UNSW SYDNEY

Kirby Institute

New South Wales Needle and Syringe Program Enhanced Data Collection

2019

A report for the NSW Ministry of Health
by the Kirby Institute, UNSW Sydney

July 2019

Prepared by
Ms Louise Geddes, Dr Jenny Iversen and Professor Lisa Maher

The Kirby Institute
for infection and immunity in society
UNSW Sydney
Sydney NSW 2052
Australia

Telephone: +61 (2) 9385 0900
www.kirby.unsw.edu.au

Suggested citation: Geddes, L., Iversen, J and Maher, L. New South Wales Needle and Syringe Program Enhanced Data Collection Report 2019, The Kirby Institute, UNSW Sydney, 2019.

Table of Contents

Acknowledgements.....1
Acronyms.....2
Key points 3
Background.....4
Respondents and occasions of service.....5
Demographic characteristics.....8
Social, legal and health 11
Drug last injected.....13
Injecting behaviour.....17
Receptive syringe sharing.....18
Hepatitis C treatment uptake.....20
NSW demographic and drug use tables.....25
NSW graphs 36
References.....38
Appendix A: Study methodology.....39
Appendix B: Participating NSP services by LHD.....40
Appendix C: 2019 data collection instrument.. 42

Acknowledgements

We would like to thank the attendees of New South Wales (NSW) Needle and Syringe Program (NSP) who participated in data collection. We are grateful to NSP staff who worked with NSP attendees to collect the data presented in this report and to the NSW Ministry of Health, the HIV and Related Program Managers and the Harm Minimisation Coordinators who supported and coordinated the 2019 data collection.

Acronyms

ACON	AIDS Council of NSW
DAAs	Direct-acting antivirals
HCV	Hepatitis C virus
LHD	Local Health District
NNEDC	New South Wales Needle and Syringe Program Enhanced Data Collection
NSP	Needle and syringe program
NSW	New South Wales
NUAA	NSW Users and AIDS Association
OOS	Occasions of service
OST	Opioid substitution therapy
PIED	Performance and image enhancing drug
PWID	People who inject drugs
RSS	Receptive syringe sharing

Key findings

A total of 4,633 occasions of service (OOS) were recorded over the two-week data collection period in February 2019, equating to approximately 2,300 OOS per week.

During the two-week data collection period in 2019, 69% of NSP attendees completed the NNEDC; 19% were repeat attendees and 12% declined to participate. The state-wide response rate was 86% in 2019.

One in five respondents (19%) reported an Aboriginal background in 2019, a significant increase from 14% in 2013 (p-trend<0.001).

The median age of respondents was 42 years in 2019. The median age of respondents has increased in one-year increments since 2016. One in twenty respondents (5%) were aged less than 25 years in 2019, and one in ten respondents (10%) reported initiating injecting in the previous three years, a significant decline from 11% in 2013 (p-trend=0.012).

All social, legal and health issues were stable over the period 2016 to 2019.

In the previous 12 months, one in four respondents (25%) had experienced homelessness, one in four (23%) reported a mental health issue, one in ten (10%) reported being imprisoned and one in four (24%) was prescribed opioid substitution therapy.

Opioids were the most common class of drug last injected in 2019, reported by one in two respondents (47%).

A significant decline in the proportion of respondents who reported last injecting PIEDs (predominantly anabolic steroids, growth hormone and peptides) was observed over the seven-year period (from 15% in 2013 to 13% in 2019, p-trend=0.002)

Heroin was the most commonly reported drug last injected in 2019, reported by 34% of respondents. Significant increases were observed in the proportion of respondents who reported last injecting heroin and methamphetamine over the seven-year period.

Conversely, significant declines were observed in the proportion of respondents who reported last injecting pharmaceutical opioids, methadone and cocaine.

Reports of daily or more frequent injection significantly declined over the six-year period (p-trend=0.003), from 49% in 2013 to 40% in 2019.

In 2019, two in five respondents (40%) reported injecting more than weekly, but not daily.

In 2019, one in five respondents (20%) reported at least one episode of receptive syringe sharing (RSS) in the month prior to data collection.

The proportion of respondents who reported RSS in the month prior to data collection has remained stable over the seven-year period (p-trend=0.075). Factors associated with a decreased risk of RSS included being aged 49 years or older and being prescribed OST in the previous 12 months.

Four in five respondents (78%) reported a lifetime history of hepatitis C virus (HCV) testing

This includes 46% who reported a HCV test since 2018. Respondents who reported recent RSS were significantly less likely to have had a HCV test, as were respondents who reported last injecting a stimulant or performance and image enhancing drug (PIED).

Among respondents determined as likely to be eligible for HCV direct-acting antiviral (DAA) treatment, the proportion who reported a lifetime history of HCV DAA treatment was 61%.

HCV DAA treatment uptake was highest in Far West LHD (100%), followed by South Eastern Sydney LHD (73%), Western NSW LHD (75%) and Central Coast LHD (70%). Of the 407 respondents who reported accessing treatment, one third (32%) reported accessing treatment through public-sector community services, while a further quarter of respondents (24%) reported accessing DAA treatment through tertiary facilities.

Background

The NSW NSP is a public health initiative that aims to reduce the transmission of blood borne viruses and other harms related to injecting drug use through the provision of sterile injecting equipment and health related information and support. The NSP operates within the principles of harm minimisation embedded in both the National and NSW HIV and Hepatitis C Strategies. The NSW public sector program is delivered through a mix of primary and secondary NSP outlets in health, welfare and pharmacy settings, augmented by mobile and outreach services and syringe dispensing machines and chutes.

The NSW Ministry of Health established the NSW NSP Enhanced Data Collection (NNEDC) as a mechanism to provide a systematic snapshot of the NSW NSP client population in 2004. The NNEDC was subsequently repeated in 2008 and in a revised format annually in all years since 2013. The 2019 NNEDC was conducted at 49 NSPs over a two-week period (18th February to 3rd March) and was the seventh consecutive data collection in the new format. This report presents data from all of the previous years, 2013 to 2019. Details on the study methodology, data collection instrument and participating sites are included at Appendices A, B and C respectively.

Respondents and Occasions of Service

Key findings:

- **A total of 4,633 occasions of service (OOS) were recorded over the two-week data collection period in 2019, equating to approximately 2,300 OOS per week:**
  - **69% (n=3,195) completed the NNEDC, a significant increase from 54% in 2013 (p-trend<0.001).**
  - **19% (n=902) were repeat attendees, consistent with previous years (p-trend=0.194).**
  - **12% (n=536) declined to participate, a significant decline from 21% in 2013 (p-trend<0.001).**
- **The state-wide response rate (which excludes repeat attendees) was 86% in 2019.**

All 15 Local Health Districts (LHDs) participated in the NNEDC in 2019. The number of participating sites varied by LHD, and ranged from seven in South Eastern Sydney and Northern NSW LHDs to one in Far West LHD.

In 2017, the methodology of the NNEDC was amended to encourage all NSP attendees to complete a minimum of the first four questions in the data collection instrument. This report includes data collected from both NSP attendees who completed all questions on the data collection instrument and those who elected to respond to the first four questions only. As a result, the proportion of respondents who did not respond to subsequent questions (from question 5) varies. In order to examine trends over time in a consistent manner, missing data are excluded when calculating proportions for all variables, including data collected in previous years (2013 to 2016).

Over the two-week 2019 data collection period, a total of 4,633 occasions of service (OOS) were recorded. This equates to approximately 2,300 NSP OOS per week (~2,400 OOS recorded during the first week and ~2,200 OOS were recorded during the second week). The number of OOS recorded in 2019 was the lowest number of OOS recorded in the seven-years that the NNEDC has been conducted in its current format.

Since 2017, additional efforts have been made by LHDs and NSP services to increase the number of NSP attendees who completed the NNEDC in 2019. This resulted in a total of 3,195 NSP attendees who agreed to participate in the NNEDC (hereafter referred to as respondents). As a result of these additional efforts, a significant increase was observed in the proportion of respondents who agreed to participate in the NNEDC in 2019, from 54% in 2013 to 69% in 2019 (p-trend<0.001). This increase has been observed in all three years since the introduction of the amended methodology in 2017. Of the 3,195 respondents in 2019, two thirds (67%, n=2,144) completed all questions included in the data collection instrument. Since 2017, the proportion of respondents who completed all questions included in the data collection instrument has declined significantly, from 79% in 2017 to 67% in 2019 (p-trend<0.001). The response rate in 2019 was 86%, and this was comparable to the response rates reported in 2018 (87%) and 2017 (90%).

In order to reduce bias towards frequent NSP attendees, NSP attendees who complete the NNEDC at a previous attendance (repeat attendees) are ineligible to complete the NNEDC at subsequent NSP attendances during the data collection period. In 2019, approximately one fifth of all OOS (19%, n=902) were repeat attendances and this was consistent with previous years (p-trend=0.194).

Approximately one tenth of all OOS (12%, n=536) recorded during the data collection period were from NSP attendees who declined to participate in the NNEDC, and did not provide any data regarding their demographic characteristics and drug use. A significant decline in the proportion of NSP attendees who declined to participate in the NNEDC was observed over the seven-year period, from 21% in 2013 to 12% in 2019 (p-trend<0.001).

Metropolitan LHDs

As in previous years, three quarters of state-wide OOS (75%, n=3,481) were recorded at NSPs in metropolitan LHDs. Of these, n=2,417 (69%) were NSP attendees who agreed to participate in the NNEDC, one in four OOS (22%, n=753) were repeat attendances, and one in ten (9%, n=311) were OOS where the NSP attendee declined to participate. The response rate of metropolitan LHDs in 2019 was 89%.

In 2019, Sydney LHD recorded the highest number of OOS (n=787, Figure 1) and respondents (n=549) among metropolitan LHDs. Response rates among metropolitan LHDs in 2019 ranged from 17% (Illawarra Shoalhaven LHD) to 100% (Nepean Blue Mountains LHD).

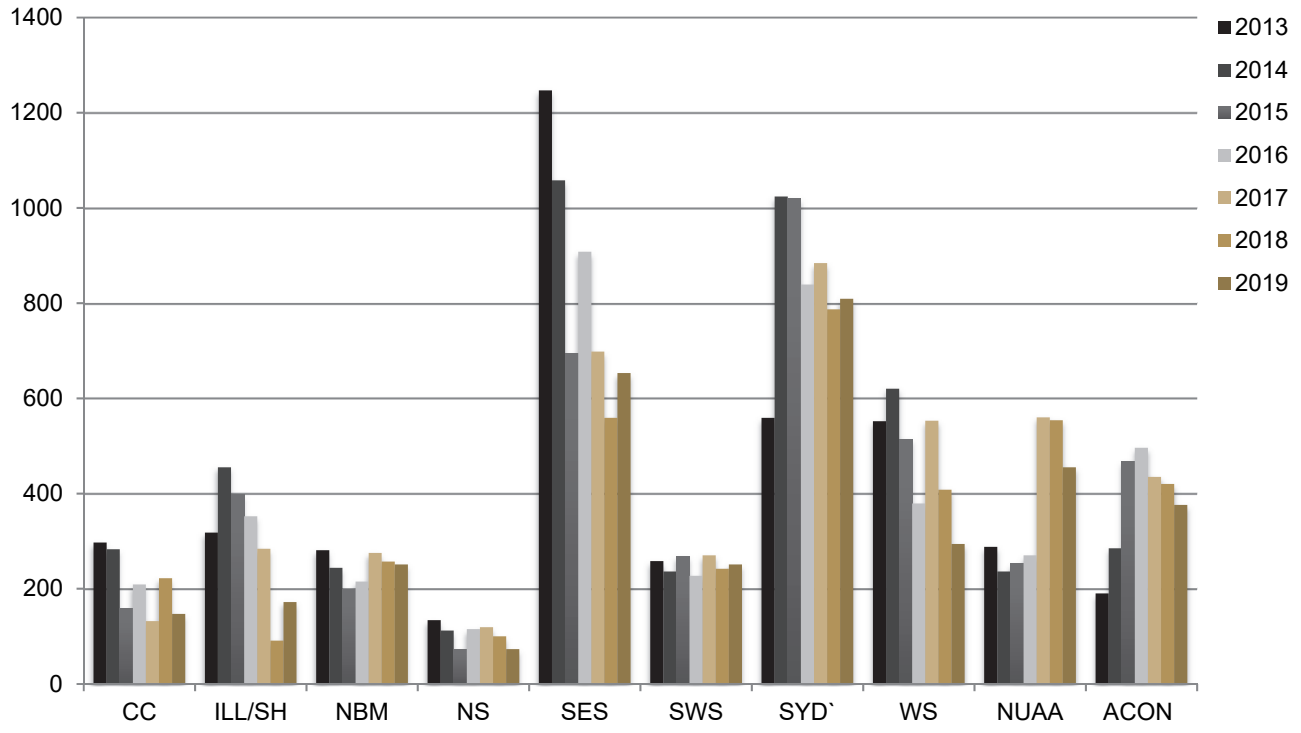
Rural and regional LHDs

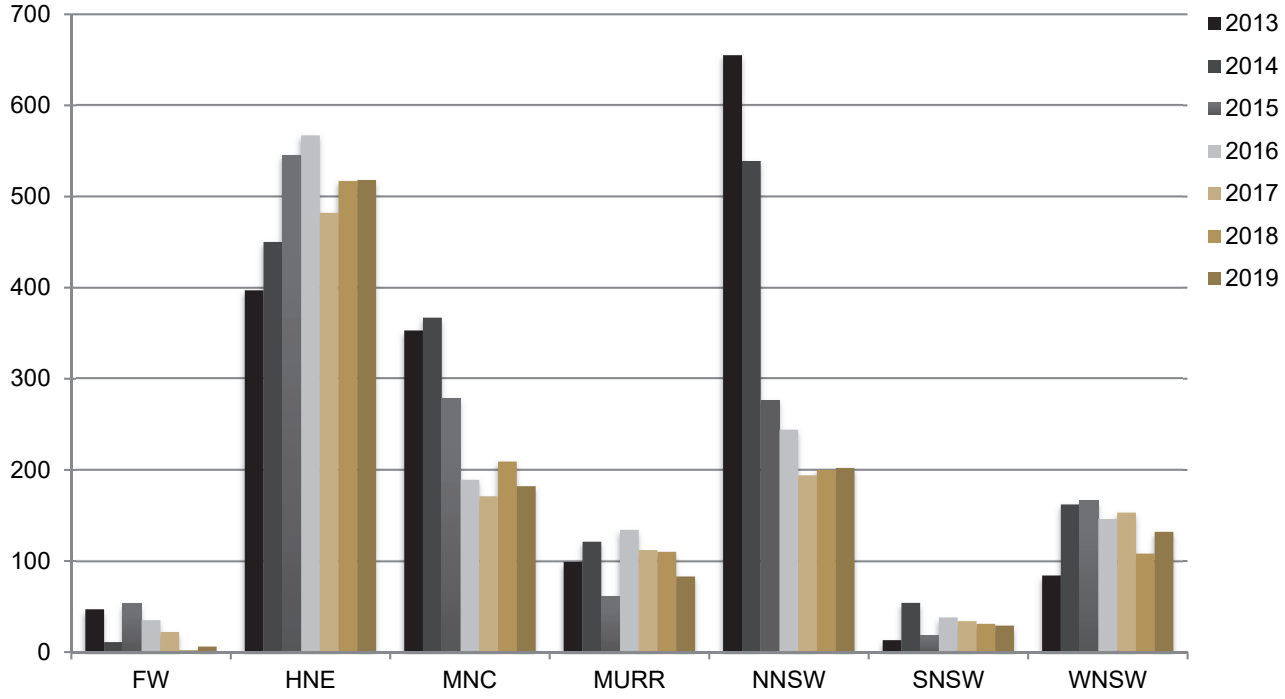
One quarter of state-wide OOS (25%, n=1,152) recorded during the 2019 data collection period were recorded at NSPs in rural and regional LHDs, of which two thirds (68%, n=778) were NSP attendees who agreed to participate in the NNEDC. Approximately one in ten OOS (13%, n=149) were repeat attendances, and one in five (20%, n=225) were OOS where the NSP attendee declined to participate. The response rate of rural and regional LHDs in 2019 was 78%, and this was significantly lower than the response rate of metropolitan LHDs (78% vs 89%, p<0.001).

In 2019, Hunter New England LHD recorded the highest number of OOS (n=518) and respondents (n=393) among rural and regional LHDs. Response rates among rural and regional LHDs in 2019 ranged from 28% (Western NSW LHD) to 100% (Far West LHD).

Differences in NSP service delivery modalities may account for variations observed in the number of OOS recorded in metropolitan and rural/regional LHDs. In general, rural and remote LHDs are more reliant on secondary NSPs and syringe dispensing machines (vending machines and chutes), in order to provide access to injecting equipment over large geographic areas. For this reason, staff interaction with NSP attendees may be limited, impacting their ability to collect data for the NNEDC.

Figure 1 Occasions of service by LHD, NUAA & ACON Sydney, 2013-2019





Demographic characteristics

Key findings:

- **The median age of respondents was 42 years in 2019, representing a gradual increase in one-year increments from 39 since 2016.**
- **One in twenty respondents (5%) were aged less than 25 years in 2019, indicating a significant decline from 9% in 2013 (p-trend<0.001).**
- **One in five respondents (19%) reported an Aboriginal background in 2019, reflecting a significant increase from 14% in 2013 (p-trend<0.001).**
- **Approximately one in ten respondents (7%) reported a language other than English as the main language spoken by their parents at home in 2019, a significant increase from 5% in 2013 (p-trend<0.001).**

Gender

In 2019, three quarters of NNEDC respondents (74%, n=2,310) were men, while women accounted for the remaining quarter of respondents (25%, n=799). A minority of respondents (1%, n=25) identified as other in 2019. The distribution of gender was stable over the seven-year period (p-trend=0.417, p-trend=0.083 and p-trend=0.501). In 2019, men comprised the majority of respondents in all LHDs, except Far West LHD, however, women comprised a significantly greater proportion of respondents from rural and regional LHDs compared to metropolitan LHDs (32% vs 24%, p<0.001).

Age

The median age of respondents was 42 years (range 17-78 years) in 2019, an increase of one year from the median age reported in 2018. Since 2016, the median age of respondents has increased in one-year increments.

In contrast to previous years, in 2019, there was no significant difference in the median age of respondents who completed the NNEDC in metropolitan compared to rural or regional LHDs (42 years vs 41 years, p=0.283). In 2019, the highest median age was recorded at Far West LHD (46 years), while the lowest was recorded at South Western Sydney LHD (35 years).

In 2019, there was no significant difference in the median age of men and women respondents (42 years vs 41 years respectively, p=0.487). As observed in previous years, respondents who reported last injecting performance and image enhancing drugs (PIEDs) in 2019 had a significantly lower median age compared to respondents who reported last injecting a psychoactive drug (all drugs excluding PIEDs, 30 years vs 43 years, p<0.001). Among respondents who last injected a psychoactive drug, the median age of men was significantly higher than women (44 years vs 41 years, p<0.001), and this was consistent with findings from previous years.

One in twenty respondents (5%, n=155) were aged less than 25 years (young people) in 2019. Over the seven-year period, 2013 to 2019, a significant decline in this sub-population has been oberserved, from 9% in 2013 to 5% in 2019 (p-trend<0.001, Figure 2). In 2019 the majority of young people were men (75%, n=116) and completed the NNEDC in a metropolitan LHD (75%, n=116). The highest proportion of young people in 2019 was observed in the Nepean Blue Mountains and South Western Sydney LHDs (11%), while Far West and Southern NSW LHDs recorded no young people during the data collection period.

Sexual identity

In 2019, four in five respondents (80%, n=1,833) identified as heterosexual, while one in ten respondents identified as either bisexual (10%, n=193) or homosexual (10%, n=178). Over the six-year period in which data regarding sexual identity has been collected, significant increases have been observed in the proportions of respondents who identified as either bisexual (from 7% in 2014 to 10% in 2019, p-trend<0.001) or homosexual (from 6% in 2014 to 10% in 2019, p-trend<0.001). During this period, the proportion of respondents who identified as heterosexual has remained stable (p-trend=0.054).

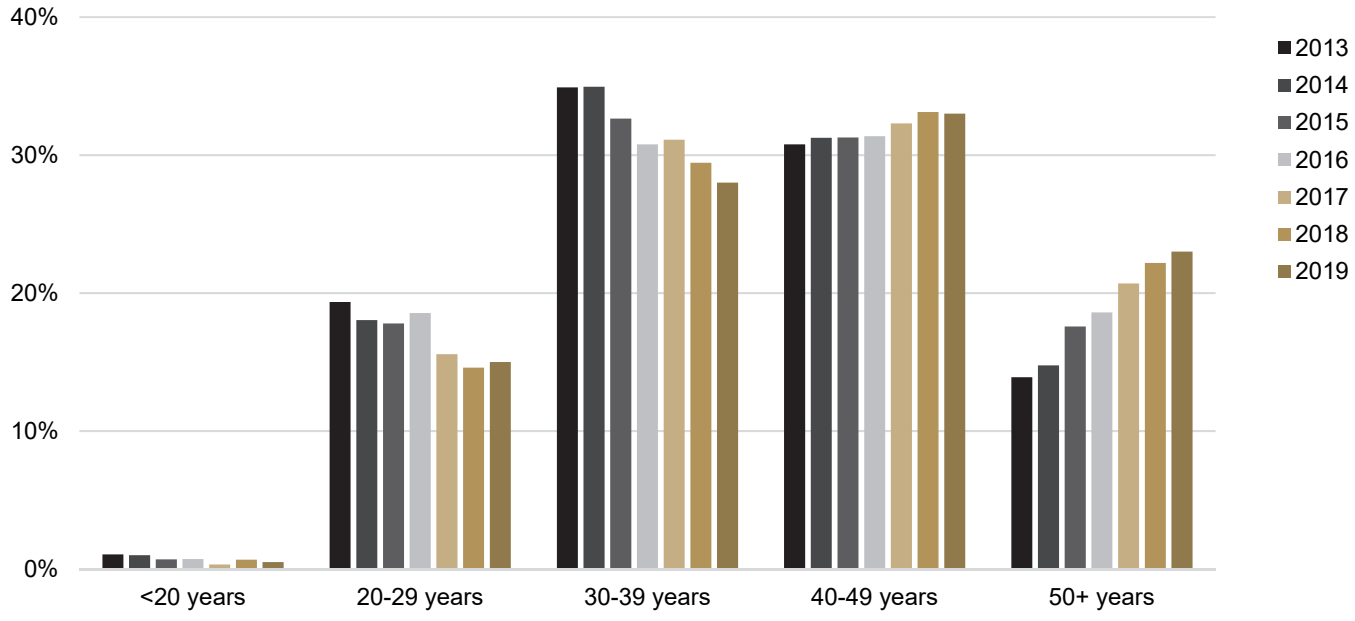
As in previous years, in 2019, women were significantly more likely than men to identify as bisexual (24% vs 6%, p<0.001), while men were more likely than women to identify as homosexual (11% vs 5%, p<0.001). Consistent with 2018, the proportion of 2019 respondents who identified as either bisexual or homosexual was highest in South Eastern Sydney LHD (37%) and lowest in Western NSW LHD, where no respondents identified as either bisexual or homosexual.

Cultural and linguistic diversity

Approximately one fifth of respondents (19%, n=594) reported an Aboriginal background in 2019. A further 1% (n=21) reported both an Aboriginal and Torres Strait Islander background, while less than 1% of respondents (n=14) reported a Torres Strait Islander background. Over the seven-year period, a significant increase was observed in the proportion of respondents who reported an Aboriginal background, from 14% in 2013 to 19% in 2019 (p-trend<0.001). Conversely, a significant decline in the proportion of respondents who reported neither an Aboriginal or Torres Strait Islander background was observed over the seven-year period, from 85% in 2013 to 80% in 2019 (p-trend=0.016).

Compared to men, women were significantly more likely to report an Indigenous background (Aboriginal or Aboriginal and Torres Strait Islander background) in 2019, (17% vs 28%, p<0.001, Figure 3), and this was consistent with previous years. The proportion of Indigenous respondents was significantly higher in rural and regional LHDs compared to metropolitan LHDs in 2019 (25% vs 19%, p=0.001). In 2019, Far West LHD recorded the highest proportion of

Figure 2 Proportion of respondents by age category, 2013-2019



Indigenous respondents in 2019 (40%), while Northern Sydney LHD recorded the lowest (2%). In 2019, less than one tenth of respondents (7%, n=138) reported a language other than English as the main language spoken by their parents at home. Consistent with previous years, a significant increase in this sub-population was observed over the seven-year period (from 5% in 2013 to 7% in 2019, p-trend<0.001). Approximately three fifths of respondents (59%, n=74, Figure 4) who reported a language other than English as the main language spoken at home by their parents reported a European language. This was followed by one fifth (21%, n=26) who reported a Middle Eastern language and 15% (n=19) who reported an Asian language. Smaller proportions of respondents reported an Indigenous language (3%, n=4) or another language (2%, n=2) was spoken by their parents.

The highest proportion of respondents who reported a language other than English as the main language spoken by their parents was recorded in South Western Sydney LHD (12%) in 2019, while five LHDs (Central Coast, Northern Sydney, Far West, Southern NSW and Western NSW) had no participants who reported that their parents spoke a language other than English at home.

Figure 3 Indigenous respondents by gender in 2019

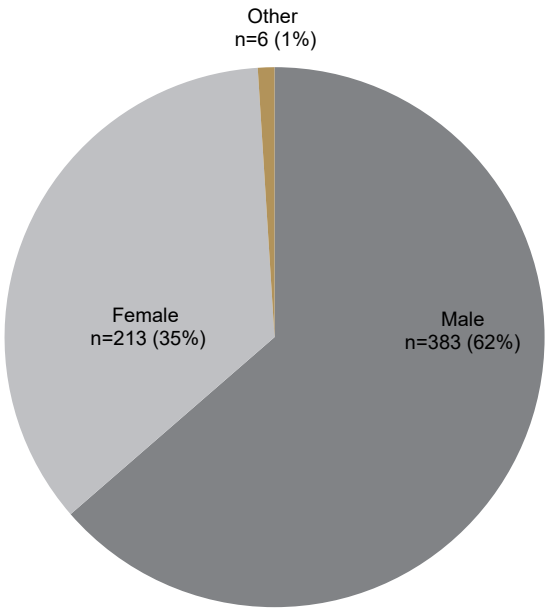
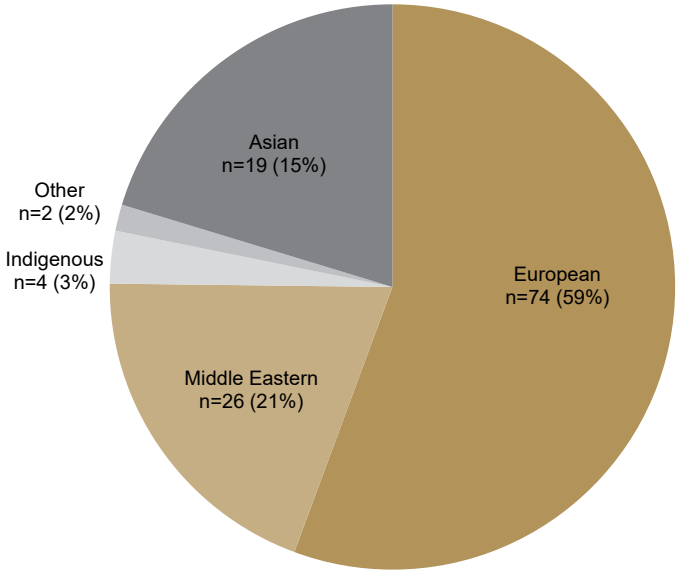


Figure 4 Languages other than English spoken at home by parents in 2019



Social, legal and health issues

Key findings:

- **In the previous 12 moths:**
  - **One in four respondents (25%) had experienced homelessness.**
  - **One in five respondents (23%) reported living with or being diagnosed with a mental health issue.**
  - **One in ten respondents (10%) reported being imprisoned.**
  - **One in four respondents (25%) reported being prescribed opioid substitution therapy.**
- **The proportion of respondents experiencing social, legal and health issues remained stable over the four-year period 2016 to 2019.**

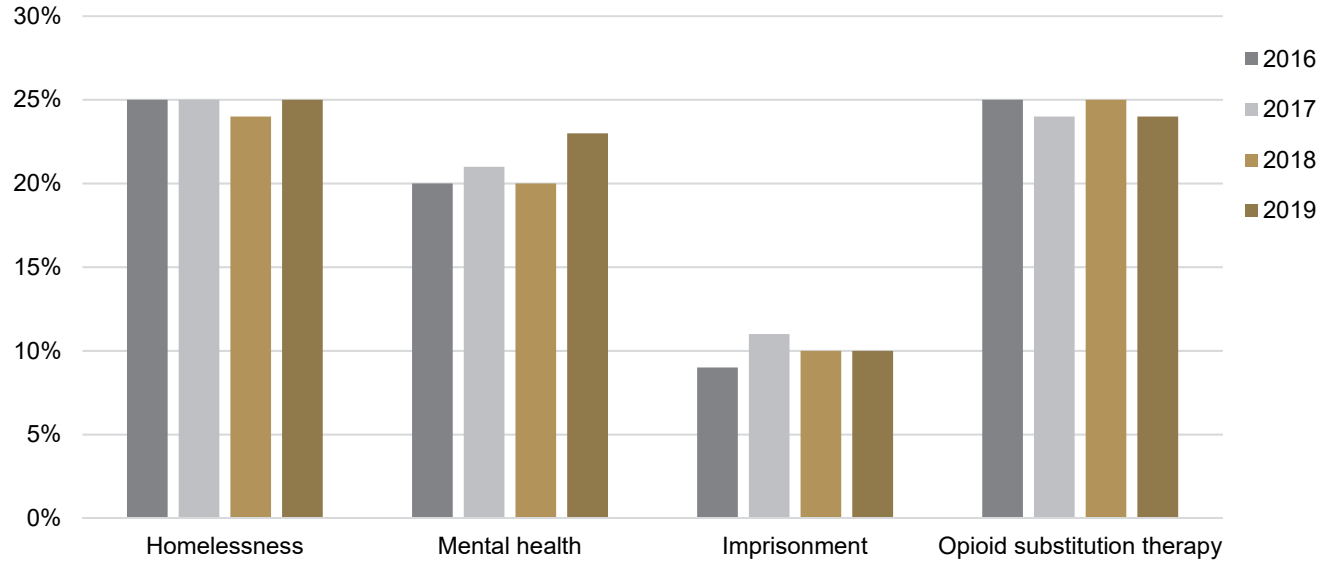
Homelessness

In 2019, one quarter of respondents (25%, n=529, Figure 5) had experienced homelessness in the previous 12 months, and this was consistent with proportions reported in previous years (p-trend=0.766). Of the 536 respondents who reported recent homelessness, two thirds (67%, n=342) were men and the majority (76%, n=356) identified as heterosexual, while 15% (n=72) identified as bisexual. The median age of respondents who reported recent homelessness in the previous 12 months was 41 years (range 18-67 years), and one in twenty respondents (5%, n=27) were young people. Two thirds of respondents (63%, n=315) who reported recent homelessness completed the NNEDC at an NSP at a metropolitan LHD.

Mental health

Approximately one quarter of respondents (23%, n=489) reported living with, or being diagnosed with a mental health issue in the preceding 12 months in 2019, and this was stable over the four-year period, 2016 to 2019, (p-trend=0.110). Of the 493 respondents who reported a mental health issue in 2019, two thirds (64%, n=309) were men, three quarters (74%, n=326) identified as heterosexual, while 14% (n=62) identified as bisexual and 12% (n=53) identified as homosexual. The median age of respondents who reported a recent mental health issue was 42 years (range 18-67 years), and 5% (n=24) were young people. Three in five respondents (58%, n=285) who reported a mental health issue completed the NNEDC at a metropolitan LHD.

Figure 5 Social, legal and health issues in the previous 12 months, 2016-2019



Imprisonment

In 2019, one in ten respondents (10%, n=216) reported that they had been imprisoned in the previous 12 months, and this was consistent with proportions reported in previous years (p-trend=0.241). Of the 218 respondents who reported recent imprisonment, three quarters were men (74%, n=155), and the majority (82%, n=164) identified as heterosexual. The median age of respondents who reported recent imprisonment was 40 years (range 20-65 years), and 3% (n=7) were young people. Two thirds of respondents (64%, n=139) who reported recent imprisonment completed the NNEDC at a metropolitan LHD.

Opioid substitution therapy

Consistent with previous years, one quarter of respondents (24%, n=507, p-trend=0.798) reported that they were prescribed opioid substitution therapy (OST) in the previous 12 months in 2019. Of the 510 respondents who reported recently being prescribed OST, two thirds (66%, n=325) were men, and four in five (83%, n=383) identified as heterosexual. The median age of respondents who reported recent OST was 43 years (range 20-67 years), and 2% (n=10) were young people. Approximately three quarters of respondents (71%, n=358) who reported recent OST completed the NNEDC at a metropolitan LHD.

Of the 941 respondents who reported last injecting an opioid and completed the social, legal and health questions, approximately two in five respondents (38%, n=354) reported being prescribed OST in 2019

Drug last injected

Key findings:

- **Opioids were the most common class of drug last injected in 2019, reported by one in two respondents (47%).**
- **One in three respondents (35%) reported last injecting a stimulant in 2019, a significant increase from 29% in 2013 (p-trend=0.001).**
- **One in eight respondents (13%) reported last injecting PIEDs in 2019, a significant decline from a peak of 19% in 2014 (p-trend=0.002).**
- **Heroin was the most commonly reported drug last injected in 2019, reported by 34% of respondents.**
- **A significant increase was observed in the proportion of respondents who reported last injecting heroin, from 29% in 2013 to 34% in 2019 (p-trend<0.001).**
- **A significant increase was also observed in the proportion of respondents who reported last injecting methamphetamine, from 26% in 2013 to 33% in 2019 (p-trend<0.001).**

Opioids

As in previous years, in 2019 opioids (predominantly heroin, opioid pharmacotherapies and pharmaceutical opioids) were the most common class of drug last injected. Approximately one in two respondents (47%, n=1,421, Figure 6) reported last injecting an opioid in 2019, and this was consistent with proportions reported in previous years (p-trend=0.734). In nine of the fifteen LHDs, opioids were the most common class of drug last injected in 2019. Illawarra Shoalhaven LHD recorded the highest proportion of respondents who reported last injecting an opioid (92%) while the lowest proportion was recorded in the Far West LHD (20%).

Heroin was the most commonly reported drug last injected in 2019, reported by one in three respondents (34%, n=1,011). Heroin has been the most commonly reported drug last injected in all years since 2017. Methadone and pharmaceutical opioids were the second and third most commonly reported opioid drugs last injected respectively (6%, n=182 and 5%, n=146). Smaller proportions of respondents reported last injecting buprenorphrine (1%, n=29), more than one opioid (1%, n=34) and buprenorphrine-naloxone (<1%, n=9).

Over the seven-year period significant increases were observed in the proportion of respondents who reported last injecting heroin (from 29% in 2013 to 34% in 2019, p-trend<0.001) and more than one opioid (from <1% in 2013 to 1% in 2019, p<0.001). Conversely, significant declines were observed in the proportion of respondents who reported last injecting either methadone (from 9% in 2013 to 6% in 2019, p-trend<0.001) and pharmaceutical opioids (10% to 5% p-trend<0.001 respectively).

In 2019, 28 respondents, from nine separate LHDs, reported last injecting either fentanyl or fentanyl in combination with other psychoactive drugs. It should be noted that fentanyl is not listed as a response category in the data collection instrument, and the number of respondents who reported last injecting fentanyl may therefore be underestimated. South Eastern Sydney and Mid North Coast LHDs recorded the highest number of respondents who specified fentanyl as the last drug injected (n=6 each), followed by Western NSW and Hunter New England LHDs (n=5 each), and Sydney LHD (n=2).

Stimulants

Approximately one in three respondents (35%, n=1,060) reported last injecting a stimulant (predominantly methamphetamine and cocaine) in 2019. Stimulants were the second most commonly reported class of drug reported by respondents. Over the seven-year period, a significant increase in the proportion of respondents who reported last injecting a stimulant was observed, from 26% in 2013 to 35% in 2019 (p-trend=0.001). Stimulants were the most common class of drug reported in six of the 15 NSW LHDs in 2019. Far West LHD recorded the highest proportion of respondents who reported last injecting a stimulant in 2019 (80%), while the lowest proportion was recorded at Illawarra Shoalhaven LHD (4%).

Methamphetamine was the most commonly reported stimulant last injected in NSW in 2019, reported by one third of respondents (33%, n=995). Smaller proportions of respondents reported last injecting cocaine (2%, n=56) or more than one or other stimulants (<1%, n=9).

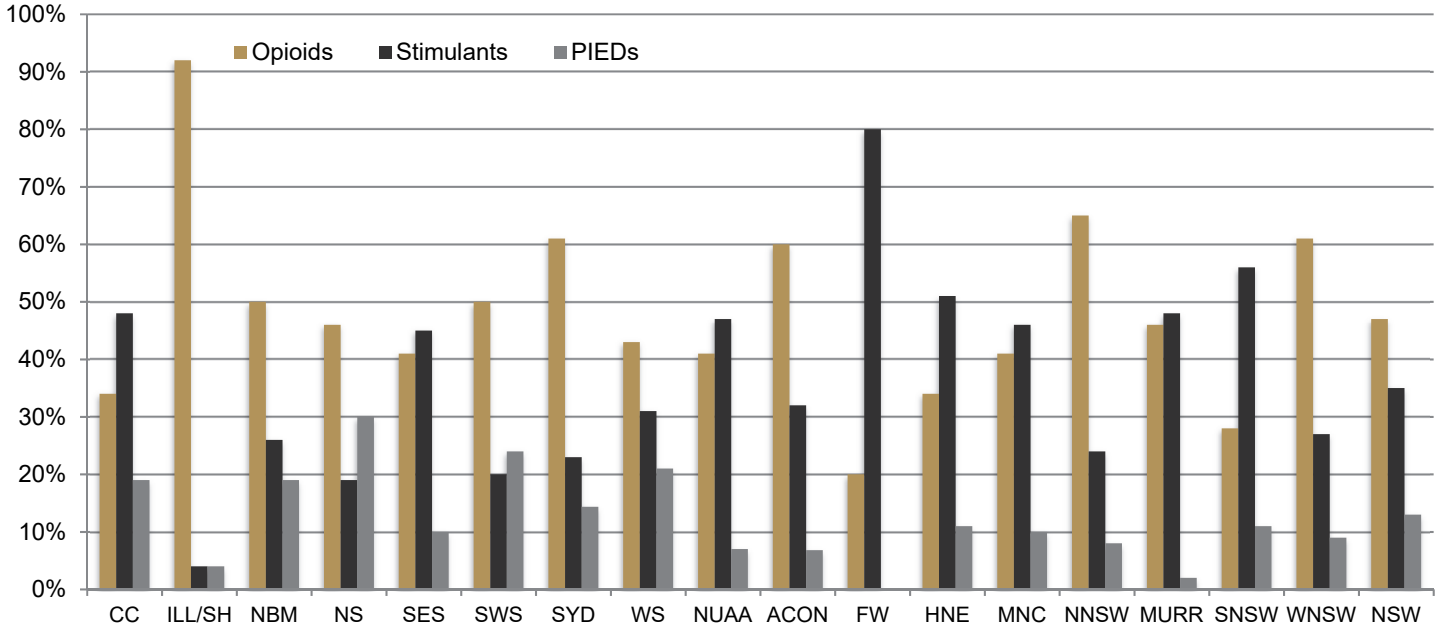
Over the seven-year period, a significant increase in the proportion of respondents who reported last injecting methamphetamine was observed, from 26% in 2013 to 35% in 2019 (p-trend<0.001). Conversely, a significant decline was observed in the proportion of respondents who reported last injecting cocaine, from 3% in 2013 to 2% in 2019 (p-trend<0.001).

Performance and image-enhancing drugs

PIEDs (predominantly anabolic steroids, peptides and growth hormone) were the third most commonly reported class of drug last injected in 2019, reported by 13% (n=397) of respondents. A significant decline in the proportion of respondents who reported last injecting PIEDs was observed over the seven-year period, from 15% in 2013 to 13% in 2019 (p-trend=0.002).

As in previous years, anabolic steroids were the most commonly reported PIED last injected in 2019, reported by approximately one in ten of these respondents (9%, n=267). Smaller proportions of respondents reported last injecting more than one or other PIEDs (2%, n=56), growth hormone (1%, n=37) or peptides (1%, n=37).

Figure 6 Opioids, stimulants and PIEDs as last drug injected in NSW and by LHD in 2019



The response options for the drug last injected question were expanded in 2017 to include growth hormone and peptides. This change in methodology resulted in an artificial decline in the proportion of respondents who reported last injecting anabolic steroids over the seven-year period. For this reason, trend analysis for anabolic steroids was restricted to the years since the methodological change. Over the three year period, 2017 to 2019, the proportion of respondents who reported last injecting anabolic steroids, growth hormone, peptides or more than one or other PIEDs remained stable (p-trend=0.093, p-trend=0.966, p-trend=0.265 and p-trend=0.131 respectively).

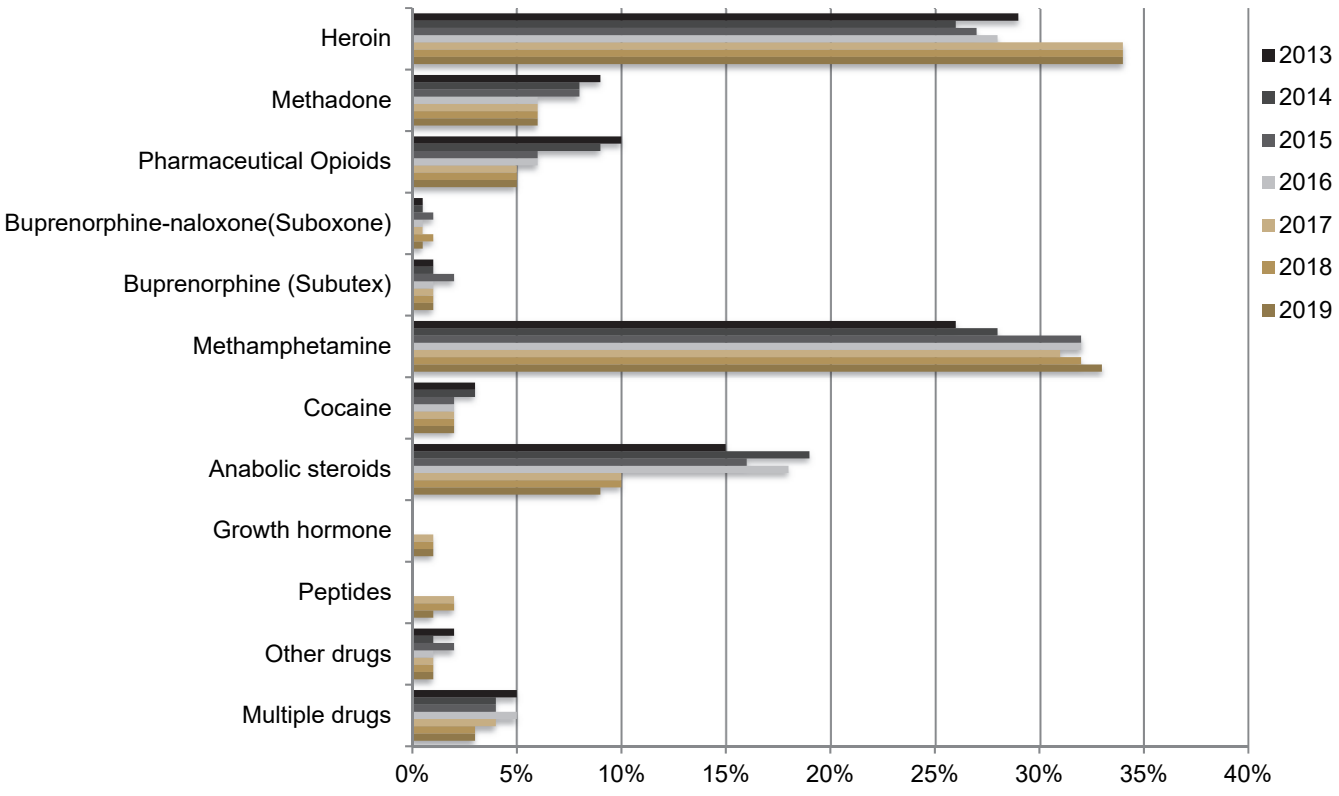
In 2019, a minority of respondents reported last injecting more than one class of drug (3%, n=76) or a drug other than those listed on the data collection instrument (other 1%, n=40). A significant decline was observed in proportion of respondents who reported last injecting more than one class of drug, from 5% in 2013 to 3% in 2019 (p-trend<0.001). The proportion of respondents who reported last injecting a drug other than those listed on the data collection instrument was stable over the seven-year period (p-trend=0.124)

Drug last injected among young people

PIEDs were the most commonly reported class of drug last injected among young people, reported by one in two young people (49%, n=70). This was followed by stimulants (24%, n=34) and opioids (20%, n=29).

The pattern of drug last injected among young men mirrored the overall pattern for young people. PIEDs was the most commly reported class of drug reported by this sub-population, reported by three in five young men (60%, n=64), followed by stimulants (20%, n=21) and opioids (18%, n=19). Among young women however, stimulants were the most commonly reported class of drug last injected, reported by two in five young women (39%, n=12). This was followed by opioids (29%, n=9) and PIEDs (16%, n=5).

Figure 7 Drug last injected among NNEDC respondents, 2013-2019



Drug last injected by location

The pattern of drug last injected among respondents who completed the NNEDC in a metropolitan LHD mirrored the overall state pattern of drug last injected. In 2019, approximately one in two metropolitan respondents (49%, n=1,115) reported last injecting an opioid, and this was followed by one in three respondents (33%, n=747) who reported last injecting a stimulant and one in seven (14%, n=330) who reported last injecting PIEDs. Conversely, among respondents who completed the NNEDC at a rural or regional LHD, two in five respondents (44%, n=313) reported last injecting a stimulant. This was followed by two in five respondents (43%, n=306) who reported last injecting an opioid and one in ten (9%, n=67) who reported last injecting PIEDs.

Compared to respondents from a rural or regional LHD, respondents from a metropolitan LHD were significantly more likely to have reported last injecting an opioid in 2019 (43% vs 49%, p=0.003), however, were significantly less likely to have reported last injecting a stimulant (44% vs 33%, p<0.001), and this is consistent with previous years. Additionally, in 2019, respondents from a metropolitan LHD were significantly more likely to have reported last injecting PIEDs compared to their rural and regional counterparts (14% vs 9%, p<0.001). This association has been observed in all years except 2018.

Injecting behaviour

Key findings:

- **Four in five respondents (80%) reported injecting weekly or more frequently in 2019.**
- **Reports of daily or more frequent injection declined significantly over the seven-year period (p-trend<0.001), from 49% in 2013 to 40% in 2019.**
- **The median number of years since first injection was 20 years (range 0-59 years).**
- **The median age at first injection was 20 years (range 10-65 years).**
- **One in ten respondents (10%) reported initiating injecting within the previous three years, a significant decline from 11% in 2013 (p-trend=0.001).**

Frequency of injection

In 2019, two in five respondents (40%, n=828) reported injecting on a weekly, but not daily, basis. This was closely followed by two fifths of respondents (40%, n=824) who reported injecting on a daily basis. Approximately one in five respondents (17%, n=481) reported injecting less than weekly, and one in ten (8%, n=223) reported no injecting in the previous month.

Over the seven-year period a significant increase was observed in the proportion of respondents who reported injecting on a weekly, but not daily basis, from 24% in 2013 to 40% in 2019 (p-trend<0.001). Conversely, during this period, significant declines were observed in the proportion of respondents who reported injecting daily or more frequently (from 49% in 2013 to 40% in 2019, p-trend<0.001), less than weekly (from 16% in 2013 to 12% in 2019, p-trend<0.001) or who reported no injection in the month prior to data collection (from 11% in 2013 to 9% in 2019, p-trend<0.001).

Time since first injection and new initiates

Among all respondents in 2019, the median number of years since first injection was 20 years (range 0-59 years), and the median age at first injection was 20 years (range 10-65 years).

One in ten respondents (10%, n=202) reported injection initiation within the previous three years (new initiates) in 2019, and over the seven-year period a significant decline was observed in this sub-population, from 11% in 2013 to 10% in 2019 (p-trend=0.001).

Of the n=202 new initiates recorded in 2019, the majority were men (84%, n=170), had a median age of 29 years (range 18-66 years), identified as heterosexual (73%, n=122) and had completed the NNEDC at a metropolitan LHD (76%, n=153).

PIEDs were the most commonly reported class of drug last injected among new initiates, reported by approximately three in five new initiates (57%, n=114). This was followed by stimulants (27%, n=53) and opioids (12%, n=24). One in two new initiates (49%, n=95) reported injecting on a weekly, but not daily basis in 2019, and this was followed by daily or more frequent injecting (22%, n=43), no injecting in the month prior to data collection (15%, n=29) and less than weekly injecting (14%, n=27).

Receptive syringe sharing

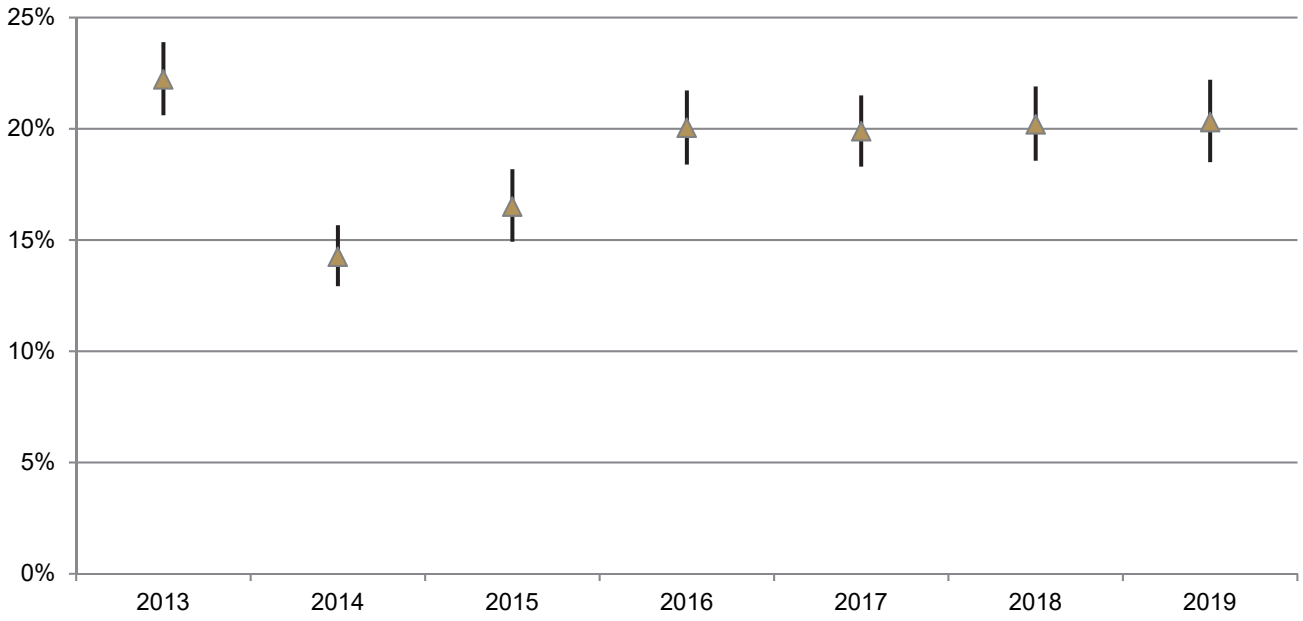
Key findings:

- **One in five respondents (20%) reported at least one episode of receptive syringe sharing (RSS) in the month prior to data collection in 2019.**
- **Of the 377 respondents who reported RSS:**
  - **One in three (36%) reported five or more occasions of RSS.**
  - **One in four (23%) reported two occasions of RSS.**
  - **One in five (22%) reported between three and five occasions of RSS.**
  - **One in five (19%) reported a single occasion of RSS in the last month.**
- **The proportion of respondents who reported recent RSS remained stable over the seven-year period (p-trend=0.075).**
- **Factors associated with a decreased risk of RSS included being aged 49 years or older and being prescribed OST in the previous 12 months.**

Of the 1,891 respondents who reported at least one injection episode in the month prior to data collection, one fifth (20%, n=377, Figure 8) reported at least one occasion of receptive syringe sharing (RSS) during this time period. Over the seven-year period, the proportion of respondents who reported recent RSS remained stable (p-trend=0.075).

Among respondents who reported recent RSS in 2019, approximately one third (36%, n=136) reported that RSS has occurred on three or more occasions. This was followed by one in four (23%, n=87) who reported that RSS had occurred twice and one in five (22%, n=83) who reported that RSS had occurred on between three and five occasions. A further one in five respondents (19%, n=71) reported only a single occasion of recent RSS. There were no significant changes in the frequency of recent RSS over the seven-year period (Figure 9).

Figure 8 Proportion of NNEDC respondents who reported RSS, 2013-2019, with 95% confidence intervals



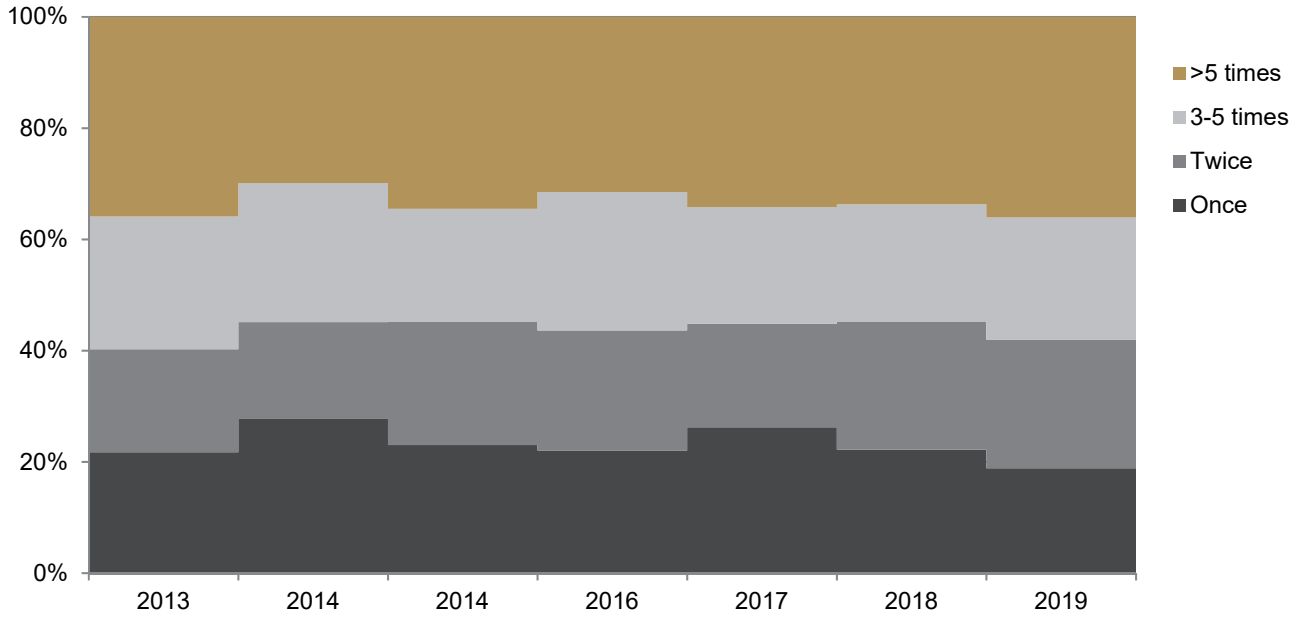
In 2019, 15% (n=477) of respondents required assistance with the completion of the NNEDC data collection instrument. RSS is a highly stigmatised behaviour and may be affected by social desirability bias (White et. al. 2007). As observed in previous years, respondents who were assisted to complete the NNEDC by either NSP staff or other NSP attendees, were significantly less likely to report RSS in 2019, compared to respondents who did not require assistance (12% vs 22% respectively, p<0.001). It is therefore likely that the overall RSS prevalence of 20% is an under-estimate of the true extent of this behaviour.

Factors independently associated with RSS

As shown in Table 5, there were no associations between RSS and gender, sexual identity, language spoken at home, geographic location, drug last injected, frequency of injection, living with a mental health issue or recent homelessness or imprisonment in 2019. 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.

Consistent with 2018, in 2019, respondents aged 49 years and over were significantly less likely to report RSS compared to respondents aged less than 35 years. Additionally, respondents who reported being prescribed OST in the last 12 months were significantly less likely to report RSS compared to those who were not prescribed OST, and this association has been observed in all years since 2016.

Figure 9 Frequency of RSS among NNEDC respondents who reported RSS, 2013-2019



Hepatitis C testing and treatment uptake

Key findings:

- **Four in five respondents (78%) reported a lifetime history of HCV testing, including 46% who reported a HCV test since 2018, while one in five respondents (22%) reported never having a test for HCV.**
- **Among respondents determined as ever eligible for HCV direct-acting antiviral (DAA) treatment, the proportion who reported a lifetime history of HCV DAA treatment was 61%.**
- **HCV DAA treatment uptake was highest in Far West LHD (100%), followed by South Eastern Sydney LHD (73%), Western NSW LHD (75%) and Central Coast LHD (70%).**
- **Three in five respondents (60%) in 2019 who reported accessing HCV DAA treatment did so in 2018 or later.**
- **The majority of respondents accessed DAA treatment through public-sector community settings (32%) or tertiary facilities (24%), with smaller proportions of respondents accessing DAA treatment through alcohol and other drug services (16%), general practitioners (10%) and correctional facilities (7%).**

Additional questions were included in the 2018 NNEDC data collection instrument to estimate the uptake of hepatitis C virus (HCV) direct-acting antiviral (DAA) treatment among people who inject drugs (PWID) attending NSPs in NSW and to identify the range of settings where treatment was accessed. In 2019, further questions were added to the NNEDC to determine the proportion of respondents who had had a HCV test in the previous 12 months, and for those who were eligible and had sought treatment, the year that treatment was sought.

HCV Testing

Of the 2,074 respondents who completed the questions regarding HCV testing and treatment in 2019, 78% (n=1,618, Table 4) reported a lifetime history of HCV testing, including 46% (n=956) who reported a HCV test since 2018. One in five respondents (22%, n=456) reported never having a HCV test.

As shown in Table 6, there were no associations observed between the uptake of HCV testing and language spoken at home, geographic location, recent homelessness and injection frequency.

Compared to men, women were significantly more likely to report ever having had a HCV test, as were respondents who identified as homosexual, compared to respondents who identified as heterosexual. Respondents aged 35 years and over were significantly more likely to have reported ever having had a HCV test compared to those aged less than 35. Finally, respondents who reported being imprisoned or having a mental health issue and those who were prescribed OST in the previous 12 months were significantly more likely to have ever had a HCV test, compared to those who did not.

Conversely, compared to respondents who reported last injecting an opioid, respondents who reported last injecting a stimulant or PIED were significantly less likely to have reported ever having a HCV test. Additionally, respondents who reported RSS in the month prior to data collection were also significantly less likely to have ever had a HCV test, compared to those who did not report recent RSS.

Exposure to HCV

Approximately three in five respondents (57%, n=928) self-reported a previous HCV diagnosis. These findings are consistent with bio-behavioural surveillance systems, such as the Australian NSP Survey (ANSPS) where the proportion of respondents in NSW who were serologically confirmed as HCV antibody positive ranged from 49% to 61% between 2013 and 2017 (Heard et. al. 2018).

Current HCV status

Secondly, respondents were asked to report their current HCV status (spontaneously cleared or chronically infected) and if they had ever received Interferon-based or DAA treatment for their HCV infection. Among respondents who self-reported a HCV diagnosis and excluding those who did not report their HCV treatment status (n=12), one in five (21%, n=191) reported that they had spontaneously cleared their HCV infection. This is consistent with previous work by Grebely et. al. (2014) which found that 25% of PWID exposed to HCV spontaneously cleared infection, with women significantly more likely to spontaneously clear their infection than men. Among NNEDC respondents, self-reported spontaneous clearance was also higher among women (25%, n=74) compared to men (18%, n=108, p<0.001). This finding also supports the validity of self-reported NNEDC data.

Among the group who self-reported a previous HCV diagnosis, approximately one in ten (11%, n=103) reported a history of Interferon-based HCV treatment. This is comparable to findings by Iversen et. al. (2014), where ~10% of HCV antibody positive PWID in Australia had engaged in treatment in the Interferon-based therapy era.

DAA treatment uptake was calculated among the group who reported a previous HCV diagnosis (n=928) after excluding respondents who reported spontaneous clearance (n=191) and those who did not report their HCV treatment status (n=12). Given ~55% cure rates among people engaged in HCV Interferon-based treatment (Fried et. al. 2002), a further n=57 respondents were excluded as these respondents were assumed to have cleared the virus successfully prior to the availability of DAA therapies. Thus, the group determined to be ever eligible for DAA treatment in February 2019 comprised n=668 respondents.

Among respondents who were determined as to be ever eligible for HCV DAA treatment (n=688), three in five respondents (61%, n=407) reported they had accessed DAAs. This is considerably higher than the 28% of people living with HCV who had accessed DAA treatment in NSW at the end of December 2018 (NSW Hepatitis B and C strategies 2014-2020: 2018 Annual Data report, in press). This suggests that NSP attendees may be more likely to be aware of their HCV status and/or to have greater opportunities and support to access DAA treatment than other sub-populations of people living with chronic HCV.

As shown in Figures 10 and 11, DAA treatment uptake (among the group determined to be ever eligible for DAA treatment) ranged from 40% to 100% among LHDs. DAA treatment uptake was highest in Far West LHD (100%), followed by South Eastern Sydney LHD (73%), Western NSW (75%) and Central Coast LHD (70%).

Figure 10 Proportion of eligible respondents treated with HCV DAAs by LHD, 2018-2019

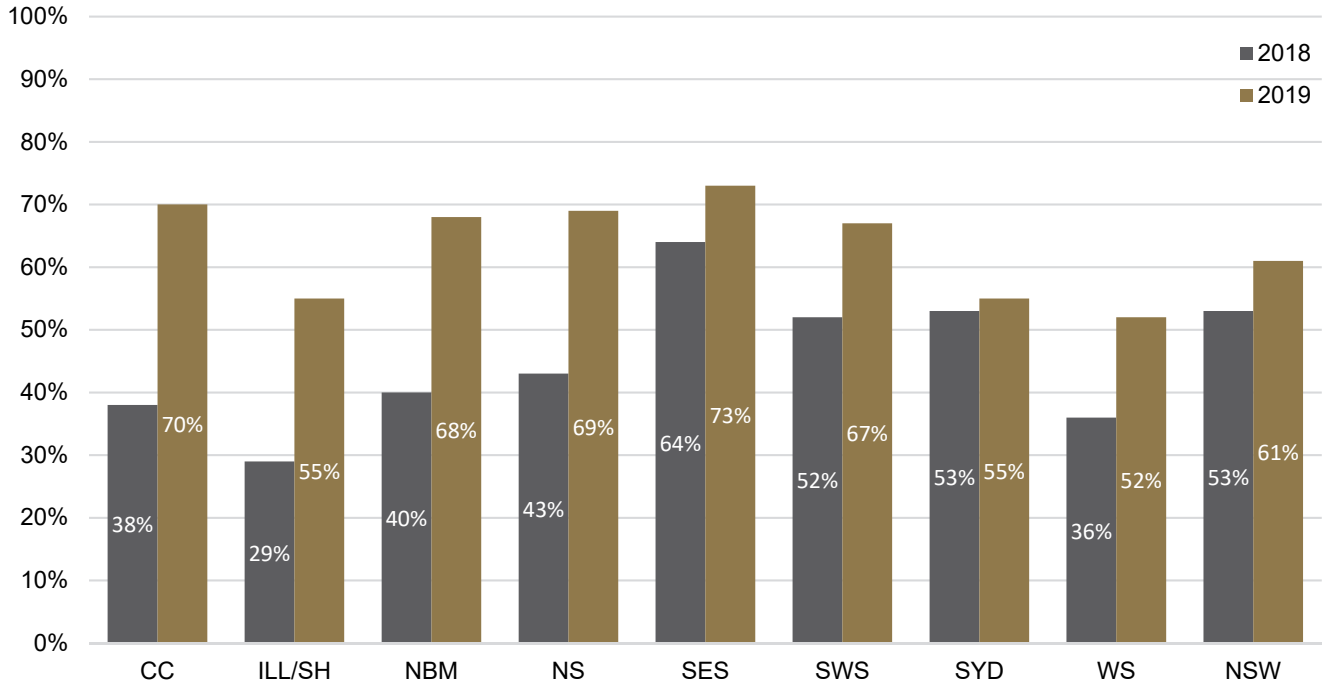
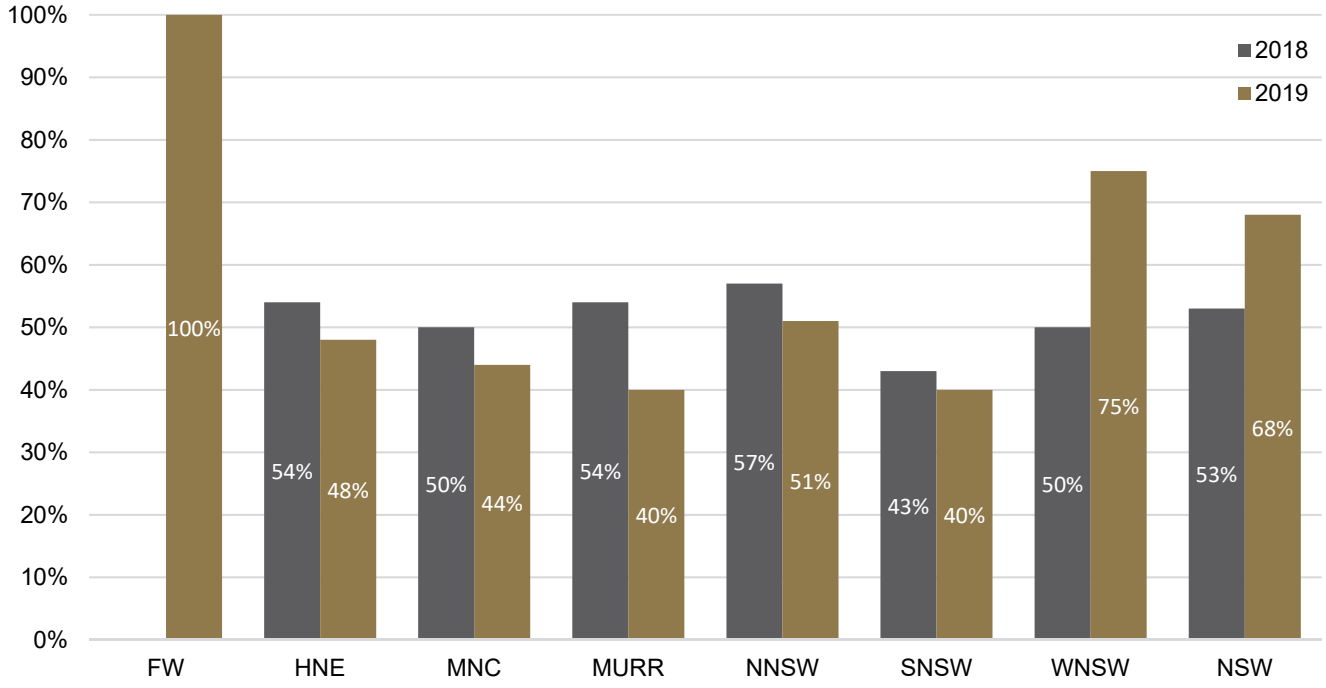


Figure 11 Proportion of eligible respondents treated with HCV DAAs by LHD, 2018-2019



[#] No respondents from FW LHD reported HCV exposure or status in 2018

HCV DAA treatment uptake by year

An additional question was included in the NNEDC in 2019 to determine the year in which respondents sought HCV DAA treatment. Of the 407 respondents who reported accessing treatment in the 2019 round of data collection, three in five (60%, n=241) reported recent access to treatment (in 2018 or later). A further quarter of respondents (25%, n=99) reported accessing treatment in 2017. Smaller proportions of respondents reported accessing treatment in 2016 (10%, n=39) or prior to 2016 (6%, n=23). Although DAAs were not available through the Pharmaceutical Benefits Scheme during these years (listed in March 2016), it is thought that these respondents may have accessed treatment either privately or through clinical trials.

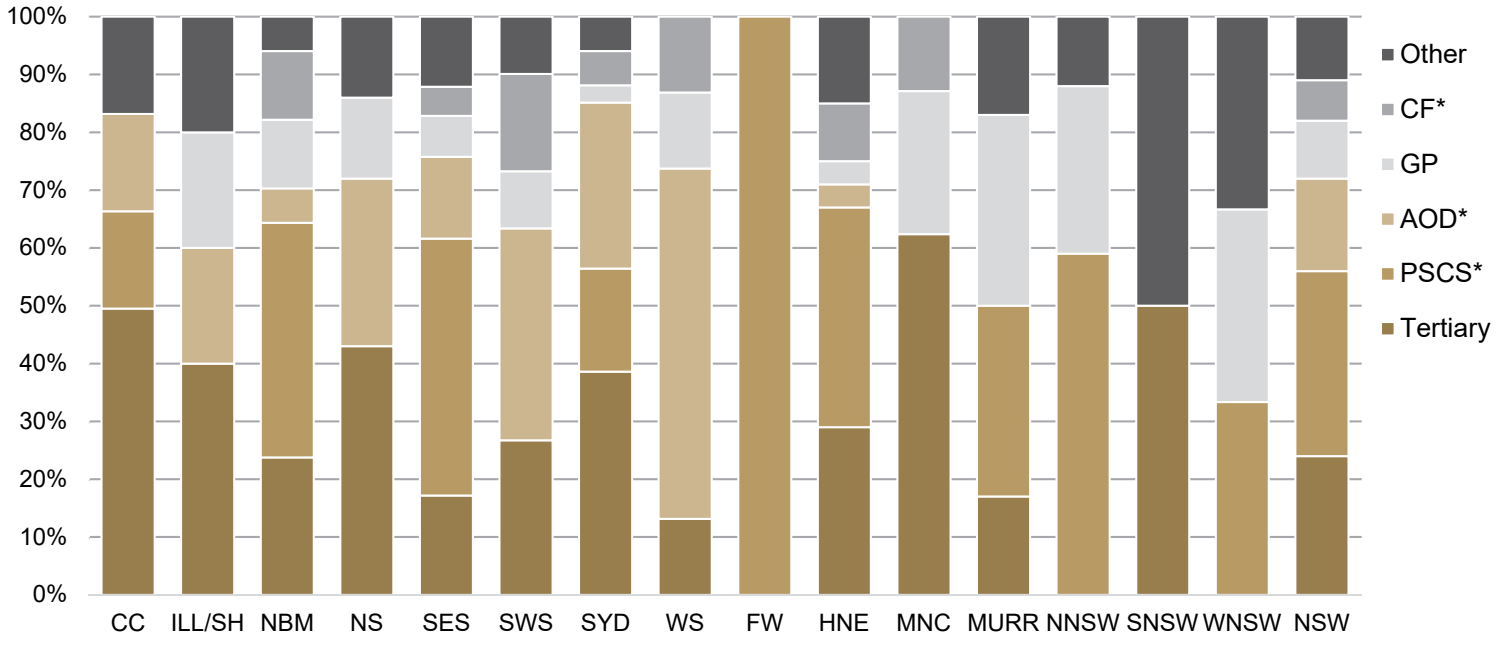
HCV DAA treatment uptake by health care setting

In 2019, respondents reported accessing HCV DAA therapies from more than 115 different health care settings. Health care settings provided by respondents were subsequently categorised into broad groups according to service type.

Among respondents who reported DAA treatment (n=407), one in three (32%, n=113) reported accessing DAA treatment through public-sector community settings (community health centres, sexual health services, community-based liver clinics and NSPs). This was followed by one in four respondents (24%, n=86) who reported accessing treatment through tertiary facilities, including hospitals and tertiary liver clinics. Smaller proportions of respondents reported accessing treatment through alcohol and other drug services (both public and private sector including OST and residential rehabilitation services, 16%, n=57), general practitioners (10%, n=35) and correctional facilities (7%, n=25). One in ten respondents (11%, n=39) reported accessing DAAs through 'other' settings, including housing services (n=7) and settings located outside NSW (n=10).

Figure 12 provides a breakdown of access to DAA treatment by health care setting and LHD (based on the LHD where the NNEDC was completed).

Figure 12 HCV DAA treatment uptake by health care setting and LHD in 2019



*PSCS: Public sector community setting
*CF: Correctional facility
*AOD: Alcohol and other drug setting
*ACCHS: Aboriginal Community Control Health Service

Uptake of HCV DAA treatment among key populations of NSP attendees

As shown in Table 7, no significant associations were observed between HCV DAA uptake and language spoken at home, drug last injected, RSS, recent imprisonment or mental health issues.

As in 2018, a significant association was observed between uptake of HCV DAA treatment and sexual identity, with respondents who identified as homosexual significantly more likely to report treatment with DAAs compared to their heterosexual counterparts. Furthermore, respondents aged between 43 and 49 years were significantly more likely to report HCV DAA treatment compared to respondents aged less than 35 years, also observed in 2018. Finally, respondents who reported being prescribed OST in the previous 12 months were significantly more likely to report accessing HCV DAA treatment, compared to respondents who were not prescribed OST. This association was not observed in 2018.

Consistent with findings from the 2018 NNEDC, significant associations were observed between gender and frequency of injection and HCV DAA uptake in 2019. Compared to men, women were significantly less likely to report HCV DAA treatment, as were respondents who reported injecting daily or more frequently compared to those who injected less frequently. Additionally, there were several associations observed in 2019 that were not observed in 2018. Compared to respondents who completed the NNEDC in a metropolitan LHD, respondents who completed the NNEDC in a rural or regional LHD were significantly less likely to report accessing HCV DAA treatment in 2019. Finally, respondents who experienced homelessness in the 12 months prior to data collection in 2019 were significantly less likely to have accessed treatment compared to those who were stably housed.

New South Wales

Table 1: Demographics characteristics, by year

	2013	2014	2015	2016	2017	2018	2019	7 year p-trend
Number of sites	**51**	**55**	**49**	**52**	**50**	**50**	**49**	--
Number surveyed (OOS)	**5,772 (%)**	**6,257 (%)**	**5,439 (%)**	**5,363 (%)**	**5,378 (%)**	**4,817 (%)**	**4,633 (%)**	--
Completed survey	3,101 (54)	3,029 (48)	2,453 (45)	2,584 (48)	3,607 (67)	3,264 (68)	3,195 (69)	**<0.001**
Previously completed (repeat NSP attendee)	1,433 (25)	1,258 (20)	955 (18)	1,004 (19)	1,355 (25)	1,054 (22)	902 (19)	0.194
Declined to participate	1,238 (21)	1,970 (31)	2,031 (37)	1,775 (33)	416 (8)	499 (10)	536 (12)	**<0.001**
N° surveyed (individuals)	**2,938**	**3,029**	**2,453**	**2,584**	**3,607**	**3,264**	**3,195**	
Gender								
Male	2,069 (71)	2,193 (74)	1,744 (73)	1,851 (73)	2,666 (74)	2,400 (74)	2,310 (74)	0.417
Female	811 (28)	733 (25)	641 (27)	673 (27)	882 (24)	813 (25)	799 (25)	0.111
Other	16 (<1)	30 (1)	11 (<1)	23 (1)	19 (1)	20 (1)	25 (1)	0.936
Not reported	42 --	73 --	57 --	37 --	40 --	31 --	61 --	--
Sexual identity*								
Heterosexual	-- --	2,495 (87)	1,955 (86)	2,091 (85)	2,077 (83)	1,833 (84)	1,498 (80)	0.054
Bisexual	-- --	193 (7)	178 (8)	202 (8)	214 (9)	188 (9)	193 (10)	**<0.001**
Homosexual	-- --	184 (6)	144 (6)	179 (7)	219 (9)	173 (8)	178 (10)	**<0.001**
Not reported	-- --	157 --	176 --	112 --	1097 --	1070 --	1,326 --	--
Age (years)								
Median age (range)	38 (17-77)	38 (15-72)	39 (14-85)	39 (18-73)	40 (18-74)	41 (16-74)	42 (17-78)	--
Less than 25 years	241 (9)	295 (10)	201 (9)	200 (8)	196 (6)	169 (5)	155 (5)	**<0.001**
25 years or more	2,594 (92)	2,656 (90)	2,078 (91)	2,276 (91)	3,234 (94)	2,956 (95)	2,870 (95)	0.084
Not reported	103 --	78 --	174 --	108 --	177 --	139 --	170 --	--
Aboriginal and/or Torres Strait Islander								
Yes, Aboriginal	402 (14)	449 (15)	389 (17)	436 (17)	645 (19)	620 (20)	594 (19)	**<0.001**
Yes, Torres Strait Islander	14 (<1)	14 (<1)	8 (<1)	13 (1)	23 (<1)	18 (1)	14 (<1)	0.547
Yes, both Aboriginal and Torres Strait Islander	15 (1)	20 (1)	17 (1)	23 (1)	24 (1)	24 (1)	21 (1)	0.450
No	2,433 (85)	2,458 (84)	1,920 (83)	2,085 (82)	2,732 (80)	2,452 (79)	2,442 (80)	**0.016**
Not reported	74 --	88 --	119 --	27 --	183 --	150 --	124 --	--
Main language spoken at home by parents								
English	2,729 (95)	2,804 (95)	2,198 (94)	2,411 (94)	2,621 (94)	2,279 (93)	1,951 (93)	0.502
Other	137 (5)	147 (5)	146 (6)	154 (6)	180 (6)	164 (7)	138 (7)	**<0.001**
Not reported	72 --	78 --	109 --	19 --	806 --	821 --	1,106 --	--

NB: Percent excludes not reported

* Data not collected in all years

Table 2: Last drug injected and injecting behaviours, by year

	2013	2014	2015	2016	2017	2018	2019	7 year p-trend
Number surveyed (individuals)	**2,938 (%)**	**3,029 (%)**	**2,453 (%)**	**2,584 (%)**	**3,607 (%)**	**3,264 (%)**	**3,195 (%)**	--
Last drug injected								
Opioids	**1,390 (49)**	**1,321 (45)**	**1,030 (44)**	**1,101 (43)**	**1,606 (47)**	**1,448 (48)**	**1,421 (47)**	0.734
Heroin	810 (29)	761 (26)	630 (27)	708 (28)	1,150 (34)	1,033 (34)	1,011 (34)	**<0.001**
Pharmaceutical opioids	275 (10)	259 (9)	151 (6)	162 (6)	186 (5)	159 (5)	146 (5)	**<0.001**
Methadone	254 (9)	240 (8)	182 (8)	162 (6)	202 (6)	180 (6)	182 (6)	**<0.001**
Buprenorphine (Subutex)	38 (1)	26 (1)	35 (2)	37 (1)	25 (1)	31 (1)	39 (1)	0.563
Buprenorphine-naloxone (Suboxone)	12 (<1)	11 (<1)	14 (1)	12 (<1)	10 (<1)	16 (1)	9 (<1)	0.568
Other opioids/more than 1 opioid	1 (<1)	24 (1)	18 (1)	20 (1)	33 (1)	29 (1)	34 (1)	**<0.001**
Stimulants	**837 (29)**	**899 (31)**	**803 (34)**	**852 (34)**	**1,122 (33)**	**1,031 (34)**	**1,060 (35)**	**0.001**
Methamphetamine	746 (26)	817 (28)	748 (32)	801 (32)	1,049 (31)	966 (32)	995 (33)	**<0.001**
Cocaine	89 (3)	76 (3)	51 (2)	40 (2)	69 (2)	58 (2)	56 (2)	**<0.001**
Other stimulants/ more than 1 stimulant	2 (<1)	6 (<1)	4 (<1)	11 (<1)	4 (<1)	7 (<1)	9 (<1)	0.232
Performance image-enhancing drugs	**427 (15)**	**547 (19)**	**382 (16)**	**449 (18)**	**494 (15)**	**448 (15)**	**397 (13)**	**0.002**
Anabolic steroids	423 (15)	544 (19)	381 (16)	448 (18)	350 (10)	309 (10)	267 (9)	0.093
Growth hormone*	-- --	-- --	-- --	-- --	42 (1)	31 (1)	37 (1)	0.966
Peptides*	-- --	-- --	-- --	-- --	55 (2)	63 (2)	37 (1)	0.265
Others PIEDs/ more than 1 PIED	4 (<1)	3 (<1)	1 (<1)	1 (<1)	47 (1)	45 (1)	56 (2)	0.131
Other drugs	**50 (2)**	**34 (1)**	**36 (2)**	**26 (1)**	**39 (1)**	**34 (1)**	**40 (1)**	0.124
More than one category	**133 (5)**	**105 (4)**	**82 (4)**	**115 (5)**	**130 (4)**	**87 (3)**	**76 (3)**	**<0.001**
Not reported	**101 --**	**123 --**	**120 --**	**41 --**	**216 --**	**216 --**	**201 --**	--
Frequency of injection last month								
Not last month	311 (11)	286 (10)	210 (9)	228 (9)	223 (8)	203 (8)	182 (9)	**<0.001**
Less than weekly	449 (16)	487 (17)	362 (16)	475 (19)	481 (17)	272 (11)	239 (12)	**<0.001**
More than weekly, not daily	677 (24)	757 (26)	556 (24)	616 (24)	689 (25)	1,009 (41)	828 (40)	**<0.001**
Daily or more	1,382 (49)	1,361 (47)	1,155 (51)	1,201 (48)	1,360 (49)	975 (40)	824 (40)	**<0.001**
Not reported	119 --	138 --	170 --	64 --	854 --	805 --	1,122 --	--
Age at first injection								
Median (range)	19 (10-60)	20 (10-65)	20 (10-75)	20 (10-59)	20 (10-67)	20 (10-66)	20 (10-65)	--
Not reported	209 --	169 --	191 --	147 --	845 --	729 --	1,089 --	--
Years since first injection								
Median (range)	16 (0-59)	16 (0-53)	17 (0-67)	18 (0-56)	18 (0-53)	19 (0-62)	20 (0-59)	--
Less than 3 years since first injection	296 (11)	382 (14)	267 (12)	280 (12)	322 (12)	235 (9)	202 (10)	**0.001**
3 or more years since first injection	2,372 (89)	2,415 (86)	1,930 (88)	2,087 (88)	2,420 (88)	2,286 (91)	1,819 (90)	0.378
Not reported	270 --	232 --	256 --	217 --	865 --	743 --	1,174 --	--

NB: Percent excludes not reported * Data not collected in all years ^ Trend analysis conducted for 2017-2019 only

Table 3: Psychosocial issues in the previous 12 months and receptive syringe sharing

	2013	2014	2015	2016	2017	2018	2019	7 year p-trend
Number who injected last month	**2,508 (%)**	**2,605 (%)**	**2,073 (%)**	**2,292 (%)**	**2,530 (%)**	**2,256 (%)**	**1,891 (%)**	--
Receptive syringe sharing last month (RSS)^								
No	1,945 (78)	2,212 (86)	1,720 (84)	1,814 (80)	2,014 (80)	1,780 (80)	1,478 (80)	0.822
Yes	554 (22)	366 (14)	339 (16)	454 (20)	500 (20)	451 (20)	377 (20)	0.075
Not reported	9 --	27 --	14 --	24 --	16 --	25 --	36 --	--
Ocassions of RSS last month among respondents who reported RSS								
Once	121 (22)	102 (28)	78 (23)	100 (22)	131 (26)	100 (22)	71 (19)	0.356
Twice	103 (19)	63 (17)	75 (22)	98 (22)	93 (19)	104 (23)	87 (23)	0.094
3-5 times	131 (24)	91 (25)	69 (20)	113 (25)	105 (21)	95 (21)	83 (22)	0.351
More than 5 times	199 (36)	110 (30)	117 (35)	143 (32)	171 (34)	152 (34)	136 (36)	0.826
Number surveyed (individuals)#	**-- --**	**-- --**	**-- --**	**2,557 (%)**	**2,833 (%)**	**2,445 (%)**	**2,106 (%)**	--
Psychosocial factors in previous 12 months								
Homelessness*	-- --	-- --	-- --	627 (25)	695 (25)	584 (24)	529 (25)	0.710
Living with, or diagnosed with, a mental health issue*	-- --	-- --	-- --	519 (20)	593 (21)	481 (20)	489 (23)	0.108
Imprisoned*	-- --	-- --	-- --	226 (9)	311 (11)	245 (10)	216 (10)	0.238
Prescribed OST*	-- --	-- --	-- --	644 (25)	681 (24)	619 (25)	507 (24)	0.756

NB: Percent excludes not reported

^ Among respondents who injected last month and excluding RSS not reported

Excludes respondents who did not complete entire survey

* Data not collected in all years

Table 4: NSW Hepatitis C testing and treatment uptake, 2018-2019

	2018	2019
Number surveyed (individuals)	**2,460 (%)**	**2,074 (%)**
Previous hepatitis C test		
Yes, ever	-- --	1,618 (78)
Since 2018	-- --	956 (46)
Prior to 2018	-- --	662 (32)
Never	-- --	456 (22)
Self-reported ever hepatitis C infection	**N=2,460**	**N=1,618***
No	1,270 (52)	690 (43)
Yes	1,190 (48)	928 (57)
Ever received treatment	**N=1,190**	**N=928**
No, still hepatitis C positive	343 (30)	215 (23)
No, cleared spontaneously	243 (21)	191 (21)
Yes, received interferon based treatment	125 (11)	103 (11)
Yes, received treatment with DAAs	449 (39)	407 (44)
Not reported	30 --	12 --
Ever eligible for DAA treatment^	**N=848**	**N=668**
Yes, received treatment with DAAs	449 (53)	407 (61)
HCV DAA treatment year		**N=407**
Since 2018	-- --	241 (60)
2017	-- --	99 (25)
2016	-- --	39 (10)
Prior to 2016	-- --	23 (6)
Not reported	-- --	5 --
HCV DAA treatment uptake by health care setting	**N=449**	**N=407**
Aboriginal Community Controlled Health Service	5 (1)	0 (0)
Alcohol and Other Drug services[1]	50 (14)	57 (16)
Correctional Facilities	28 (8)	25 (7)
General Practitioner	38 (10)	35 (10)
Public sector community services[2]	105 (29)	113 (32)
Tertiary services	108 (29)	86 (24)
Other[3]	34 (9)	39 (11)
Not reported	81 --	52 --

^ Assumes 55% cure among respondents who reported Interferon-based therapy. Denominator excludes this group, those who reported spontaneous clearance and those with no valid response

* Unlike 2018, the denominator in 2019 excludes respondents who reported no history of HCV testing and results cannot be compared across years

[1] Alcohol and other drugs services includes both public and private sector including OST and residential rehabilitation services

[2] Public sector community services includes community health centres, sexual health services, community-based liver clinics and NSPs

[3] Other services includes housing services and settings located outside of NSW

Table 5: Factors independently associated with receptive syringe sharing

Factor	Crude			Adjusted		
	OR	95% CI	*p value*	OR	95% CI	*p value*
Gender						
Male (reference)	--			--		
Female	1.18	(0.91-1.51)	0.206	--		
Sexual Identity						
Homosexual (reference)	--			--		
Bisexual	1.16	(0.79-1.71)	0.455	--		
Homosexual	1.21	(0.80-1.82)	0.367	--		
Age (quartiles)						
<35 years (reference)	--			--		
35-42 years	1.12	(0.83-1.51)	0.466	1.17	(0.86-1.59)	0.308
43-49 years	0.83	(0.60-1.16)	0.274	0.88	(0.64-1.23)	0.466
>49 years	0.53	(0.23-0.36)	**<0.001**	0.55	0.38-0.79)	**0.001**
Language spoken at home by parents						
English (reference)	--			--		
Other	0.92	(0.58-1.47)	0.725	--		
Geographic location						
Metropolitan (reference)	--			--		
Rural/Regional	0.88	(0.69-1.13)	0.327	--		
Recent homelessness*						
No (reference)	--			--		
Yes	1.22	(0.95-1.57)	0.125	--		
Recent imprisonment*						
No (reference)	--			--		
Yes	1.55	(1.11-2.17)	**0.010**	--		
Recent OST*						
No (reference)	--			--		
Yes	0.71	(0.53-0.94)	**0.016**	0.67	(0.38-0.79)	**0.001**
Living with a mental health issue*						
No (reference)	--			--		
Yes	0.79	(0.60-1.05)	0.103	--		
Drug class last injected						
Opioids (reference)	--			--		
Stimulants	1.37	(1.06-1.77)	**0.015**	--		
PIEDs	1.32	(0.93-1.89)	0.125	--		
Daily or more frequent injection						
No (reference)	--			--		
Yes	1.19	(0.95-1.49)	0.131	--		

Table 6: Factors independently associated with uptake of HCV testing

Factor	Crude			Adjusted		
	OR	95% CI	*p value*	OR	95% CI	*p value*
Gender						
Male (reference)	--			--		
Female	2.23	(1.69-2.93)	**<0.001**	1.55	(1.09-2.19)	**0.014**
Sexual Identity						
Homosexual (reference)	--			--		
Bisexual	1.75	(1.14-2.68)	**0.010**	1.32	(0.79-2.21)	0.291
Homosexual	1.62	(1.06-2.48)	**0.027**	2.65	(1.50-4.69)	**0.001**
Age (tertiles)						
<38 years (reference)	--			--		
38-46 years	3.09	(2.38-4.01)	**<0.001**	2.13	(1.56-2.92)	**<0.001**
>46 years	5.73	(4.23-7.76)	**<0.001**	3.13	(2.19-4.47)	**<0.001**
Language spoken at home by parents						
English (reference)	--			--		
Other	0.94	(0.62-1.43)	0.775	--		
Geographic location						
Metropolitan (reference)	--			--		
Rural/Regional	1.26	(1.00-1.59)	**0.047**	--		
Recent homelessness*						
No (reference)	--			--		
Yes	1.75	(1.34-2.72)	**<0.001**	--		
Recent imprisonment*						
No (reference)	--			--		
Yes	2.99	(1.86-4.79)	**<0.001**	2.09	(1.23-3.55)	**0.006**
Recent OST*						
No (reference)	--			--		
Yes	4.46	(3.14-6.32)	**<0.001**	2.02	(1.36-3.02)	**0.001**
Living with a mental health issue*						
No (reference)	--			--		
Yes	2.79	(2.05-3.79)	**<0.001**	1.53	(1.06-2.20)	**0.022**
Drug class last injected						
Opioids (reference)	--			--		
Stimulants	0.56	(0.43-0.75)	**<0.001**	0.62	(0.45-0.85)	**0.003**
PIEDs	0.06	(0.04-0.08)	**<0.001**	0.13	(0.09-0.19)	**<0.001**
Daily or more frequent injection						
No (reference)	--			--		
Yes	1.91	(1.52-2.40)	**<0.001**	--		
Receptive syringe sharing						
No (reference)	--			--		
Yes	0.58	(0.45-0.75)	**<0.001**	0.52	(0.38-0.71)	**<0.001**

Table 7: Factors independently associated with uptake of DAA treatment

Factor	Crude			Adjusted		
	OR	95% CI	*p value*	OR	95% CI	*p value*
Gender						
Male (reference)	--			--		
Female	0.69	(0.47-0.95)	**0.026**	0.65	(0.43-0.97)	**0.037**
Sexual Identity						
Homosexual (reference)	--			--		
Bisexual	0.94	(0.57-1.56)	0.819	1.21	(0.68-2.16)	0.521
Homosexual	4.35	(1.51-12.55)	**0.006**	3.21	(1.05-9.80)	**0.040**
Age (quartiles)						
<35 years (reference)	--			--		
35-42 years	1.43	(0.83-2.47)	**0.197**	1.23	(0.68-2.22)	0.497
43-49 years	2.14	(1.22-3.72)	**0.008**	1.91	(1.05-3.48)	**0.034**
>49 years	2.58	(1.47-4.53)	**0.001**	1.78	(0.96-3.30)	0.069
Language spoken at home by parents						
English (reference)	--			--		
Other	1.57	(0.72-3.41)	0.255	--		
Geographic location						
Metropolitan (reference)	--			--		
Rural/Regional	0.41	(0.29-0.58)	**<0.001**	0.39	(0.27-0.58)	**<0.001**
Recent homelessness*						
No (reference)	--			--		
Yes	0.44	(0.31-0.62)	**<0.001**	0.48	(0.27-0.58)	**<0.001**
Recent imprisonment*						
No (reference)	--			--		
Yes	0.56	(0.34-0.90)	**0.017**	--		
Recent OST*						
No (reference)	--			--		
Yes	1.70	(1.18-2.44)	**0.004**	1.64	(1.11-2.42)	**0.013**
Living with a mental health issue*						
No (reference)	--			--		
Yes	0.95	(0.66-1.37)	0.777	--		
Drug class last injected						
Opioids (reference)	--			--		
Stimulants	0.97	(0.68-1.38)	0.874	--		
PIEDs	0.52	(0.03-8.33)	0.641	--		
Daily or more frequent injection						
No (reference)	--			--		
Yes	0.54	(0.39-0.75)	**<0.001**	0.56	(0.0.39-0.81)	**0.002**
Receptively shared syringes						
No (reference)	--			--		
Yes	0.90	(0.58-1.39)	0.645	--		

Table 8: Hepatitis C testing and treatment uptake by LHD (Metropolitan), 2018-2019

	Central Coast		Illawarra Shoalhaven		Nepean Blue Mountains		Northern Sydney	
	2018	2019	2018	2019	2018	2019	2018	2019
Number surveyed (individuals)	**117 (%)**	**30 (%)**	**50 (%)**	**24 (%)**	**145 (%)**	**111 (%)**	**64 (%)**	**52 (%)**
Previous hepatitis C test								
Yes, ever	-- --	26 (87)	-- --	19 (79)	-- --	88 (79)	-- --	39 (75)
Since 2018	-- --	12 (40)	-- --	8 (33)	-- --	48 (48)	-- --	28 (54)
Prior to 2018	-- --	14 (47)	-- --	11 (46)	-- --	40 (36)	-- --	11 (21)
Never	-- --	4 (13)	-- --	5 (21)	-- --	23 (21)	-- --	13 (25)
Self-reported ever hepatitis C infection^		**N=26**		**N=19**		**N=88**		**N=39**
No	64 (55)	10 (38)	31 (62)	6 (32)	76 (54)	32 (36)	42 (66)	21 (54)
Yes	53 (45)	16 (62)	19 (38)	13 (68)	65 (46)	56 (64)	22 (34)	18 (46)
Not reported	0 --	0 --	0 --	0 --	4 --	0 --	0 --	0 --
Ever received treatment	**N=53**	**N=16**	**N=19**	**N=13**	**N=65**	**N=56**	**N=22**	**N=18**
No, still Hep C positive	21 (40)	3 (20)	11 (58)	5 (38)	25 (42)	9 (16)	6 (27)	4 (22)
No, cleared spontaneously	9 (17)	4 (27)	1 (5)	2 (15)	16 (27)	12 (22)	6 (27)	5 (27)
Yes, received interferon based treatment	8 (15)	1 (7)	2 (11)	0 (0)	2 (3)	7 (13)	4 (18)	0 (0)
Yes, received treatment with DAAs	15 (28)	7 (47)	5 (26)	6 (46)	17 (28)	27 (49)	6 (27)	9 (50)
Not reported	0 --	1 --	0 --	0 --	5 --	1 --	0 --	0 --
Ever eligible for DAA treatment^	**N=10**	**N=10**	**N=11**	**N=11**	**N=43**	**N=40**	**N=14**	**N=13**
Yes, received treatment with DAAs	15 (70)	7 (70)	5 (55)	6 (55)	17 (40)	27 (68)	6 (43)	9 (69)
HCV DAA treatment year		**N=7**		**N=6**		**N=27**		**N=9**
Since 2018	-- --	3 (43)	-- --	4 (67)	-- --	13 (50)	-- --	4 (44)
2017	-- --	2 (29)	-- --	2 (33)	-- --	6 (23)	-- --	1 (11)
2016	-- --	1 (14)	-- --	0 (0)	-- --	5 (19)	-- --	3 (33)
Prior to 2016	-- --	1 (14)	-- --	0 (0)	-- --	2 (8)	-- --	1 (11)
Not reported	-- --	0 --	-- --	0 --	-- --	1 --	-- --	0 --
HCV DAA treatment uptake by health care setting^	**N=15**	**N=7**	**N=5**	**N=6**	**N=17**	**N=27**	**N=6**	**N=9**
Aboriginal Community Controlled Health Service	0 (0)	0 (0)	0 (0)	0 (0)	1 (7)	0 (0)	0 (0)	0 (0)
Alcohol and Other Drug services	4 (29)	1 (17)	2 (40)	1 (20)	0 (0)	1 (6)	2 (50)	2 (29)
Correctional Facilities	0 (0)	0 (0)	1 (20)	0 (0)	1 (7)	2 (12)	0 (0)	0 (0)
General Practitioner	0 (0)	0 (0)	0 (0)	1 (20)	1 (7)	2 (12)	0 (0)	1 (14)
Public sector community services	1 (7)	1 (17)	0 (0)	0 (0)	6 (40)	7 (42)	1 (25)	0 (0)
Tertiary services	9 (64)	3 (50)	1 (20)	2 (40)	4 (27)	4 (24)	1 (25)	3 (43)
Other	0 (0)	1 (17)	1 (20)	1 (20)	2 (13)	1 (6)	0 (0)	1 (14)
Not reported	1 --	1 --	0 --	1 --	2 --	10 --	2 --	2 --

^ See Table 4 for footnotes

Table 9: Hepatitis C testing and treatment uptake by LHD (Metropolitan), 2018-2019

	South Eastern Sydney		South Western Sydney		Sydney		Western Sydney	
	2018	2019	2018	2019	2018	2019	2018	2019
Number surveyed (individuals)	**767 (%)**	**634 (%)**	**164 (%)**	**154 (%)**	**427 (%)**	**299 (%)**	**260 (%)**	**127 (%)**
Previous hepatitis C test								
Yes, ever	-- --	540 (85)	-- --	91 (59)	-- --	211 (71)	-- --	85 (67)
Since 2018	-- --	355 (56)	-- --	54 (35)	-- --	126 (42)	-- --	54 (43)
Prior to 2018	-- --	185 (29)	-- --	37 (24)	-- --	85 (29)	-- --	31 (24)
Never	-- --	94 (15)	-- --	63 (41)	-- --	88 (29)	-- --	42 (33)
Self-reported ever hepatitis C infection^		**N=540**		**N=91**		**N=211**		**N=85**
No	303 (44)	227 (42)	80 (50)	29 (32)	179 (52)	97 (46)	157 (61)	41 (48)
Yes	385 (56)	313 (58)	79 (50)	62 (68)	163 (48)	114 (54)	101 (39)	44 (52)
Not reported	79 --	0 --	5 --	0 --	85 --	0 --	2 --	0 --
Ever received treatment	**N=385**	**N=313**	**N=79**	**N=62**	**N=163**	**N=114**	**N=101**	**N=44**
No, still Hep C positive	82 (22)	48 (16)	27 (36)	13 (21)	43 (27)	25 (22)	38 (39)	10 (23)
No, cleared spontaneously	90 (24)	65 (21)	14 (18)	7 (11)	25 (16)	28 (25)	19 (19)	10 (23)
Yes, received interferon based treatment	31 (8)	29 (10)	4 (5)	7 (11)	28 (18)	20	16 (16)	9 (20)
Yes, received treatment with DAAs	171 (46)	163 (53)	31 (41)	35 (56)	63 (40)	41	25 (26)	15 (34)
Not reported	11 --	8 --	3 --	0 --	4 --	0 --	3 --	0 --
Ever eligible for DAA treatment^	**N=267**	**N=224**	**N=60**	**N=52**	**N=119**	**N=75**	**N=70**	**N=29**
Yes, received treatment with DAAs	171 (64)	163 (73)	31 (52)	35 (67)	63 (53)	41 (55)	25 (36)	15 (52)
HCV DAA treatment year		**N=163**		**N=35**		**N=41**		**N=15**
Since 2018	-- --	94 (58)	-- --	24 (71)	-- --	20 (50)	-- --	11 (73)
2017	-- --	42 (26)	-- --	5 (15)	-- --	13 (33)	-- --	4 (27)
2016	-- --	15 (9)	-- --	4 (12)	-- --	5 (13)	-- --	0 (0)
Prior to 2016	-- --	11 (7)	-- --	1 (3)	-- --	2 (5)	-- --	0 (0)
Not reported	-- --	1 --	-- --	1 --	-- --	1 --	-- --	0 --
HCV DAA treatment uptake by health care setting^	**N=171**	**N=163**	**N=31**	**N=35**	**N=63**	**N=41**	**N=25**	**N=15**
Aboriginal Community Controlled Health Service	2 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Alcohol and Other Drug services	14 (10)	21 (14)	11 (44)	11 (37)	4 (8)	9 (27)	9 (45)	9 (60)
Correctional Facilities	12 (9)	7 (5)	3 (12)	5 (17)	2 (4)	2 (6)	3 (15)	2 (13)
General Practitioner	10 (7)	11 (7)	4 (16)	3 (10)	6 (13)	1 (3)	1 (5)	1 (7)
Public sector community services	56 (40)	65 (44)	0 (0)	0 (0)	8 (17)	6 (18)	0 (0)	1 (7)
Tertiary services	34 (24)	25 (17)	3 (12)	8 (27)	23 (48)	13 (39)	6 (30)	2 (13)
Other	13 (9)	18 (12)	4 (16)	3 (10)	5 (10)	2 (6)	1 (5)	0 (0)
Not reported	30 --	16 --	6 --	5 --	15 --	8 --	5 --	0 --

^ See Table 4 for footnotes

Table 10: Hepatitis C testing and treatment uptake by LHD (Rural and Regional), 2018-2019

	Far West		Hunter New England		Mid North Coast		Murrumbidgee	
	2018	2019	2018	2019	2018	2019	2018	2019
Number surveyed (individuals)	**-- --**	**5 (%)**	**336 (%)**	**347 (%)**	**105 (%)**	**88 (%)**	**50 (%)**	**50 (%)**
Previous hepatitis C test								
Yes, ever	-- --	5 (100)	-- --	269 (78)	-- --	81 (92)	-- --	40 (80)
Since 2018	-- --	4 (80)	-- --	152 (44)	-- --	45 (51)	-- --	15 (30)
Prior to 2018	-- --	1 (20)	-- --	117 (34)	-- --	36 (41)	-- --	25 (50)
Never	-- --	0 --	-- --	78 (22)	-- --	7 (8)	-- --	10 (20)
Self-reported ever hepatitis C infection^		**N=5**		**N=269**		**N=81**		**N=40**
No	-- --	2 (40)	185 (56)	117 (43)	38 (37)	32 (40)	32 (64)	20 (50)
Yes	-- --	3 (60)	145 (44)	152 (57)	66 (63)	49 (60)	18 (36)	20 (50)
Not reported	-- --	0 --	6 --	0 --	1 --	0 --	0 --	0 --
Ever received treatment	**--**	**N=3**	**N=145**	**N=152**	**N=66**	**N=49**	**N=18**	**N=18**
No, still Hep C positive	-- --	0 (0)	41 (29)	49 (33)	25 (39)	22 (45)	5 (28)	7 (35)
No, cleared spontaneously	-- --	0 (0)	31 (22)	28 (19)	11 (17)	9 (18)	3 (17)	4 (20)
Yes, received interferon based treatment	-- --	0 (0)	15 (10)	20 (13)	2 (3)	1 (2)	3 (17)	3 (15)
Yes, received treatment with DAAs	-- --	3 (100)	56 (39)	53 (35)	26 (41)	17 (35)	7 (39)	6 (30)
Not reported	-- --	0 --	2 --	2 --	2 --	0 --	0 --	0 --
Ever eligible for DAA treatment^	**--**	**N=3**	**N=104**	**N=111**	**N=52**	**N=39**	**N=13**	**N=13**
Yes, received treatment with DAAs	**--**	3 (100)	56 (54)	53 (48)	26 (50)	17 (44)	7 (54)	6 (40)
HCV DAA treatment year		**N=3**		**N=53**		**N=17**		**N=6**
Since 2018	-- --	3 (100)	-- --	41 (79)	-- --	10 (59)	-- --	2 (33)
2017	-- --	0 (0)	-- --	8 (15)	-- --	6 (35)	-- --	2 (33)
2016	-- --	0 (0)	-- --	1 (2)	-- --	1 (6)	-- --	1 (17)
Prior to 2016	-- --	0 (0)	-- --	2 (4)	-- --	0 (0)	-- --	1 (17)
Not reported	-- --	0 --	-- --	1 --	-- --	0 --	-- --	0 --
HCV DAA treatment uptake by health care setting^	**--**	**N=3**	**N=56**	**N=53**	**N=26**	**N=17**	**N=7**	**N=6**
Aboriginal Community Controlled Health Service	-- --	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Alcohol and Other Drug services	-- --	0 (0)	3 (6)	2 (4)	1 (5)	0 (0)	0 (0)	0 (0)
Correctional Facilities	-- --	0 (0)	4 (8)	5 (10)	1 (5)	2 (13)	1 (20)	0 (0)
General Practitioner	-- --	0 (0)	9 (18)	2 (4)	3 (14)	4 (25)	0 (0)	2 (33)
Public sector community services	-- --	3 (100)	15 (29)	18 (38)	3 (14)	0 (0)	3 (60)	2 (33)
Tertiary services	-- --	0 (0)	14 (27)	14 (29)	12 (57)	10 (63)	0 (0)	1 (17)
Other	-- --	0 (0)	5 (10)	7 (15)	1 (5)	0 (0)	1 (20)	1 (17)
Not reported	-- --	0 --	5 --	5 --	5 --	1 --	2 --	0 --

^ See Table 4 for footnotes

Note: There were no respondents in Far West LHD who reported HCV status or treatment in 2018

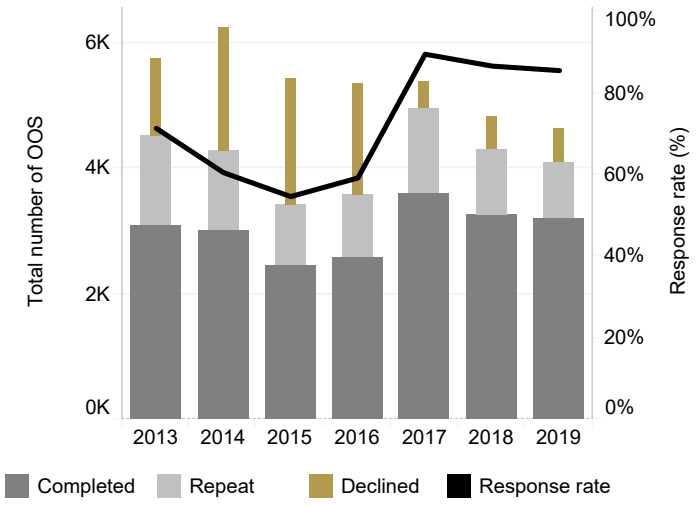
Table 11: Hepatitis C testing and treatment uptake by LHD (Rural and Regional), 2018-2019

	Northern NSW		Southern NSW		Western NSW	
	2018	2019	2018	2019	2018	2019
Number surveyed (individuals)	**93 (%)**	**103 (%)**	**19 (%)**	**17 (%)**	**46 (%)**	**33 (%)**
Previous hepatitis C test						
Yes, ever	-- --	86 (84)	-- --	13 (76)	-- --	25 (76)
Since 2018	-- --	40 (39)	-- --	6 (35)	-- --	9 (27)
Prior to 2018	-- --	46 (45)	-- --	7 (41)	-- --	16 (49)
Never	-- --	17 (17)	-- --	4 (24)	-- --	8 (24)
Self-reported ever hepatitis C infection		**N=86**		**N=13**		**N=25**
No	39 (42)	32 (37)	8 (42)	4 (31)	36 (78)	20 (80)
Yes	53 (58)	54 (63)	11 (58)	9 (69)	10 (22)	5 (20)
Not reported	1 --	0 --	0 --	0 --	0 --	0 --
Ever received treatment	**N=53**	**N=54**	**N=11**	**N=9**	**N=10**	**N=5**
No, still Hep C positive	12 (23)	16 (30)	4 (36)	3 (33)	3 (30)	1 (20)
No, cleared spontaneously	11 (21)	12 (22)	4 (36)	4 (44)	3 (30)	1 (20)
Yes, received interferon based treatment	9 (17)	6 (11)	0 (0)	0 (0)	1 (10)	0 (0)
Yes, received treatment with DAAs	21 (40)	20 (37)	3 (27)	2 (22)	3 (30)	3 (60)
Not reported	0 --	0 --	0 --	0 --	0 --	0 --
Ever eligible for DAA treatment^	**N=37**	**N=39**	**N=7**	**N=5**	**N=6**	**N=4**
Yes, received treatment with DAAs	21 (57)	20 (51)	3 (43)	2 (40)	3 (50)	3 (75)
HCV DAA treatment year		**N=20**		**N=2**		**N=3**
Since 2018	-- --	9 (45)	-- --	1 (50)	-- --	2 (67)
2017	-- --	7 (35)	-- --	0 (0)	-- --	1 (33)
2016	-- --	2 (10)	-- --	1 (50)	-- --	0 (0)
Prior to 2016	-- --	2 (10)	-- --	0 (0)	-- --	0 (0)
Not reported	-- --	0 --	-- --	0 --	-- --	0 --
HCV DAA treatment uptake by health care setting^	**N=21**	**N=20**	**N=3**	**N=2**	**N=3**	**N=3**
Aboriginal Community Controlled Health Service	0 (0)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)
Alcohol and Other Drug services	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Correctional Facilities	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
General Practitioner	4 (25)	5 (29)	0 (0)	0 (0)	0 (0)	1 (33)
Public sector community services	10 (63)	10 (59)	0 (0)	0 (0)	2 (67)	1 (33)
Tertiary services	1 (6)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)
Other	1 (6)	2 (12)	0 (0)	1 (50)	0 (0)	1 (33)
Not reported	5 --	3 --	3 --	0 --	0 --	0 --

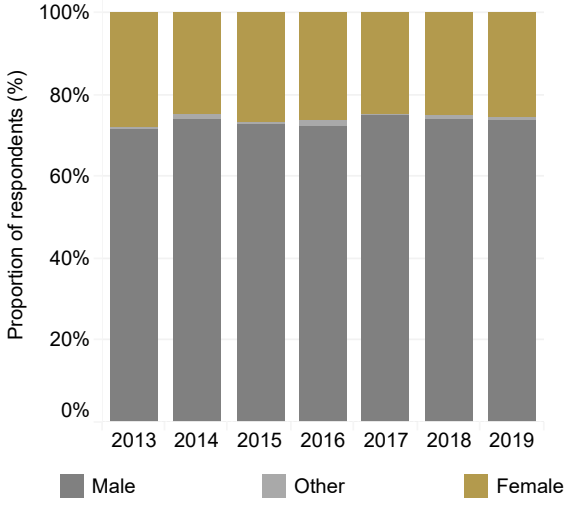
^ See Table 4 for footnotes

Graphs: NSW

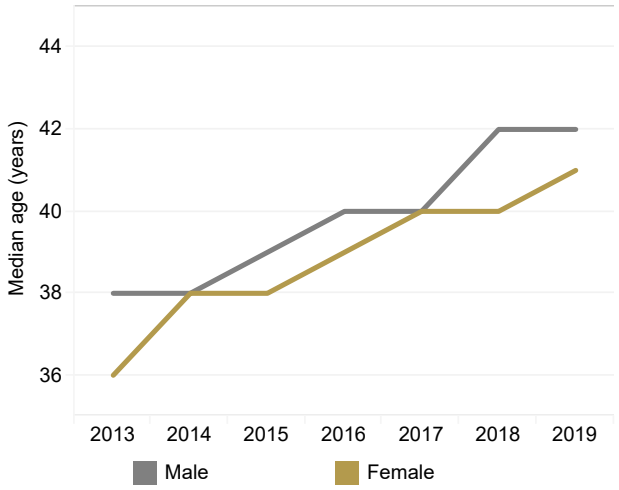
Occasions of service, 2013-2019



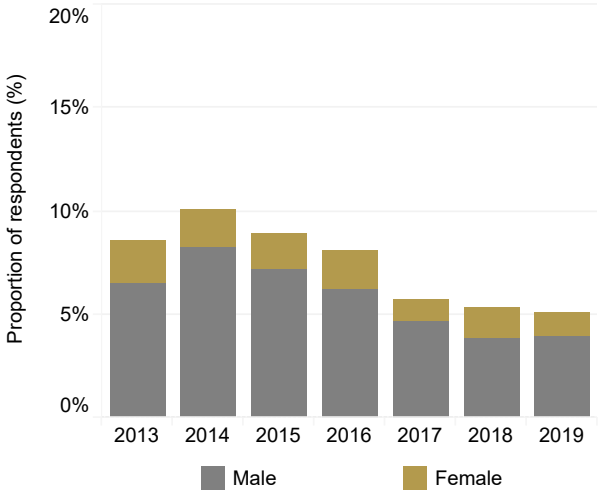
Gender distribution, 2013-2019



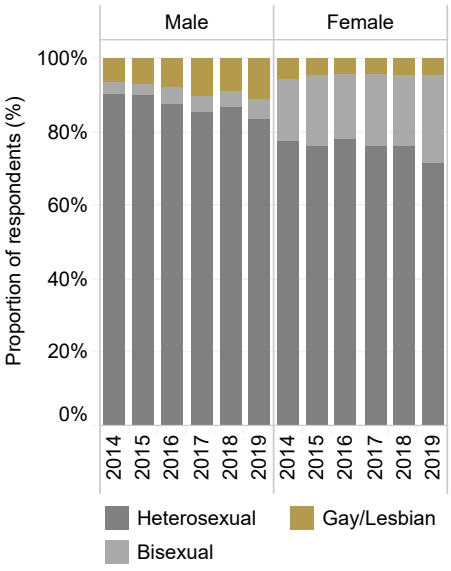
Median age of respondents by gender, 2013-2019



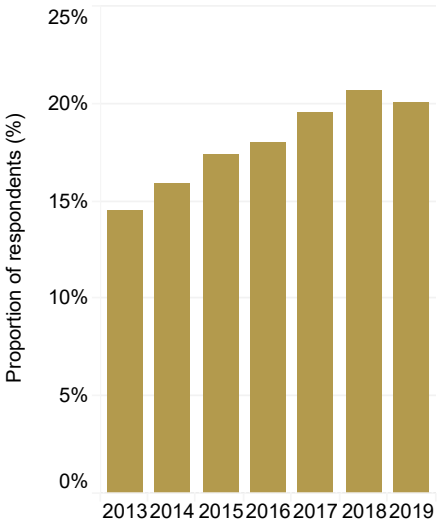
Proportion of respondents under 25 years, 2013-2019



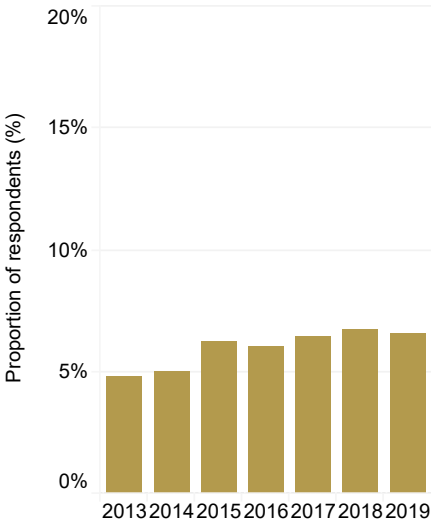
Sexual identity by gender, 2014-2019



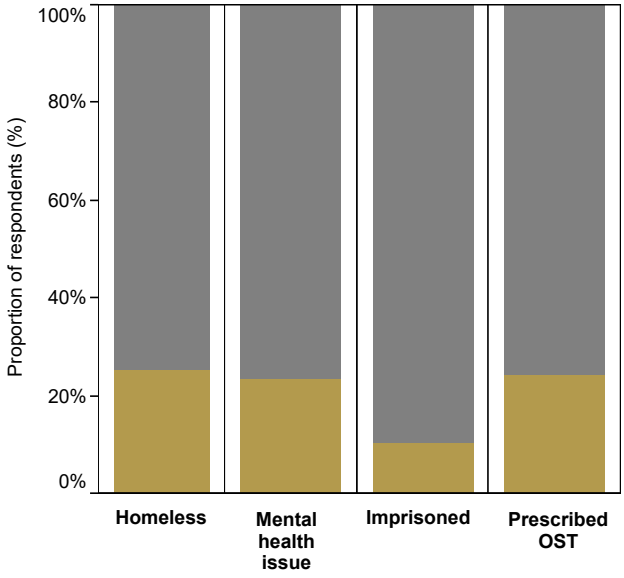
Indigenous background, 2013-2019



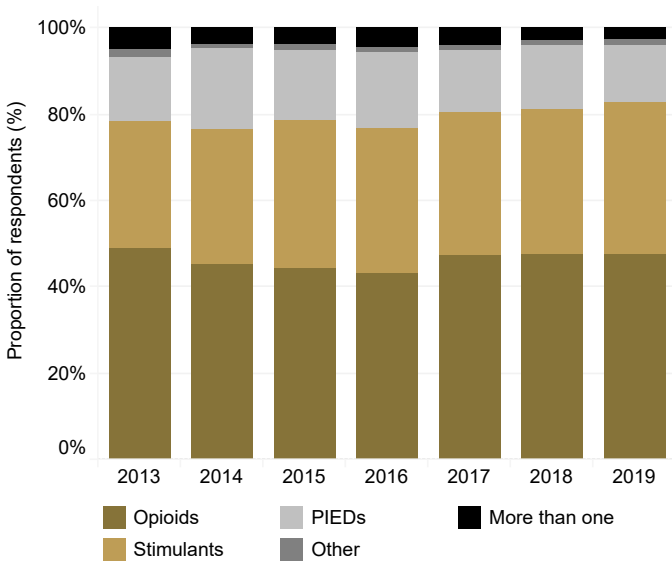
Language other than English spoken at home, 2013-2019



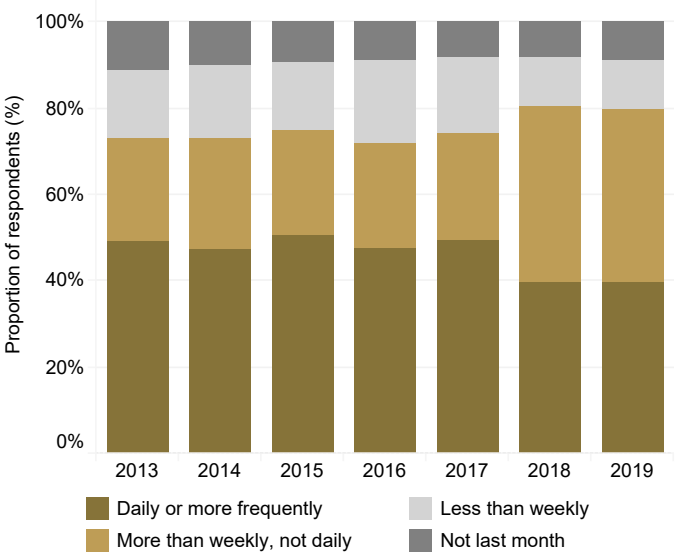
Social, legal and health characteristics in the previous 12 months in 2019



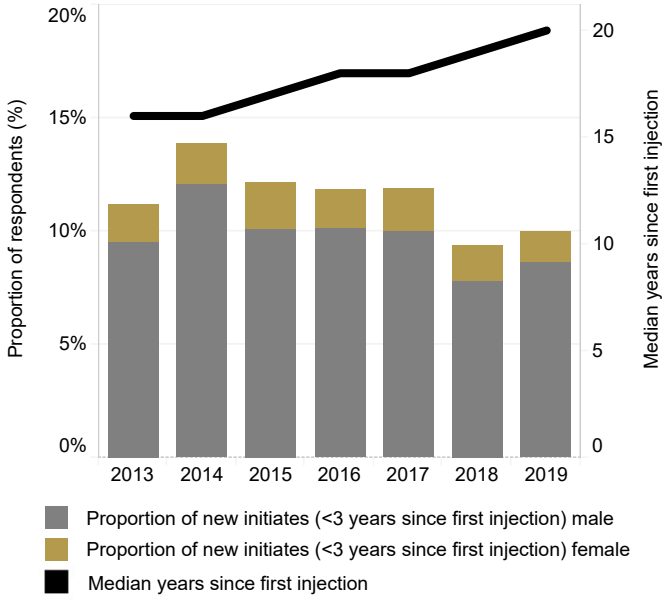
Class of drug last injected, 2013-2019



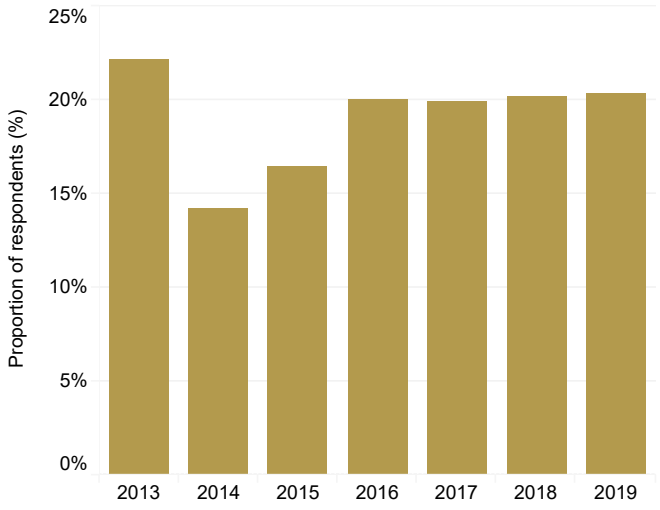
Frequency of injection, 2013-2019



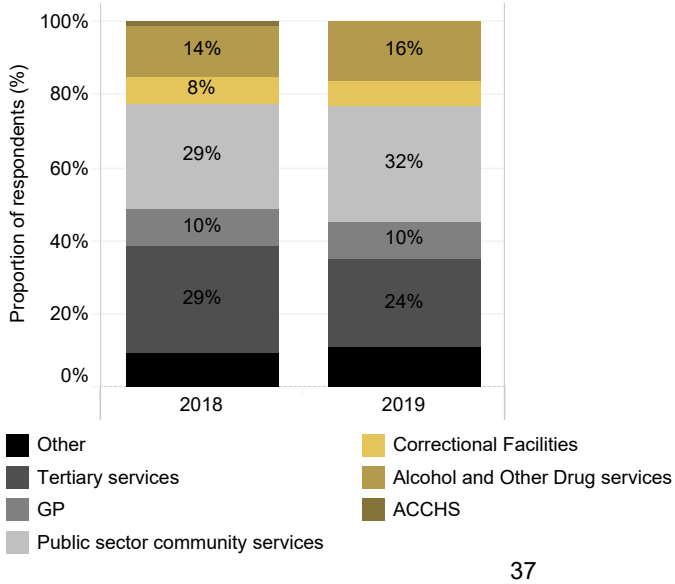
Years since first injection, 2013-2019



Proportion of respondents who reported RSS, 2013-2019



HCV DAA treatment uptake by health care setting, 2018-2019



References

Fried M, Shiffman M, Reddy K, Smith C, Marinos G, Gonçales F, Häussinger D, Diago M, Carosi G, and Dhumeaux D. (2002). Peginterferon alfa-2a plus ribavirin for chronic hepatitis C virus infection. New England Journal of Medicine; 347(13): 975-982.

Grebely J, Page K, Sacks-Davis R, Loeff M, Rice T, Bruneau J, Morris M, Hajarizadeh B, Amin J, Cox A, Kim A, McGovern B, Schinkel J, George J, Shoukry N, Lauer G, Maher L, Lloyd A, Hellard M, Dore G, and Prins M. (2014). The effects of female sex, viral genotype, and IL28B genotype on spontaneous clearance of acute hepatitis C virus infection. Hepatology; 59(1): 109-120.

Iversen J, Grebely J, Topp L, wand H, Dore G, and Maher L. (2014) Uptake of hepatitis C treatment among people who inject drugs attending Needle and Syringe Programs in Australia, 1999-2011. Journal of Viral Hepatitis; 21 (3): pp.198-207.

Heard S, Iversen J, Geddes L, and Maher L. Australian Needle Syringe Program Survey National Data Report 2013-2017: Prevalence of HIV, HCV and injecting and sexual behaviour among NSP attendees. Sydney: Kirby Institute, UNSW Sydney; 2019. ISSN: 1448-5915.

White B, Day C, and Maher L. (2007) Self-reported risk behaviour among injecting drug users: self-versus assisted questionnaire completion. AIDS Care; 19(3): 441-447.

Appendix A

Data collection

The NNEDC was conducted over a two-week period in late February/early March over the past seven years, 2013 to 2019. A minority of low volume NSPs in rural/regional areas extended the data collection period for an additional week to increase sample size and facilitate data analysis. All primary and some secondary NSP services in NSW were involved in the collection of demographic and drug use information from all NSP attendees. Appendix B provides detail on participating services by year.

The data collection instrument consisted of one A4 page and was designed to be self-completed (see Appendix C). To provide an estimate of the proportion of the broader NSP population, NSP staff submitted a blank NNEDC form on each occasion of service (OOS) when a client elected not to participate in the NNEDC. NSP attendees who had previously contributed to the data collection (repeat attendees) were recorded as an OOS, but were excluded from re-contributing to the data collection to avoid skewing the data collection towards frequent NSP attendees.

Data analysis

The data presented in this report were electronically scanned and validated. Stata, Version 14 (Stata Corporation, College Station TX) was used to analyse data. Percentage values exclude the proportion of respondents who didn't answer the question and may not add to 100 because of rounding.

The methodology for presenting RSS was changed in 2015 to exclude respondents who did not inject in the previous month.

Ethical approvals for the data collection were obtained from Sydney LHD Ethics Review Committee (RPAH Zone) and the Aboriginal Health and Medical Research Council (AH&MRC). Site Specific Assessment Forms were completed for all Local Health Districts.

Limitations

In some LHDs, NSP services are predominantly or entirely delivered through secondary NSPs and some LHDs distribute a large proportion of injecting equipment via vending machines and dispensing chutes. This may limit opportunities for staff to engage NSP attendees to participate in the data collection in some services and LHDs. The number of NSP attendees who participated in the NNEDC is not an indicator of needle and syringe distribution or NSP coverage. It should also be noted that changes to staffing levels and changes to service delivery may impact on NNEDC participation.

Appendix B

Metropolitan	2013	2014	2015	2016	2017	2018	2019
Central Coast LHD							
Gosford Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Long Jetty Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Woy Woy Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Wyong Hospital Needle and Syringe Program	✓			✓	✓	✓	✓
Illawarra Shoalhaven LHD							
First Step: Port Kembla	✓	✓	✓	✓	✓	✓	✓
First Step: Wollongong	✓	✓	✓	✓	✓	✓	✓
Nepean Blue Mountains LHD							
Barnardos Cranebrook				✓	✓		
South Court Primary Care	✓	✓	✓	✓	✓	✓	✓
Northern Sydney LHD							
Manly RUSH	✓	✓	✓	✓	✓	✓	✓
RUSH Royal North Shore Hospital	✓	✓	✓	✓	✓	✓	✓
South Eastern Sydney LHD							
ACON Sydney	✓	✓	✓	✓	✓	✓	✓
Albion Centre	✓	✓	✓	✓			
Clinic 180	✓	✓	✓	✓	✓	✓	✓
Haymarket Foundation	✓	✓	✓	✓			
Kirketon Road Centre	✓	✓	✓	✓	✓	✓	✓
Kirketon Road Centre Outreach Bus	✓	✓		✓	✓	✓	✓
KRC South	✓	✓	✓	✓	✓	✓	✓
Medically Supervised Injecting Centre				✓	✓	✓	✓
New South Wales Users and AIDS Association (NUAA)	✓	✓	✓	✓	✓	✓	✓
St George NSP: Central Access Service	✓	✓	✓				
South Western Sydney LHD							
Bankstown Harm Minimisation Program	✓	✓	✓	✓	✓	✓	✓
Liverpool Harm Minimisation Program	✓	✓	✓	✓	✓	✓	✓
Sydney LHD							
Canterbury Harm Minimisation Program	✓	✓	✓	✓	✓	✓	✓
Marrickville Harm Minimisation Program	✓	✓	✓	✓	✓	✓	✓
Redfern Harm Minimisation Program	✓	✓	✓	✓	✓	✓	✓
The Gender Centre		✓					
Western Sydney LHD							
Blacktown Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Kelly Close Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Parramatta Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓

Rural and Regional	2013	2014	2015	2016	2017	2018	2019
Far West LHD							
Broken Hill Sexual Health Service	✓	✓	✓	✓	✓	✓	✓
Dareton Primary Health Centre		✓	✓	✓			
Hunter New England LHD							
ACON Hunter	✓	✓	✓	✓	✓	✓	✓
Coledale Community Centre		✓	✓	✓	✓	✓	✓
Eastlakes Community Health Centre		✓	✓	✓	✓	✓	✓
Maitland Neighbourhood Centre	✓	✓	✓	✓	✓	✓	✓
Muswellbrook Neighbourhood Centre		✓					
Newcastle Community Health Centre	✓	✓	✓	✓	✓	✓	✓
Raymond Terrace Neighbourhood Centre		✓					
Cessnock Drug and Alcohol Unit	✓						
Jesmond Neighbourhood Centre	✓						
Tamworth Sexual Health Clinic	✓						
Taree Community Health Centre							✓
Mid North Coast LHD							
Coffs Harbour Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Grafton Needle and Syringe Program	✓	✓	✓		✓	✓	
Kempsey Needle and Syringe Program					✓	✓	✓
Port Macquarie Population Health	✓	✓	✓	✓		✓	✓
Murrumbidgee LHD							
Albury Community Health Centre	✓	✓	✓	✓	✓	✓	✓
Barham Hospital				✓			
Cootamundra Community Health Centre			✓				
Cootamundra Hospital			✓				
Temora & District Hospital		✓					
Griffith Needle and Syringe Program					✓	✓	✓
Wagga Wagga Community Health Centre	✓	✓		✓	✓	✓	✓
Northern NSW LHD							
ACON Lismore	✓	✓	✓	✓	✓	✓	✓
Ballina Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Byron Bay Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Lismore Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Lismore Sexual Health Service (SHAIDS)	✓	✓	✓	✓	✓	✓	✓
Murwillumbah Needle and Syringe Program	✓	✓					
Nimbin Hospital Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Tweed Needle and Syringe Program	✓	✓	✓	✓	✓	✓	✓
Southern NSW LHD							
Goulburn Community Health Centre		✓	✓				
Batemans Bay Community Health Centre				✓	✓	✓	✓
Moruya Community Health Centre				✓	✓	✓	✓
Narooma Community Health Centre				✓	✓	✓	✓
Queanbeyan Community Health Service	✓						
Western NSW LHD							
Bathurst Sexual Health Clinic		✓	✓	✓	✓	✓	✓
Bourke Primary Centre		✓					✓
Dubbo Sexual Health Centre	✓	✓	✓	✓	✓	✓	✓
Dubbo Community Health Centre		✓	✓				
Orange Sexual Health Clinic	✓	✓	✓	✓	✓	✓	

Appendix C

NSW NSP ENHANCED DATA COLLECTION 2019

Please MARK LIKE THIS: ○●○○

To be completed for every client attending the NSP during the designated data collection period.
If the client has already completed the data collection at this or another NSP, mark this circle: ○ Already completed
If questionnaire was completed with the assistance of staff, mark this circle: ○ Assisted

Today's date: ☐☐/☐☐/2019

1. Are you?
- ○ Male
- ○ Female
- ○ Other
- ○ Prefer not to answer

2. How old are you? ☐☐

3. Are you?
- ○ Aboriginal
- ○ Torres Strait Islander
- ○ Both Aboriginal & Torres Strait Islander
- ○ Neither

4. What was the last drug you injected?
Mark only one. If more than one drug was injected at your last injection, mark "other" and specify the drugs injected.
- ○ Heroin
- ○ Morphine
- ○ Oxycodone
- ○ Methadone
- ○ Subutex/Buprenorphine
- ○ Suboxone
- ○ Methamphetamine (Speed, ice, base)
- ○ Cocaine
- ○ Anabolic steroids
- ○ Growth hormone
- ○ Peptides
- ○ Other, please specify _____

5. How old were you when you first injected drugs?

☐☐

6. How often did you inject in the last month?
- ○ Daily or more
- ○ Weekly or more, but not daily
- ○ Monthly or more, but not weekly
- ○ Did not inject in the last month ☛ *Go to Q8*

7. How many times in the last month have you used a needle/syringe after someone else had already used it?
- ○ None
- ○ Once
- ○ Twice
- ○ 3-5 times
- ○ More than 5 times

8. At any time in the last 12 months were you?
Mark all that apply
- ○ Homeless
- ○ Living with or diagnosed with a mental health issue
- ○ In prison
- ○ Prescribed methadone or bupe
- ○ None of the above

9. What was the main language spoken at home by your parents?
- ○ English
- ○ Other, please specify _____

10. Do you identify as?
- ○ Heterosexual
- ○ Bisexual
- ○ Gay/Lesbian
- ○ Prefer not to answer

11. Have you EVER had a hepatitis C test?
- ○ Yes, in 2019 (in last 2 months)
- ○ Yes, in 2018 (last year)
- ○ Yes, in 2017 (a year ago)
- ○ Yes, 2016 or before
- ○ No, I have never been tested ☛ *End of questions.*

11a. Have you EVER been told that you have hepatitis C infection?
- ○ Yes
- ○ No ☛ *End of questions.*

11b. Have you EVER received treatment for your hepatitis C?
- ○ No, I still have hepatitis C ☛ *End of questions.*
- ○ No, I cleared without treatment ☛ *End of questions.*
- ○ Yes, I received the new treatment (tablets only)
- ○ Yes, I received the old treatment (with injections)

11c. What year did you START your LAST course of treatment?
- ○ 2019 (in last 2 months)
- ○ 2018 (last year)
- ○ 2017 (a year ago)
- ○ 2016 (2 years ago)
- ○ 2015 (3 years ago)
- ○ 2014 or before

11d. What was the name of the clinic or service where you were LAST prescribed your hepatitis C treatment?

_____

End of questions, thank you for your time.

This information is being collected by the Kirby Institute for the NSW Ministry of Health.
If you have any questions or concerns please contact Professor Lisa Maher, Kirby Institute on phone (02) 9385 0900.