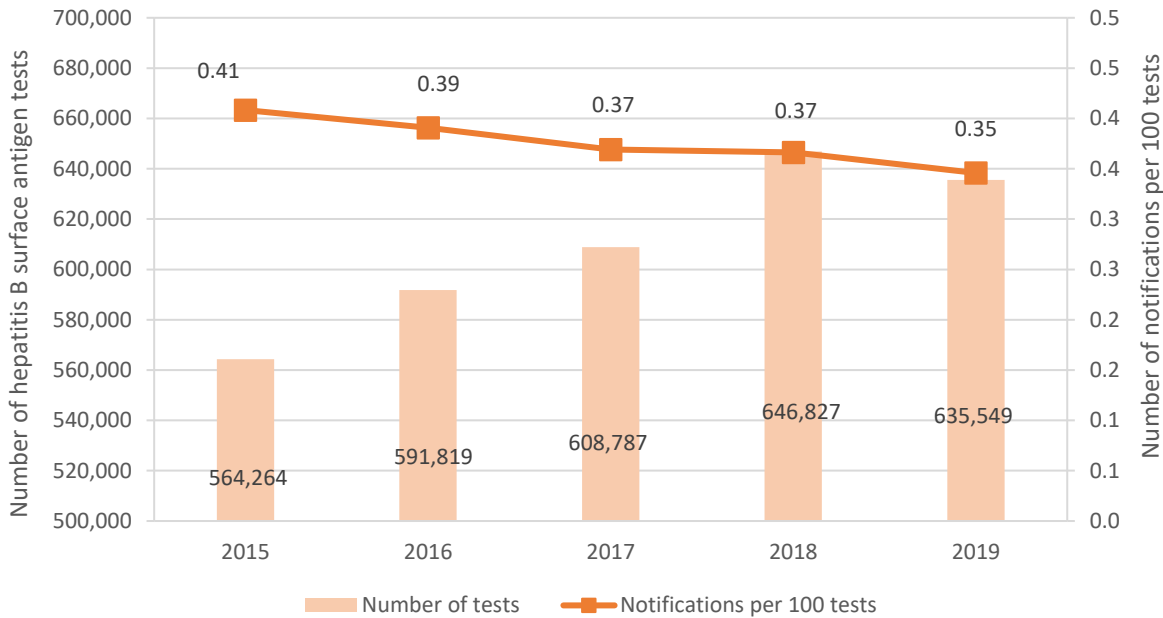
There is substantial variation in population size between the LHDs. For LHDs with a smaller population, such as Far West NSW, a small change in the number of notifications can have a large impact on the annual rate.

A notification rate has not been calculated for Justice Health as the population (the denominator) fluctuates considerably and data are available only for the annual number of incarcerations, not the number of people incarcerated.

6. Testing for hepatitis B

6.1 Is hepatitis B testing increasing?

Figure 21: Number of tests for hepatitis B surface antigen and notification to test ratio⁷, 2015-2019



Data source: NSW denominator data project, Health Protection NSW, NSW Health

In 2019:

- The number of hepatitis B tests performed in NSW decreased slightly from its peak in 2018. In 2019, 635,549 tests for hepatitis B surface antigen were performed in 15 laboratories in NSW, a 1.7% decrease from 2018 (646,827 tests).
- The hepatitis B notification to test ratio continued to decline in 2019, to 0.35 notifications per 100 tests from 0.37 notifications per 100 tests in 2018. The relative decrease in the notification to test ratio is slightly larger than the decrease in the number of tests, suggesting testing of a broader population that is at lower risk, or repeat testing of those already known to have hepatitis B.

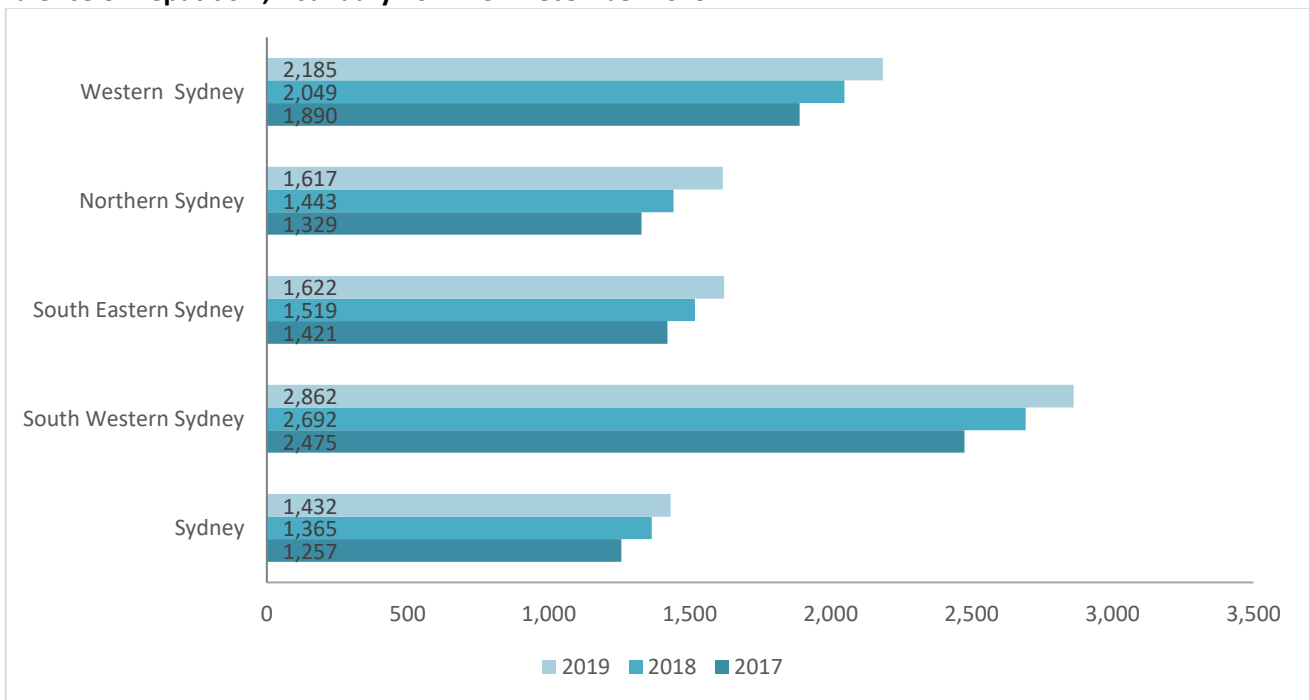
⁷ See **Appendix: Table 2** for more details about methodology

7. Hepatitis B treatment access

In 2017 there were an estimated 79,685 people living with chronic hepatitis B in NSW⁸. Up to 1 in 4 people with chronic hepatitis B will die from liver cancer or liver failure unless they receive appropriate monitoring and treatment. Not all people living with hepatitis B require treatment; it is estimated that 8-25 per cent of cases require antiviral treatment⁹. The National Hepatitis B Strategy set a treatment target of 15 per cent by 2017. No state or territory reached the national target. Uptake was highest in NSW (9.6 per cent) followed by Victoria (7.9 per cent).

7.1 How many people in NSW are accessing hepatitis B treatment?

Figure 22: Number of NSW residents¹⁰ dispensed hepatitis B treatment in the five LHDs with the highest prevalence of hepatitis B, 1 January 2017 - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2017 to 31 December 2019

Note: Figure 22 incorporates residents who were dispensed treatment in Justice Health settings.

Data for all other local health districts is at Appendix: Figure 31

Between 1 January and 31 December 2019:

- A total of 9,718 NSW residents in the five LHDs with the highest prevalence of hepatitis B were dispensed hepatitis B treatment, which accounted for 91 per cent of the total number of residents dispensed hepatitis B treatment in NSW. This is an increase (7.2 per cent) compared to 2018 (9,068) and a 16.1 per cent increase compared to 2017 (8,372).
- In the five LHDS with high burden, a total of 19 residents were dispensed hepatitis B treatment in Justice Health settings compared to 20 in 2018, and 22 in 2017.
- In NSW, 10,245 residents (unique number) were dispensed hepatitis B treatment, which was 13 per cent of the estimated number of people living in NSW with CHB in 2016 (79,685).

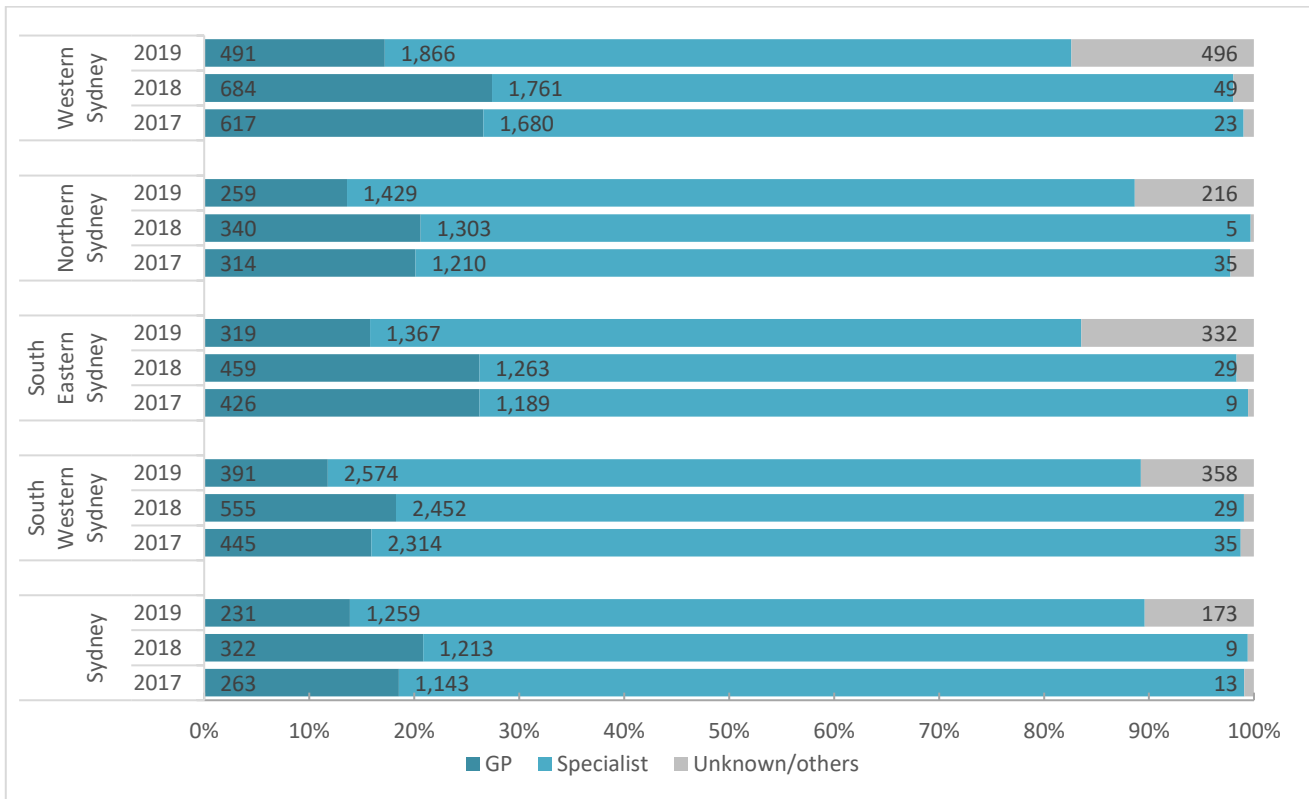
⁸ Viral Hepatitis Mapping Project: Estimates of chronic hepatitis B diagnosis, monitoring and treatment by Primary Health Network, National Report 2017. Published by the Australasian Society for HIV Medicine

⁹ Treatment is only beneficial in some stages of hepatitis B infection

¹⁰ Figure 1 incorporates residents who were dispensed treatment in Justice Health settings

7.2 What percentage of people with chronic hepatitis B are receiving treatment in primary care?

Figure 23: Number of NSW residents dispensed hepatitis B treatment in the five LHDs with the highest prevalence of hepatitis B, by prescriber type, 1 January 2017 - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2017 to 31 December 2019

Note: Figure 23 incorporates residents who were dispensed treatment in Justice Health settings. Data for all other local health districts is at Appendix: Figure 32

Between 1 January and 31 December 2019:

- Fourteen per cent of NSW residents in the five LHDs with the highest prevalence of hepatitis B who were dispensed hepatitis B treatment had their treatment prescribed by a GP. This is 8 per cent less compared to the same period to 2018 (22 per cent) and 7 per cent less compared to 2017 (21 per cent).

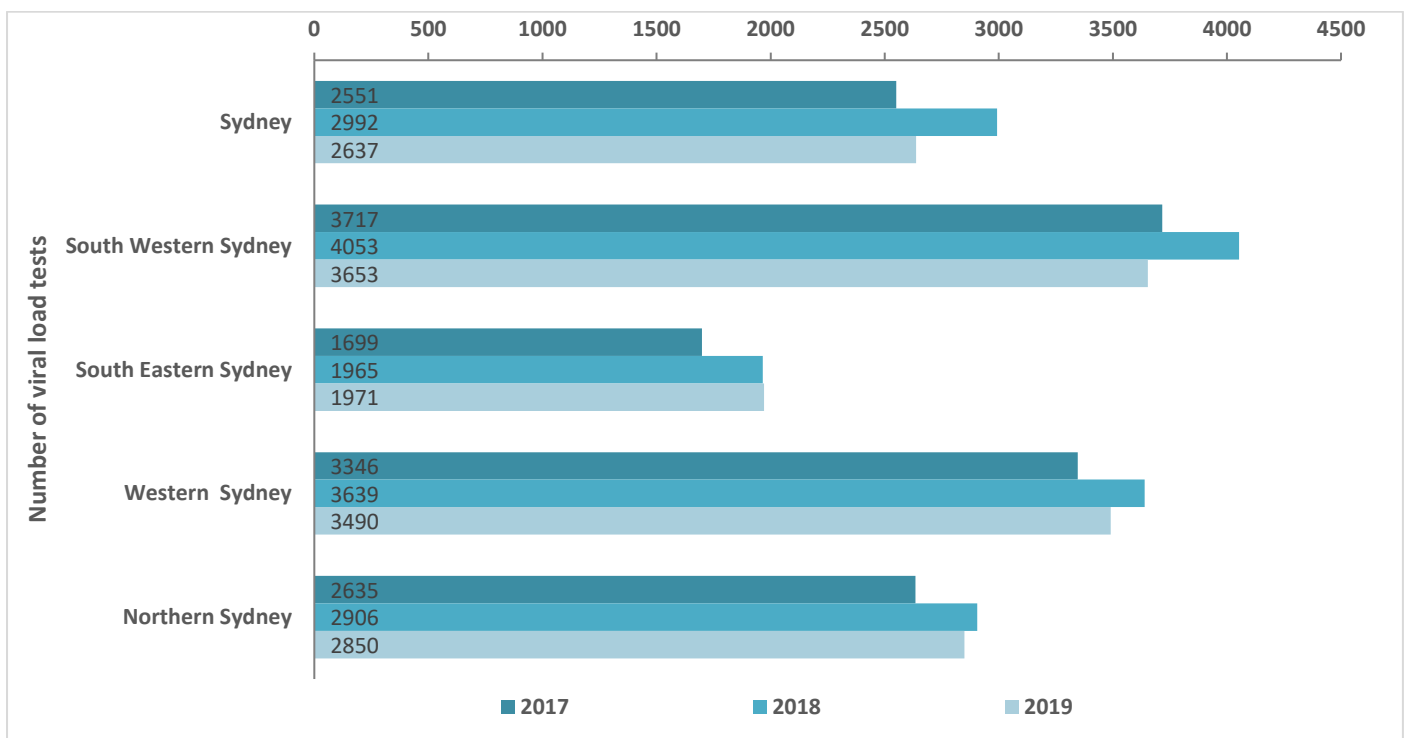
8. Management of hepatitis B

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

All people with chronic hepatitis B require regular (six to twelve monthly) monitoring of hepatitis B viral load and should be receiving ongoing care, incorporating either yearly off-treatment monitoring (including a DNA viral load test) or antiviral treatment. People who are on antiviral treatment are also monitored via a hepatitis B viral load test, in order to provide recommendations for their treatment plan.^{11 12}

The frequency of monitoring varies according to the phase of infection, the extent of liver damage present, whether the person is receiving treatment, and the presence of other complicating factors such as co-infections, immunosuppression and other causes of liver disease.

Figure 24: Number of people in the five high prevalence LHDs with CHB and not receiving treatment who had a viral load test via Medicare, 1 January 2017 – 31 December 2019



Data source: Medicare Benefits Schedule, Department of Human Services

Note: Data from MBS is only available to 31 December 2019. Data is based on patient enrolment postcode and date of service (DOP). An annual hepatitis B viral load test (MBS item 69482) for people not on treatment is covered under Medicare, so this data indicates the number of people tested. This data excludes tests not ordered under Medicare and therefore is an underestimate of the number of people being monitored. It does not include services provided by hospital doctors to public patients in public hospitals and services that qualify for a benefit under the Department of Veterans' Affairs National Treatment Account. Data for the other Local Health Districts is at Appendix: Figure 33

Between 1 January and 31 December 2019:

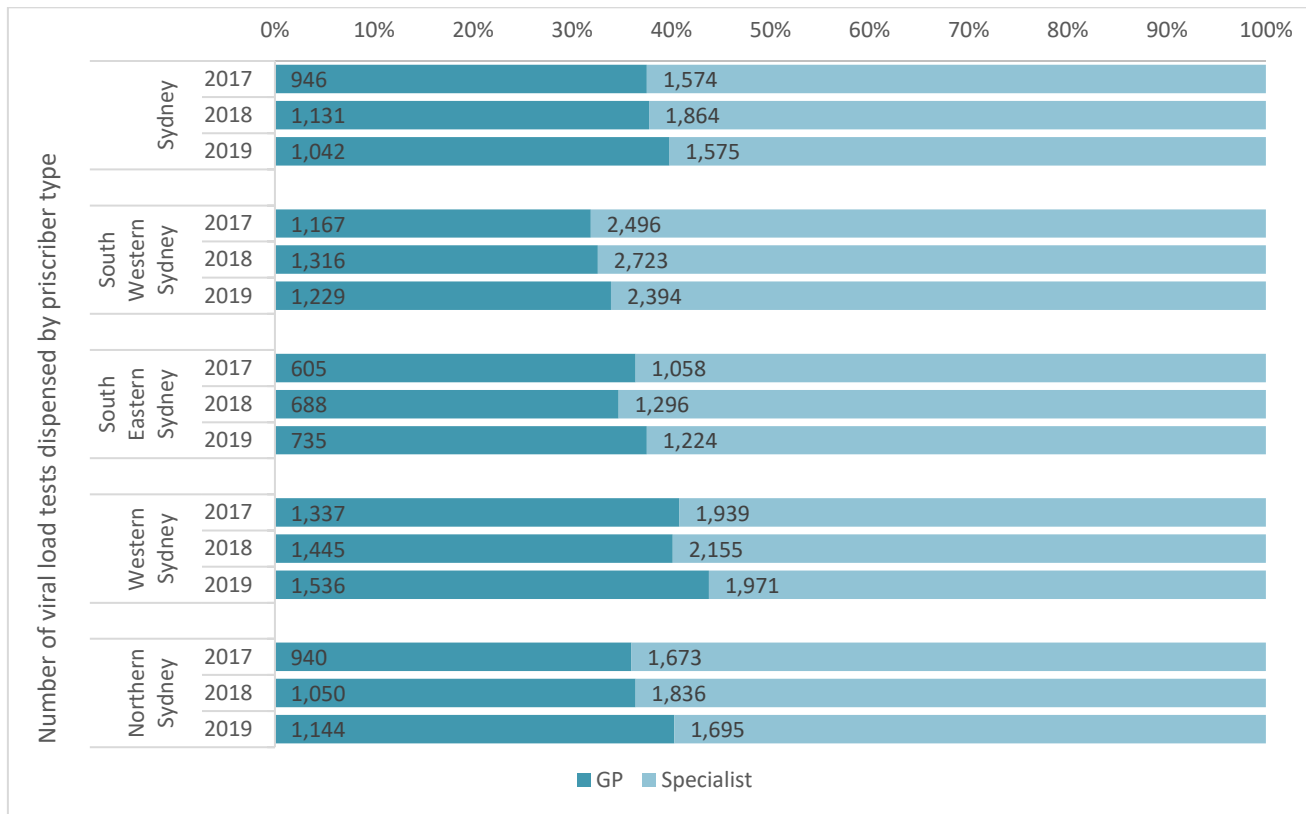
- In the five high prevalence LHDs, a total of 14,601 people with CHB not on treatment received an annual MBS viral load test. The number was 6% less than the number tested in 2018 (15,555) and 5% higher than the numbers tested in 2017 (13,948).

¹¹ 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.

¹² Hepatitis B Mapping Project: Estimates of chronic hepatitis B diagnosis, monitoring and treatment by Medicare Local, 2014/15 – National Report. Published by the Australasian Society for HIV Medicine (ASHM)

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

Figure 25: Number of people with hepatitis B not receiving treatment in the five LHDs with the highest prevalence of hepatitis B who had an annual MBS viral load test (item 69482) by type of practitioner ordering the test, 1 January 2017 – 31 December 2019



Data source: Medicare Benefits Schedule, Department of Human Services; Note: Data from MBS is only available to 31 December 2019. Data is based on patient enrolment postcode and date of service (DOS). An annual hepatitis B viral load test (MBS item 69482) for people not on treatment is covered under Medicare, so this data indicates the number of people tested. This data excludes tests not ordered under Medicare and therefore is an underestimate of the number of people being monitored. It does not include services provided by hospital doctors to public patients in public hospitals and services that qualify for a benefit under the Department of Veterans' Affairs National Treatment Account.

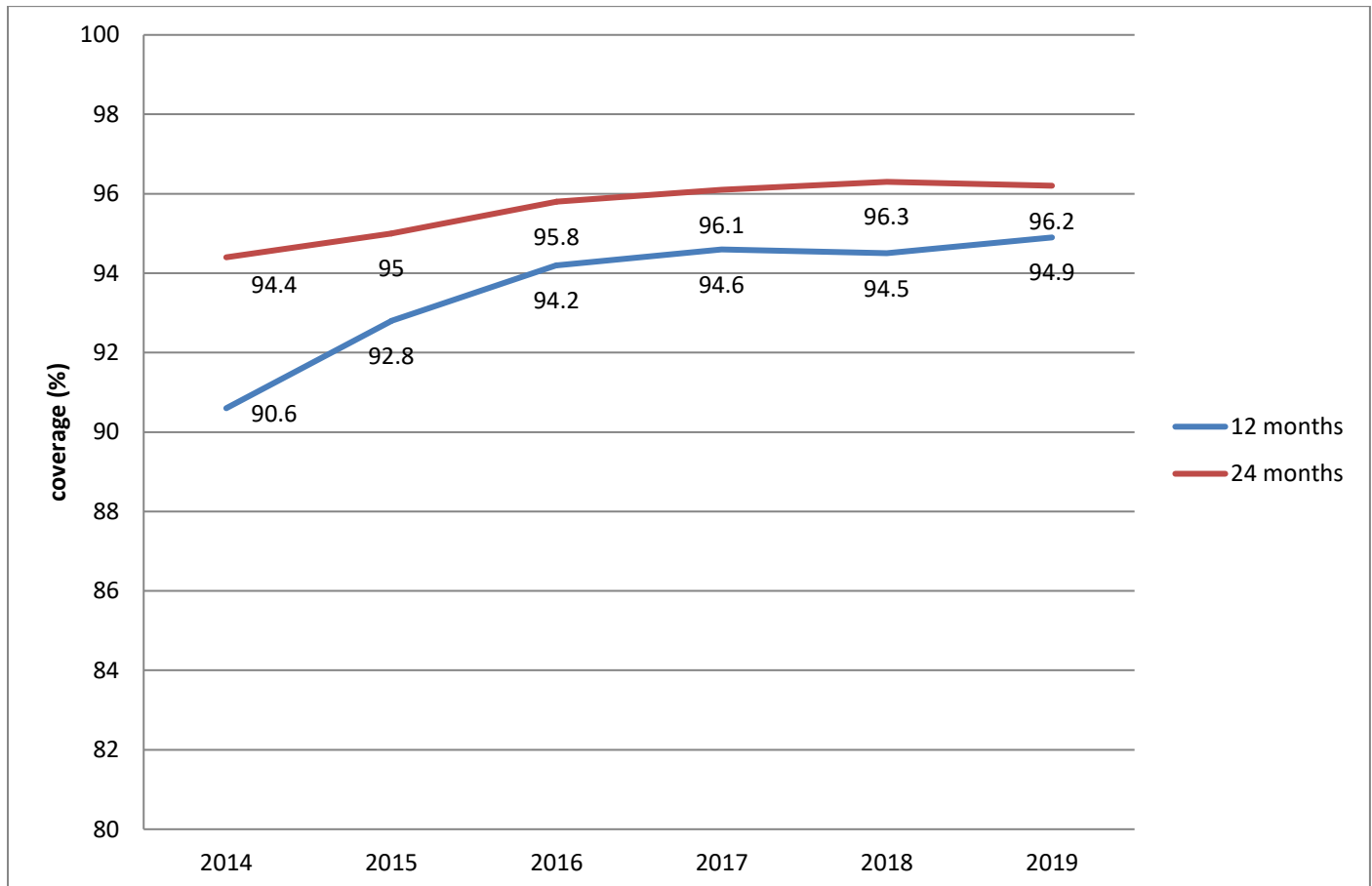
Between 1 January and 31 December 2019:

- In the five LHDs with high prevalence of HBV, 39 per cent (5,686) of people with CHB not on treatment who received an annual MBS viral load test had their test requested by a GP and 61 per cent (8,859) had their test requested by a specialist. The percentages remained similar when compared to the same periods in 2017 and 2018.

9. Hepatitis B prevention investment

9.1 What proportion of infants in NSW are vaccinated for hepatitis B?

Figure 26: Proportion of infants in NSW who have received 3 doses of hepatitis B vaccine (measured at 12 and 24 months of age) 2014-2019



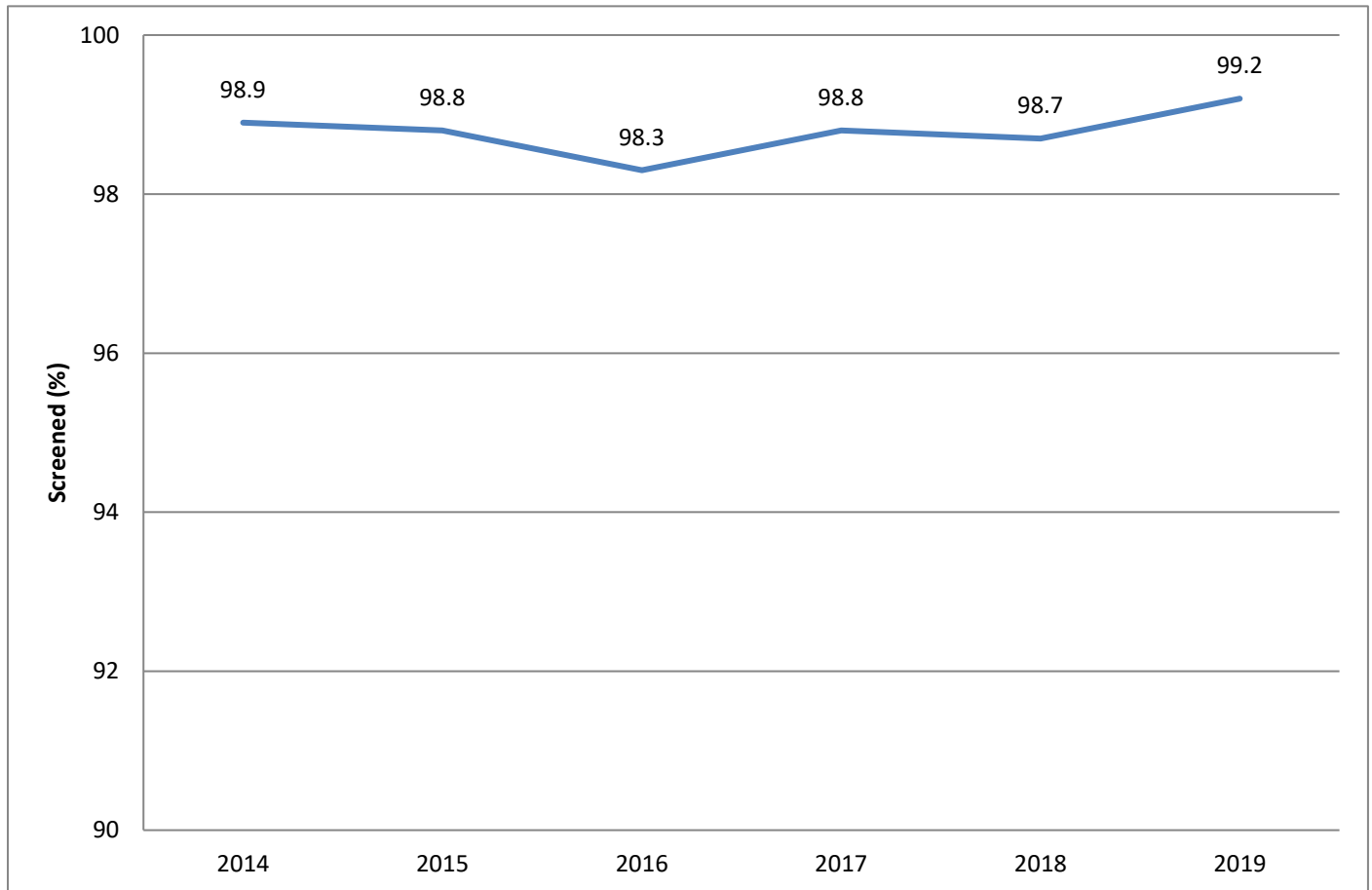
Data source: Australian Immunisation Register, Australian Government Department of Human Services

- Hepatitis B vaccine is due at birth, 6 weeks, 4 months and 6 months of age. Children fully vaccinated with at least three doses measured at 12 months of age in 2019 was 94.9 per cent compared to 94.5 per cent in 2018.
- At 24 months of age in 2019, 96.2 per cent of all children were fully vaccinated against hepatitis B. These rates are higher than at 12 months of age, indicating that delayed vaccination as well as underreporting¹³ influence reported vaccination rates.
- Hepatitis B vaccination coverage at 12 months and 24 months of age has been steadily increasing since 2014.

¹³ Children overdue for immunisation: a question of coverage or reporting? An audit of the Australian Immunisation Register. *Aust NZ J Public Health* 2019; 43:214-20

9.2 What proportion of women giving birth in NSW are screened for hepatitis B?

Figure 27: Proportion of women giving birth in a public or private hospital in NSW who are screened for hepatitis B 2014 - 2019

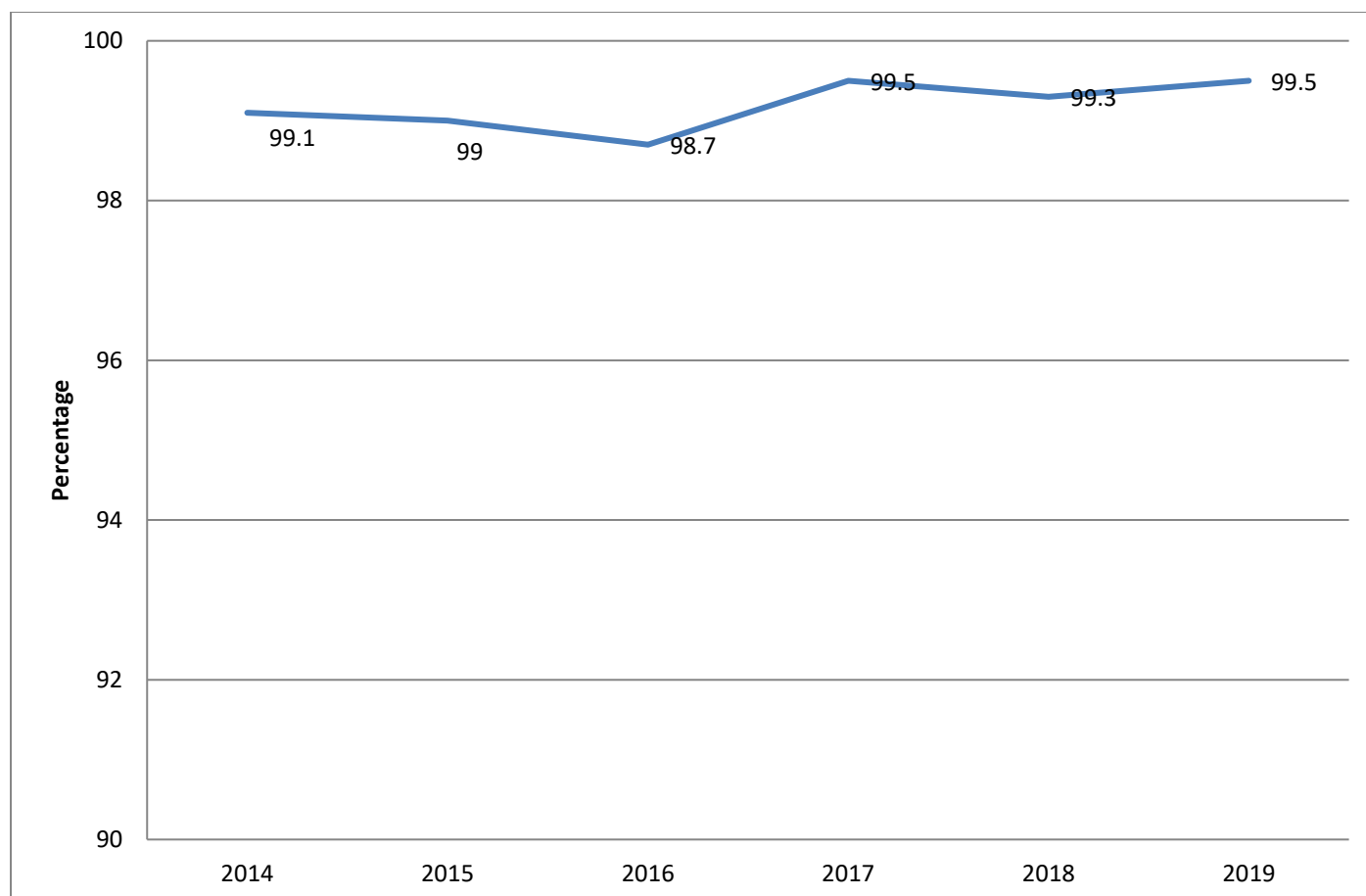


Data source: Neonatal Hepatitis B Vaccination Program Database, NSW Health

- The proportion of mothers giving birth in a public or private hospital in NSW screened for hepatitis B was 99.2 per cent in 2019 (the latest year for which data is available).
- Screening rates may be underestimated due to missing data as pathology results that become available only after the time of antenatal booking are not always entered onto e-Maternity.

9.3 What proportion of neonates in NSW born to hepatitis B positive mothers receive hepatitis B immunoglobulin within 12 hours of birth?

Figure 28: Proportion of neonates in NSW born to hepatitis B positive mothers who received hepatitis B immunoglobulin within 12 hours of birth, 2014 - 2019



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

Table 1: Neonatal hepatitis B immunoglobulin administration (2014 - 2019)

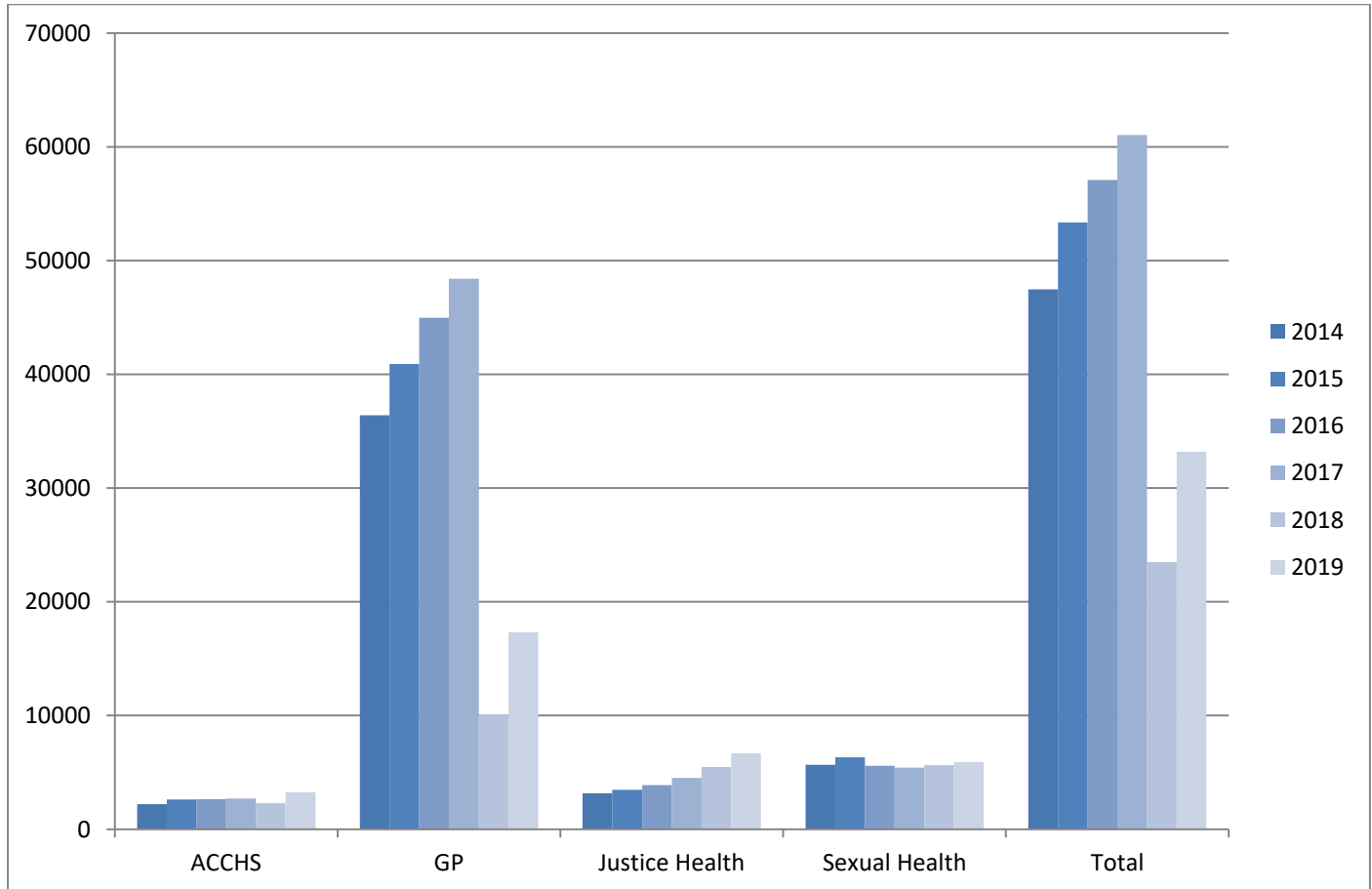
Year	No. neonates born to HBsAg+ mothers	No. neonates born to HBsAg+ mothers who received HBIG	No. neonates born to HBsAg+ mothers who received HBIG within 12 hours of birth (%)
2014	739	737	732 (99.1%)
2015	677	673	670 (99.0%)
2016	696	689	687 (98.7%)
2017	642	642	639 (99.5%)
2018	551	551	547 (99.3%)
2019	547	547	544 (99.5%)

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

The proportion of babies born to mothers living with hepatitis B who receive hepatitis B immunoglobulin (HBIG) within 12 hours of birth increased to 99.5 per cent in 2019. There were three neonates born to HBsAg+ mothers in 2019 that received HBIG greater than 12 hours after birth. The incidents were reported and managed in the incident information management system (IIMS).

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

Figure 29: Number of adult doses of hepatitis B vaccine distributed to health care providers through the NSW Vaccine Centre 2014-2019



Data source: NSW Vaccine Centre Database

- NSW Health purchases adult formulation hepatitis B vaccine for vaccination of at-risk groups.
- The total number of doses of adult hepatitis B vaccine distributed to health care providers in NSW increased from 23,494 doses in 2018 to 33,177 doses in 2019. In May 2018, ordering restrictions were placed on GPs due to global hepatitis B vaccine shortages and to ensure availability of the vaccine for at risk groups. The restrictions were removed in October 2019 which has contributed to an increase in distribution to GPs in from 2018 to 2019.
- Distribution of hepatitis B vaccine to Justice Health services has almost doubled from 3,176 doses 2014 to 6,694 doses in 2019
- Distribution to Aboriginal community controlled services and sexual health services remains stable.

Appendix

Table 2: Number of hepatitis B and hepatitis C notifications by gender and age group, NSW, 2019

Age group (years)	Hepatitis B				Hepatitis C (excluding Justice Health)				Hepatitis C (Justice Health only)			
	Male	Female	Other/ not stated	Total	Male	Female	Other/ not stated	Total	Male	Female	Other/ not stated	Total
TOTAL	1,166	1,014	3	2,183	1,643	905	22	2,570	536	89	0	625
0-4	0	0	0	3	5	3	0	8	0	0	0	0
5-9	2	0	0	5	0	2	0	2	0	0	0	0
10-14	3	2	0	14	0	0	0	0	0	0	0	0
15-19	20	9	0	34	8	16	0	24	18	1	0	19
20-24	49	52	0	137	69	49	0	118	140	16	0	156
25-29	115	134	2	359	127	85	0	212	115	15	0	130
30-34	190	170	0	404	148	118	1	267	89	14	0	103
35-39	176	161	0	287	195	113	6	314	64	16	0	80
40-44	115	107	1	231	194	92	2	288	59	12	0	71
45-49	122	71	0	185	188	110	1	299	26	7	0	33
50-54	89	61	0	177	209	92	2	303	15	3	0	18
55-59	87	61	0	182	183	84	6	273	4	1	0	5
60-64	75	76	0	136	176	72	1	249	2	3	0	5
65-69	64	49	0	77	79	31	3	113	3	1	0	4
70-74	32	23	0	31	36	13	0	49	1	0	0	1
75-79	16	25	0	23	5	11	0	16	0	0	0	0
80-84	9	6	0	20	8	6	0	14	0	0	0	0
85 and over	2	7	0	10	8	8	0	16	0	0	0	0
Not stated	0	0	0	0	5	0	0	5	0	0	0	0

Data source: NCIMS, NSW Health; data extracted 21 May 2020.

Note: Data are provisional and subject to change.

Table 3: Number of hepatitis B and hepatitis C notifications by LHD of residence, NSW, 2015-2019

Local Health Districts	Hepatitis B					Hepatitis C				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
TOTAL	2,315	2,314	2,239	2,376	2,183	3,291	5,024	3,925	3,442	3,195
Central Coast	24	31	36	28	35	149	230	172	124	113
Far West	8	7	6	4	5	23	33	38	20	21
Hunter New England	72	63	73	78	62	374	545	440	347	269
Illawarra Shoalhaven	37	36	44	43	36	163	232	163	141	121
Justice Health	21	26	21	44	52	307	429	497	655	625
Mid North Coast	25	23	25	16	15	133	210	129	119	117
Murrumbidgee	34	26	18	31	31	148	215	154	160	153
Nepean Blue Mountains	38	30	47	55	50	118	236	213	189	118
Northern NSW	24	18	22	22	14	226	400	252	183	190
Northern Sydney	267	282	287	301	354	142	179	136	131	138
NSW not otherwise specified	6	5	9	4	0	20	29	36	31	2
South Eastern Sydney	320	361	346	364	307	307	474	335	260	273
South Western Sydney	495	523	432	425	380	364	487	357	340	296
Southern NSW	16	19	15	15	18	81	229	131	73	69
Sydney	356	339	332	347	306	297	432	298	235	237
Western NSW	34	32	26	37	26	176	269	227	159	149
Western Sydney	538	493	500	562	492	263	395	347	275	304

Data source: NCIMS, NSW Health; data extracted 21 May 2020.

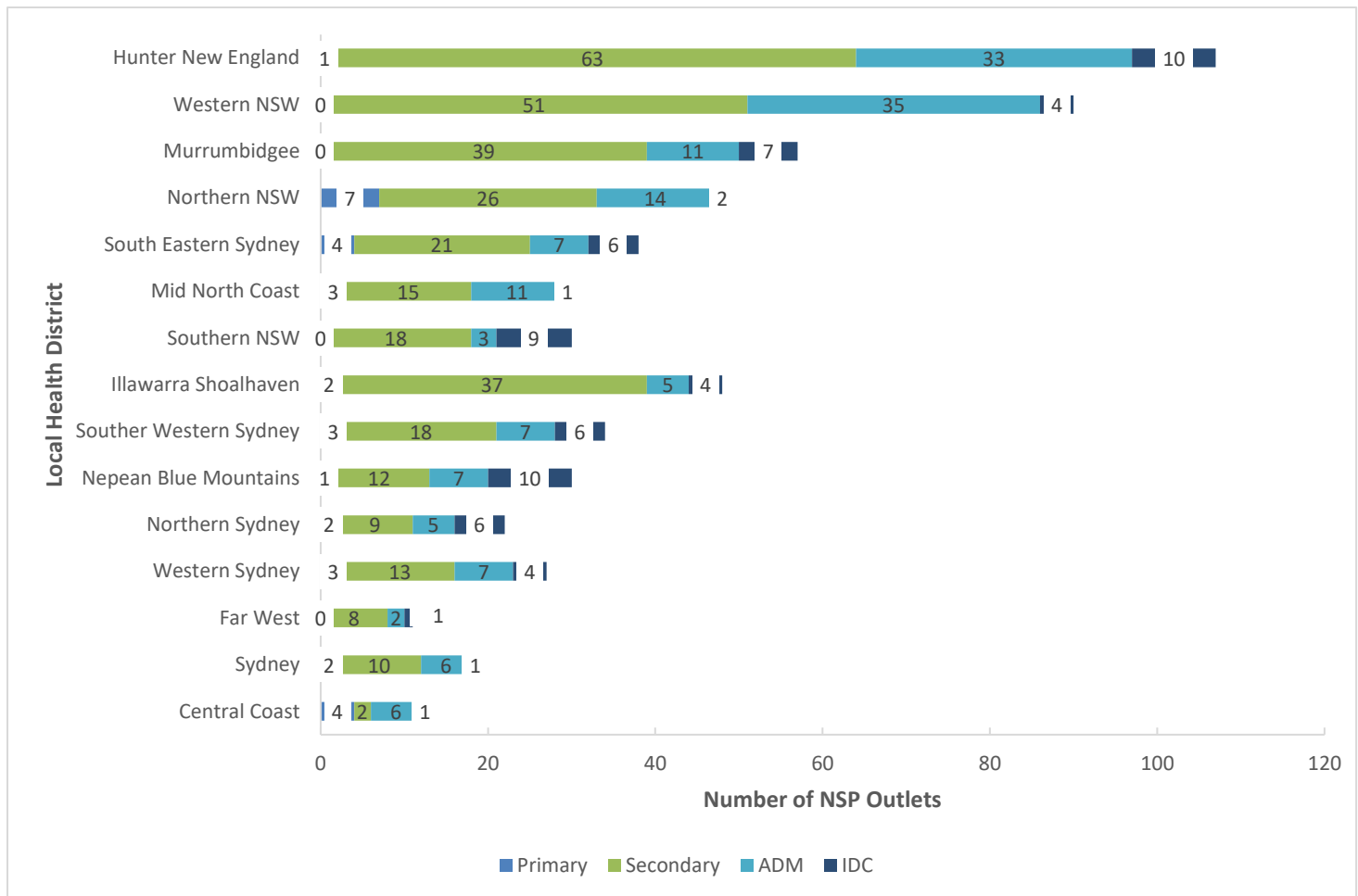
Note: Data are provisional and subject to change.

Table 4: Number of units of injecting equipment distributed by LHD in 1 January – 31 December 2019

LHD	Public	Pharmacy
HNE	2,361,294	525,020
S	1,496,447	291,598
WS	1,068,683	83,684
SES	1,148,683	211,386
SWS	1,072,726	493,913
WNSW	943,219	5,280
CC	850,334	22,925
ISH	796,011	47,333
MNC	509,167	40,046
NNSW	607,647	4,635
NBM	543,643	40,697
M	552,479	10,333
NS	470,093	42,250
SNSW	251,286	8,908
FW	122,149	103
Total	12,793,861	1,828,111
Number of units of injecting equipment distributed by NGOs 1 January – 31 December 2019		
NUAA	415,212	
ACON	309,113	
MSIC	49,248	
Total	773,573	

Data source: Public NSP - NSW Health NSP Minimum Data Set

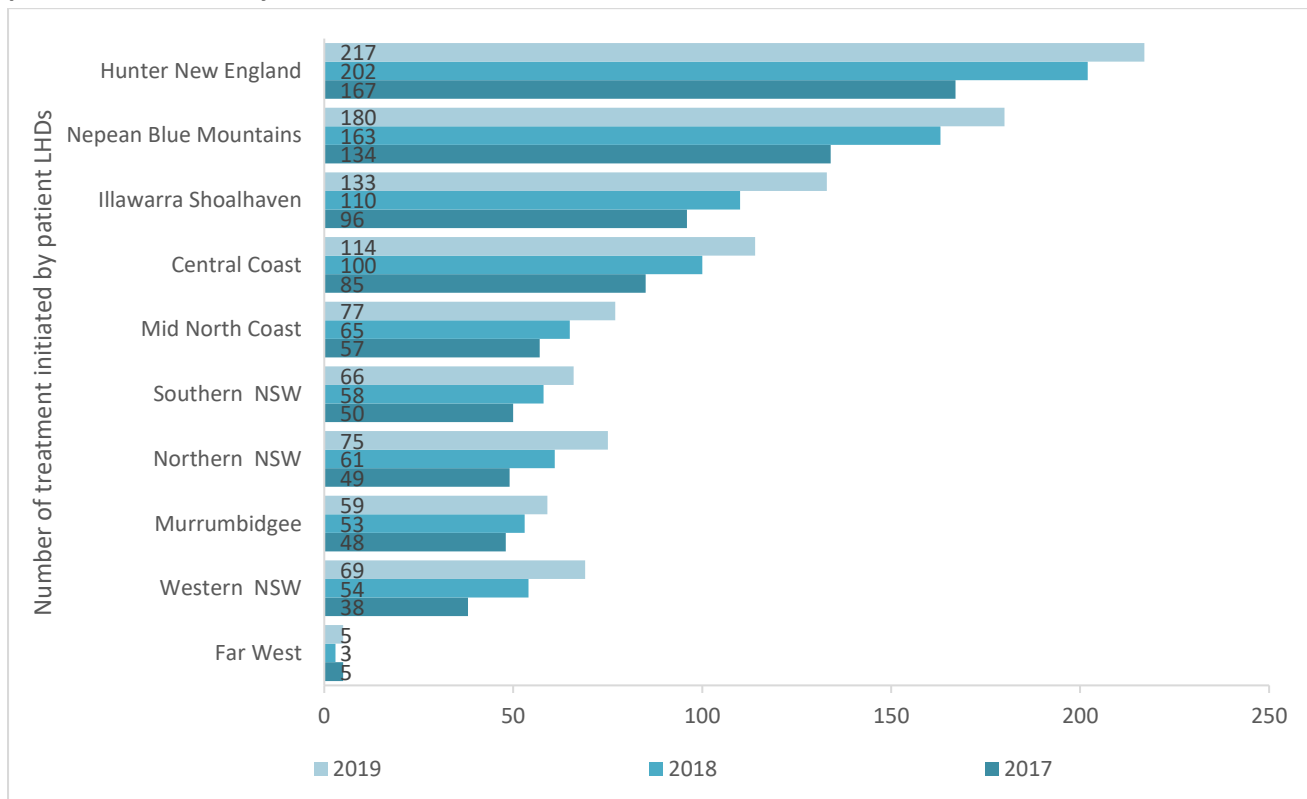
Figure 30: Number of public NSW NSP outlets by type, by LHD, 31 June 2019



Data source: Local Health District NSP Services

- As of June 2019, the public NSW NSP had 32 primary outlets, 342 secondary outlets, 159 automatic dispensing machines (ADMs) and 72 internal dispensing chutes (IDCs).

Figure 31: Number of NSW residents dispensed hepatitis B treatment in the LHDs with lower hepatitis B prevalence, 1 January 2017 - 31 December 2019



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2017 to 31 December 2019

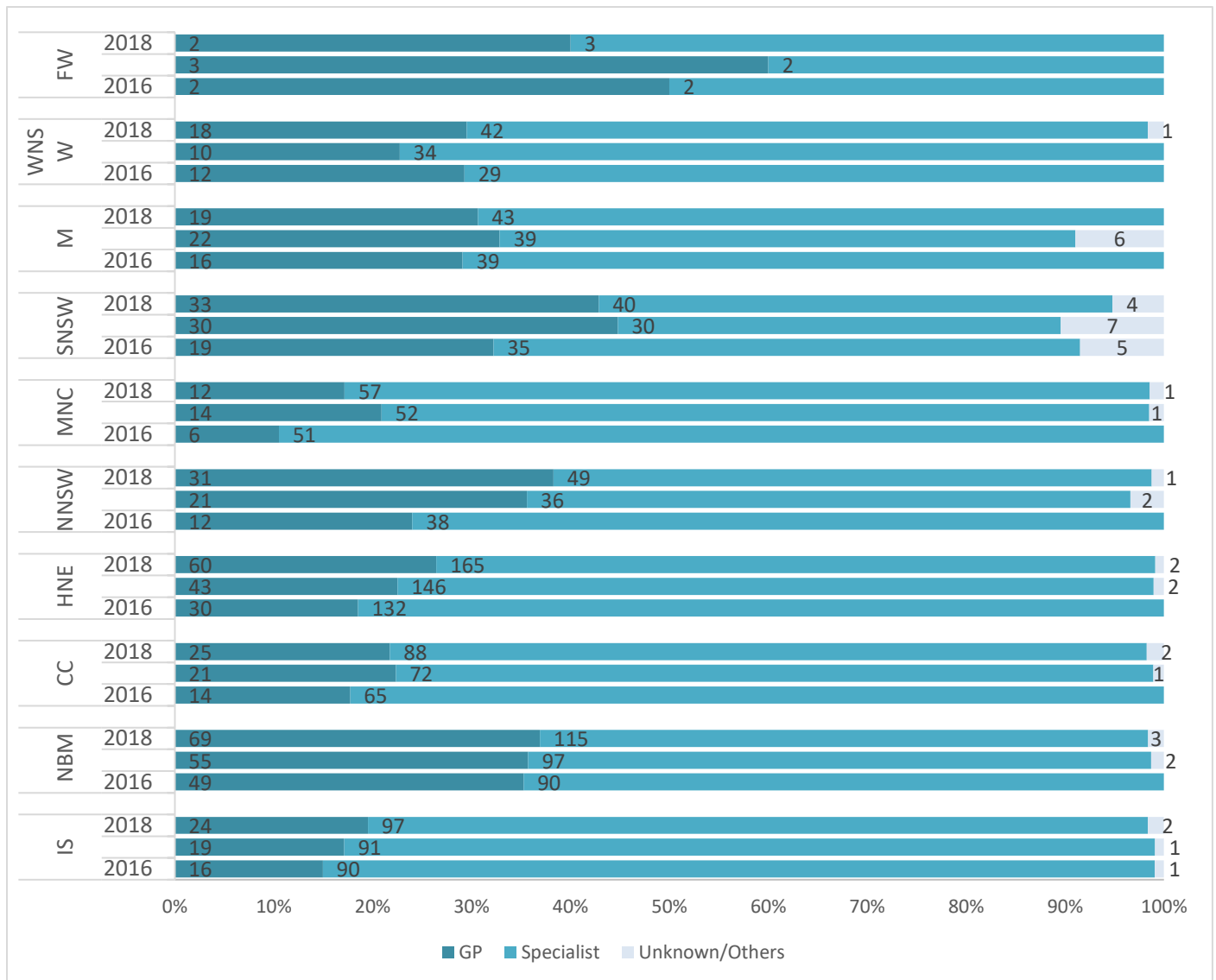
Note: Figure 31 includes residents who were dispensed treatment in Justice Health settings.

Between 1 January and 31 December 2019:

- 955 residents were dispensed hepatitis B treatment in the ten LHDs with lower prevalence, which accounted for 9 per cent of the total number of residents dispensed hepatitis B treatment in NSW¹⁴.
- This is a 15 per cent increase compared to 2018 (869) and a 37 per cent increase compared to 2017 (729).
- 20 NSW residents were dispensed hepatitis B treatment in Justice Health settings; which remains similar compared to 2018 (19), but is higher compared to 2017 (13).

¹⁴ Overall, 10,245 NSW residents were dispensed treatment in 2019

Figure 32: Number of NSW residents dispensed hepatitis B treatment by LHD of patient residence, by prescriber type, 1 January 2017 - 31 December 2019 in LHDs with lower hepatitis B prevalence



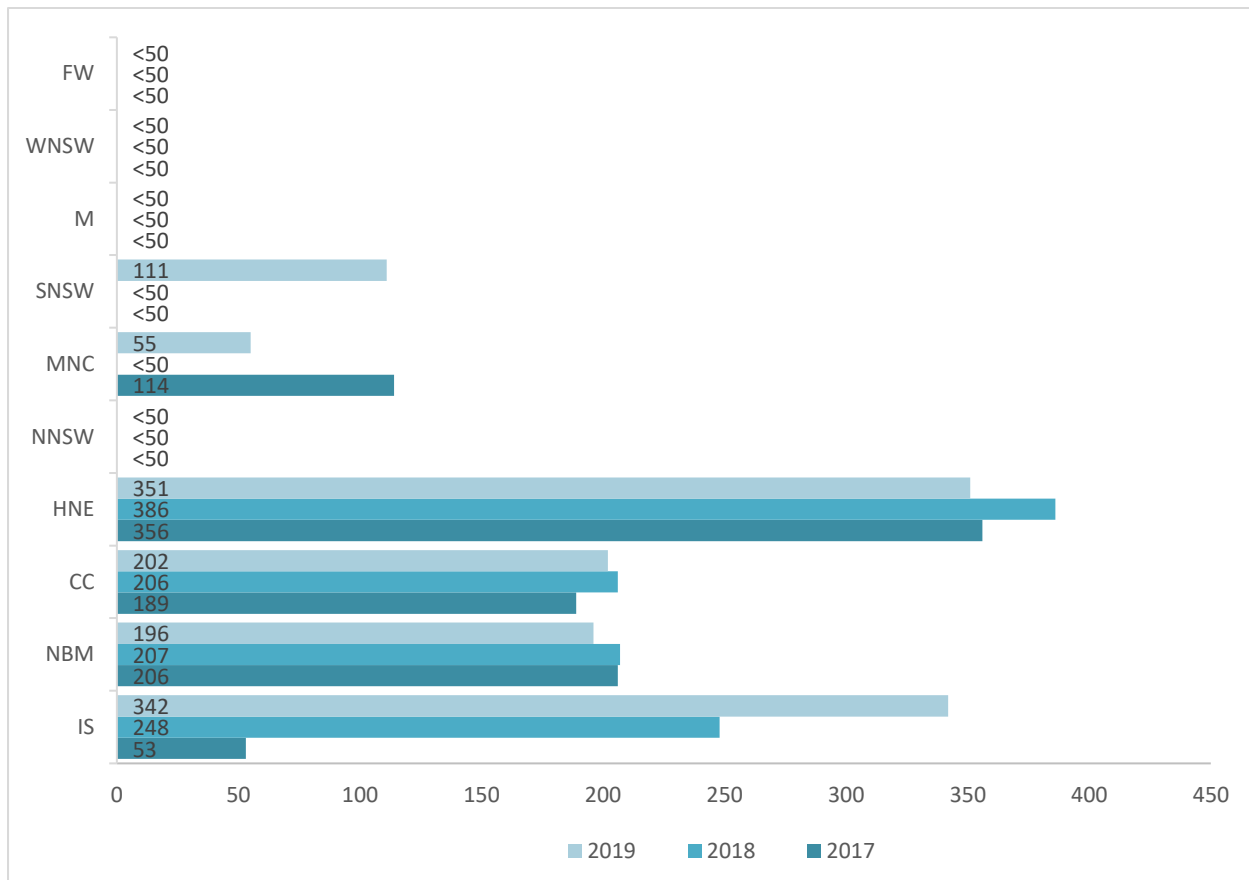
Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2017 - 31 December 2019.

Note: Figure 32 incorporates residents who were dispensed treatment in Justice Health settings.

Between 1 January and 31 December 2019:

- Of the residents dispensed hepatitis B treatment in the ten LHDs with lower prevalence, 22 per cent were prescribed by a GP, which is a decrease compared to the previous two years (28 per cent in 2017 and 29 per cent in 2018, respectively).

Figure 33: Number of people in the lower prevalence LHDs with CHB and not receiving treatment who had a viral load test via Medicare, 1 January 2017 – 31 December 2019



Data source: Medicare Benefits Schedule, Department of Human Services

Note: Data from MBS is only available to 31 December 2019. Data is based on patient enrolment postcode and date of processing (DOP). An annual hepatitis B viral load test (MBS item 69482) for people not on treatment is covered under Medicare, so this data indicates the number of people tested. This data excludes tests not ordered under Medicare and therefore is an underestimate of the number of people being monitored. It does not include services provided by hospital doctors to public patients in public hospitals and services that qualify for a benefit under the Department of Veterans' Affairs National Treatment Account.

Between 1 January and 31 December 2019:

- The exact testing number for LHDs where less than 50 people were tested is not shown.
- A total of 1,559 people with CHB not on treatment received an annual MBS viral load test. This is 9.6 per cent of the total tests (16,160) provided in NSW.

Table 5: Data Sources

Name	Custodian	Description
NSW Notifiable Conditions Information Management System (NCIMS)	Health Protection NSW, NSW Health	<p>NCIMS contains records of all people notified to NSW Health with a notifiable condition under the NSW <i>Public Health Act 2010</i>. Notification data may not reflect the true incidence of hepatitis B and C infections as they only represent a proportion of notifiable diseases in the population, however they are useful for monitoring trends over time.</p> <p>Notifications are for individual people with hepatitis C or B and subsequent notifications (in the one year or in later years) for the same infection in the same individual are not counted.</p>
Communicable Diseases Register (CDR)	Health Protection NSW, NSW Health	<p>The CDR contains de-identified records from NCIMS, linked to emergency department, hospitalisation and deaths data, and includes the Enhanced Reporting of Aboriginality (ERA) variable. Record linkage was carried out by the Centre for Health Record Linkage (www.cherel.org.au), NSW Ministry of Health. Data are currently available to the end of 2018.</p>
NSW Health denominator data project	Health Protection NSW, NSW Health	<p>Monthly aggregated testing data for selected notifiable conditions from 15 NSW public and private laboratories. 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 for the same individual.</p> <p>The notification to test ratio has been calculated by dividing the number of notifications to NSW Health by the total number of tests performed by the participating laboratories, and multiplying by 100. Notifications are for individual people with hepatitis C/B reported from all laboratories and subsequent notifications (in the one year or in later years) for the same infection in the same individual are not counted. However, the testing data are for individual tests reported from participating laboratories and may include multiple specimens per individual. As such, the notification to test ratio may be an underestimate of the percentage of people tested who were positive for the condition.</p>