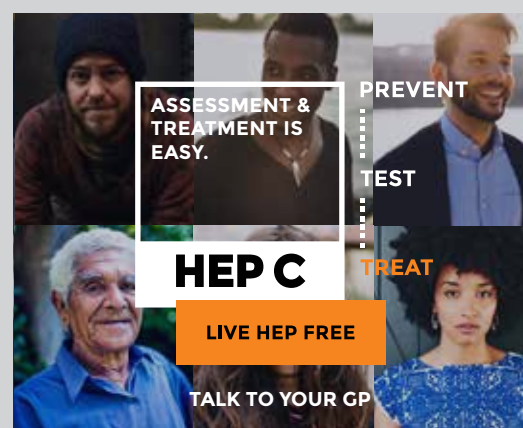
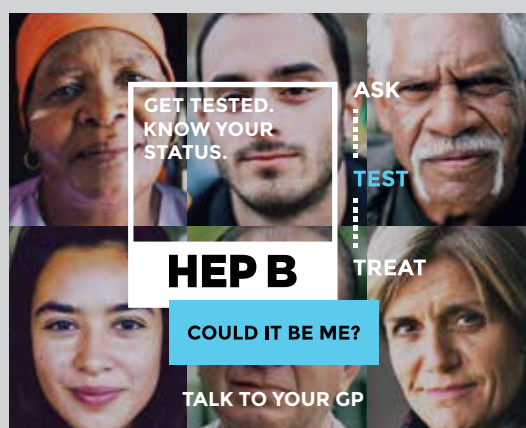


# NSW HEPATITIS B AND HEPATITIS C STRATEGIES 2014–2020 DATA REPORT

## 2020 Annual Data Report



## 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)		
	2020	Change since 2019
Number of tests for hepatitis C antibody	546,826	7.6% decrease (592,106)
Progress towards elimination	43% of the estimated number of people with hepatitis C initiated treatment (at 31 December 2020)	8% increase (35% at 31 December 2019)
Number of units of injecting equipment distributed	15,215,379	1.2% decrease (15,395,545)
Number of people participating in the Opioid Treatment Program	22,949	2% increase (21,421)

### Key Messages

#### Decreased hepatitis C testing and treatment in 2020

There was a 9.4 per cent decrease in hepatitis C notifications in 2020 (2,026 notifications) compared to 2019 (3,195 notifications) in NSW. Similarly, there was a 7.6 per cent decrease in hepatitis C antibody tests in 2020 (546,826) compared to 2019 (592,106), however reactivity rate remained stable.

#### Increased efforts are needed to achieve hepatitis C elimination by 2028

In 2020, 2,828 people initiated hepatitis C treatment in NSW, however the number of people initiating hepatitis C treatment each quarter continues to decrease. Since hepatitis C curative treatments were introduced onto the PBS in March 2016, 43 per cent of people (30,757) estimated to be living with hepatitis C in NSW initiated treatment. This is below the NSW target of 47 per cent required to achieve hepatitis C elimination by 2028.

#### Delay in retrieving hepatitis C Aboriginality data

Due to the effects of the COVID-19 pandemic, there is a delay in retrieving hepatitis C Aboriginality data for NSW. As such, the NSW Hepatitis B and Hepatitis C Strategies 2014-2020 Annual Data Report: 2020 reports the 2018 hepatitis C Aboriginality data and once the 2020 Aboriginality data becomes available, the report will be updated.

## 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)				
		2020	Change since 2019	
Number of tests for hepatitis B surface antigen		606,600	8.8% decrease (665,478)	
Residents dispensed with hepatitis B treatment		10,569	3.2% increase (10,245)	
Number of viral load tests		14,951	7.0% decrease (16,158)	
Hepatitis B vaccines	Proportion of infants in NSW who have received 3 doses of hepatitis B vaccine	12 months	95.4%	0.5 percentage point increase (94.9%)
		24 months	96.5%	0.3 percentage point increase (96.2%)
Proportion of women giving birth who are screened for hepatitis B		99.3% (January – June 2020)		0.4 percentage point increase (99.2% in 2019)

### Key Messages

#### Ongoing efforts are required to support GPs to prescribe Hepatitis B 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. There was a 7 per cent decrease in the number of viral load tests completed in 2020 (14,951 tests) compared to 2019 (16,158 tests). The number of residents dispensed hepatitis B treatment increased in 2020 (10,569 residents) compared to 2019 (10,245 residents).

#### 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

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## 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.

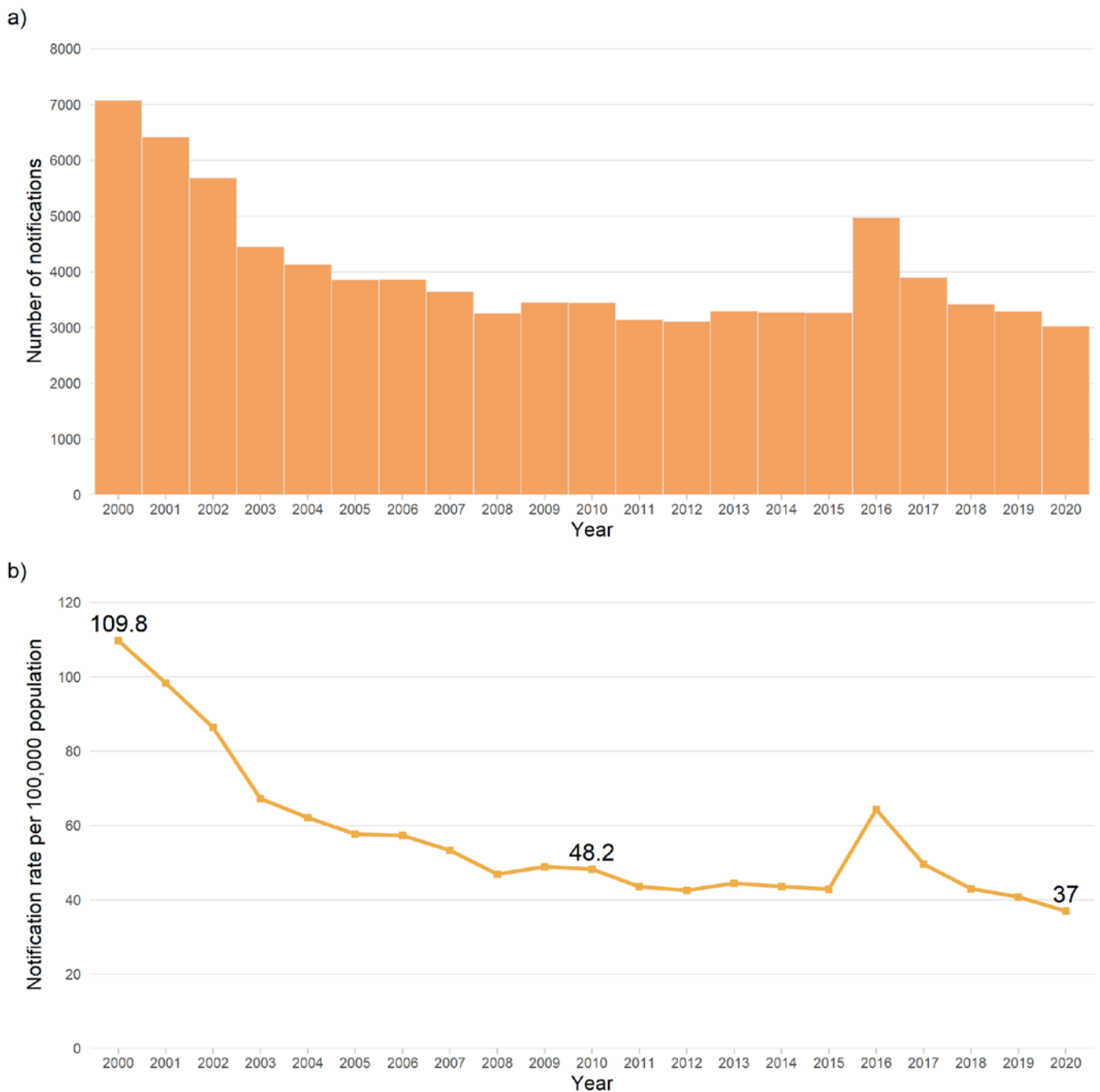
Hepatitis C RNA is a marker of current infection. Hepatitis C RNA testing is recommended for all patients who have a positive hepatitis C antibody test. It's important to note that there may be multiple tests for each individual tested for hepatitis C. However, an individual with multiple positive hepatitis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

#### 1.1 How many diagnoses of hepatitis C are notified?

Hepatitis C notification 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, 2000-2020



Data source: NCIMS and ABS population estimates (SAPHARI), NSW Health; data extracted 18 May 2021.

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

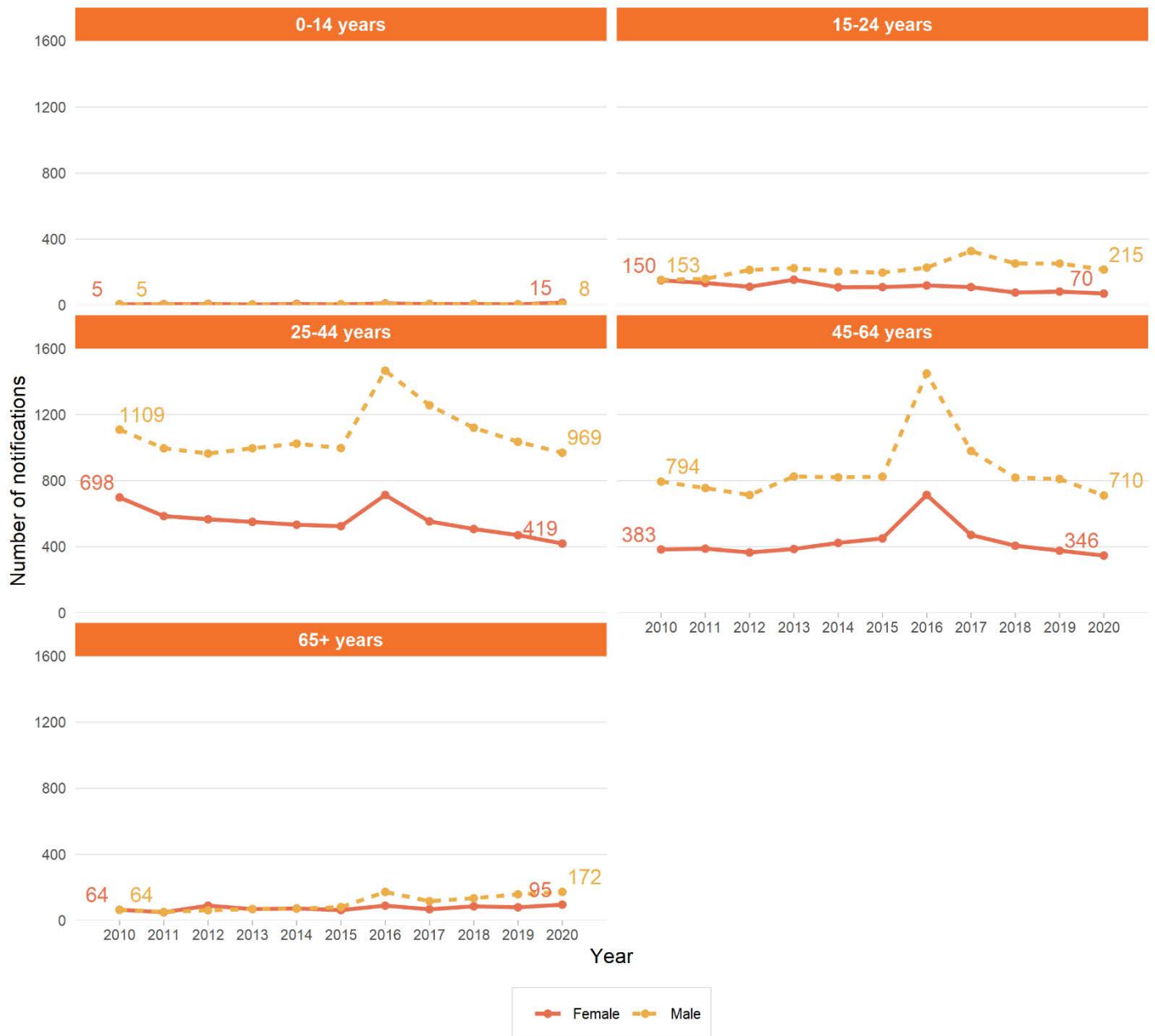
In 2020:

- There were 3,026 hepatitis C notifications in NSW.
- The hepatitis C notification rate was 37 notifications per 100,000 population, which represents a 9.4% decrease compared with 2019 when the rate was 40 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, 2010-2020



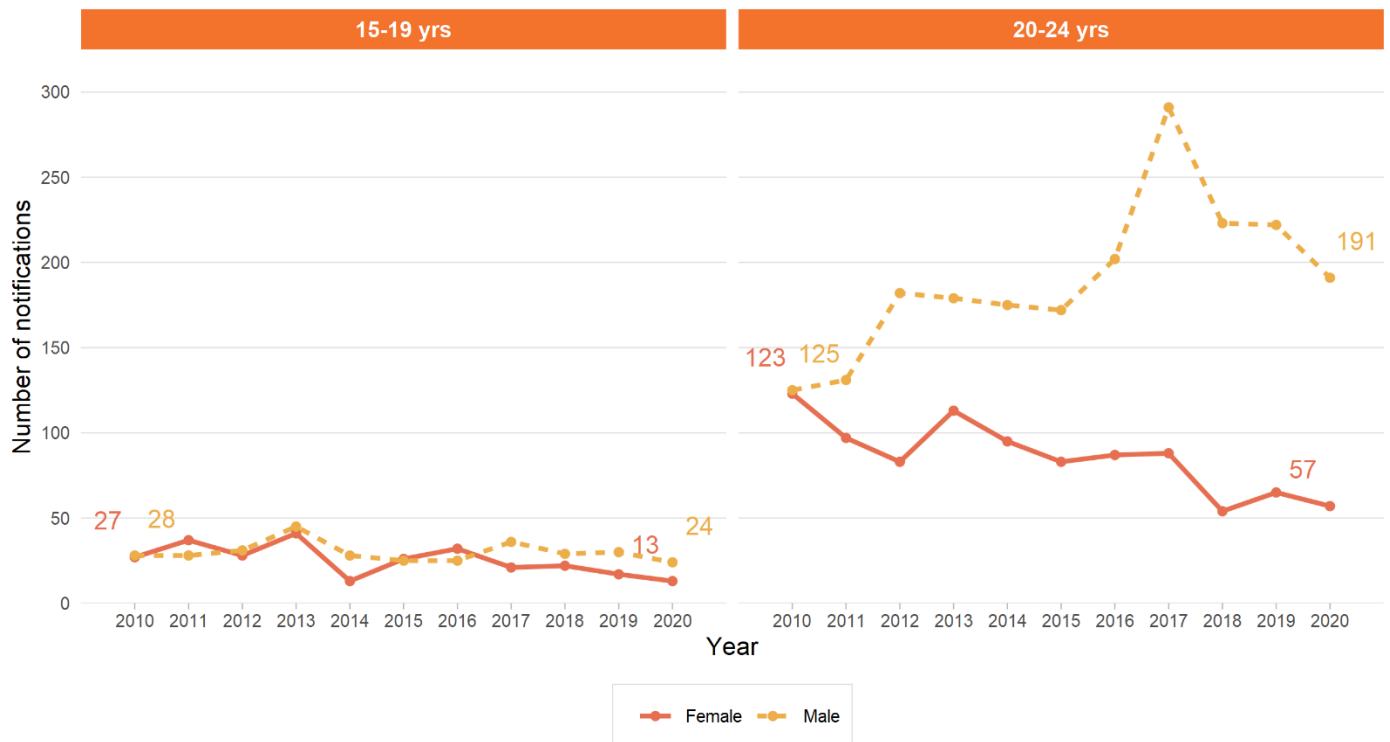
Data source: NCIMS, NSW Health; data extracted 18 May 2021.

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

#### In 2020

- The largest number of hepatitis C notifications continued to occur amongst people aged 25-44 years. Compared to 2019, the number of notifications in this age group declined by 8.1%. Hepatitis C notifications also declined in the 15-24 year and 45-64 year age groups, with 14.7% and 11.5% reductions respectively compared to 2019.
- Hepatitis C notifications remained largely stable amongst people aged 65+ years and people aged 0-14 years compared to 2019. 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, 2010-2020**



Data source: NCIMS, NSW Health; data extracted 18 May 2021.

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.

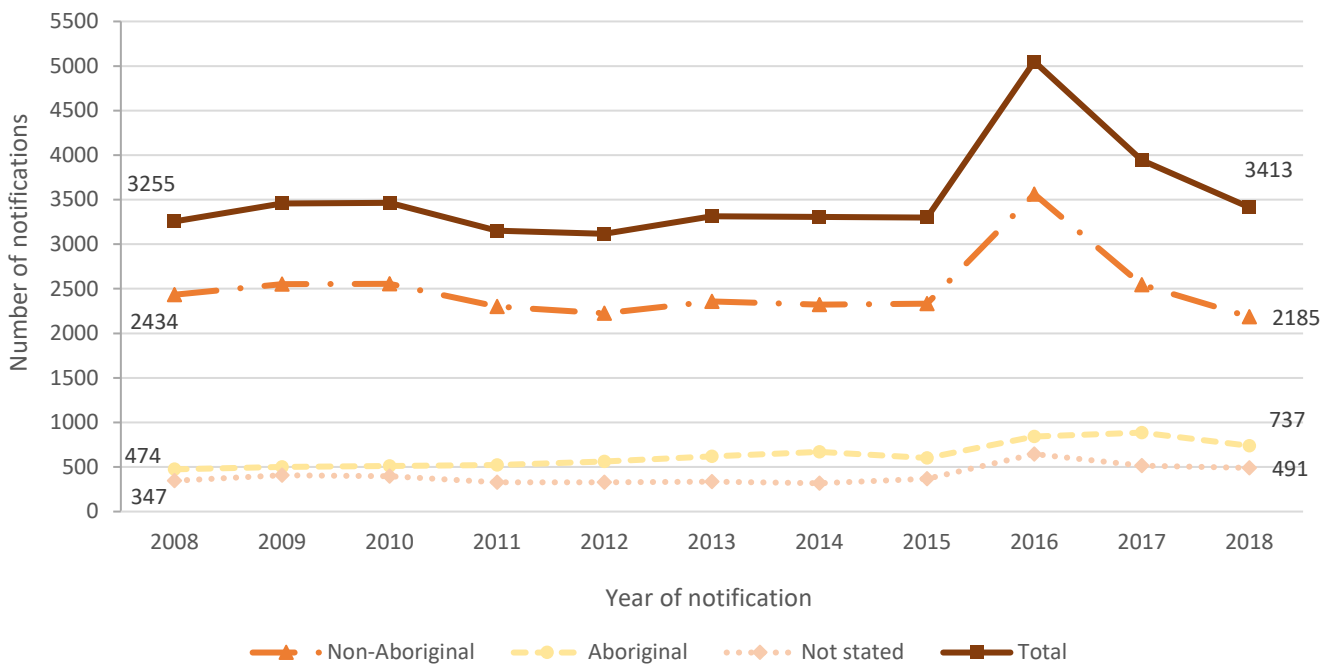
In 2020:

- The number of hepatitis C notifications continued to decline amongst males aged 20 to 24 years, with a 13.5% decrease compared with 2019. The number of hepatitis C notifications amongst females in the same age range decreased by 13.8%.
- Amongst males and females aged 15-19 years, the number of notifications remained small and declined 20.0% and 23.5% respectively compared to 2019.

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**

Note: Due to the COVID-19 pandemic, extraction of hepatitis C Aboriginality data has been delayed. The data presented is from the 2018 NSW Hepatitis B and Hepatitis C Annual Data Report and is not an accurate reflection of the 2020 hepatitis C notifications by Aboriginality in NSW. An updated report will be published once this data is available.



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.<sup>1,2</sup> 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.

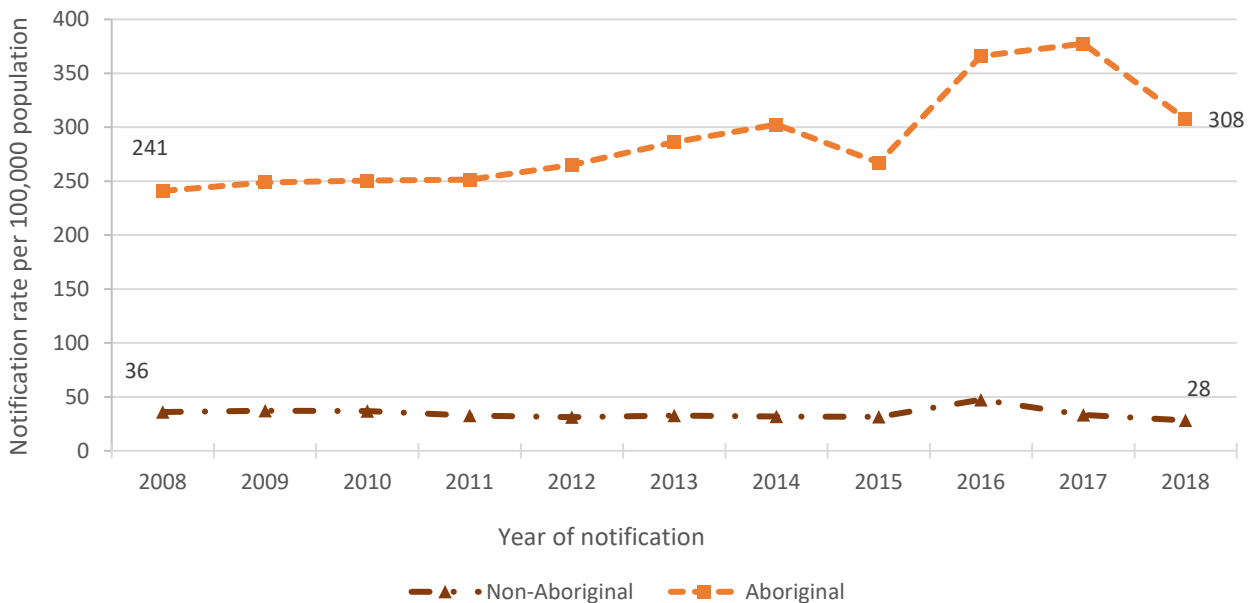
Differences in notification numbers captured in the CDR compared to previous reports are due to improved record linkage and inclusion of NCIMS records that were unable to be matched to any of the other contributing data sources.

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

<sup>2</sup> See **Appendix: Table 7** for details about methodology

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

Note: Due to the COVID-19 pandemic, extraction of hepatitis C Aboriginality data has been delayed. The data presented is from the 2018 NSW Hepatitis B and Hepatitis C Annual Data Report and is not an accurate reflection of the 2020 hepatitis C notifications by Aboriginality in NSW. An updated report will be published once this data is available.



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.<sup>1,2</sup> Excludes non-NSW residents and persons whose Aboriginal status was not stated. Year of notification is based on calculated onset date.

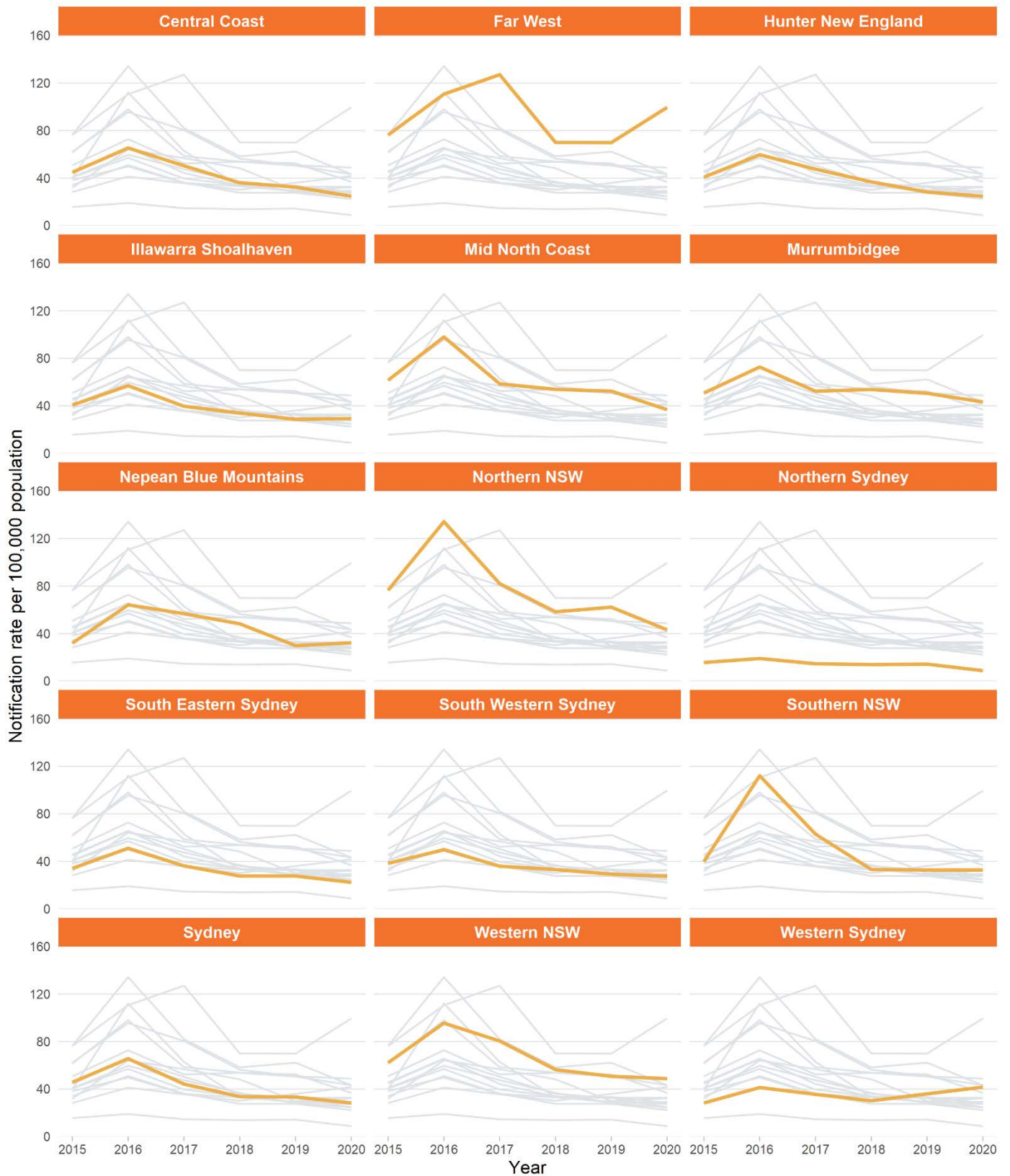
- Amongst those whose Aboriginal status was stated, the hepatitis C notification rate in Aboriginal people was 308 notifications per 100,000 population in 2018, which is 11 times as high as the rate of 28 notifications per 100,000 population in non-Aboriginal people.

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 5). 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, 2015-2020



Data source: NCIMS, NSW Health; data extracted 18 May 2021.

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 2020:**

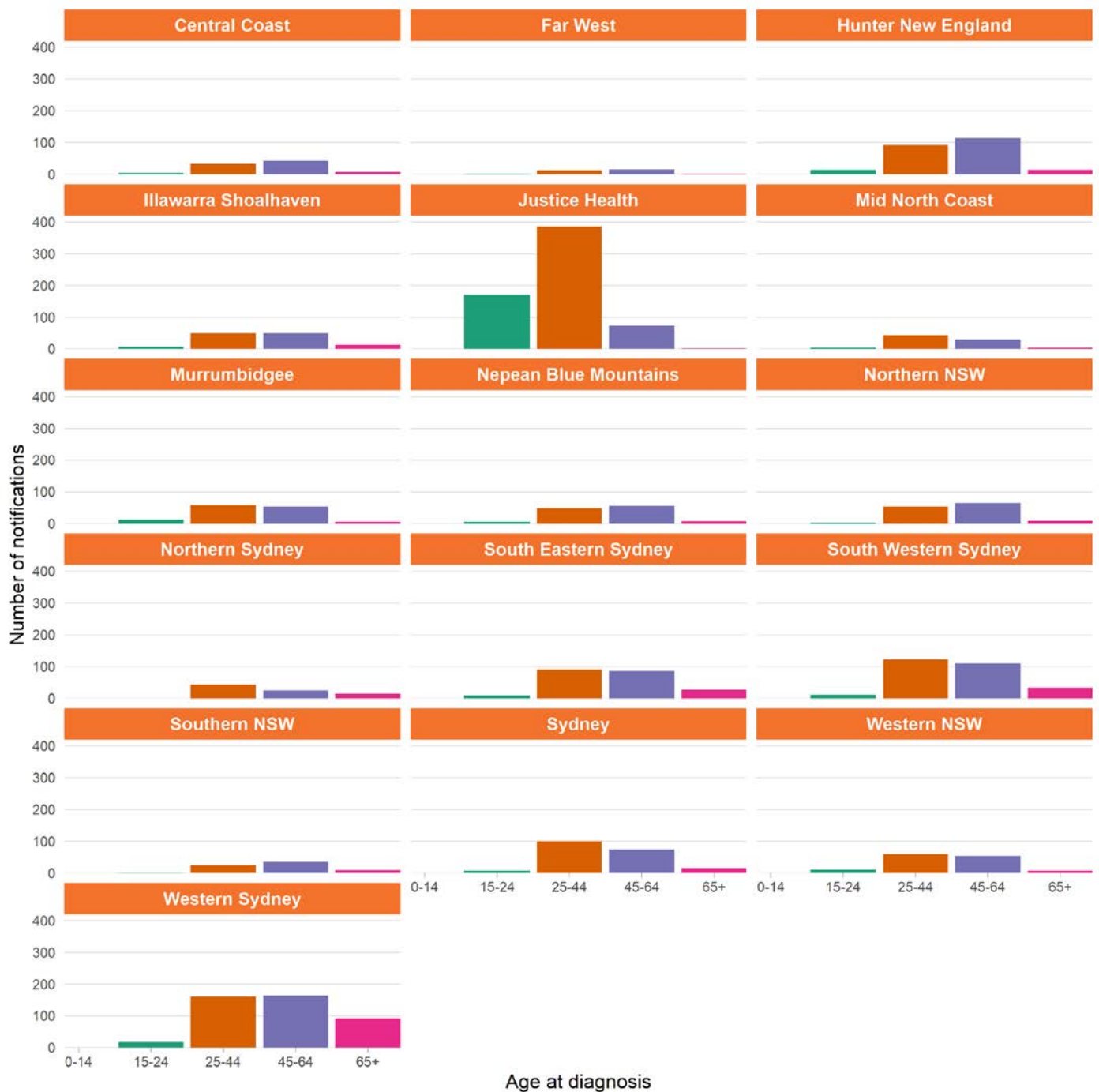
- Far West, Western NSW and Murrumbidgee LHDs had the highest hepatitis C notification rates in NSW.
- Compared with 2019, hepatitis C notification rates decreased in most LHDs, with small increases between 1% and 8% observed in Illawarra Shoalhaven and Nepean Blue Mountains LHD.
- Far West and Western Sydney LHDs had an increase in Hepatitis C notification of 42.5% and 15.7% respectively. Far West LHD had an increase from 21 cases in 2019, to 30 cases in 2020.
- Compared with 2019, the largest declines in hepatitis C notification rates occurred in the Northern Sydney and Northern NSW LHDs, with 38.5% and 30.6% 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, 2020



Data source: NCIMS, NSW Health; data extracted 13 May 2021.

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 2020:

- 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 284 hepatitis C notifications in people aged 15-24 years in 2020, 171 (60%) 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.

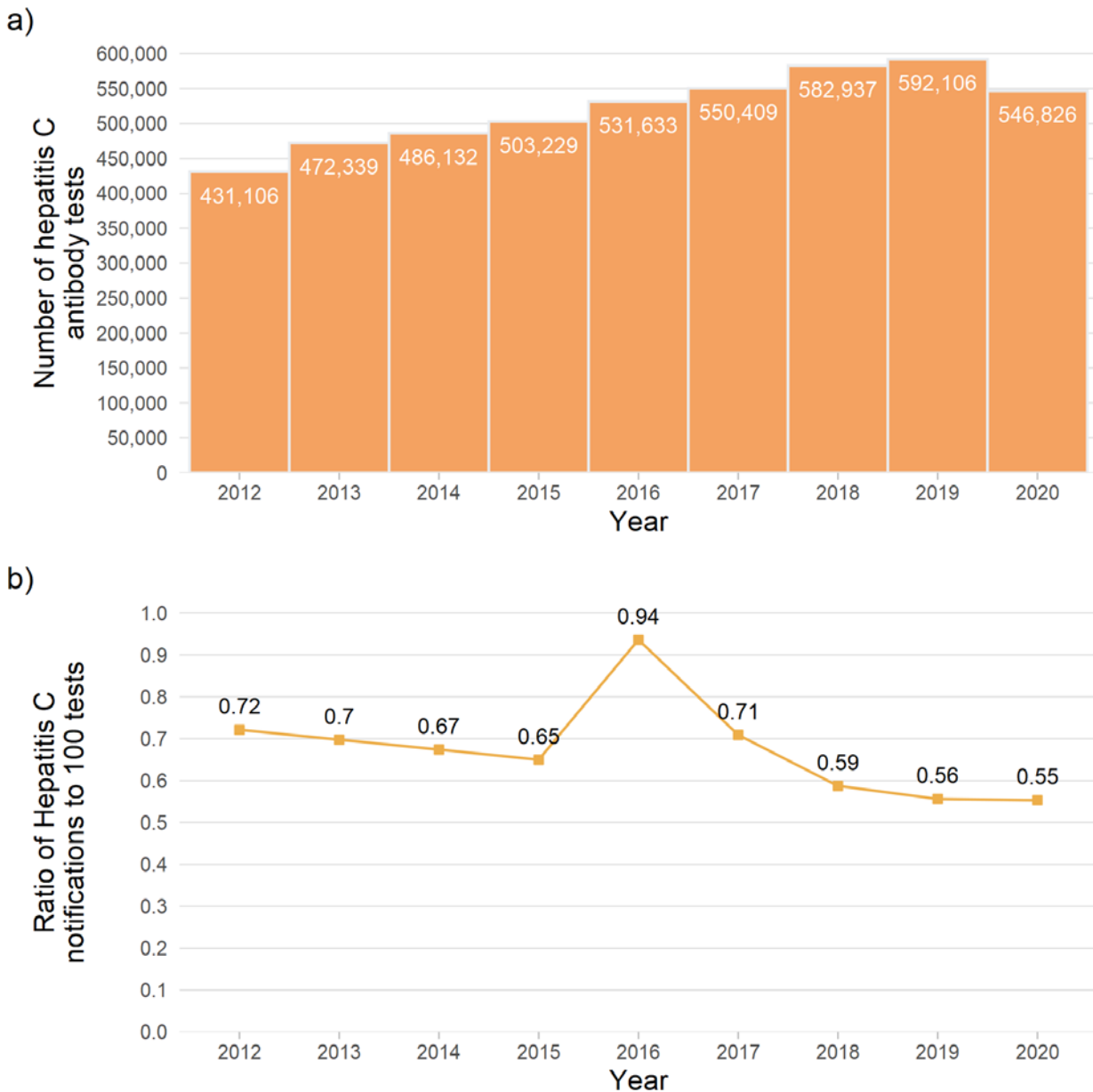
Hepatitis C infections in children are usually acquired through mother-to-child transmission during pregnancy or birth.



## 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 ratio<sup>3</sup>, NSW, 2012-2020



Data sources: NSW denominator data project, NSW Health; data extracted 18 May 2021

In 2020

- In 2020, 546,826 tests for hepatitis C antibody were performed in 15 laboratories in NSW, a 7.6% decrease from 2019 (592,106 tests).

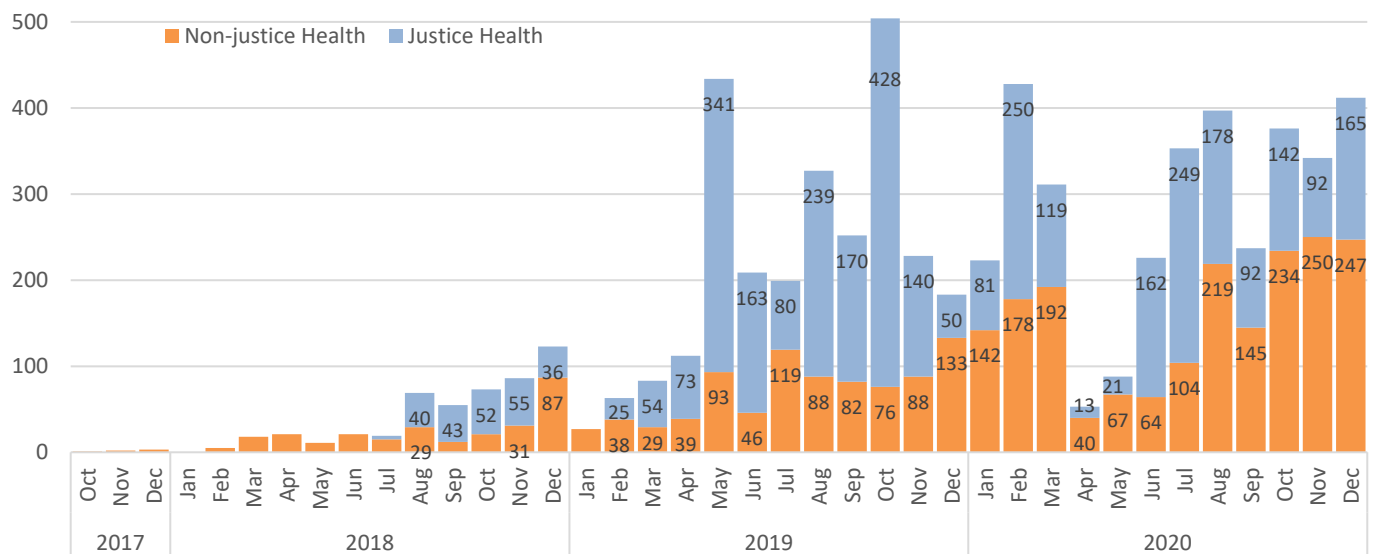
<sup>3</sup> See **Appendix: Table 7** for more details about methodology

The decline in overall testing throughout 2020 was likely largely due to impacts of the COVID-19 pandemic response. However, it is encouraging that the positivity percentage remained stable, which suggests that testing remained well targeted throughout the year.

[Dried Blood Spot \(DBS\)](#) is an innovative finger stick test for HIV and hepatitis C that is accessed by eligible people online or via a settings-based approach. The NSW DBS Self-Sampling Testing Pilot Program aims to increase testing among high-risk populations who experience barriers to testing through conventional services.

In September 2019, the pilot was updated to expand access to at-risk populations. As part of the update, participants can be tested for hepatitis C without an HIV test. People eligible for a hepatitis C test can still opt-in for an HIV test.

**Figure 9: Number of hepatitis C Dried Blood Spot (DBS) tests completed in NSW in Justice Health settings and non-Justice Health settings<sup>4</sup> between 1 October 2017 and December 2020**



Data sources: Dried Blood Spot (DBS) Testing Pilot, NSW Health

In 2020:

- There were 1,882 hepatitis C DBS tests completed in non-Justice Health settings and 1,564 tests completed in Justice Health settings
- There was a decrease in the number of DBS tests completed in April and May likely due to COVID-19 restrictions.
- There were 447 DBS tests that were reactive for hepatitis C in 2020 (13% reactivity) and 878 DBS tests that were reactive for hepatitis C since October 2017 (13% reactivity).

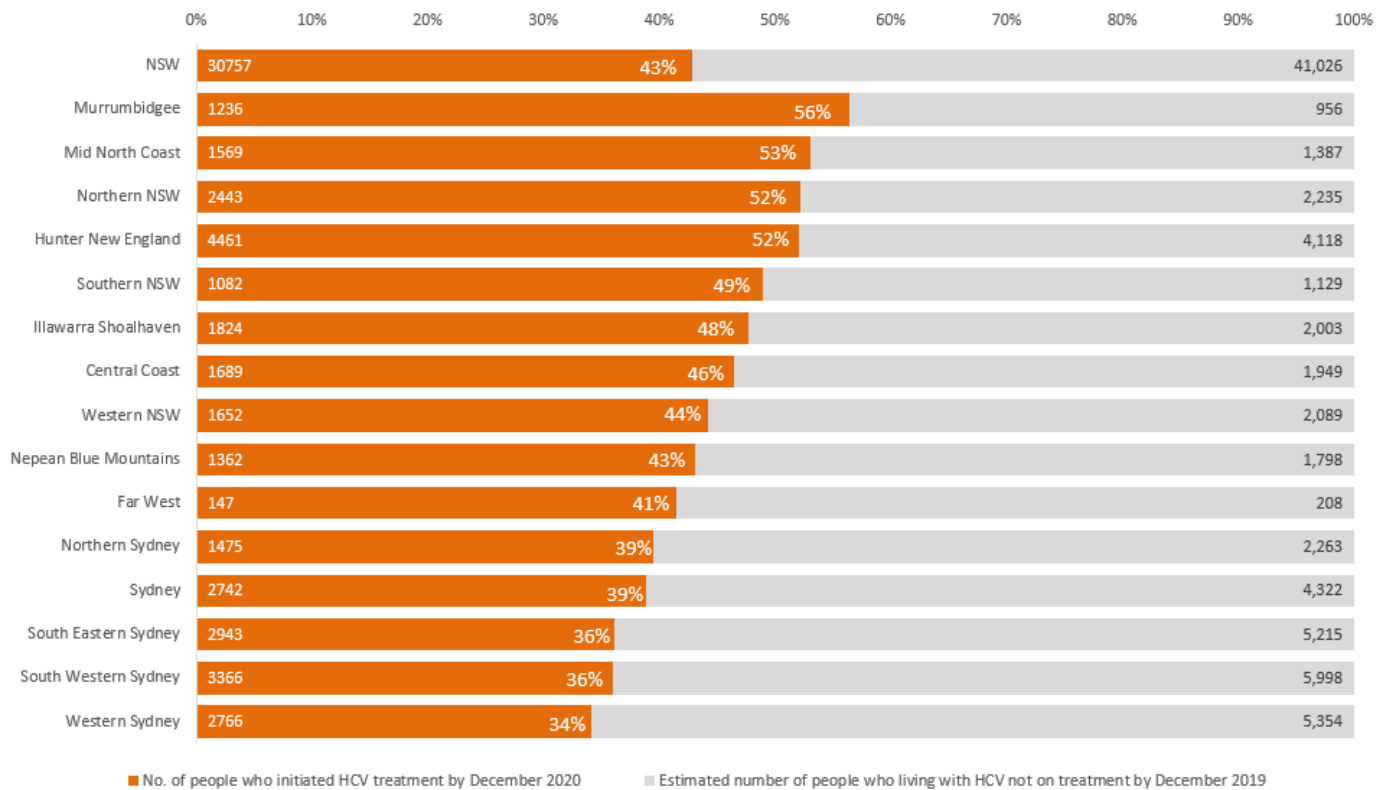
Note: The number of hepatitis C Dried Blood Spot (DBS) tests completed in NSW in Justice Health settings and non-Justice Health settings between 2017 and 2020 is not included in figure 8 due to the DBS test being in a pilot phase where results are not linked to the NSW denominator data project.

<sup>4</sup> See **Appendix: Table 5** for more information

### 3. Hepatitis C treatment access

#### 3.1 How many people are accessing hepatitis C treatment?

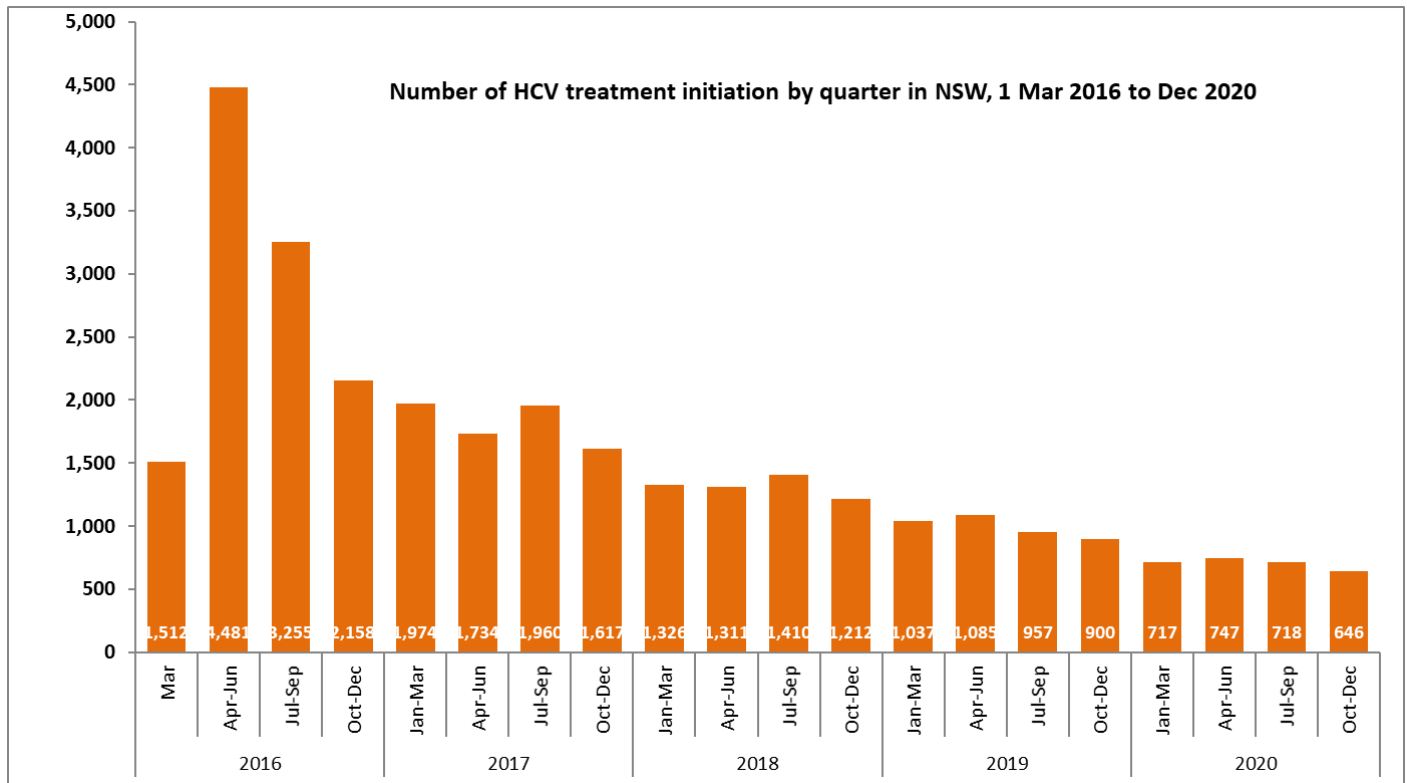
**Figure 10: Number of residents initiating hepatitis C treatment in NSW between 1 March 2016 and 31 December 2020 by LHD of patient residence, compared to the estimated number of people living with hepatitis C in 2019**



Data source: PBS data (treatment initiation); The Kirby Institute, 2020 Updated 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 2020, 2,828 people had initiated hepatitis C treatment.
- As of December 2020, 43 per cent (30,757) of the estimated 71,783 people in NSW with hepatitis C have initiated treatment.

**Figure 11: Number of residents initiating hepatitis C treatment in NSW by quarter, 1 March 2016 - 31 December 2020**

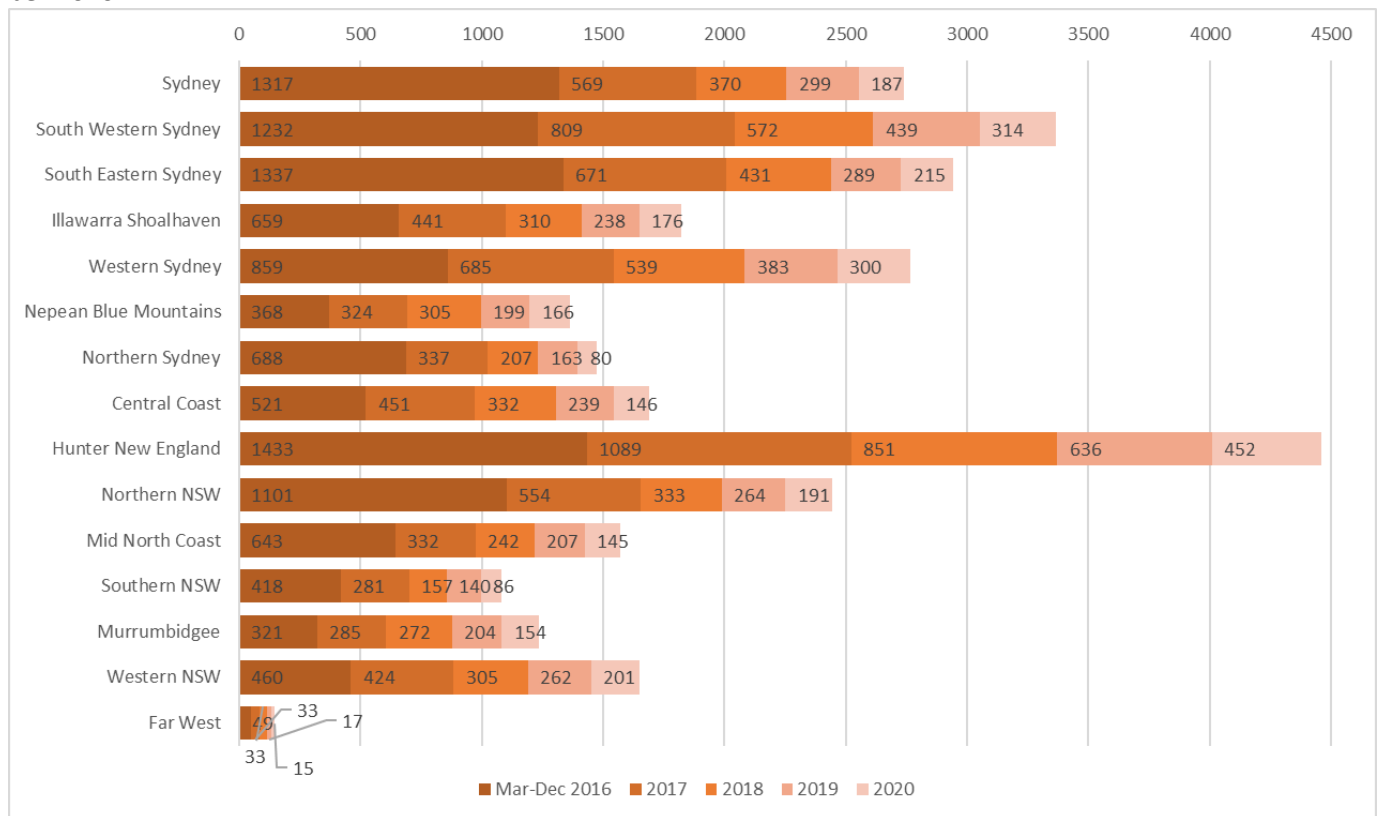


Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

From 1 March 2016 to 31 December 2020:

- The number of residents initiating hepatitis C treatment each quarter continues to decrease. Between October and December 2020, 646 people in NSW who had initiated hepatitis C treatment. COVID-19 restrictions may also have impacted treatment initiations in 2020.
- Further efforts are needed by districts to actively find people with hepatitis C and link them to treatment services.

**Figure 12: Number of residents initiating hepatitis C treatment in NSW by LHD by year, 1 March 2016 - 31 December 2020**

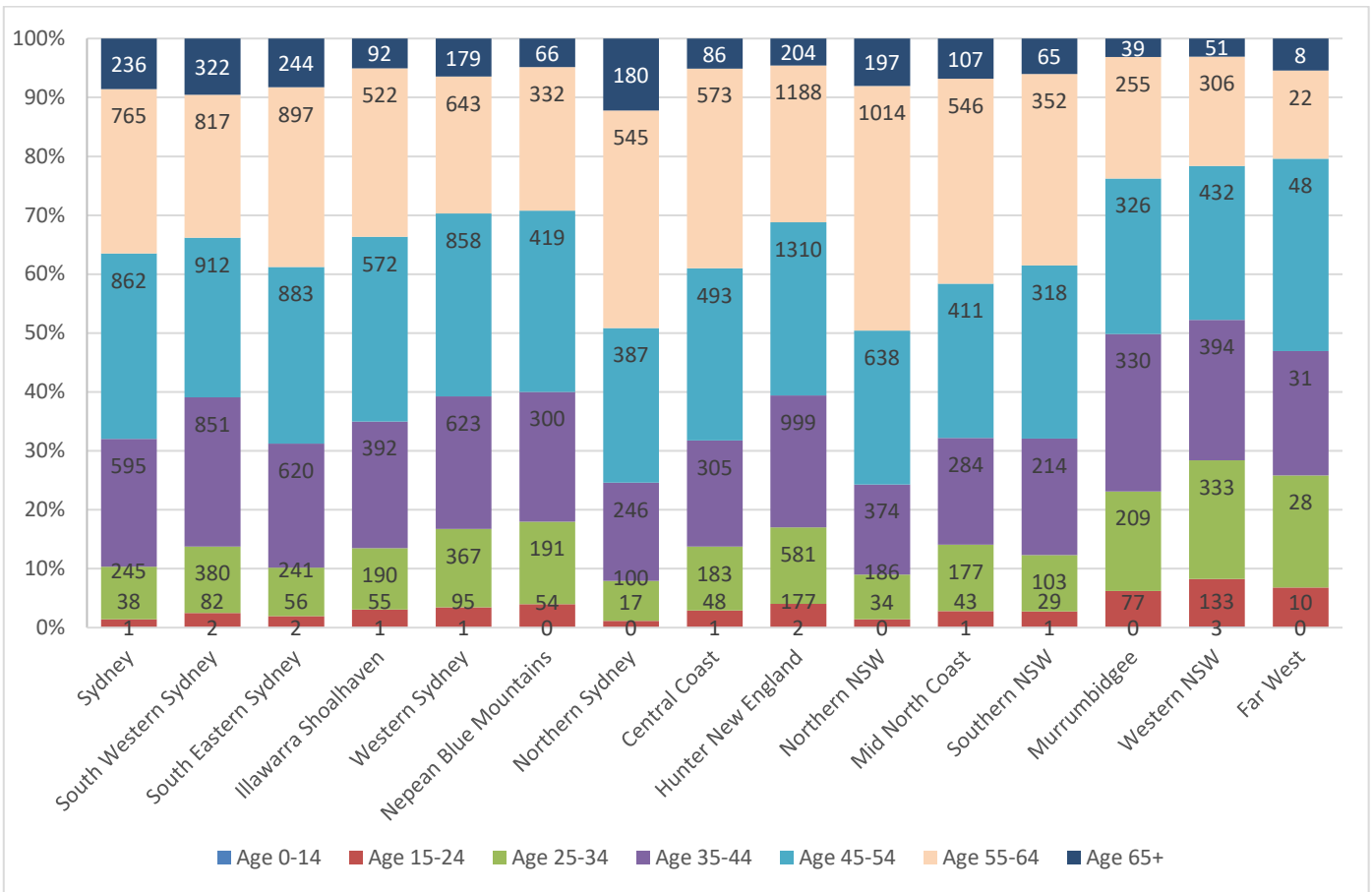


Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

Between 1 March 2016 and 31 December 2020:

- 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 13: Number of people in NSW dispensed hepatitis C treatment by age group and LHD of patient residence, March 2016 - 31 December 2020**

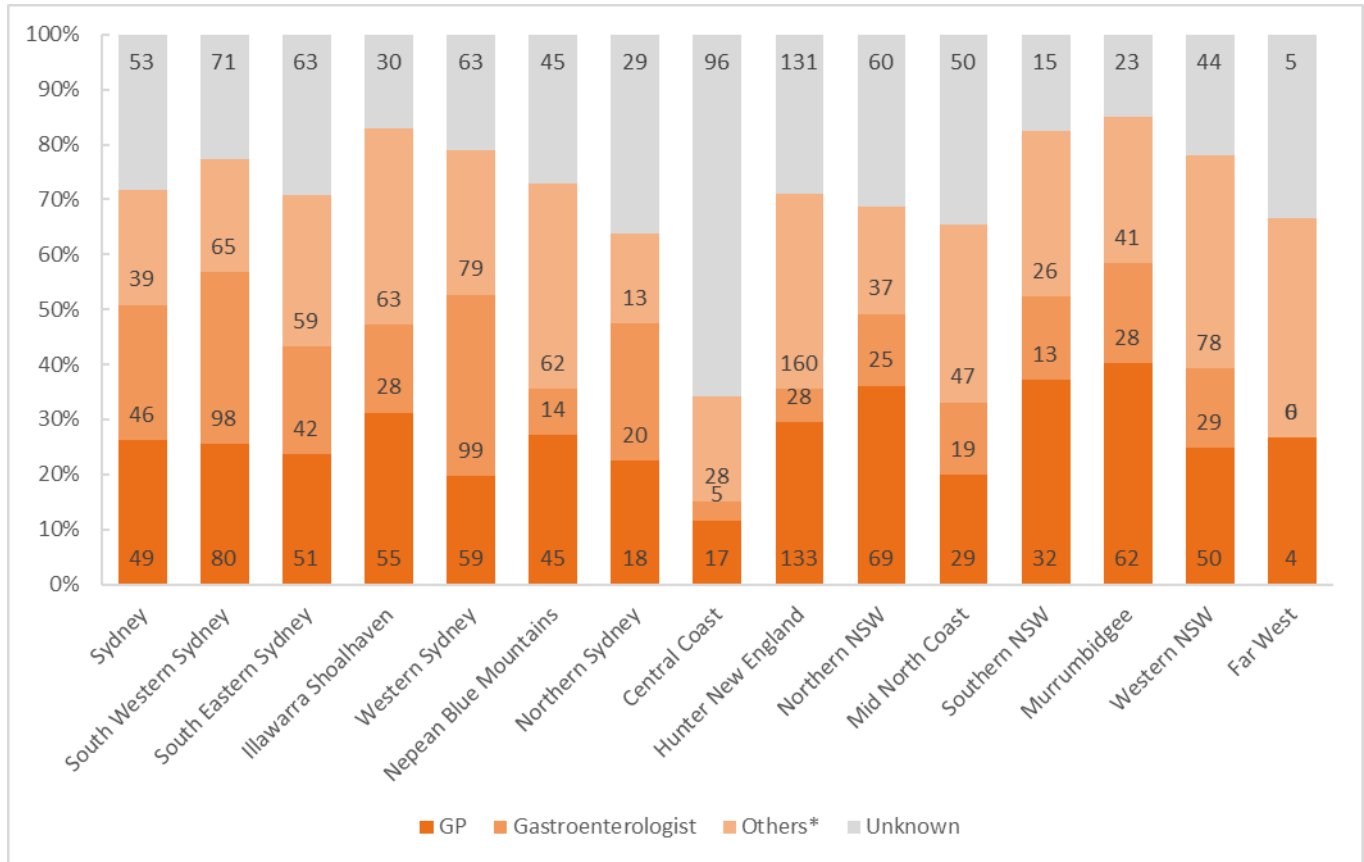


Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Programme data

Between 1 March 2016 and 31 December 2020:

- Among the people who initiated hepatitis C treatment in NSW, 69% (21,150) were male and 31% (9,605) were female.
- The larger number of residents initiating hepatitis C treatment were mainly from age groups 35 to 44 years, 45 to 54 years and 55 to 64 years. There were more people aged 65+ initiating treatment in South Western Sydney, South Eastern Sydney, Sydney, Hunter New England, Northern NSW and Northern Sydney.

**Figure 14: Number of people in NSW dispensed hepatitis C treatment by LHD of patient residence, by prescriber type<sup>5</sup>, 1 January - 31 December 2020**



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. \*'Other' includes non-vocationally registered GPs and all prescriber speciality areas, except gastroenterologists. The number and proportion of people initiating treatment across LHDs exclude Justice Health Settings. NSW Health continues to work with the PBS to increase accuracy of prescriber type data.

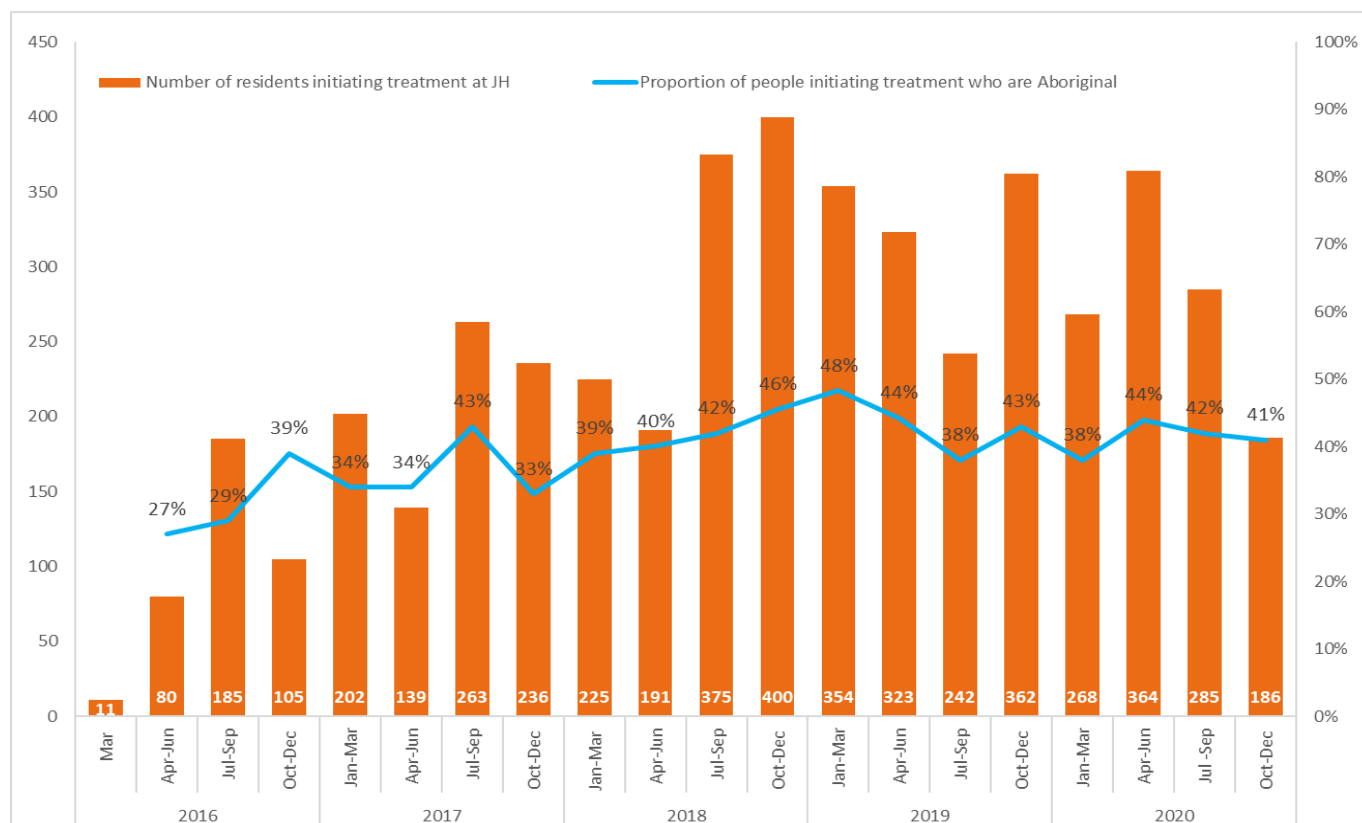
- From 1 January to 31 December 2020, the proportion of NSW residents initiating hepatitis C treatment by a general practitioner (GP) was 27 per cent.

<sup>5</sup> 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 15: Number of people initiating treatment in Justice Health, including the number and proportion of people who identify as Aboriginal, 1 March 2016 - 31 December 2020**



Data source: Data were from Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data between 1 March 2016 and 31 December 2020 (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 2020, data were reported by Justice Health.

- Between 1 March 2016 and 31 December 2020, 5,378 NSW residents initiated hepatitis C treatment in Justice Health settings.
- In 2020, a total of 1,103 NSW residents who had initiated hepatitis C treatment in Justice Health; the proportion of those initiating treatment who are Aboriginal people increased from 38% in first quarter to 44% in the second quarter, then decreased to 41% in the fourth quarter in 2020.
- Throughout 2017 to 2020, 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 2020, 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 evidence based, 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 2020. Among people participating in the NSW Needle and Syringe Program Enhanced Data Collection (NNEDC) in 2020:

- 19 per cent identified as Aboriginal and/or Torres Strait Islander
- 21 per cent of respondents had experienced homelessness
- 11 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 2020 (NNEDC)

Note: The NNEDC provides an annual snapshot of NSW client demographic and drug use behaviour. In 2020 all 15 LHDs participated at 50 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 50 of the 286 primary and secondary outlets participating in 2020, including all 29 primary NSPs in NSW. The NSW NSP also includes automatic dispensing machines and pharmacies that are not captured as part of the survey. The type and number of NSP outlets by LHD is at Appendix Figure 32.

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

Among respondents in the 2020 NNEDC, reports of receptive syringe sharing (RSS) in the previous month declined significantly to 16% (compared to 20% in previous years). This may suggest that less people are sharing injecting equipment. At the time of the survey, NSW Health released messaging for people to avoid physical contact with others to prevent COVID-19 transmission. This may have impacted reported RSS rates. Factors associated with an increased risk of RSS included recent homelessness, those who were imprisoned in the previous 12 months and daily or more frequent injecting habits.

Twenty four per cent of respondents reported being prescribed opioid agonist treatment (OAT), however this was not associated with decreased RSS.

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

- As of June 2020, the public NSW NSP had 29 primary outlets, 257 secondary outlets, 197 automatic dispensing machines (ADMs) and 72 internal dispensing chutes (IDCs).
- The number of units of injecting equipment distributed in NSW reduced slightly (-1%) from 15,395,545 in 2019 to 15,215,379 in 2020. This included:
  - 13,589,197 units dispensed at public outlets
  - 1,626,182 units dispensed at NSW pharmacies

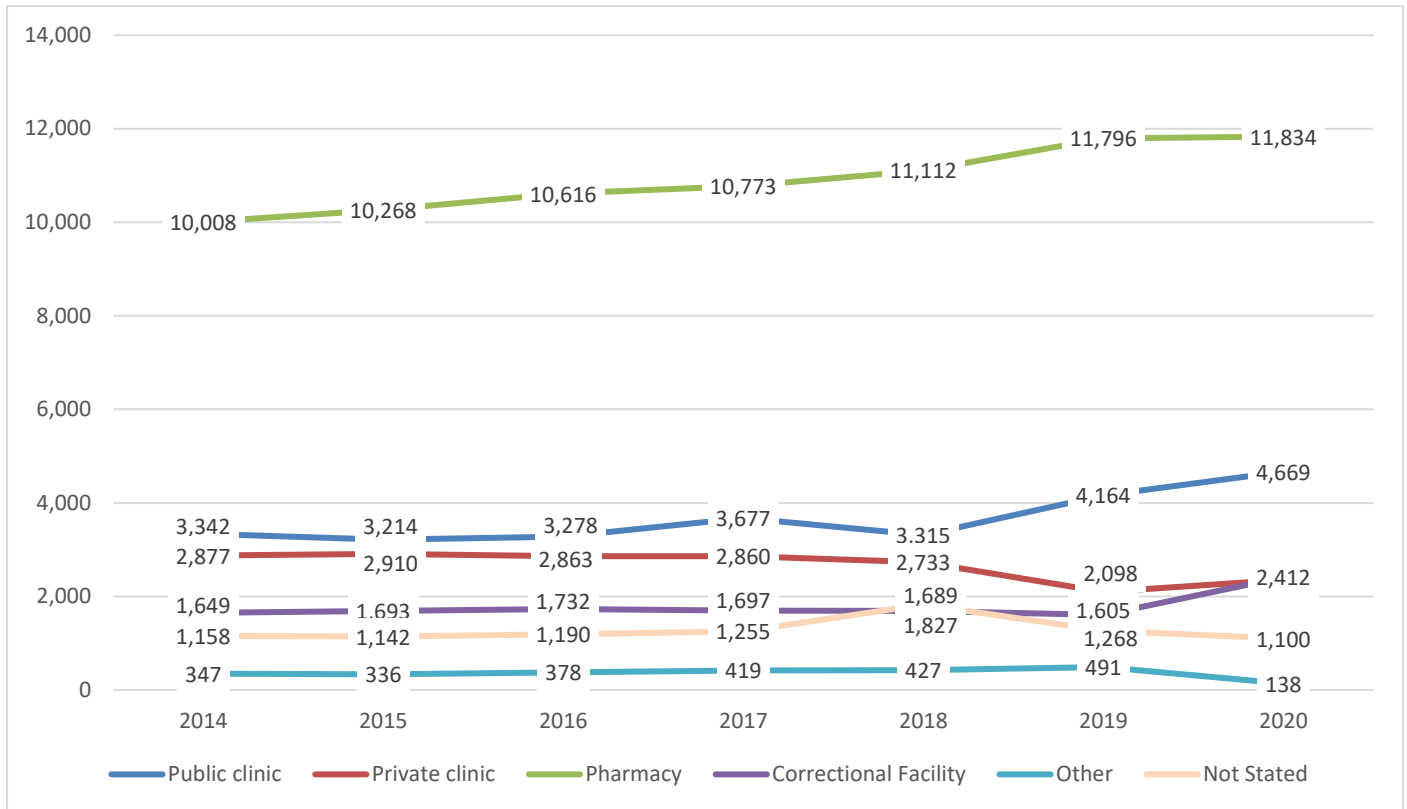
Note: The total includes additional units ordered from The Pharmacy Guild of Australia (NSW Branch) by individual pharmacies, but not allocated to an LHD.

Note: The number of units of injecting equipment distributed by LHD is at **Appendix Table 6**

#### 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.

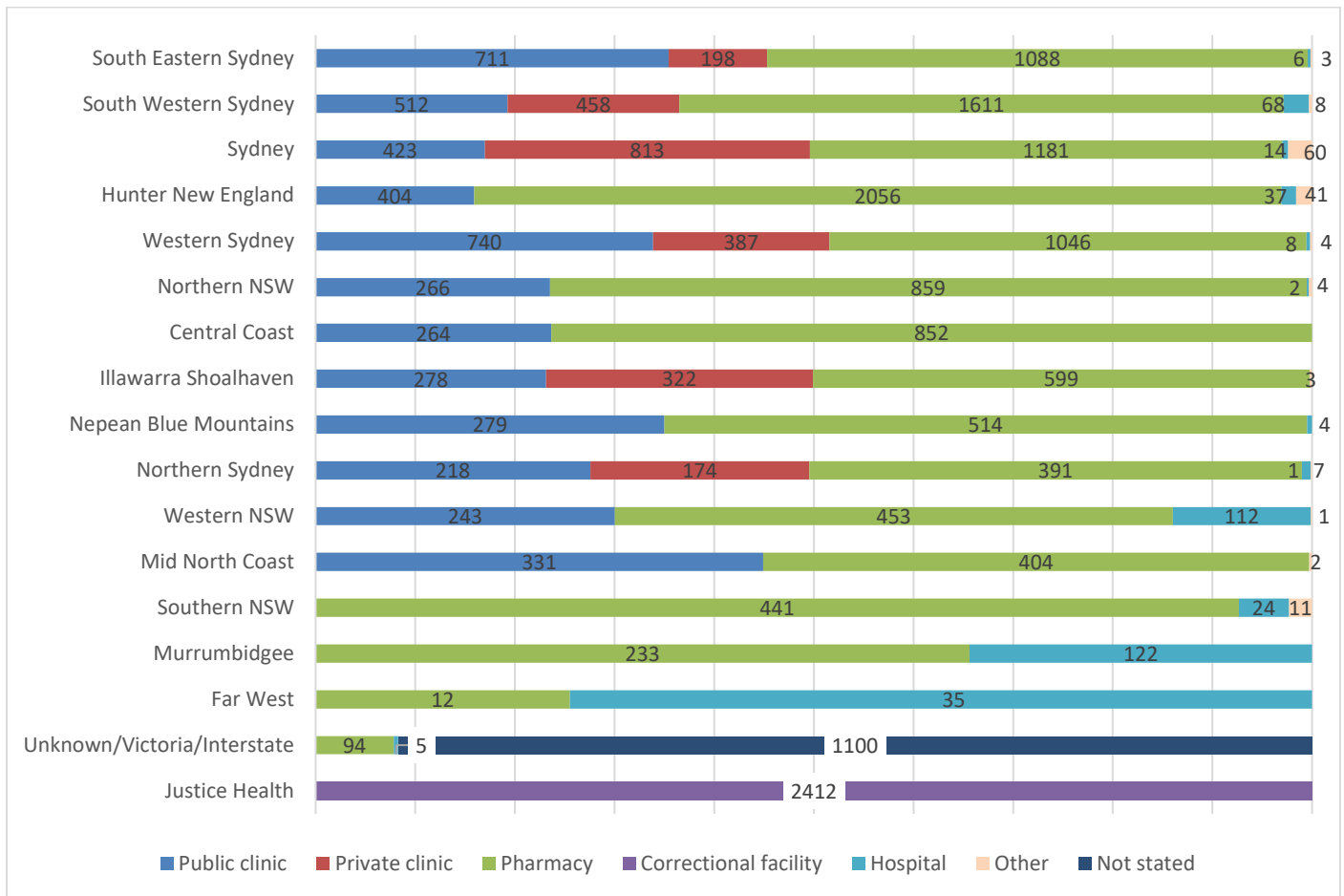
**Figure 16: Number of people participating in the Opioid Treatment Program, by dosing point, at 30 June 2014 – 2020**



Data source: National Opioid Pharmacotherapy Statistics Annual Data 2014-2020

- In 2020, 22,949 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 2020 community pharmacy dosing was consistently the most common dosing point in each time period. In 2020, over 53 per cent of clients (11,834) received treatment at a community pharmacy; 21 per cent of clients (4,669) received treatment at a public clinic; and 10 per cent of clients (2,352) received treatment at a private clinic. “Other” (138) accounts for clients dosed in hospital and community health settings, and “Not Stated” (1,100) accounts for clients that may have moved dosing point, but the data has not been updated with the Pharmaceutical Regulatory Unit.

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 17: Number of people participating in the Opioid Treatment Program, by dosing point, by LHD, at 30 June 2020**

Data source: Pharmaceutical Drugs and Addiction System (PHDAS), NSW Health up to June 2020; 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 Western Sydney, Hunter New England, Sydney, Western Sydney, South Eastern Sydney and Justice Health.
- The highest number of people treated in public clinics occurs in Sydney, South Western Sydney, Western Sydney, South Eastern Sydney, South Western Sydney, and Sydney.
- The highest number of people treated in private clinics occurs in Sydney, South Western Sydney and Illawarra Shoalhaven.
- 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.

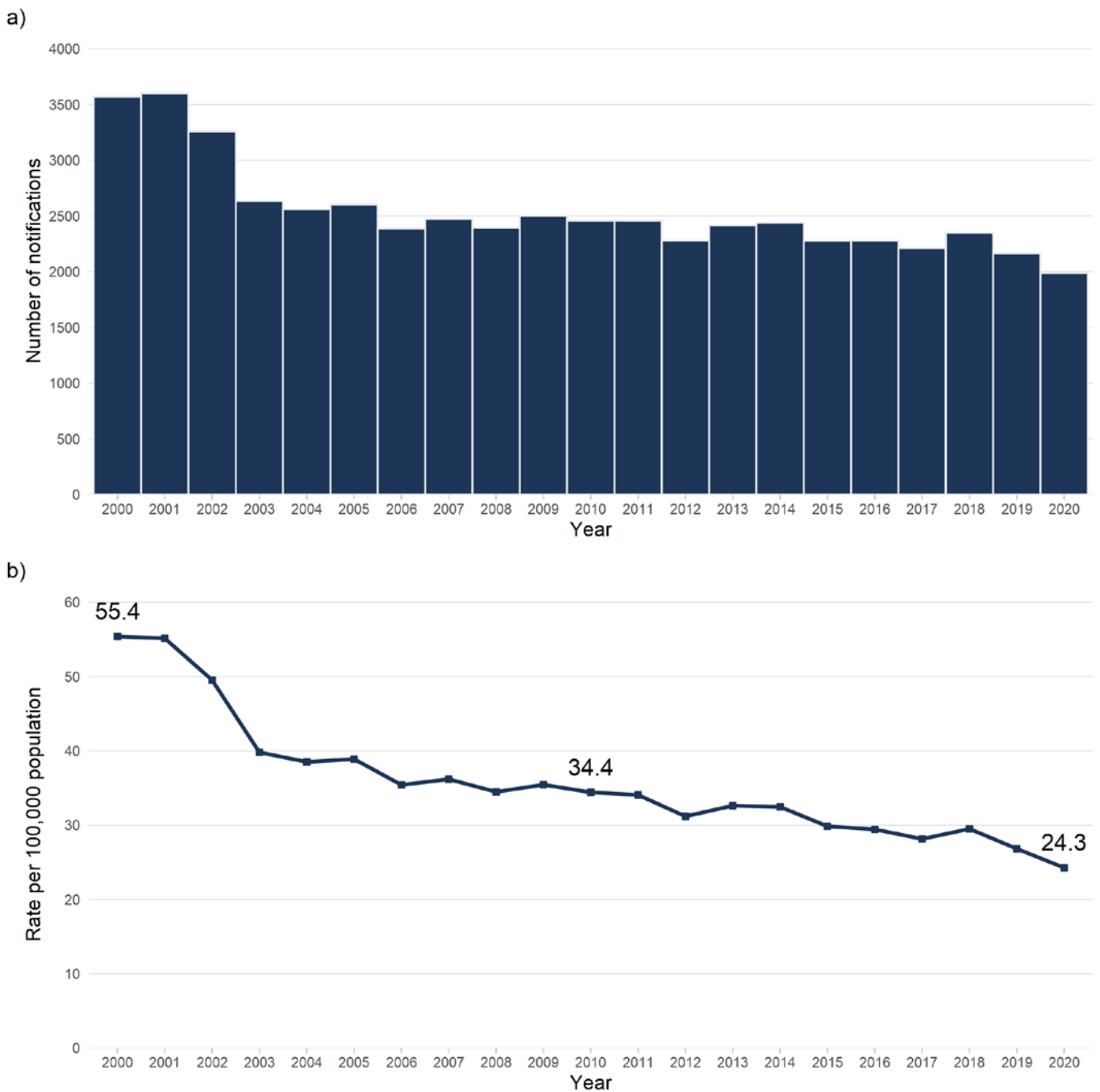
## Hepatitis B

### 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 18: Number and rate of hepatitis B notifications, NSW, 2000-2020



Data source: NCIMS and ABS population estimates (SAPHaRI), NSW Health; data extracted 18 May 2021.

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

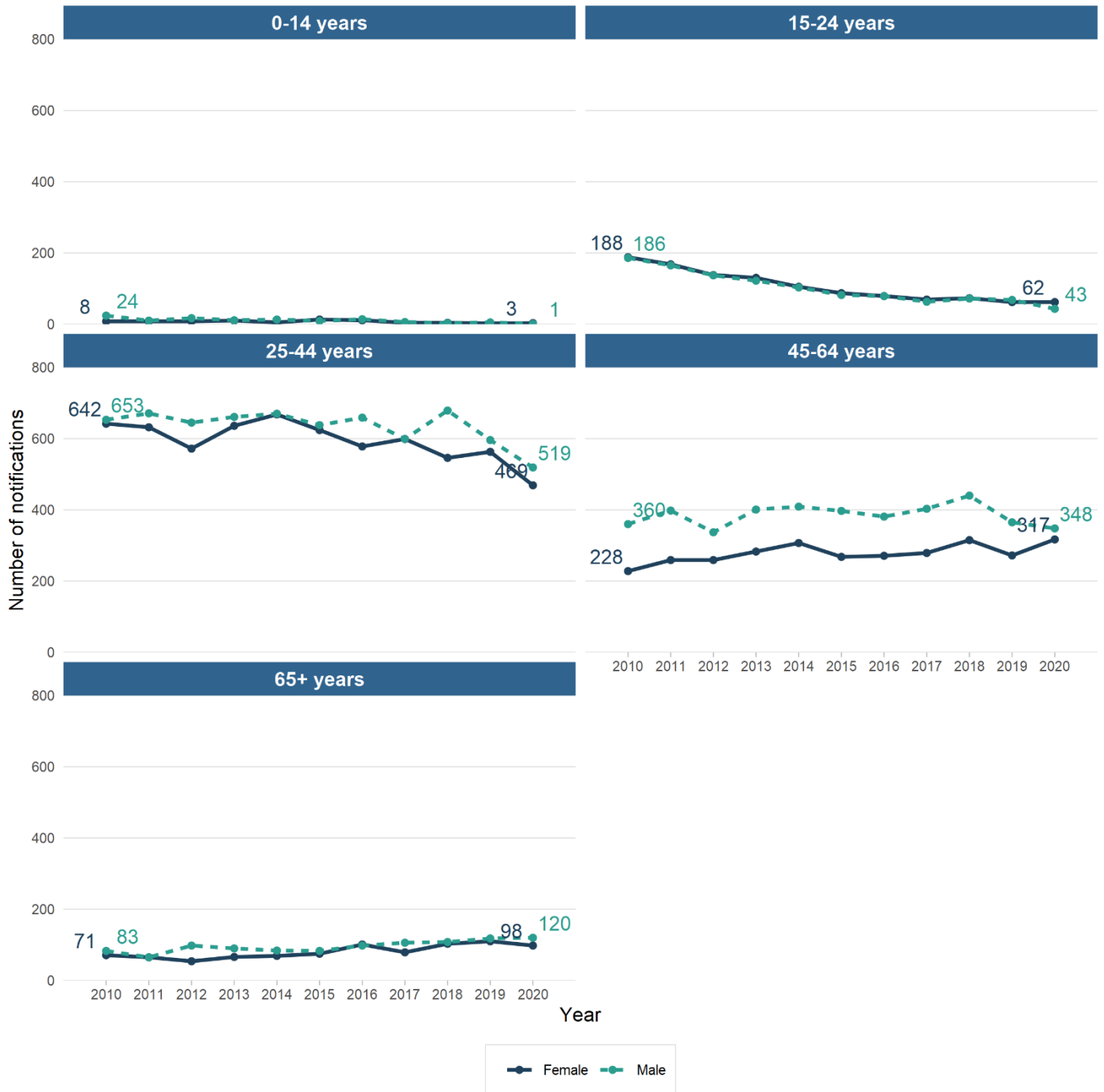
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In 2020:

- There were 1,991 hepatitis B notifications in NSW.
- The hepatitis B notification rate has declined in NSW since 2001. In 2020, there was a 9.3% decrease compared to the previous year, with 24.3 notifications per 100,000 population compared to 26.8 notifications per 100,000 population in 2019.

### 5.2 Which groups are being notified?

Figure 19: Hepatitis B notifications in NSW by age group and year of diagnosis, 2010-2020



Data source: NCIMS, NSW Health; data extracted 18 May 2021.

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

In 2020:

- The largest number of hepatitis B notifications, 993, continued to occur amongst people aged 25-44 years. Compared to 2019, the notifications in this age group declined by 12.4% for males and 16.3% for females (total decrease of 14.3%).

The number of hepatitis B notifications also declined in the 15-24 years age group, with 19.2% reduction compared to 2019. The continued downward trend in the younger age group may be related to the catch-up immunisation

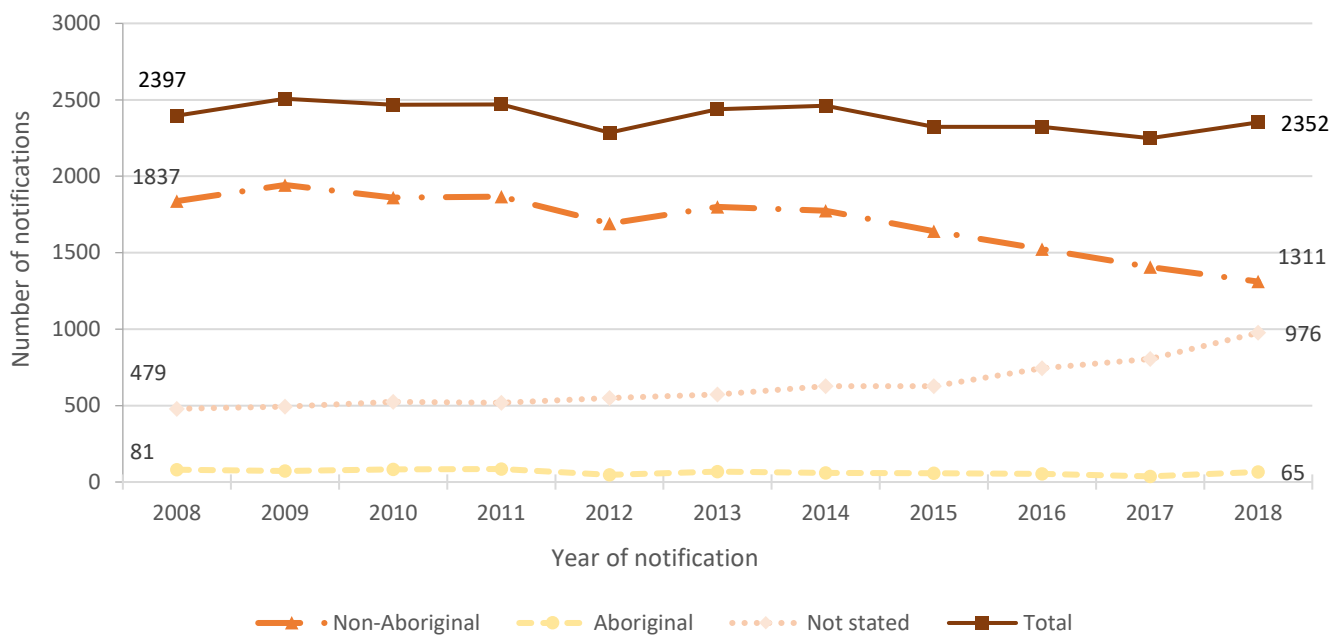
program for adolescents, which was introduced as a school-based program in 2004, and to universal routine immunisation of infants which commenced in NSW in May 2000.

Hepatitis B notifications increased by 4.4% amongst people aged 45-64 years.

A very small number of hepatitis B notifications continued to occur amongst people aged 0-14 years with four notifications received in 2020, which is three less than 2019.

### Figure 20: Hepatitis B notifications by Aboriginality, NSW, 2008-2018

Note: Due to the COVID-19 pandemic, extraction of hepatitis B Aboriginality data has been delayed. The data presented is from the 2019 NSW Hepatitis B and Hepatitis C Annual Data Report and is not an accurate reflection of the 2020 hepatitis C notifications by Aboriginality in NSW. An updated report will be published once this data is available.



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.<sup>6,7</sup> 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.

<sup>6</sup> Work is currently underway to update the data contained in the Communicable Diseases Register and this will be published in future reports.

<sup>7</sup> See **Appendix: Table 3** for details about methodology

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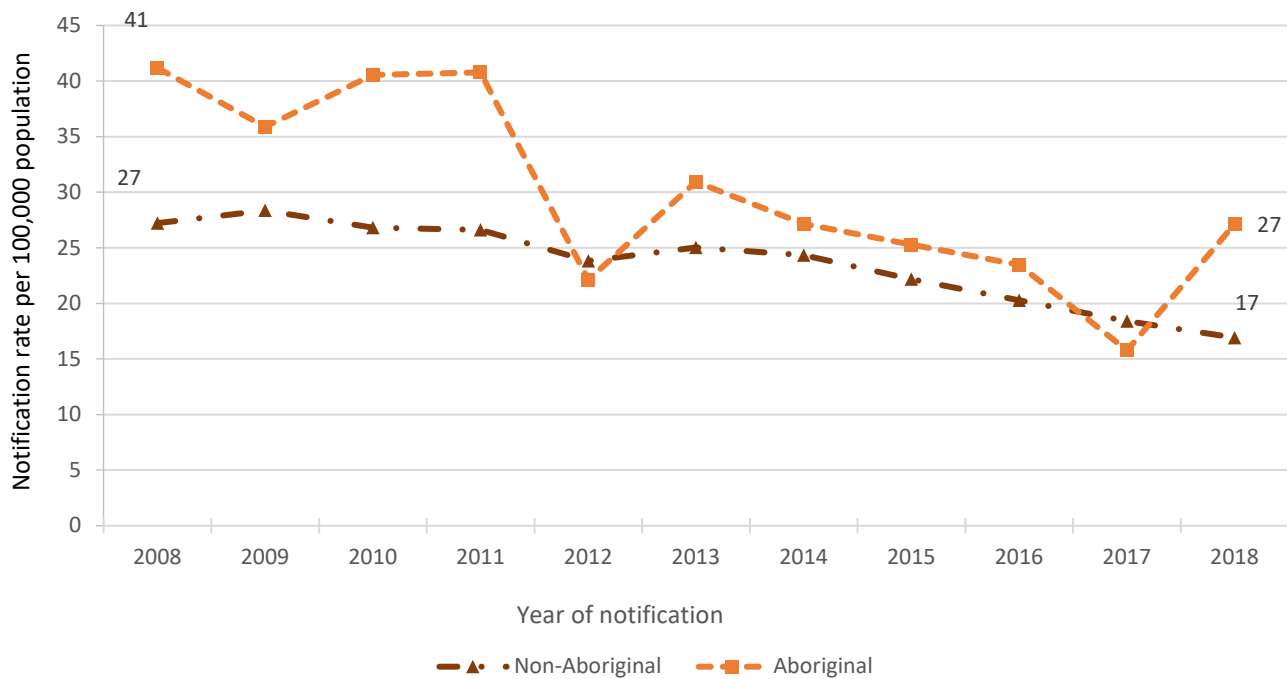
Note: Trends in the Aboriginal population are difficult to interpret due to variation in the yearly number of people for whom Aboriginal status was not stated, and the high proportion of incomplete data compared to the proportion who are Aboriginal people.

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.



**Figure 21: Hepatitis B notification rate by Aboriginality, NSW, 2008-2018**

Note: Due to the COVID-19 pandemic, extraction of hepatitis B Aboriginality data has been delayed. The data presented is from the 2018 NSW Hepatitis B and Hepatitis C Annual Data Report and is not an accurate reflection of the 2020 hepatitis C notifications by Aboriginality in NSW. An updated report will be published once this data is available.



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.<sup>1,2</sup> 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. 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 22: Hepatitis B notification rate, by LHD of residence, NSW, 2015-2020



Data source: NCIMS, NSW Health; data extracted 18 May 2021.

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 2020:

- Western Sydney and Sydney LHDs reported the highest rates of hepatitis B notification in NSW in 2020 at 43.5 and 41.0 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 2020, Far West had the highest notification rate among non-metropolitan LHDs with 23.2 notifications per 100,000 population; however, this only reflects a total of seven notifications received in 2020 compared to five in 2019.

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.

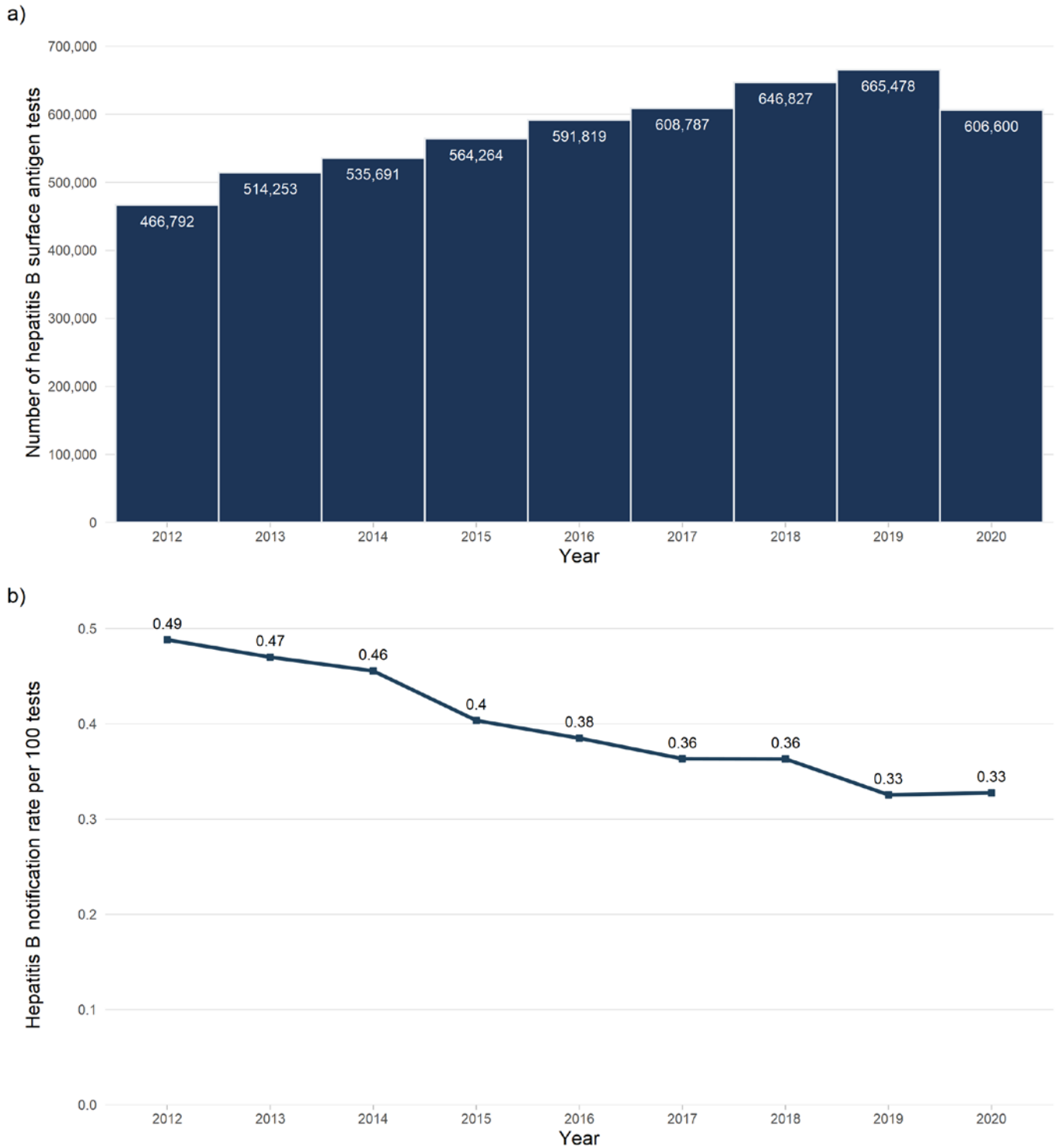
There is substantial variation in population size between the LHDs. For LHDs with a smaller population, such as Far West NSW, a small change in the number of notifications can have a large impact on the annual rate.

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 23: Number of tests for hepatitis B surface antigen and notification to test ratio<sup>8</sup>, 2012-2020



Data source: NSW denominator data project, Health Protection NSW, NSW Health, data extracted 18 May 2021

<sup>8</sup> See **Appendix: Table 2** for more details about methodology

**In 2020:**

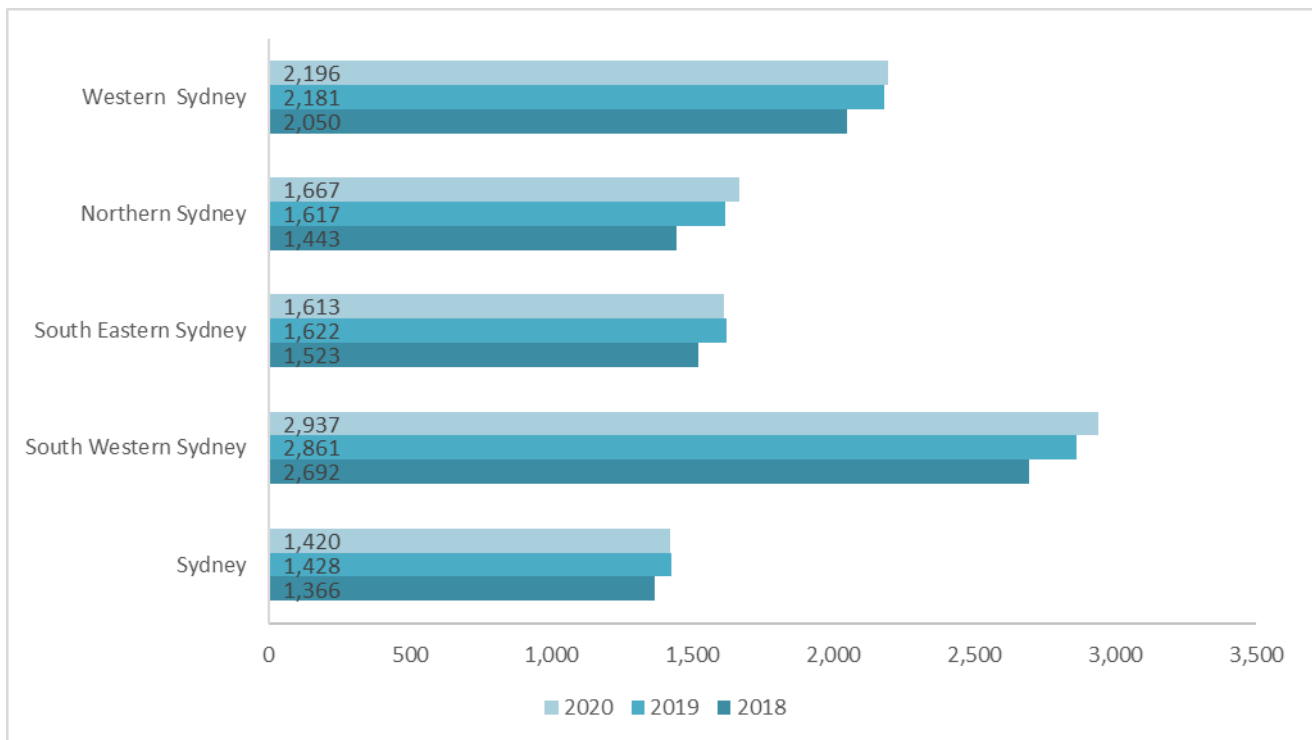
- The number of hepatitis B tests performed in NSW decreased slightly from its peak in 2019 due to the COVID-19 pandemic. In 2020, 606,600 tests for hepatitis B surface antigen were performed in 15 laboratories in NSW, an 8.8% decrease from 2019 (665,478 tests).
- The hepatitis B notification to test ratio remained stable in 2020 at 0.33 notifications per 100.

**7. Hepatitis B treatment access**

In 2017 there were an estimated 79,685 people living with chronic hepatitis B in NSW<sup>9</sup>. 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 treatment<sup>10</sup>. 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 24: Number of NSW residents<sup>11</sup> dispensed hepatitis B treatment in the five LHDs with the highest prevalence of hepatitis B, 1 January 2018 - 31 December 2020**



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January to 31 December 2020

Note: Figure 24 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 2020:**

- A total of 9,833 NSW residents in the five LHDs with the highest prevalence of hepatitis B were dispensed hepatitis B treatment, which accounted for 93% of the total number of residents dispensed hepatitis B treatment in NSW. This is an increase of 1% compared to the number of hepatitis B treatment dispensing in 2019 (9,709) and 8.4% in 2018 (9,074), respectively.

<sup>9</sup> 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

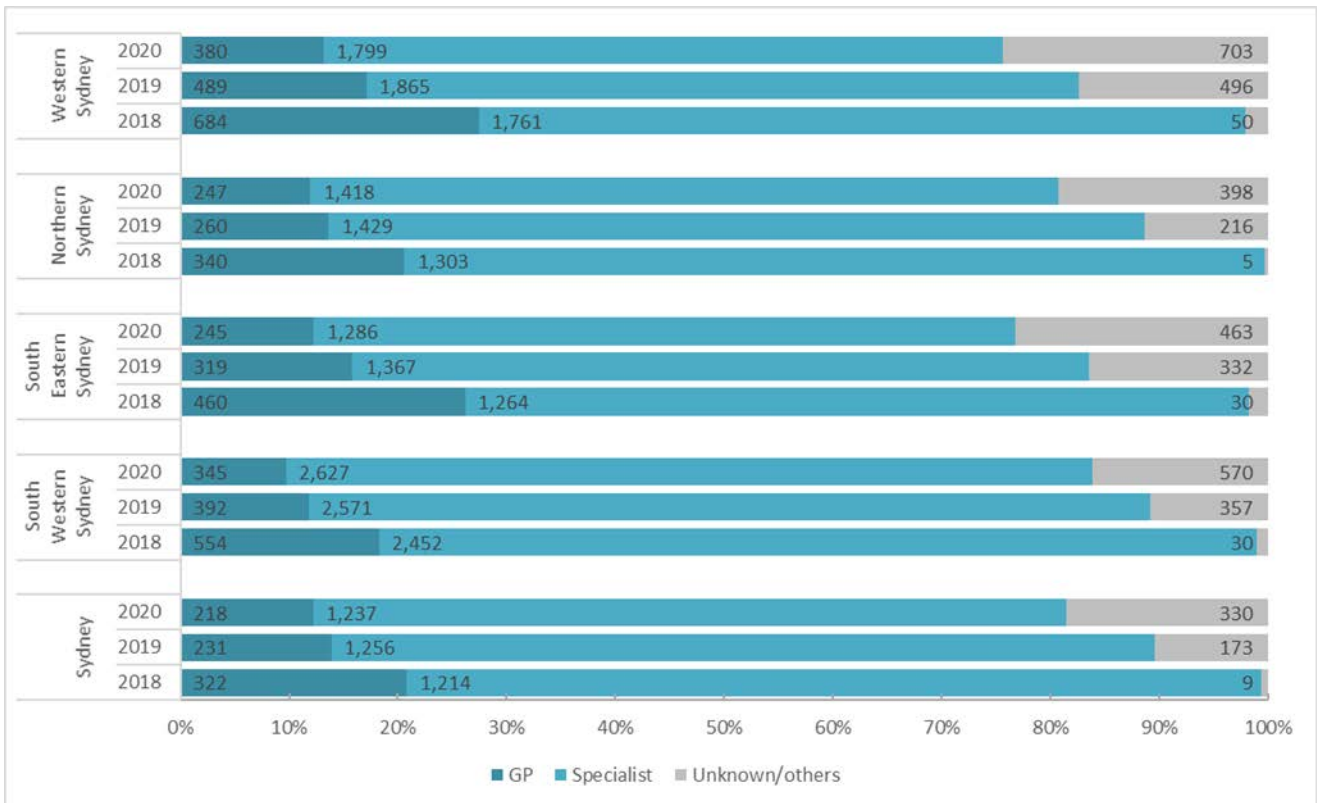
<sup>10</sup> Treatment is only beneficial in some stages of hepatitis B infection

<sup>11</sup> Figure 24 incorporates residents who were dispensed treatment in Justice Health settings

- A total of 11 NSW residents were dispensed hepatitis B treatment in Justice Health settings compared to 20 in 2019, and 18 in 2018.
- In NSW, 10,569 residents (unique number) were dispensed hepatitis B treatment, which is 13% of the estimated number of people living in NSW with CHB in 2016 (79,685).

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

**Figure 25: Number of NSW residents dispensed hepatitis B treatment in the five LHDs with the highest prevalence of hepatitis B, by prescriber type, 1 January 2018 - 31 December 2020**



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2018 to 31 December 2020

Note: Figure 25 incorporates residents who were dispensed treatment in Justice Health settings. Data for all other local health districts is at Appendix: Figure 33

Between 1 January 2020 to 31 December 2020

- 12% 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 3% less compared to the same period in 2019 (14%) and 10% less compared to 2018 (22%).

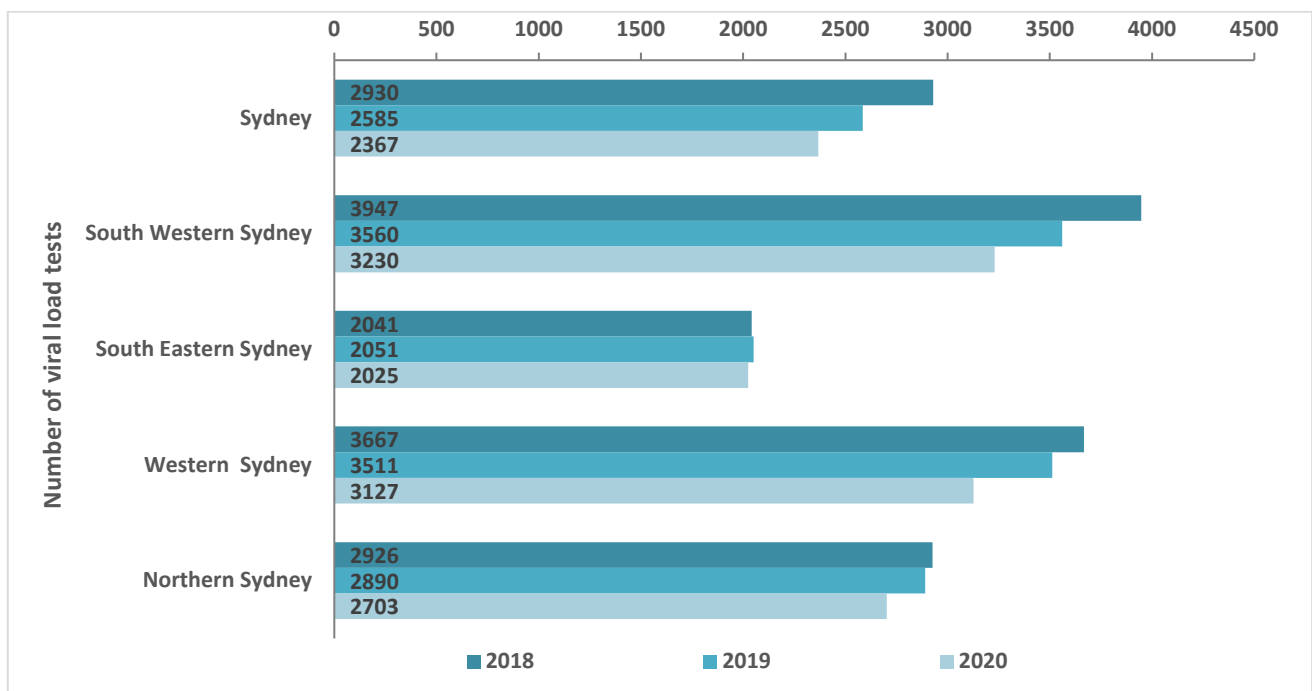
## 8. Management of hepatitis B

### 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.<sup>12 13</sup>

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 26: Number of people in the five high prevalence LHDs with CHB and not receiving treatment who had a HBV DNA viral load test via Medicare, 1 January 2018 – 31 December 2020**



Data source: Medicare Benefits Schedule, Department of Human Services

Note: Data from MBS is only available to 31 December 2020. 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 34

Between 1 January and 31 December 2020:

- In the five high prevalence LHDs, a total of 13,452 people with CHB not on treatment received an annual MBS viral load test. The number was 8% less than the number tested in the period between January and December 2019 (14,597) and 13% less than the numbers tested between January and December 2018 (15,511).

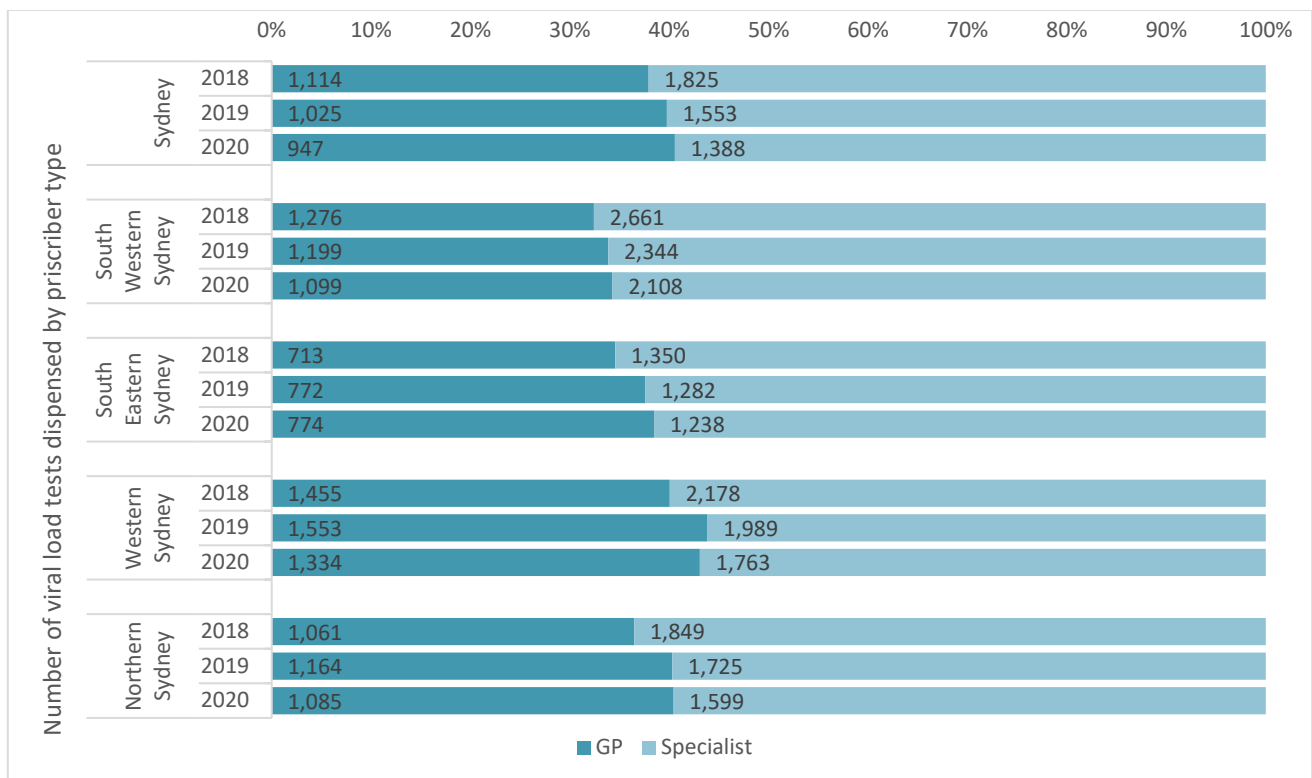
<sup>12</sup> HBV viral load testing under the Medicare Benefits Schedule (MBS) is used as a surrogate for guideline-based monitoring of people living with chronic hepatitis B who are not receiving treatment. Viral load testing is covered annually under MBS (item 69482) in line with the recommended guidelines. Those who are receiving antiviral therapy are monitored via a different MBS item (69483) for their viral load tests.

<sup>13</sup> 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)

- In NSW, a total of 14,951 people with CHB not on treatment received an annual MBS viral load test. The number was 7% less than the number tested in the period between January and December 2019 (16,158) and 12% less than the numbers tested from January to December 2018 (16,987).

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

**Figure 27: 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 2018 – 31 December 2020**



Data source: Medicare Benefits Schedule, Department of Human Services; Note: Data from MBS is only available to 31 December 2020. 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 2020:

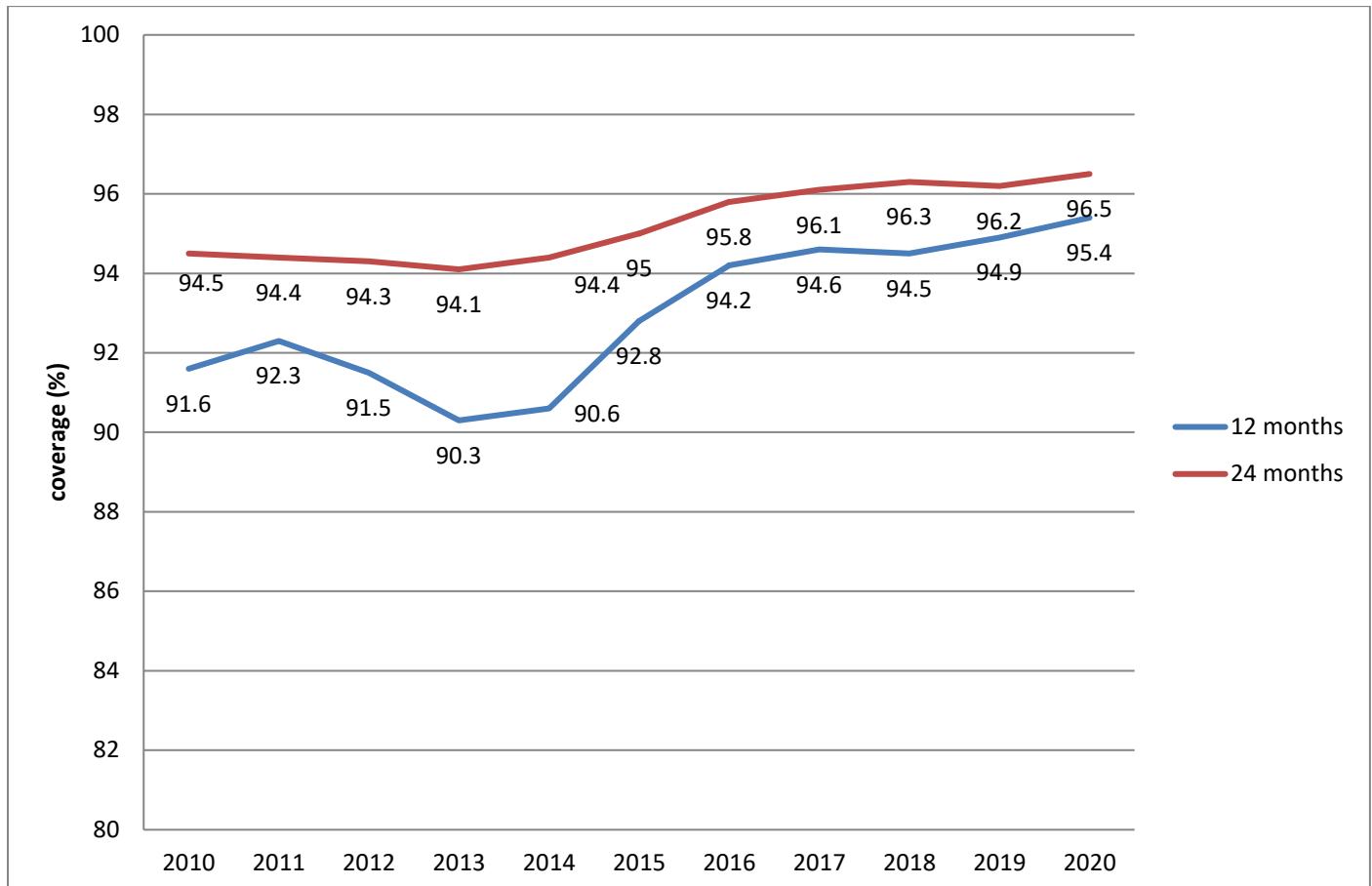
- In the five LHDs with high prevalence of HBV, 39% (5,239) of people with CHB not on treatment who received an MBS viral load test had their test requested by a GP and 61% (8,096) had their test requested by a specialist.
- The proportion of viral load test requested by a GP between January and December 2020 remained the same compared to the period from January to December 2019 (39%) and increased 3% compared to the period between January and December 2018 (36%).



## 9. Hepatitis B prevention investment

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

Figure 28: Proportion of infants in NSW who have received 3 doses of hepatitis B vaccine (measured at 12 and 24 months of age) 2014-2020



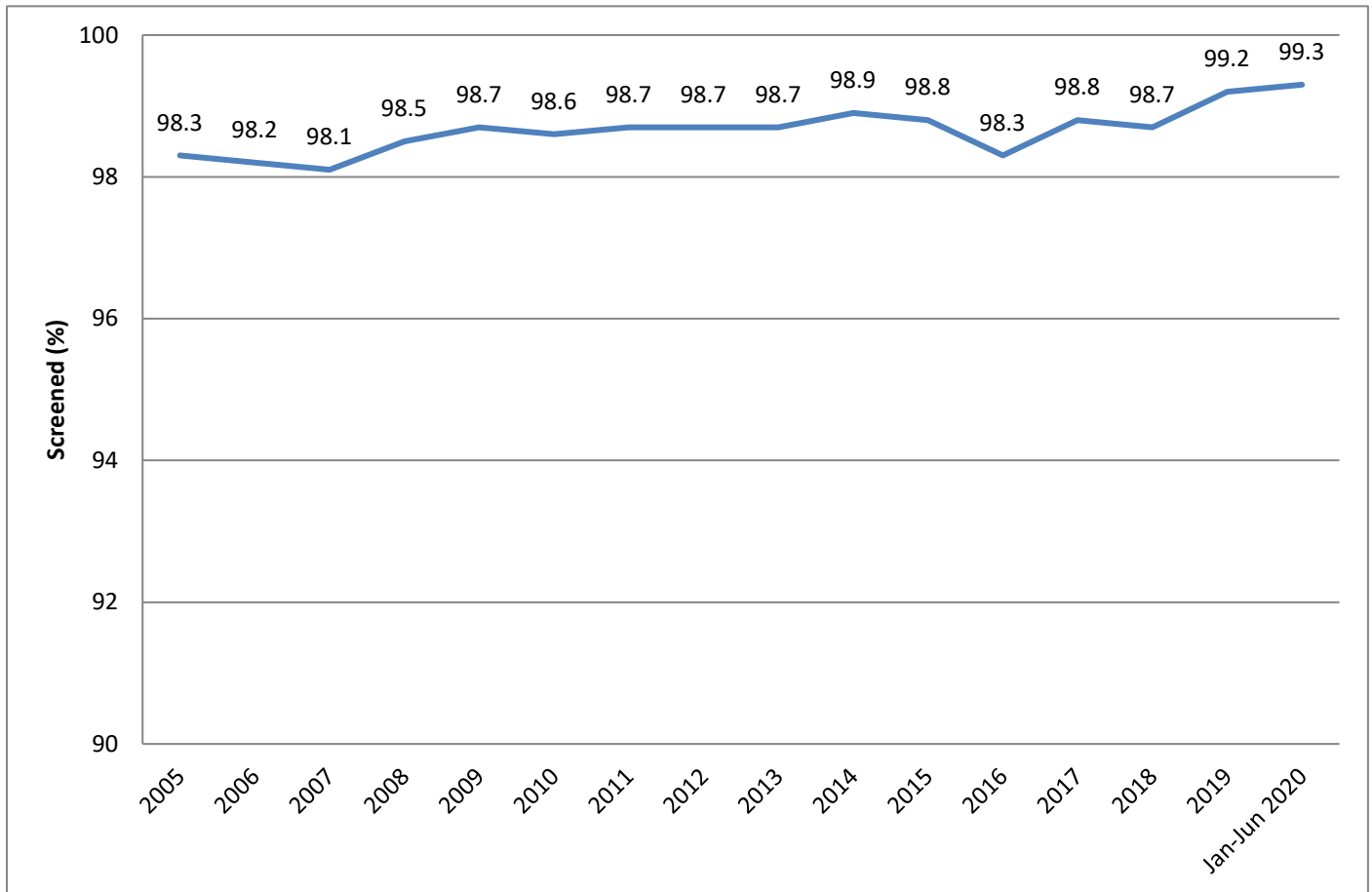
Data source: Australian Immunisation Register, Services Australia

- 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 2020 was 95.4 per cent compared to 94.9 per cent in 2019.
- At 24 months of age in 2020, 96.5 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 underreporting<sup>14</sup> influence reported vaccination rates.
- Hepatitis B vaccination coverage at 12 months and 24 months of age has been steadily increasing since 2014.

<sup>14</sup> 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 29: Proportion of women giving birth in a public or private hospital in NSW who are screened for hepatitis B January 2014 – June 2020

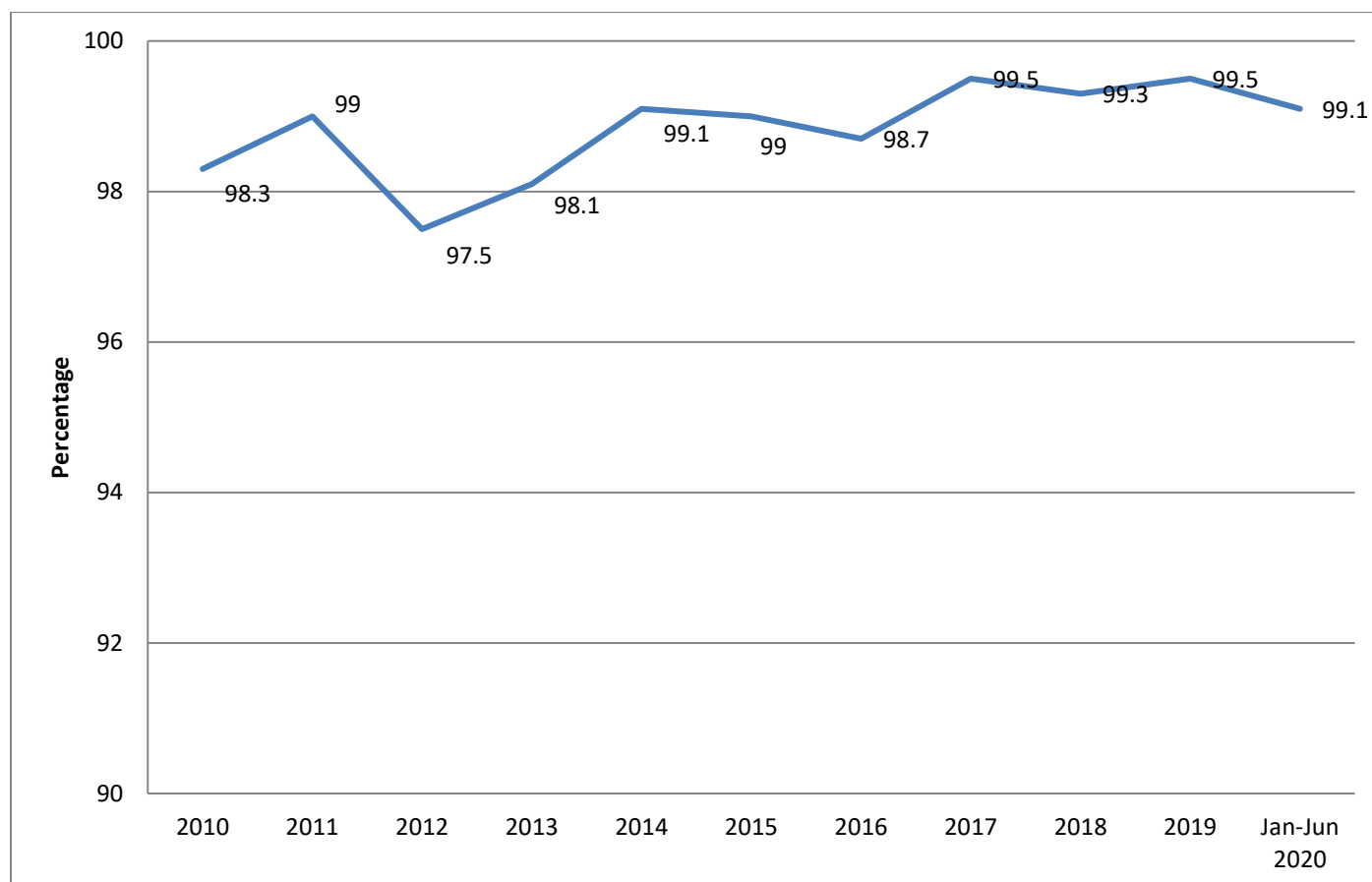


Data source: Neonatal Hepatitis B Vaccination Program Database, NSW Health

- The proportion of mothers giving birth in a public or private hospital in NSW in the 6 months January-June 2020 (the latest period for which data is available) screened for hepatitis B was 99.3 per cent, a slight increase on 99.2 per cent in the year 2019.
- 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 30: Proportion of neonates in NSW born to hepatitis B positive mothers who received hepatitis B immunoglobulin within 12 hours of birth, January 2014 – June 20



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

Table 1: Neonatal hepatitis B immunoglobulin administration (January 2014 – June 2020)

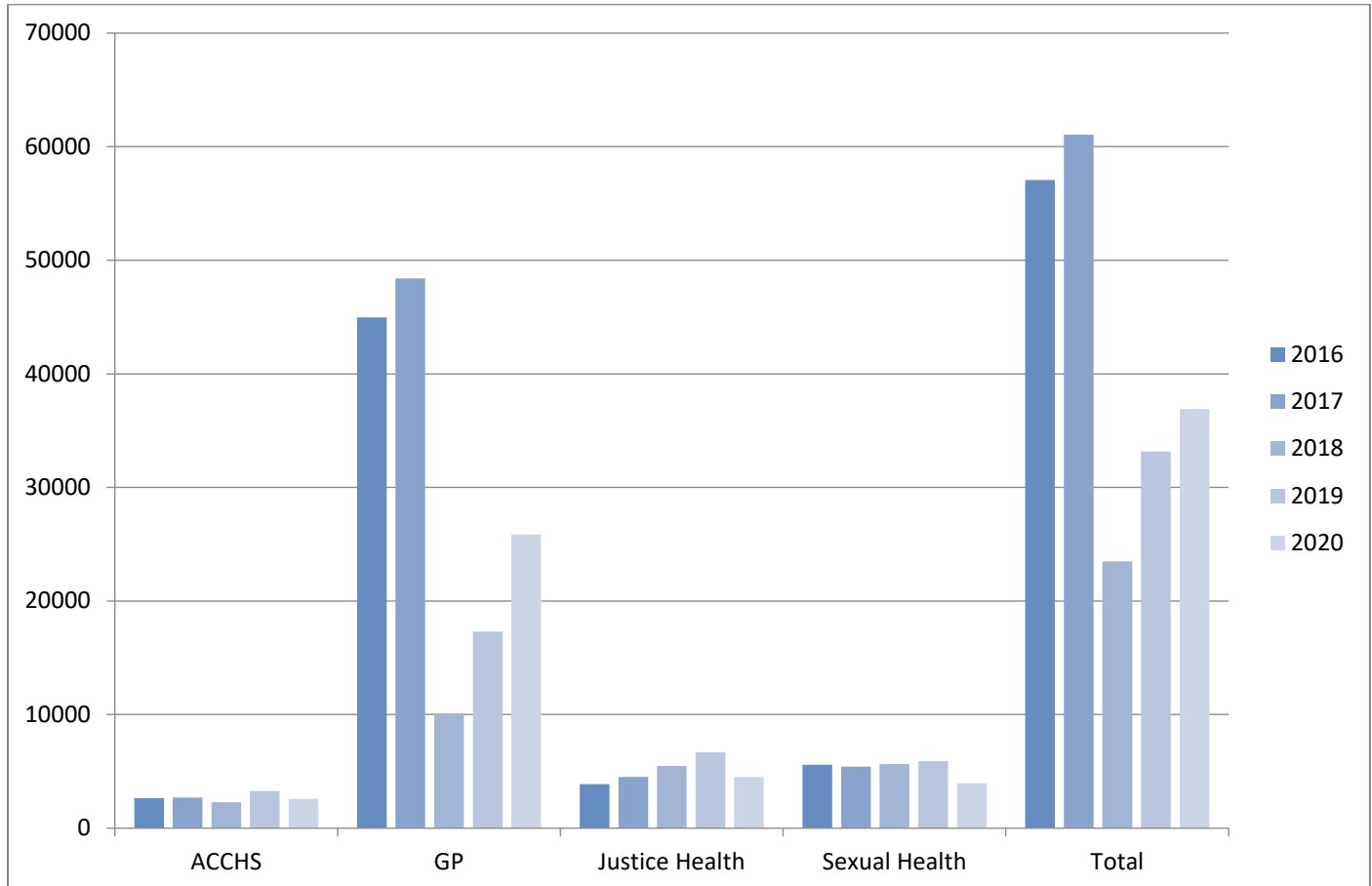
Year	No. neonates born to HbsAg+ mothers	No. neonates born to HbsAg+ mothers who received HBIG	No. neonates born to HbsAg+ mothers who received HBIG within 12 hours of birth (%)
2014	739	737	732 (99.1%)
2015	677	673	670 (99.0%)
2016	696	689	687 (98.7%)
2017	642	642	639 (99.5%)
2018	551	551	547 (99.3%)
2019	547	547	544 (99.5%)
Jan-Jun 2020	221	220	219 (99.1%)

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 was 99.1 per cent in the first half of 2020 (the latest period for which data is available). There were two neonates born to HBsAg+ mothers in this period 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 31: Number of adult doses of hepatitis B vaccine distributed to health care providers through the NSW Vaccine Centre 2014-2020**



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 33,177 doses in 2019 to 36,902 doses in 2020. 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 since 2019.
- Distribution of hepatitis B vaccine to Justice Health services decreased from 6,694 doses in 2019 to 4,518 doses in 2020.
- 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, 2020

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
<b>TOTAL</b>	1022	948	3	1973	1392	826	5	2223	573	59	0	632
0-4	0	1	0	1	5	8	0	13	0	0	0	0
5-9	0	1	0	1	1	3	0	4	0	0	0	0
10-14	1	1	0	2	1	2	0	3	0	0	0	0
15-19	7	11	0	18	4	12	0	16	20	1	0	21
20-24	35	51	0	86	57	39	0	96	134	16	0	150
25-29	81	86	0	167	125	69	2	196	129	10	0	139
30-34	153	152	0	305	146	97	0	243	106	8	0	114
35-39	166	148	0	314	173	108	1	282	71	15	0	86
40-44	115	86	1	202	154	93	0	247	40	5	0	45
45-49	90	81	0	171	142	76	0	218	42	1	0	43
50-54	80	88	2	170	174	75	0	249	12	3	0	15
55-59	87	74	0	161	153	84	0	237	11	0	0	11
60-64	85	70	0	155	132	78	0	210	4	0	0	4
65-69	50	56	0	106	71	45	0	116	2	0	0	2
70-74	35	26	0	61	30	14	0	44	0	0	0	0
75-79	15	8	0	23	12	10	1	23	0	0	0	0
80-84	17	5	0	22	7	8	0	15	0	0	0	0
85 and over	2	3	0	5	5	5	0	10	0	0	0	0
Not stated	3	0	0	3	0	1	2	3	0	0	3	3

Data source: NCIMS, NSW Health; data extracted 27 April 2021.

Note: Data are provisional and subject to change.

Table 3: Number of hepatitis B and hepatitis C notifications by LHD of residence, NSW, 2016-2020

Local Health Districts	Hepatitis B					Hepatitis C				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
<b>TOTAL</b>	2276	2207	2344	2157	1973	4977	3897	3393	3210	2855
Central Coast	30	34	28	34	23	218	169	124	113	85
Far West	7	6	4	5	7	33	38	21	21	30
Hunter New England	62	73	74	62	61	544	438	343	267	235
Illawarra Shoalhaven	36	43	43	36	39	231	162	140	119	122
Justice Health	26	21	44	52	40	426	496	647	679	632
Mid North Coast	23	25	17	15	16	212	128	119	117	83
Murrumbidgee	26	18	31	31	26	213	154	160	150	129
Nepean Blue Mountains	28	46	55	50	41	236	212	183	115	124
Northern NSW	18	22	22	14	19	398	246	177	191	134
Northern Sydney	278	283	295	344	277	175	135	129	135	83
NSW not otherwise specified	3	9	3	1	5	25	33	29	11	16
South Eastern Sydney	360	346	355	302	288	467	334	259	262	214
South Western Sydney	504	423	415	374	349	480	354	332	290	269
Southern NSW	19	15	15	18	20	230	131	70	70	71
Sydney	337	326	345	305	284	430	295	228	229	196
Western NSW	31	27	38	26	23	267	224	158	144	135
Western Sydney	488	490	560	488	455	392	348	274	297	297

Data source: NCIMS, NSW Health; data extracted 27 April 2021.

Note: Data are provisional and subject to change.

**Table 4: Number of hepatitis C DBS registrations by LHD and quarter from 1 January to 31 December 2020**

Local Health District	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020 Total
Justice Health	409	449	609	297	1764
South Eastern Sydney*	144	127	205	149	625
Sydney	55	50	132	92	329
South Western Sydney	173	165	96	185	619
Hunter New England	42	25	54	28	149
Northern Sydney	42	29	53	47	171
Western Sydney	70	62	34	66	232
Illawarra Shoalhaven	21	18	33	65	137
Nepean Blue Mountains	37	62	30	127	256
Western NSW	62	33	26	52	173
Mid North Coast	12	12	18	52	94
Murrumbidgee	27	25	13	8	73
Northern NSW	8	12	8	19	47
Central Coast	14	4	5	6	29
Southern NSW	3	6	4	3	16
Far West	6	5	2	0	13
Other**	5	5	0	0	10

\* South Eastern Sydney LHD results may include some data generated by the St Vincent's Health Network.

\*\* Includes registrations/ tests for non-NSW residents.

**Table 5: Number of hepatitis C DBS tests by LHD and quarter from 1 January to 31 December 2020**

Local Health District	Q1 2020	Q2 2020	Q3 2020	Q4 2020	2020 Total
Justice Health	449	197	519	399	1564
South Eastern Sydney*	127	115	176	139	557
Sydney	50	39	123	79	291
South Western Sydney	165	53	80	164	462
Hunter New England	25	27	33	17	102
Northern Sydney	29	20	43	34	126
Western Sydney	62	16	31	49	158
Illawarra Shoalhaven	18	13	31	60	122
Nepean Blue Mountains	62	8	24	121	215
Western NSW	33	7	14	50	104
Mid North Coast	12	3	15	46	76
Murrumbidgee	25	5	13	4	47
Northern NSW	12	4	6	16	38
Central Coast	4	4	2	5	15
Southern NSW	6	4	2	2	14
Far West	5	2	3	0	10
Other**	5	0	0	0	5

\* South Eastern Sydney LHD results may include some data generated by the St Vincent's Health Network.

\*\* Includes registrations/ tests for non-NSW residents.

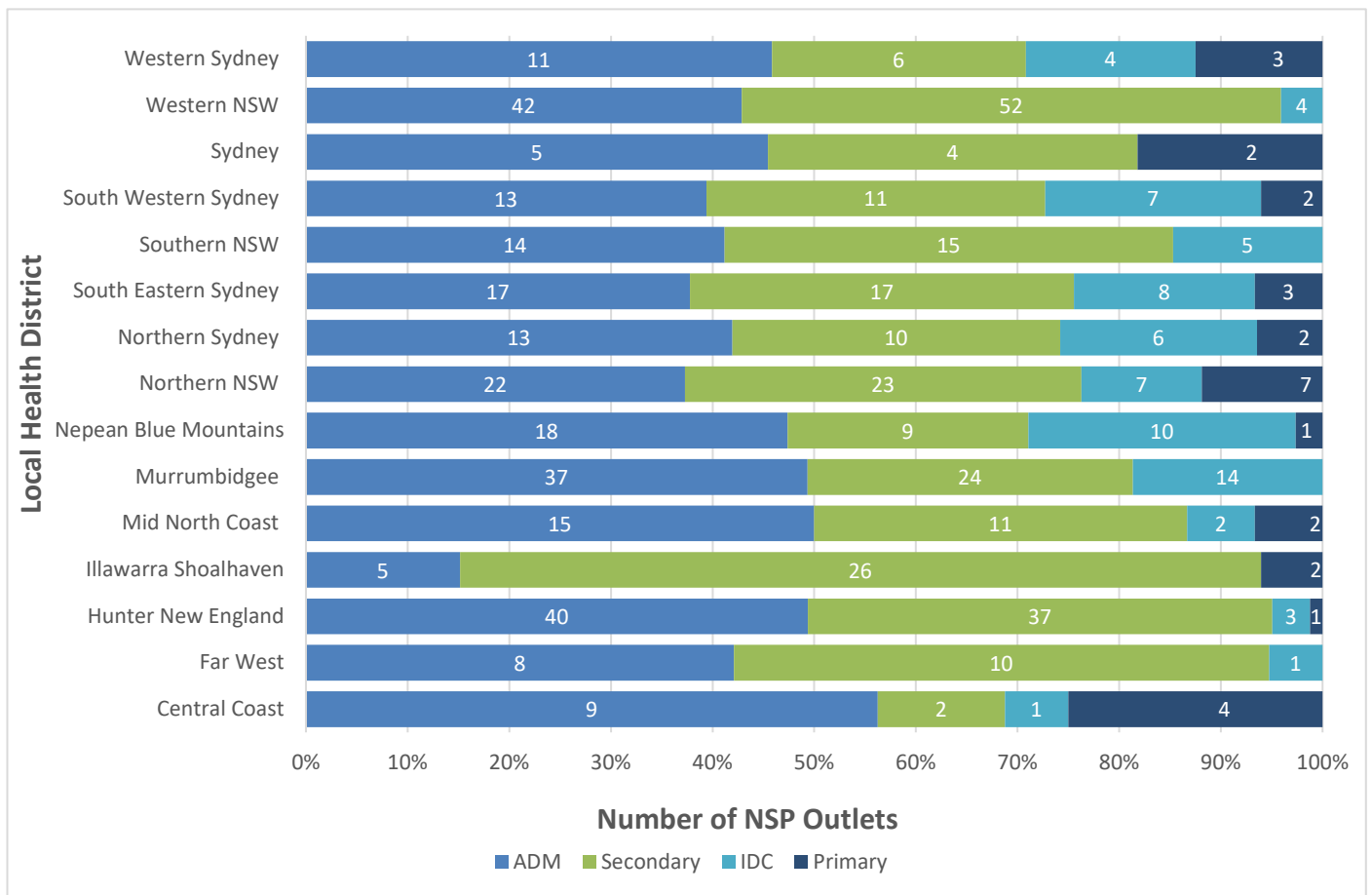
Table 6: Number of units of injecting equipment distributed by LHD in 1 January – 31 December 2020

Local Health District	Public	Pharmacy
Hunter New England	2,452,368	425,510
Sydney	1,402,198	306,894
South Western Sydney	1,195,335	402,746
Western Sydney	1,177,504	109,734
South Eastern Sydney	1,040,649	168,540
Western NSW	955,914	7,838
Illawarra Shoalhaven	828,303	41,786
Central Coast	798,182	15,486
Nepean Blue Mountains	650,858	54,174
Northern NSW	563,726	3,090
Murrumbidgee	551,805	7,035
Mid North Coast	475,917	37,380
Northern Sydney	460,096	39,793
Southern NSW	252,096	6,126
Far West	142,090	50
<b>TOTAL</b>	<b>12,947,041</b>	<b>1,626,182</b>
<b>Number of units of injecting equipment distributed by NGOs 1 January – 31 December 2020</b>		
NUAA	376,086	
ACON	266,070	
MSIC	35,469	
<b>Total</b>	<b>677,625</b>	

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



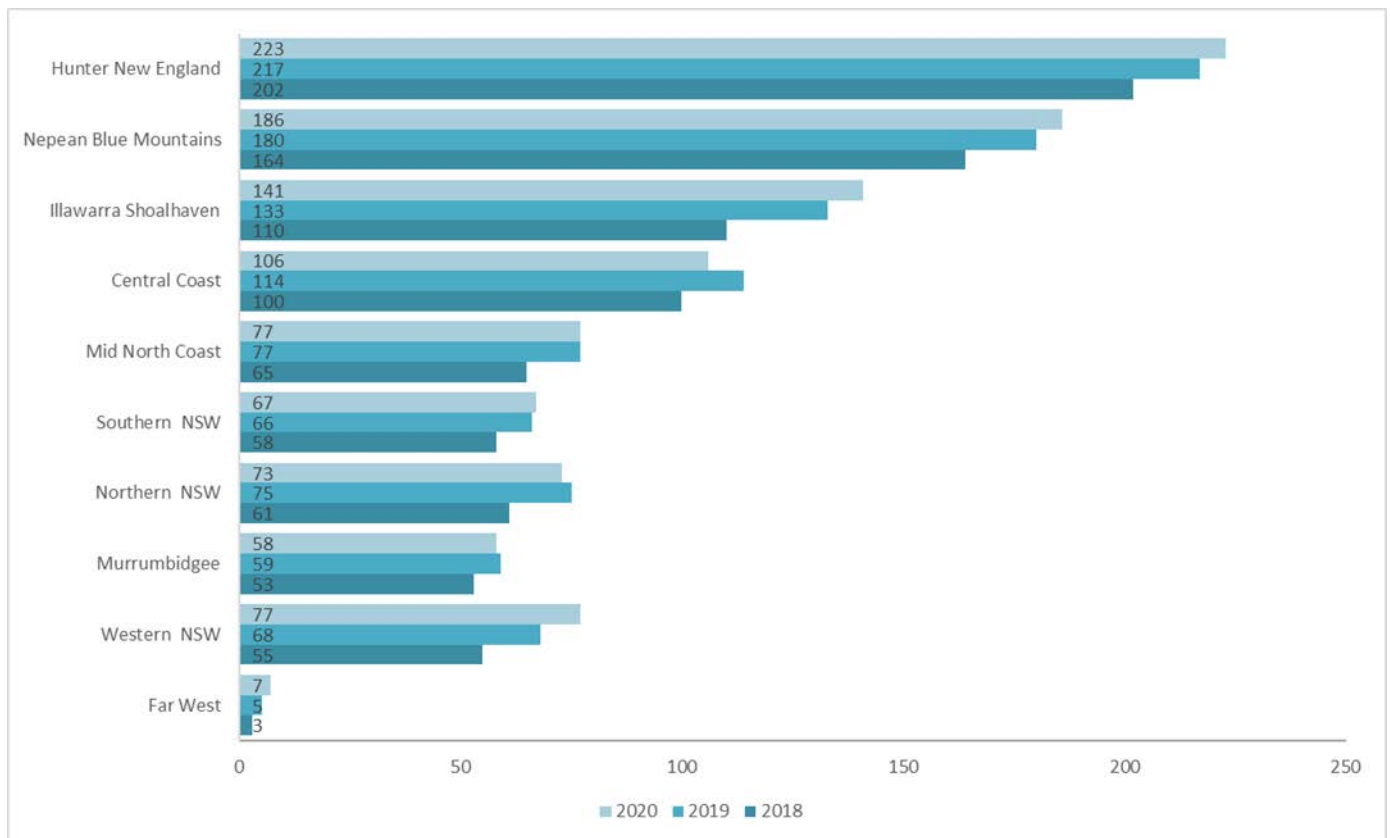
Figure 32: Number and proportion of public NSW NSP outlets by type, by LHD, 31 June 2019



Data source: Local Health District NSP Services. Data extracted 31 June 2019.

- As of June 2020, the public NSW NSP had 29 primary outlets, 257 secondary outlets, 197 automatic dispensing machines (ADMs) and 72 internal dispensing chutes (IDCs).

**Figure 33: Number of NSW residents dispensed hepatitis B treatment in the LHDs with lower hepatitis B prevalence, 1 January 2018 - 31 December 2020**



Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2018 to 31 December 2020

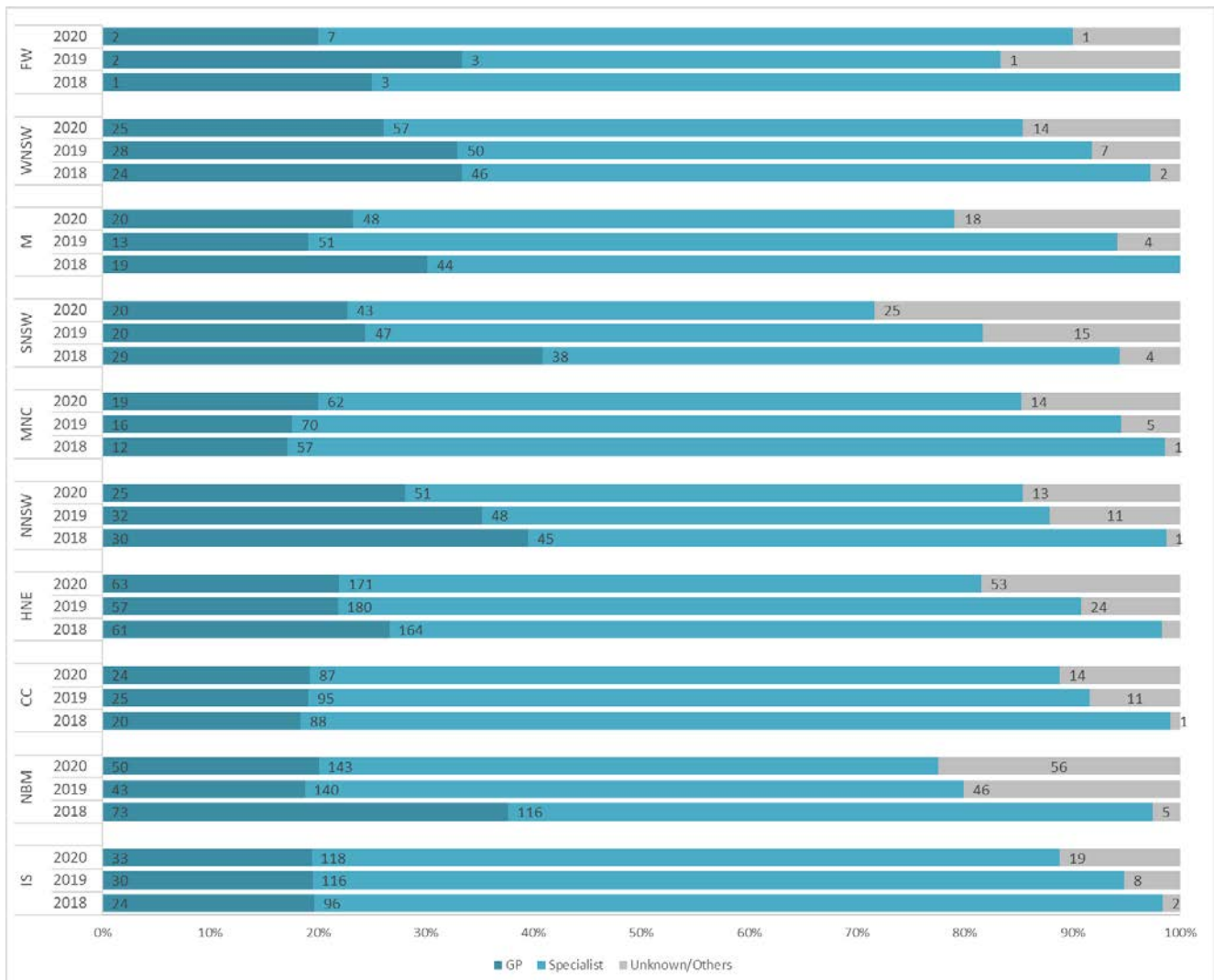
Note: Figure 33 includes residents who were dispensed treatment in Justice Health settings.

Between 1 January and 31 December 2020:

- 1015 residents were dispensed hepatitis B treatment in the ten LHDs with lower prevalence, which accounted for 7% of the total number of residents dispensed hepatitis B treatment in NSW<sup>15</sup>.
- This is a 2% increase compared to the period between 1 January and 31 December 2019 (994) and a 16.5% increase compared to the period between 1 January and 31 December 2018 (871).
- 19 NSW residents were dispensed hepatitis B treatment in Justice Health settings; which is a 5% decrease compared to the period between 1 January and 31 December 2019 (20), but a slight increase compared to the period between 1 January and 31 December 2018 (16).

<sup>15</sup> Overall, 10,569 NSW residents (unique number) were dispensed treatment between 1 January and 31 December 2020.

**Figure 34: Number of NSW residents dispensed hepatitis B treatment by LHD of patient residence, by prescriber type, 1 January 2018 - 31 December 2020 in LHDs with lower hepatitis B prevalence**



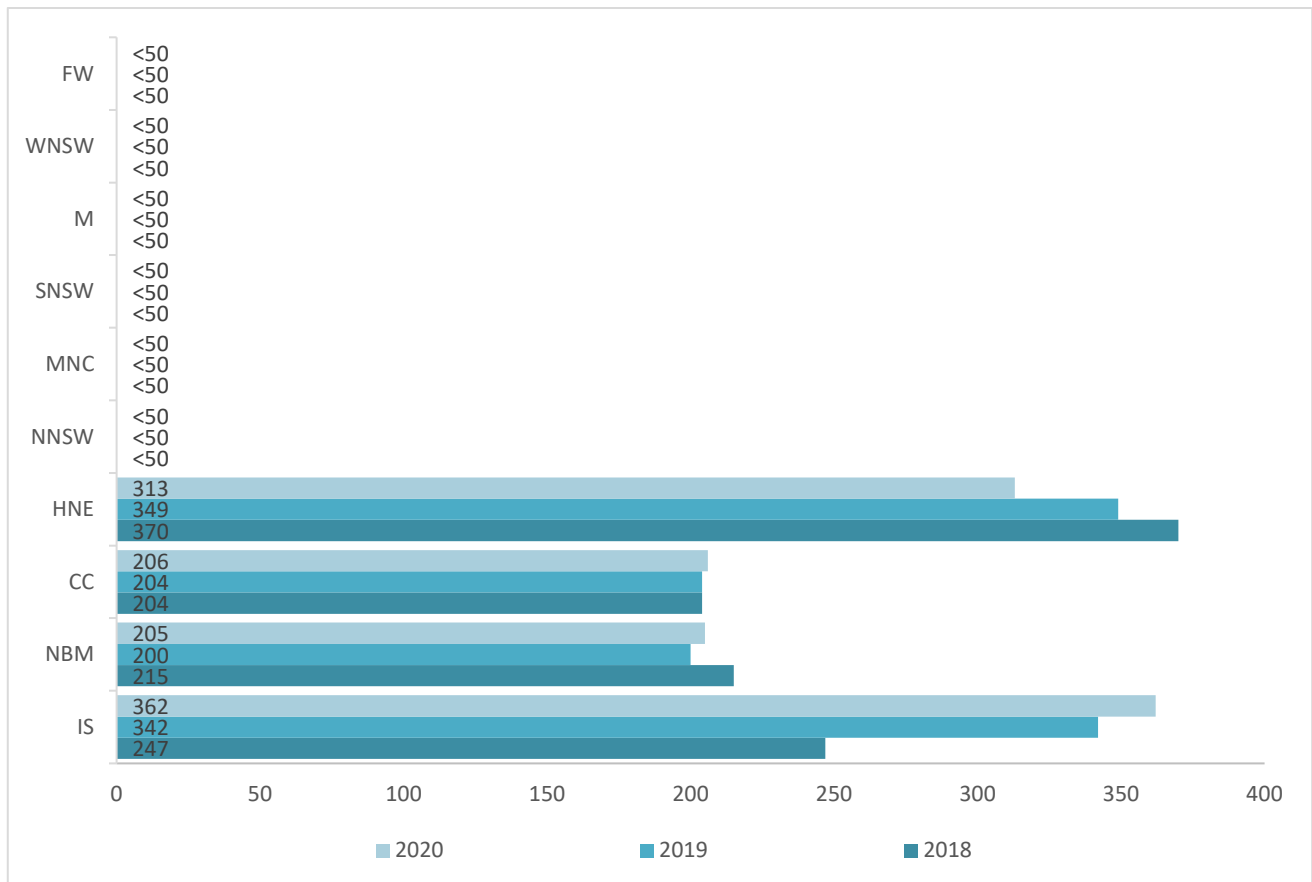
Data source: Pharmaceutical Benefits Schedule Highly Specialised Drugs Program data, 1 January 2018 - 31 December 2020.

Note: Figure 34 incorporates residents who were dispensed treatment in Justice Health settings.

Between 1 January and 31 December 2020:

- Of the residents dispensed hepatitis B treatment in the ten LHDs with lower prevalence, 22% were prescribed by a GP, which remained the same proportion compared to the same period in 2019 (22%) but a decrease compared to 2018 (29%).

**Figure 35: Number of people in the lower prevalence LHDs with CHB and not receiving treatment who had a viral load test via Medicare, 1 January 2018 – 31 December 2020**



Data source: Medicare Benefits Schedule, Department of Human Services

Note: Data from MBS is only available to 31 December 2020. 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 2020, among the ten LHDs with lower CHB prevalence:

- The exact testing number for LHDs where less than 50 people were tested is not shown.
- A total of 1,086 people with CHB not on treatment received an MBS viral load test. This is 7.3% of the total tests (14,951) provided in NSW.

Table 7: 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 (<a href="http://www.cherel.org.au">www.cherel.org.au</a>), 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>