

# Queensland Minimum Data Set for Needle and Syringe Programs

2016

## **Queensland Minimum Data Set for Needle and Syringe Programs**

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# Contents

Acknowledgements: .....	2
Summary .....	6
Introduction.....	6
Content of the Queensland minimum data set for needle and syringe programs .....	7
Data collection and analysis .....	8
Executive Summary .....	9
Scope of needle and syringe program activity.....	9
Drug use patterns .....	9
Client demography and drug use .....	9
Interventions and referrals .....	10
Regional trends .....	10
State-wide Data Profile.....	11
Occasions of service.....	11
Client demographics .....	12
Client Age.....	12
Client gender .....	14
Aboriginal and Torres Strait Islander profile .....	15
Drug trends.....	16
Service Occasions by Drug Type and Gender .....	16
Amphetamine subtypes .....	17
Opioid related service occasions .....	18
Equipment ordering and distribution.....	19
Equipment ordering .....	19
Equipment distributed .....	20
Interventions provided .....	21
Referrals to services .....	22
Regional profiles.....	24
Brisbane City .....	24
Central Region.....	27
Northern Region .....	30
Southern Region.....	33
Discussion .....	36
Trends in service access .....	36
Enhanced pharmacy NSP.....	36
Drug use patterns and trends .....	37
Age, gender and Aboriginal and Torres Strait Islander status .....	37
Injecting equipment and drug use .....	38
Interventions .....	38
Referral activity.....	38
Australian NSP survey .....	39
Glossary .....	43
References .....	44

## Figures

Figure 1	Total service occasions across participating NSPs, 2007-16 .....	11
Figure 2	Total service occasions by age category, 2016 (N=174,103).....	12
Figure 3	Service occasions by age category & gender, 2016 (N=172,185).....	14
Figure 4	Service occasions by gender, 2016 (N=174,103).....	14
Figure 5	Service occasions by Aboriginal and Torres Strait Islander status, 2016 (N=174,641).....	15
Figure 6	Service occasions by Aboriginal and Torres Strait Islander status and age, 2016 (N=163,194).....	15
Figure 7	Service occasions related to drug use and gender, 2016 (N=168,863).....	16
Figure 8	Per cent of service occasions for each amphetamine subtype - where specified, 2016 (N=41,427).....	17
Figure 9	Percentage breakdown of opioid related service occasions, 2016 (N=74,739) .....	18
Figure 10	Total equipment ordered, Financial Year 2007-08 to 2016-17 .....	19
Figure 11	Total equipment ordered as NDM kits, Financial Year 2007-08 to 2016-17 .....	19
Figure 12	Total equipment distributed, 2016.....	20
Figure 13	Type of interventions provided, 2016 (N=69,388) .....	21
Figure 14	Type of referrals provided, 2016 (N=5,871) .....	22
Figure 15	Percent of internal and external referrals, 2016, (N=4,482).....	23
Figure 16	Percent of active and passive referrals, 2016 (N=4,086).....	23
Figure 17	Brisbane City: Age distribution, 2016 (N=46,744) .....	24
Figure 18	Brisbane City: Service occasions by drug use and gender, 2016 (N=45,357) .....	25
Figure 19	Central Region: Age distribution, 2016 (N=43,648).....	27
Figure 20	Central Region: Service occasions related to male and female drug use, 2016 (N=42,394).....	28
Figure 21	Northern Region: Age distribution, 2016 (N=22,364) .....	30
Figure 22	Northern Region: Service occasions related to male and female drug use, 2016 (N=24,014).....	31
Figure 23	Southern Region: Age distribution, 2016 (N=61,391).....	33
Figure 24	Southern Region: Service occasions related to male and female drug use, 2016, (N=59,817).....	34
Figure 25	NSP ordering activity in QLD by sector, 2008/09 to 2016/17.....	37
Figure 26	HIV antibody prevalence by year of survey, Australia & Queensland, 2005-2016 .....	39
Figure 27	HCV antibody prevalence by year of survey, Australia & Queensland, 2005-2016 .....	40
Figure 28	Age profile of respondents by year of survey, Australia, 2005-2016.....	40
Figure 29	Gender profile of respondents by year of survey, Australia, 2007-2016 ....	41
Figure 30	Aboriginal and Torres Strait Islander status of respondents by year of survey, Australia, 2007-2016 .....	41
Figure 31	Drug last injected by respondents by year of survey, Australia, 2007- 2016 .....	42

## Tables

Table 1	Percentage of service occasions related to drug type, by age group (N=172,850) .....	13
Table 2	Brisbane City: Interventions provided, 2016.....	26
Table 3	Brisbane City: Referrals provided, 2016.....	26

Table 4	Central Region: Interventions provided, 2016 .....	29
Table 5	Central Region: Referrals provided, 2016 .....	29
Table 6	Northern Region: Interventions provided, 2016.....	32
Table 7	Northern Region: Referrals provided, 2016.....	32
Table 8	Southern Region: Interventions provided, 2016 .....	35
Table 9	Southern Region: Referrals provided, 2016 .....	35
Table 10	Drug last injected by respondents by year of survey, QLD, 2007- 2016 .....	42

# Summary

## Introduction

The purpose of the Queensland Minimum Data Set for Needle and Syringe Programs (QMDS-NSP) is to provide a state-wide standardised data collection system for people who inject drugs (PWID). This supports the ongoing development of the Needle and Syringe Program (NSP) in Queensland by providing core data about client and program activities.

In December 2015, the QMDS-NSP was approved as part of the Queensland Data Dictionary. Data collection details can be viewed at:

[http://oascrasprod.co.health.qld.gov.au:7900/pls/qhikrev\\_prd/qhik\\_data\\_collections\\_data\\_collection\\_details?pCommand=SHOW&pResultSetID=7834&pCol\\_seq\\_id=25584](http://oascrasprod.co.health.qld.gov.au:7900/pls/qhikrev_prd/qhik_data_collections_data_collection_details?pCommand=SHOW&pResultSetID=7834&pCol_seq_id=25584)

Effective data collection among NSPs in Queensland is essential for planning and developing programs. Program development that is guided by valid, reliable data can ensure, for example, that access is adequate in different locations and that an optimal mix of services and resources are available to clients. This routine program data collection is integral to reducing the spread of HIV and hepatitis C among PWID.

Data sets of various forms have been collected by NSPs in Queensland since their inception in the 1980s. The equipment ordering data and the Australian NSP Survey (Kirby Institute, UNSW), collected since 1995, have been other key data sources of information.

Collection of standardised data began in December 2006 with 13 programs sending in monthly data electronically; since then participating data collection sites have increased to 25 with Hervey Bay, Maryborough and Browns Plains being the most recent additions.

In addition, there has been significant growth in the number of programs and an increase in the diversity and complexity of the NSP sector in Queensland. Linkages with other services, including drug and alcohol treatment, welfare services, sexual health, mental health and Blood Borne Viruses (BBVs) treatment services, have become more prominent, as has the need to meaningfully record referrals to such services. Changing trends in the demographics of people who inject drugs, types of drugs injected and regional variations for these drugs underscore the importance of collecting basic drug information from clients.

The QMDS-NSP encompasses the following objectives:

- Establishing a core set of uniform definitions for activity data relating to the equipment and services provided by NSPs on each occasion of service;
- Promoting consistency, validity and reliability in NSP data;
- Providing up-to-date information for participating NSPs individually, on their program activities via the reporting tools of their data collection software;
- Providing regular analyses of available NSP data.

## Content of the Queensland minimum data set for needle and syringe programs

There are a total of 17 data elements in the QMDS-NSP. Only a subset of these will be collected on most occasions of service, depending on the client's equipment requirements and whether any interventions or referrals are provided. The data represents occasions of service and does not reflect number of clients as most present on multiple occasions at the same NSP location.

The data elements can be divided into three groups, a) client data, b) equipment data, and c) interventions data. These groups are as follows:

Client data (six elements):

- Date of NSP occasion of service
- Gender
- Postcode
- Age
- Drug to be injected
- Aboriginal and Torres Strait Islander status\*

Equipment data (six elements):

- 1ml fixed needle syringes issued
- 3ml barrels issued
- 5ml barrels issued
- 10ml barrels issued
- 20ml barrels issued
- Butterflies issued

Interventions data (five elements):

- NSP interventions provided
- Referral destination
- Referral location
- Referral type
- Time spent.

In addition, there are three optional data elements – 'wheel filters issued', 'disposal method', and 'phone calls' – that may be used by individual NSPs as required.

\*Aboriginal and Torres Strait Islander status, which was a previously optional data element, has been mandatory since January 2010.

## Data collection and analysis

Collection of standardised data began in December 2006 with 13 primary programs. Since then the numbers have increased with 19 primary programs and six secondary programs sending data collected through the QMDS-NSPs in 2015. The NSP sites were geographically categorised for reporting purposes into four regions; Brisbane City, Southern Region, Central Region and Northern Region. The Brisbane City Region is located within the Metro North Hospital and Health Service (HHS). Southern Region comprises of Metro South, Gold Coast, Darling Downs and West Moreton HHSs. Central Region comprises of Central Queensland, Wide Bay, Metro North (excluding Brisbane City) and Sunshine Coast HHSs. Northern Region comprises of Cairns and Hinterland, Townsville and Mackay HHSs.

Data is not collected from any sites in Central West, North West, South West or Torres and Cape HHS's.

The inclusion of secondary programs at Hervey Bay and Maryborough in 2012 improved the statewide representation of the QMDS-NSP as Bundaberg was the only previous representation from Wide Bay HHS. Browns Plains Community Centre replaced Palm Beach Community Centre in the Southern Region in 2013.

These 25 sites accounted for 84% of state-wide NSP during the 2015/16 financial year. Brisbane City, comprising Biala and Brisbane QulHN, has been analysed separately due to their geographic variation and size; together they contribute nearly 30% of the service occasions across these 25 agencies. QNSP providers provide Queensland Health with spreadsheets of occasions of service data from individual provider sites. A script was developed to extract the data from each spreadsheet file using the Python programming language from the Python Software Foundation. Python Language Reference, version 3.5. (Available at <http://www.python.org>). The individual occasions of service data were stored in a Microsoft SQL Server 2012 instance.

Descriptive analysis of the occasions of service data was carried out using Microsoft Excel 2010.

For the purpose of this report, data is examined at a state-wide level to indicate trends in this 12-month period and further analysed at a regional level to observe any geographic variations among the participating NSPs.

## Executive Summary

### Scope of needle and syringe program activity

- The Queensland Minimum Data Set for Needle and Syringe Programs (QMDS-NSP) was implemented at the beginning of December 2006.
- In 2016, 19 primary programs and six secondary programs collected and submitted data in accordance with the QMDS-NSP guidelines.
- The needle and syringe provision at these 25 sites comprised 84% of state-wide ordering during the 2015/16 financial year.
- In 2016 there were 174,641 occasions of service across the 25 participating NSPs.
- There was a 5% decline in occasions of service among the participating sites from the previous reporting year.

### Drug use patterns

- Opioids continued to be the drugs most injected and were the primary drug type for 52% of the total occasions of service delivery; amphetamines and other stimulants made up 40% of the service occasions.
- Heroin and pharmaceutical opioids made up 90% of all opioid-related service occasions.
- Methadone continued to be the Opioid Substitution Therapy (OST) drug most often reported by clients with subutex® and suboxone® coming a close second.
- At 80%, crystal methamphetamine is the most reported amphetamine sub-type in 2016.
- Performance and image enhancing drugs (steroids) constituted 8% of all occasions of service in 2016.

### Client demography and drug use

- Of the 174,641 service occasions, 74.1% (n = 129,449) were for males and 25.8% (n = 45,105) were for females, with only 0.1% of service occasions for 'other gendered' or missing this information.
- In 2016, of the 174,641 service occasions, 11.7% (n = 20,410) were for clients who identified as an Aboriginal and/or Torres Strait Islander person. This may be an under-representation due to missing data.
- The average age of clients was 38 years with the 35-39 age group comprising the largest proportion of clients (19%). Clients aged 35 years or more in age made up 61% of the occasions of service.

- Heroin and morphine (term used to describe a number of morphine type pharmaceutical opioids) together were the dominant drugs of choice for clients 40 years and older (41%).
- The majority of steroid use was among clients aged less than 35 years, comprising 74% of total occasions of service related to steroids.
- Service occasions related to use of drugs used in Opioid Substitution Treatment (OST), i.e. methadone, buprenorphine - subutex® and buprenorphine-naloxone - suboxone®, were more prevalent among clients in the 35 years and older age groups.

## Interventions and referrals

- There were 69,388 primary interventions recorded during the 12-month period where staff provided information and education on topics such as blood-borne viruses, vein care, safe disposal of syringes, drug-related topics, sexual health etc. This occurred on 40% of service occasions.
- There were over 5,871 referrals provided by NSP staff during the 12-month period; 8% of all primary interventions involved referrals.
- The top three referral destinations across the state were to hepatitis services, medical services and welfare services.

## Regional trends

- There were similar patterns of age distribution for both genders throughout the state with males outnumbering females three to one. Central Region recorded the highest attendance of females with 30% of service occasions, compared with 24% state-wide. Brisbane City recorded the lowest attendance of females with 21% of service occasions.
- Service occasions associated with amphetamines and opioids; (heroin, morphine and Opioid Substitution Therapy drugs) differed according to region. Opioid use was more prevalent in Brisbane City when compared to state-wide prevalence (47% v 43%) and steroid use was more prevalent in the Southern Region compared to state-wide (11% v 8%)
- Northern Region displayed distinctively different drug use trends to other regions: the majority (70%) of opioid-related service occasions were for morphine, while heroin accounted for only 10%.

# State-wide Data Profile

## Occasions of service

There were 174,641 occasions of service for 2016 across the 25 participating NSPs; a continuing decline since the 200,386 occasions of service in 2013. This decline can be attributed in part to the pharmacy NSP enhancement initiative that was implemented across Queensland in December 2013.

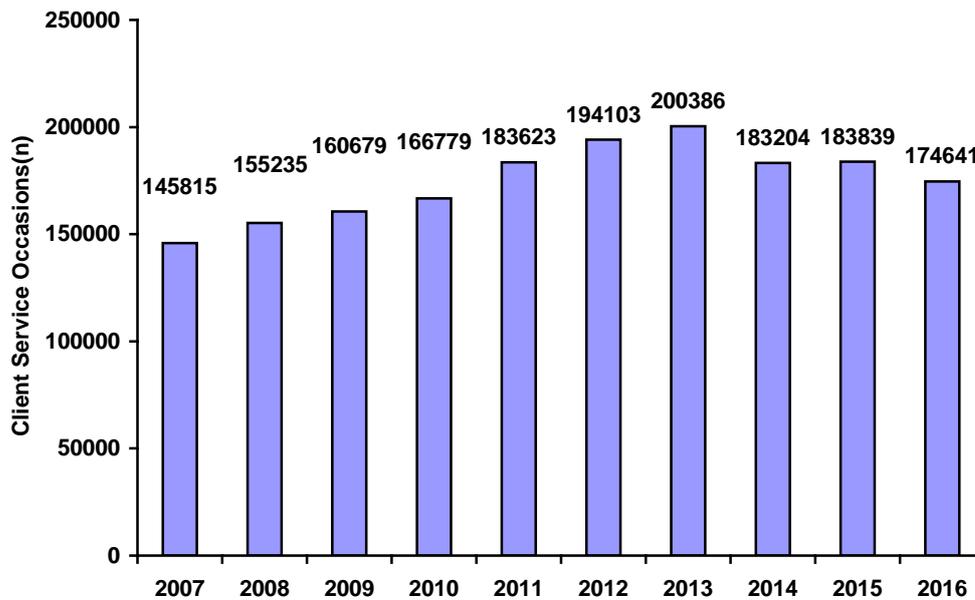
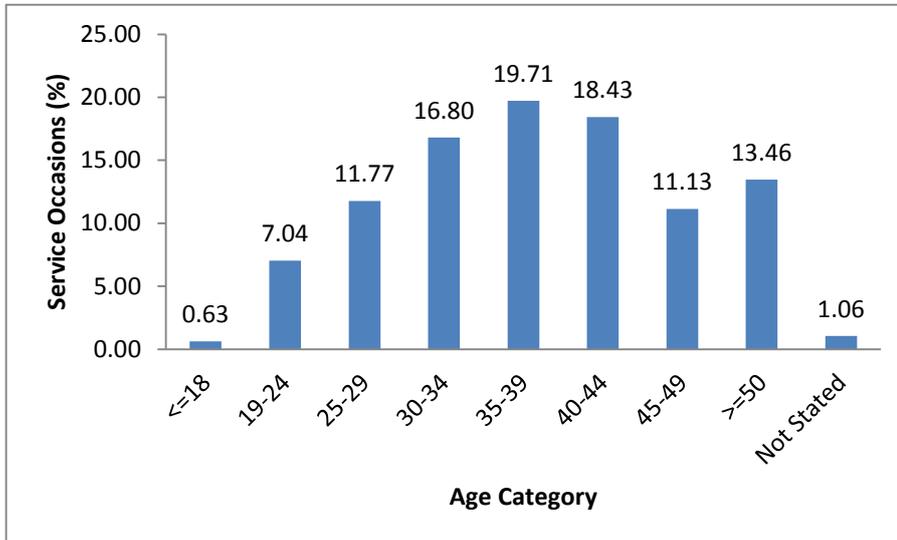


Figure 1 Total service occasions across participating NSPs, 2007-16

## Client demographics

### Client Age



**Figure 2 Total service occasions by age category, 2016 (N=174,103)**

The average age of clients was 38 years, with the 35-39 year age group comprising the largest proportion of clients (20%) (Figure 2). The 40-44 and the 30-34 age groups were the second and third largest groups respectively, followed by the 50 years and over group. Clients aged 35 years and over comprised 63% of all clients, while clients under the age of 25 comprised eight per cent. This continues the trend from previous years of an ageing population of people who inject drugs accessing the NSPs with 80% of occasions of service being clients aged 30 years or above.

**Table 1 Percentage of service occasions related to drug type, by age group (N=172,850)**

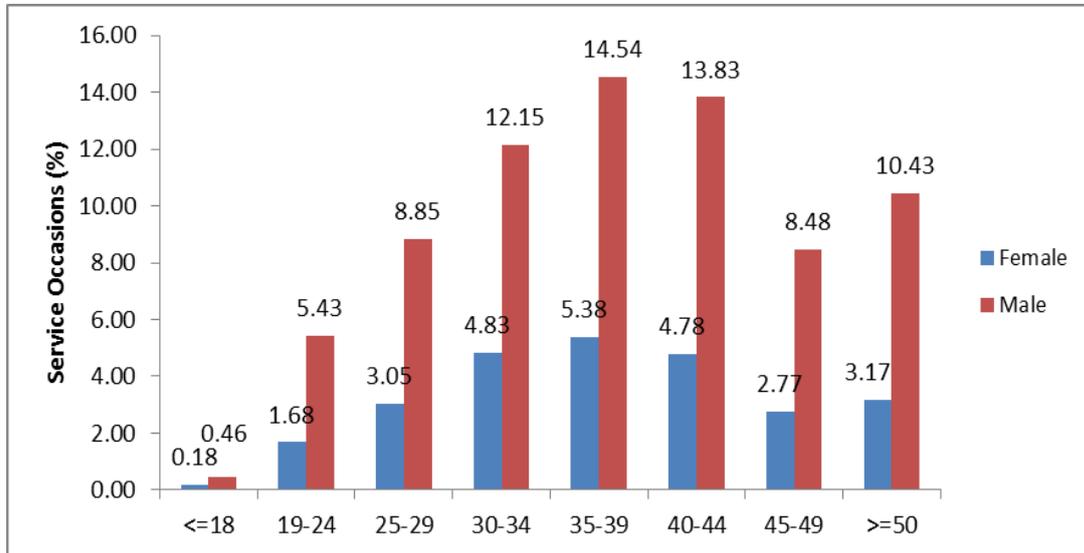
Drug Type (%)	Total	<=18	19-24	25-29	30-34	35-39	40-44	45-49	=>50	Missing
Amphetamines	<b>40.09</b>	54.01	37.50	42.97	42.62	43.09	41.68	39.93	29.12	30.99
Heroin	<b>15.96</b>	6.75	8.43	10.13	14.42	17.35	18.71	17.35	20.81	8.45
Morphine	<b>15.06</b>	6.57	6.47	9.57	12.54	15.23	15.34	19.22	24.13	10.02
Methadone	<b>4.86</b>	1.09	1.99	3.16	5.41	5.86	4.68	6.19	5.11	2.43
Bup/Subutex®	<b>2.61</b>	1.09	3.11	2.67	3.76	3.19	2.76	1.53	0.90	0.47
Suboxone®	<b>1.30</b>	4.29	3.79	1.47	2.28	0.88	0.89	0.52	0.35	0.31
Other opioids	<b>3.41</b>	0.91	2.28	2.69	3.27	2.78	3.40	3.83	5.69	0.86
Steroids	<b>8.01</b>	15.60	26.19	18.93	8.75	4.99	3.78	3.07	2.03	6.96
All other categories*	<b>5.71</b>	7.76	7.68	6.42	4.70	3.96	5.30	5.04	8.65	10.95
Missing	<b>2.99</b>	1.92	2.57	1.99	2.24	2.67	3.44	3.32	3.23	28.56
Total in each age group (n)	<b>172850</b>	1096	12201	20428	29156	34182	31911	19292	23306	1278

\*Includes all other substance types (Human Growth Hormone (HGH), vitamin B, insulin, hallucinogens, ketamine, gamma-Hydroxybutyric acid (GHB) and other drugs)

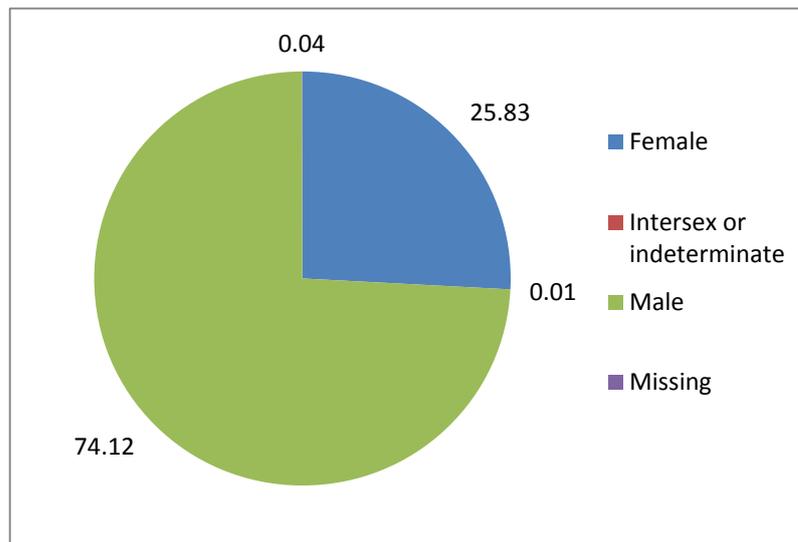
Table 1 displays the proportion of service occasions by age group and drug type used. Comparing all drug types, amphetamines accounted for a majority of service occasions across all age groups under 40 with opiates accounting for the majority of service occasions for those aged 40 and over. Amphetamine was reported as being used in 54% of service occasions involving clients aged 18 years and under, with morphine/pharmaceutical opioid use accounting for the majority of service occasions (36%) for those aged 50 years and older. Steroid use was more prevalent in the younger age group with clients younger than 35 years making up 73% of the service occasions related to steroid/performance and image enhancing drugs use.

## Client gender

Of the 174,641 service occasions, 74% (n = 127,694) were male and 26% (n = 44,491) were female. In less than four per cent (n = 2,456) of service occasions this information was missing or not stated. There were significant differences observed for male and female clients across all age categories (Figure 3).



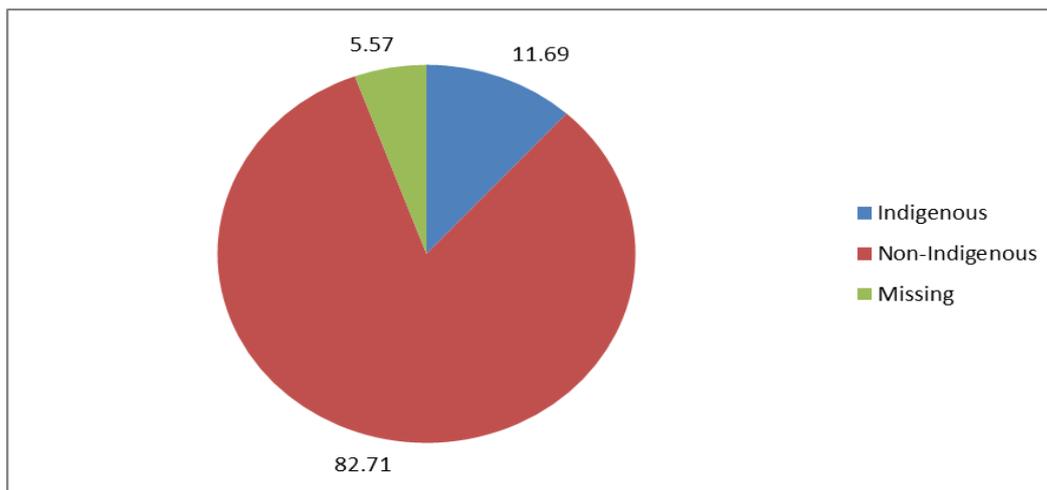
**Figure 3** Service occasions by age category & gender, 2016 (N=172,185)



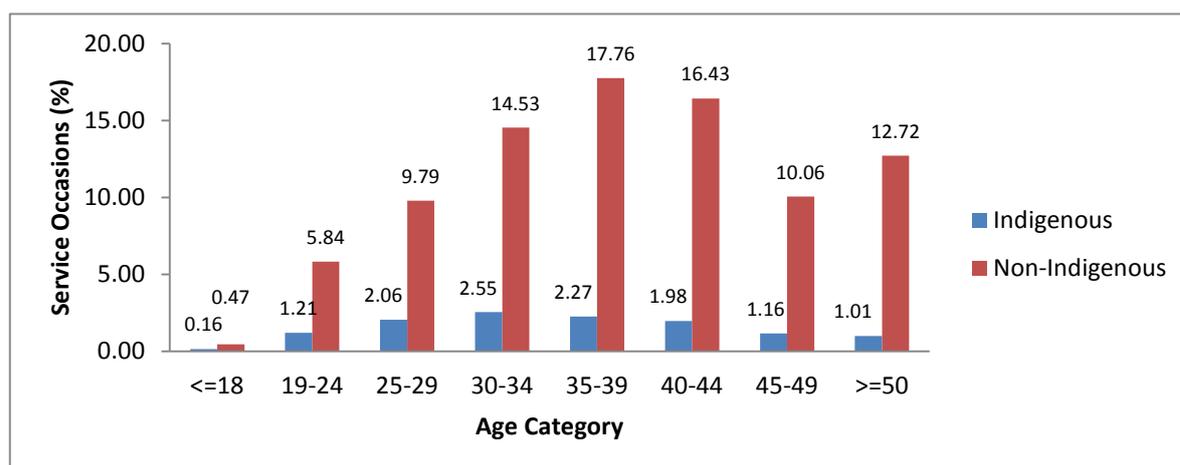
**Figure 4** Service occasions by gender, 2016 (N=174,641)

## Aboriginal and Torres Strait Islander profile

Aboriginal and Torres Strait Islander status was collected as a mandatory data element of the QMDS-NSP for the first time in 2010. In 2016, of the 174,641 service occasions, 11.7% (n = 20,410) were for clients who identified as an Aboriginal and/or Torres Strait Islander person. This may be an under-representation due to missing data. Clients identifying as an Aboriginal and/or Torres Strait Islander person were younger with a mean age of 34.9 years compared to 38.2 years for the non-Aboriginal and Torres Strait Islander group (Figure 6).



**Figure 5** Service occasions by Aboriginal and Torres Strait Islander status, 2016 (N=174,641)



**Figure 6** Service occasions by Aboriginal and Torres Strait Islander status and age, 2016 (N=163,194)

## Drug trends

### Service Occasions by Drug Type and Gender

Figure 7 displays service occasions by drug type and gender. The three most commonly used drug types were the same for males and females. Amphetamines accounted for 40% of male and 46% of female occasions of service. Heroin use was similar in both males and females at 16% and 17% of service occasions respectively; morphine use was the same for both males and females at 16%. A key difference between male and female drug use was steroid use; which was largely confined to males; 10.7% male compared with 1.1% female.

The 'All Other' category in this figure encompasses all other drug types (Human Growth Hormone (HGH), Vitamin B, insulin, hallucinogens, ketamine, GHB (gamma-Hydroxybutyric acid, benzodiazepines, fentanyl, cocaine and ecstasy). Three per cent of all service occasions did not specify a drug type.

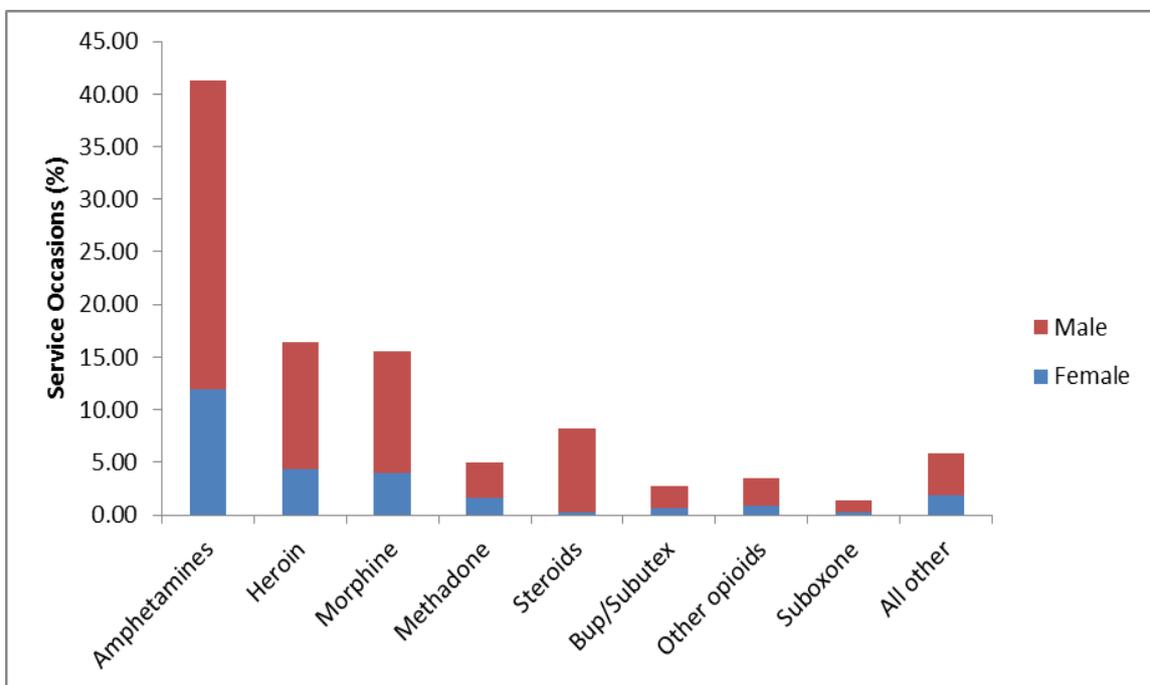
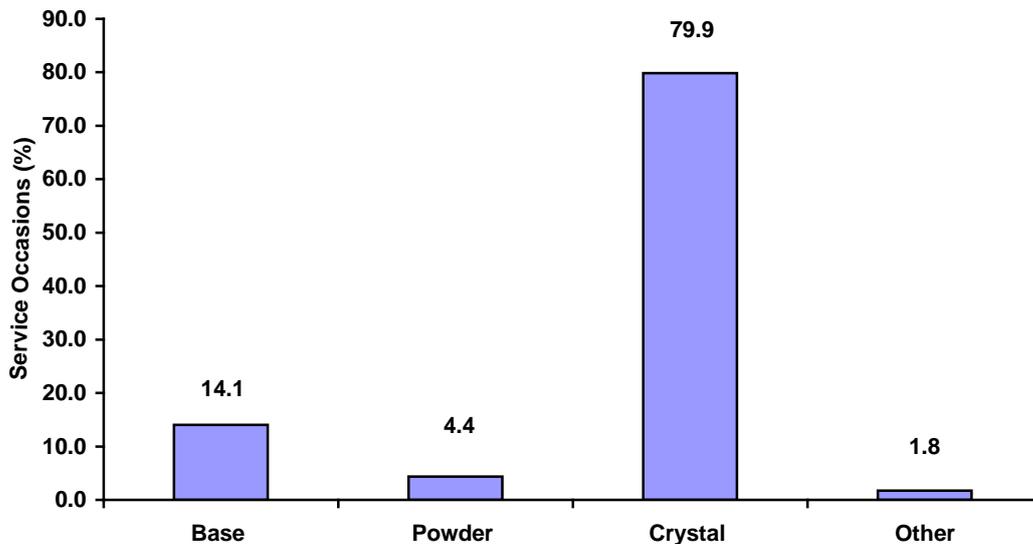


Figure 7 Service occasions related to drug use and gender, 2016 (N=168,863)

## Amphetamine subtypes

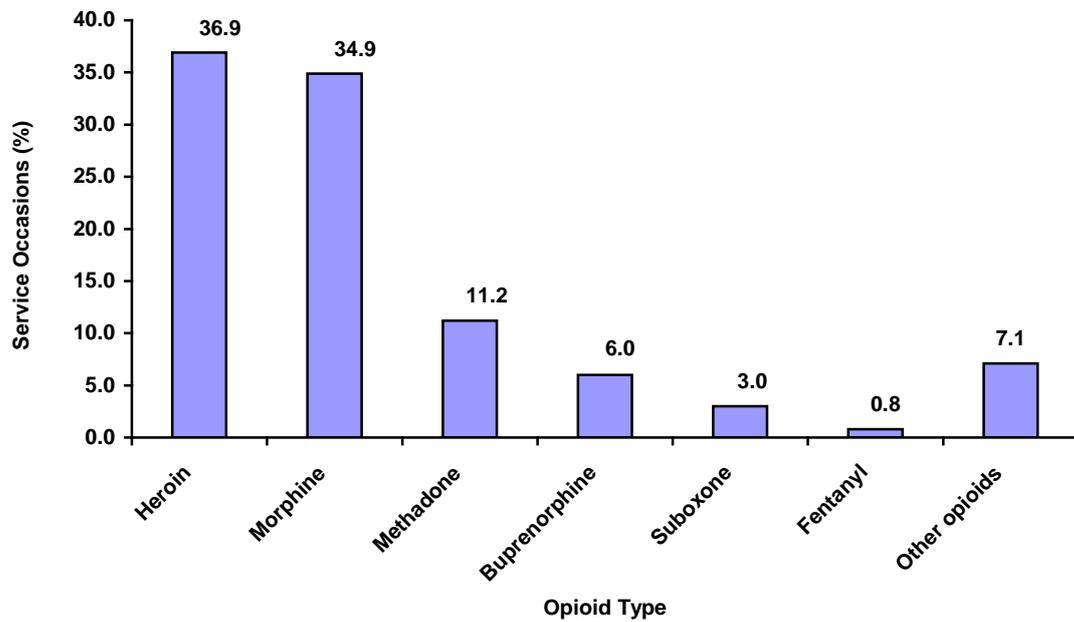


**Figure 8** Per cent of service occasions for each amphetamine subtype - where specified, 2016 (N=41,427)

The QMDS-NSP has five categories for recording amphetamine use. A broad amphetamines code is entered when clients are unsure of the exact type of amphetamine they will be using. The four other amphetamine categories (base, powder, crystal, and other) are used when clients are aware of and report the type of amphetamine they will be using. The 'Other' amphetamine code is used for liquid and pill forms as well as amphetamine sulphate.

Of the 61,482 occasions of service related to all amphetamine use, 61% were recorded as specific amphetamine types. Figure 8 displays the breakdown of amphetamine; crystal methamphetamine (80%) and base methamphetamine (14%) were the most common forms. An increase in the reporting of crystal methamphetamine observed in 2013, 2014 and 2015 has continued into 2016, however overall use of amphetamines remained stable.

## Opioid related service occasions

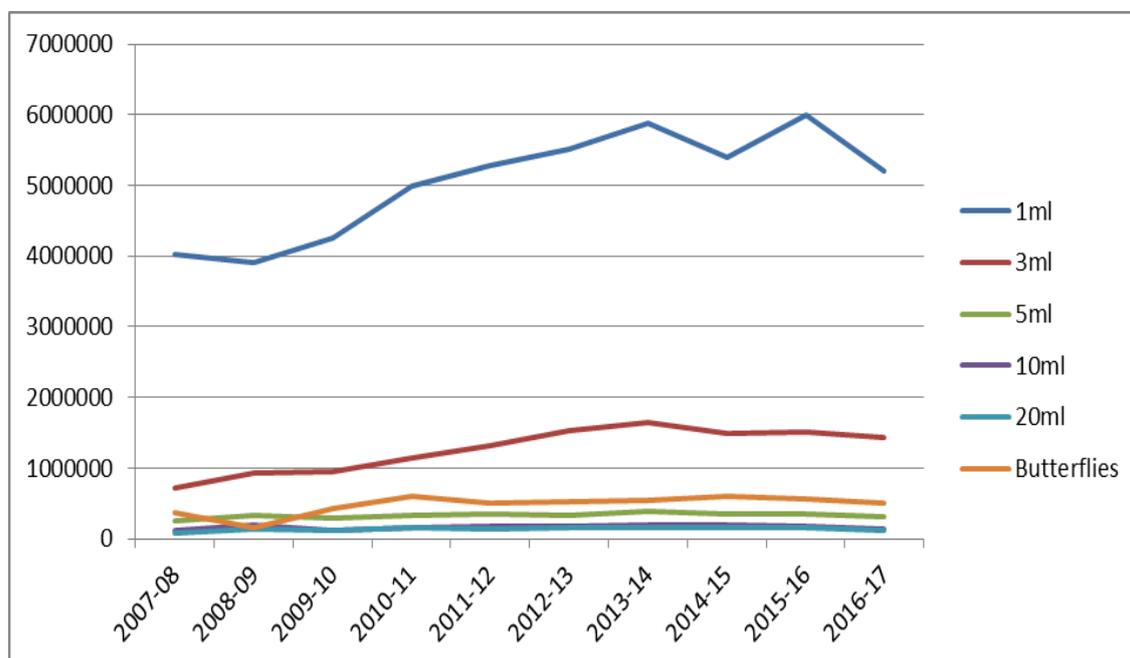


**Figure 9** Percentage breakdown of opioid related service occasions, 2016 (N=74,739)

Figure 9 displays the percentage breakdown of service occasions related to all opioid use. Heroin and morphine, comprising 72% of opioid related service occasions were the most commonly used opioids throughout this period.

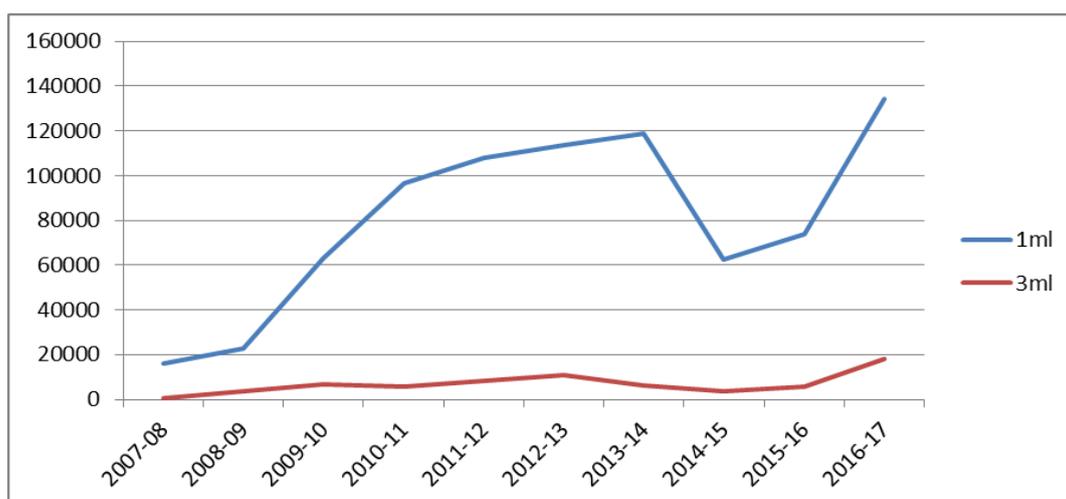
## Equipment ordering and distribution

### Equipment ordering



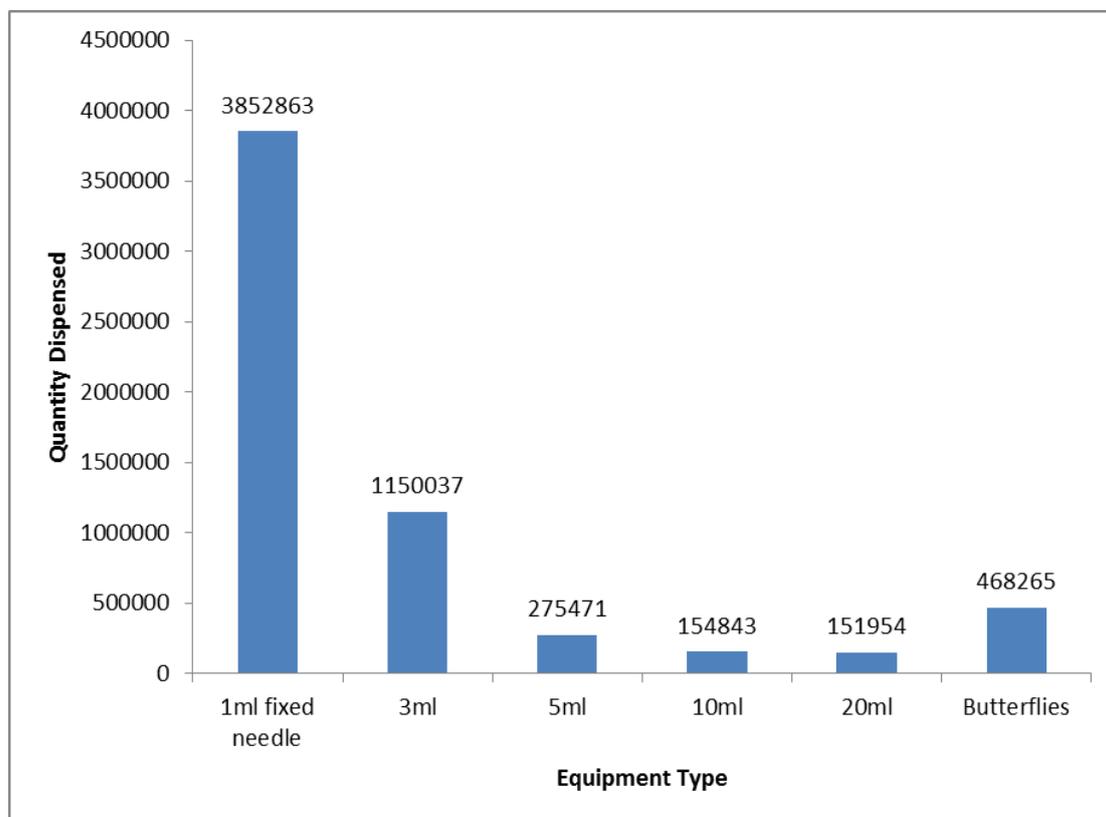
**Figure 10 Total equipment ordered, Financial Year 2007-08 to 2016-17**

The total for each equipment type ordered by all primary and secondary NSP sites in Queensland for financial years 2007-08 to 2016-17 is displayed in Figure 10. 1ml fixed needle syringes were the most common syringe followed by 3ml syringes. The ordering data for 1ml fixed needle syringes and 3ml syringes also includes Needle Dispensing Machine (NDM) kits as detailed in Figure 11.



**Figure 11 Total equipment ordered as NDM kits, Financial Year 2007-08 to 2016-17**

## Equipment distributed



**Figure 12** Total equipment distributed, 2016

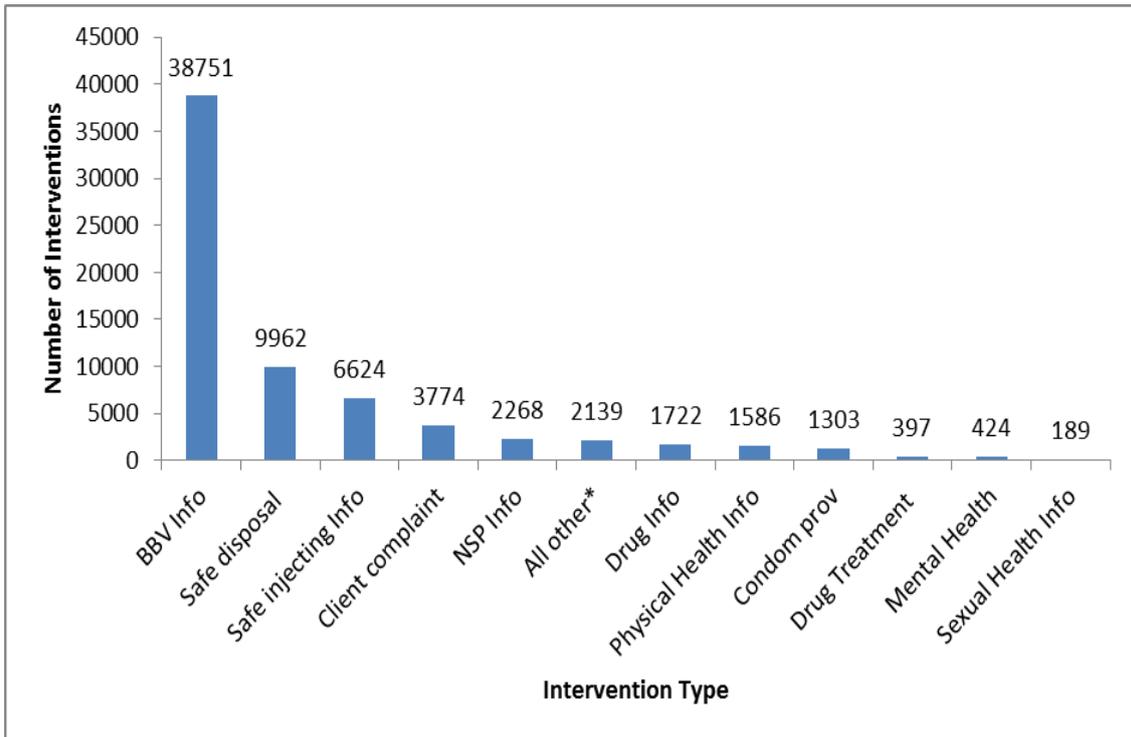
Total distribution through occasions of service for each equipment type is displayed in Figure 12. 1ml fixed needle syringes were the most commonly distributed item, comprising 64% of all equipment dispensed without charge followed by 3ml syringes which accounted for 19%.

## Interventions provided

NSP interventions comprise information and education on topics such as HIV, hepatitis C and other blood-borne viruses (BBVs), vein care and safe injecting practices, safe disposal of equipment, drug information and treatment related information and sexual health information. The intervention 'client-focused discussion' has been replaced with a set of new interventions; 'NSP policy information', 'Opioid Substitution program information', 'Drug treatment information' and a category for client complaints.

Up to three different interventions can be recorded for each service occasion, but for the purpose of analysis only the primary intervention is included. Figure 13 displays the primary interventions provided across all sites, for 2016.

Staff provided a primary intervention on 40% of service occasions. The top five interventions provided were BBV information, safe injecting information and education, safe disposal information, physical health information and drug related information. The prominence of these interventions reflects the health needs and concerns of clients. The 'Other info' category encompasses site-specific interventions not covered by the minimum dataset codes.



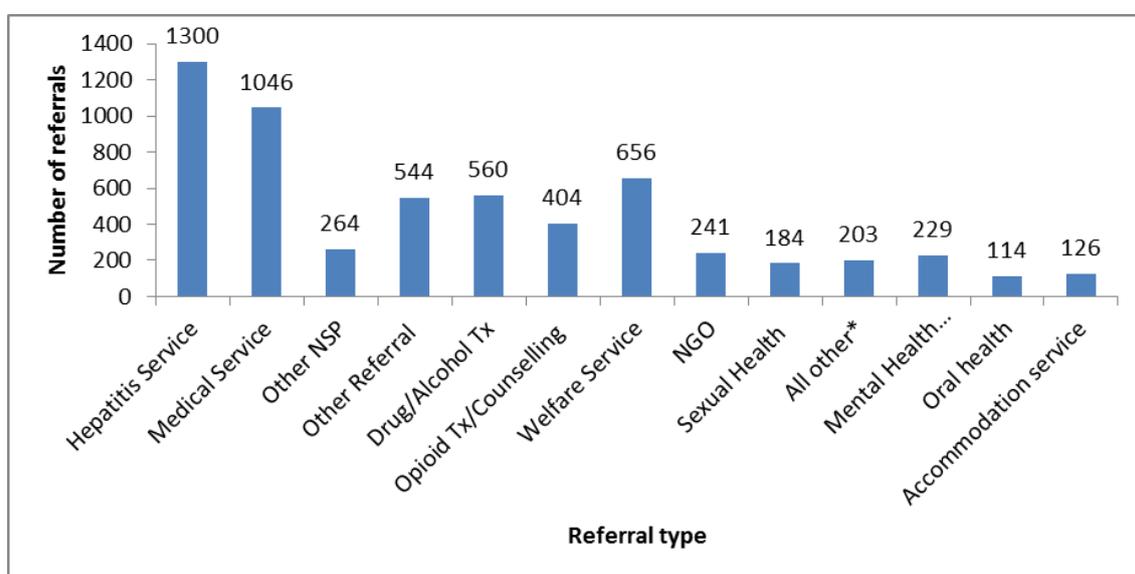
**Figure 13** Type of interventions provided, 2016 (N=69,388)

\*Includes antenatal education and welfare

## Referrals to services

As part of an NSP occasion of service a client may be referred to another service. There were 5,871 referrals provided by NSP staff during 2016; three per cent of all occasions of service involved referrals. Figure 14 displays the total number of referrals made to each destination. 'Other' referrals include site-specific referrals not covered by the minimum dataset codes.

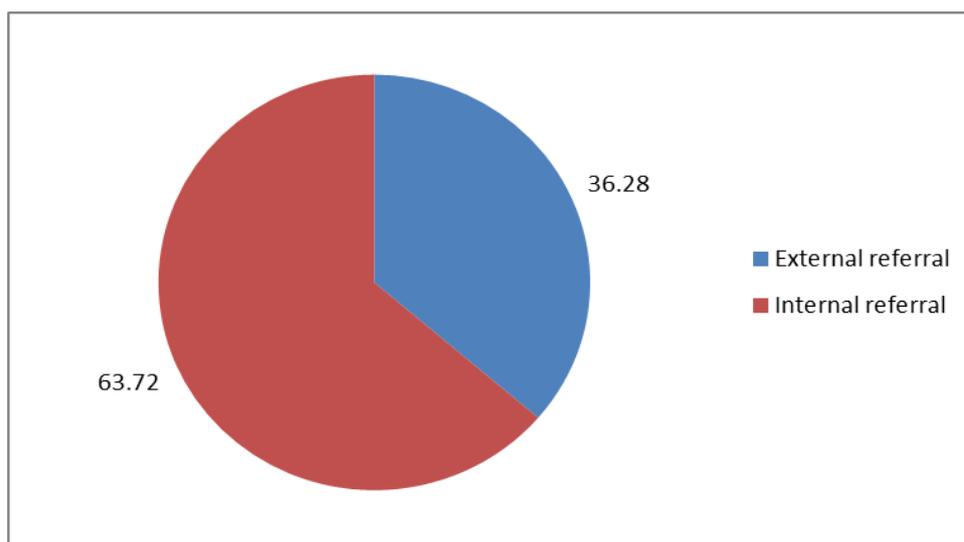
The top four referral destinations were referrals to hepatitis services, medical services, welfare services and drug and alcohol treatment services. Medical services include treatment (by nurses or medical practitioners) for bacterial infections and vascular disease, in addition to any other medical services not elsewhere classified.



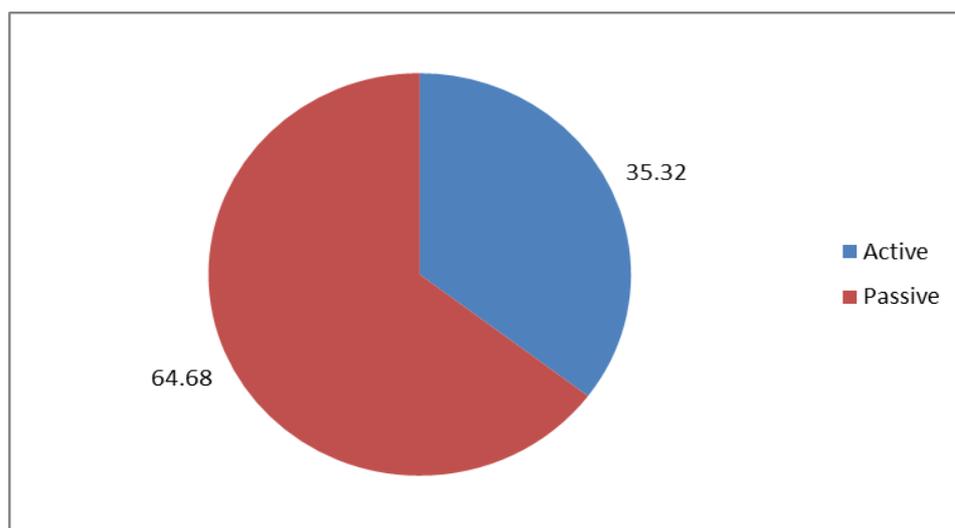
**Figure 14** Type of referrals provided, 2016 (N=5,871)

\*Includes antenatal or parenting service, hospital and HIV/AIDS service

Referrals are characterised according to referral type (internal/external and active/passive). Internal referrals are referrals made to services within the premises where the NSP is located, while external referrals are those that are external to these premises. Referrals are also recorded as active or passive. An active referral occurs when a NSP staff member arranges a referral by writing a letter, phoning for an appointment, or having face-to-face contact with the staff member to whom the client is being referred. A referral is considered passive when the client is provided with agency information but is not assisted to make an appointment with the agency.



**Figure 15** Percent of internal and external referrals, 2016, (N=4,482)



**Figure 16** Percent of active and passive referrals, 2016 (N=4,086)

Figures 15 and 16, display the breakdown of internal and external referrals, and active and passive referrals respectively. Less than half of the referral sites were external. Passive referrals, where no formal introduction or appointment to the referral site occurred, were the most commonly provided referral type. An active referral to an internal referral site would be considered best practice where feasible.

## Regional profiles

### Brisbane City

- In 2016 there were 46,744 occasions of service (27% of total) provided in the Brisbane City region.

#### Client gender

- Male attendance (79%) was higher than state-wide male attendance (74%).
- 21% of clients attending were female; less than overall service occasions related to females (26%).
- Aboriginal and Torres Strait Islander clients made up eight per cent of occasions of service in Brisbane City which was lower than the 12% state-wide representation.

#### Client age

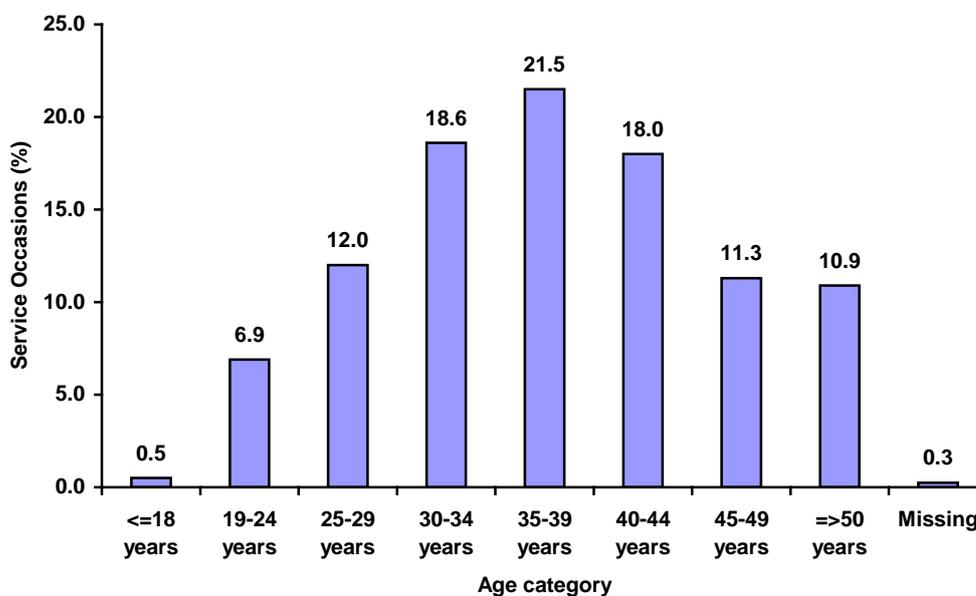
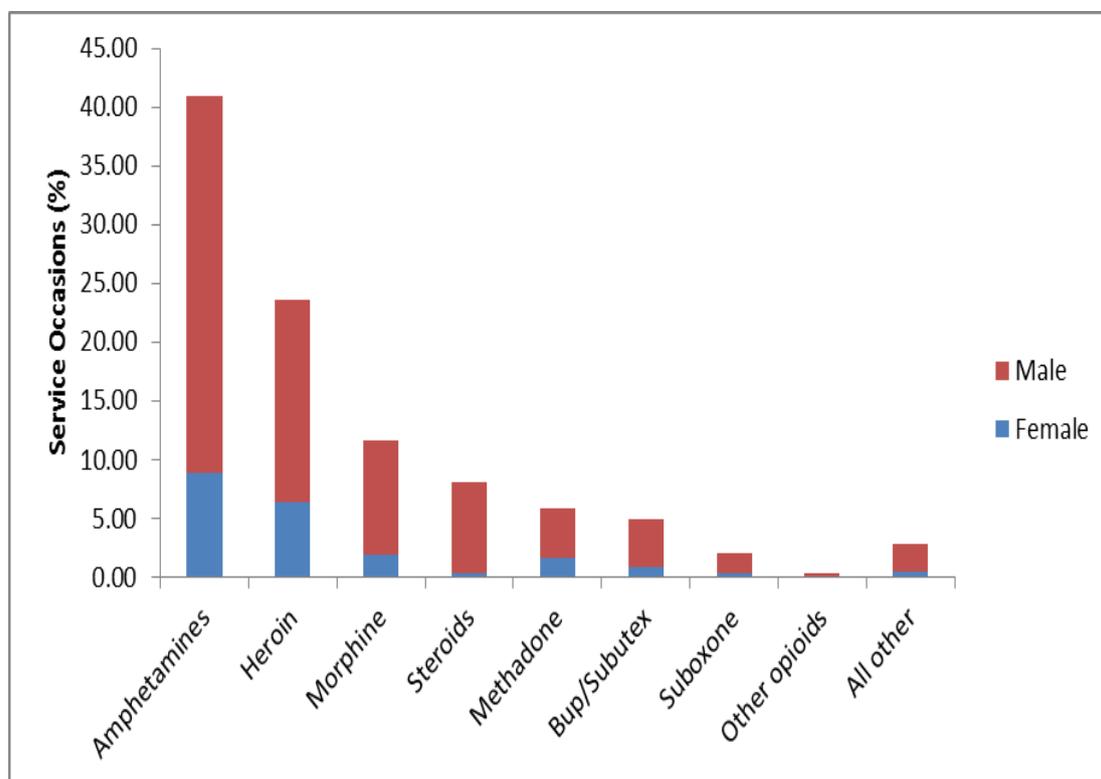


Figure 17 Brisbane City: Age distribution, 2016 (N=46,744)

- The average age of clients attending was 37.6 years, similar to the state-wide mean (38.2 years). Consistent with state-wide patterns, the 35-39 and 30-34 year age groups comprised the largest proportion of clients attending Brisbane City NSPs.

## Drug trends



**Figure 18 Brisbane City: Service occasions by drug use and gender, 2016 (N=45,357)**

- Consistent with state-wide trends, service occasions related to amphetamine, heroin, and morphine use were more prevalent than for any other drug types.
- Amphetamine use was slightly lower for females (8.9%) but higher for males (32.5%), in comparison to state-wide levels. Heroin was reported by a greater number of males (17.3%) when compared to the females (6.3%) and was also higher than state-wide levels.

## Interventions provided

**Table 2 Brisbane City: Interventions provided, 2016**

Information/Education	Interventions
Safe Injecting Information	1752
BBV Information	677
NSP Policy Information	494
Other Information	318
Drug Information	295
Safe Disposal	270
Physical Health	119
Drug Treatment	78
Client Complaint	49
OST	40
Mental Health	26
Sexual Health Information	22
All Other*	22
<b>Total interventions</b>	<b>4162</b>

\*All Other includes condom provision and antenatal information.

- On nine per cent of service occasions, at least one intervention was provided to clients attending Brisbane City NSPs.
- Information on safe injecting was provided most often, followed by BBV information, NSP policy information, other information, drug information, safe disposal and physical health information.

## Referrals to services

**Table 3 Brisbane City: Referrals provided, 2016**

Services	Referrals
Drug and Alcohol Treatment	133
Hepatitis Service	106
Medical Service	97
OST	57
Other NSP	48
Welfare Services	17
NGO	12
Accommodation	7
Sexual Health Service	5
All Other*	14
<b>Total Referrals</b>	<b>496</b>

\*All Other includes HIV services, oral health, hospital, legal service, mental health, ante-natal and client complaint.

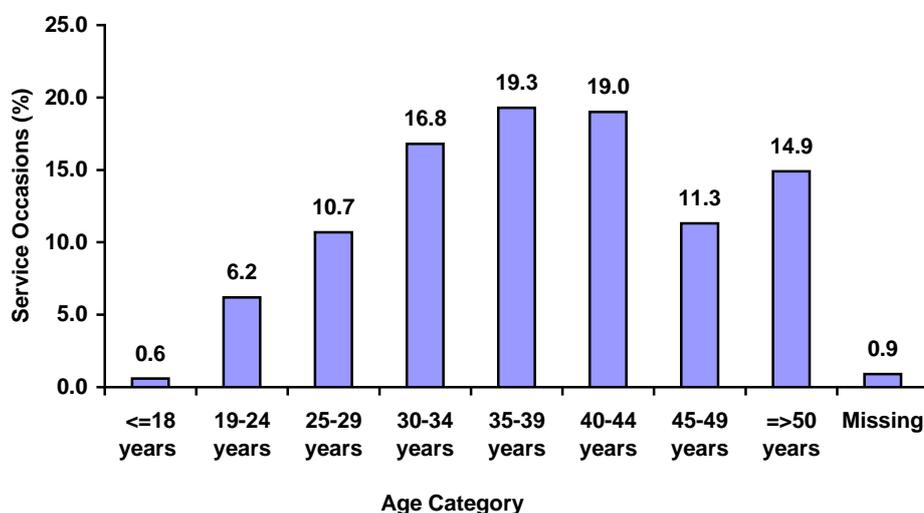
## Central Region

- In 2016, Central Region conducted 43,656 occasions of service (25% of total).

### Client gender

- Female attendance in this region was higher than state-wide attendance (30% v 26%) and all other regions.
- Male clients comprised 70% of service occasions.
- Aboriginal and Torres Strait Islander clients made up 11.5% of occasions of service in Central Region which was similar to state-wide representation (12%).

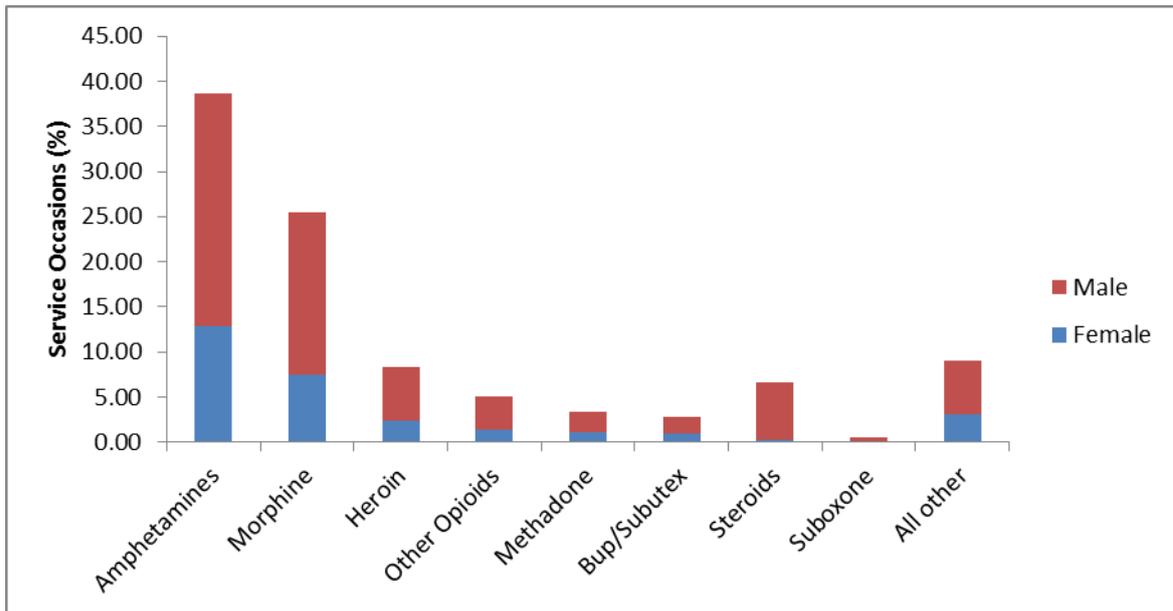
### Client age



**Figure 19** Central Region: Age distribution, 2016 (N=43,648)

- The average age of clients was 38 years, the same as the state-wide average of 38 years.
- Consistent with state-wide data, the 35-39 years age group made up the largest proportion of client presentations.

## Drug trends



**Figure 20** Central Region: Service occasions related to male and female drug use, 2016 (N=42,394)

- Amphetamine use was similar to state-wide patterns of use for male but higher for female service occasions (14.5% v 11.9%).
- The use of heroin was lower for males and females when compared to state-wide data (4.9% v 12.15% and 1.7% v 4.3% respectively); also service occasions related to morphine was higher for both males (16.2%) and females (7.1%) in comparison to state-wide data.

## Interventions provided

**Table 4 Central Region: Interventions provided, 2016**

Information/Education	Interventions
BBV Information	6994
Client Complaint	3317
Viral Hepatitis	2361
NSP Policy Information	1256
Other Information	1082
Physical Health	784
Safe Disposal	688
Safe Injecting	572
Condom Provision	559
Drug Treatment	93
Mental Health	76
Sexual Health	68
OST	54
All Other*	22
<b>Total interventions</b>	<b>17926</b>

\*All Other includes antenatal information.

- Information and education was provided to clients on 41% of service occasions, particularly education related to safe disposal of equipment, safe injecting, BBV information, viral hepatitis, NSP policy information, physical health, and condom provision.

## Referrals to services

**Table 5 Central Region: Referrals provided, 2016**

Services	Referrals
Drug and Alcohol Treatment	155
OST	132
NGO	131
Medical Service	102
Hepatitis Service	97
Other Referral	60
Other NSP	59
Client Complaint	41
Welfare Service	22
Sexual Health Service	20
Mental Health	17
Legal	10
Accommodation	9
All Other*	14
<b>Total Referrals</b>	<b>869</b>

\*All Other includes HIV services, oral health and antenatal.

- Referrals to Drug and Alcohol Treatment, NGO, OST and Medical Services were more prevalent than to any other referral type.

## Northern Region

- In 2016, the Northern Region conducted 22,498 occasions of service (13% of total).

### Client gender

- Male and female attendance was similar to state-wide attendance; with 71% of service occasions being for males and 29% for females.
- Aboriginal and Torres Strait Islander clients made up 12% of occasions of service in Northern Region which was the same as the 12% state-wide representation.

### Client age

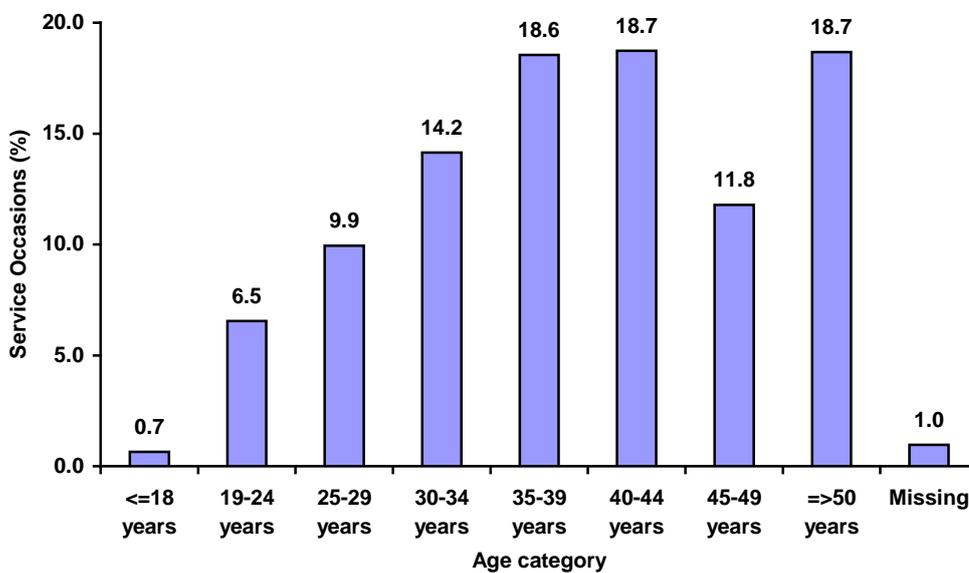
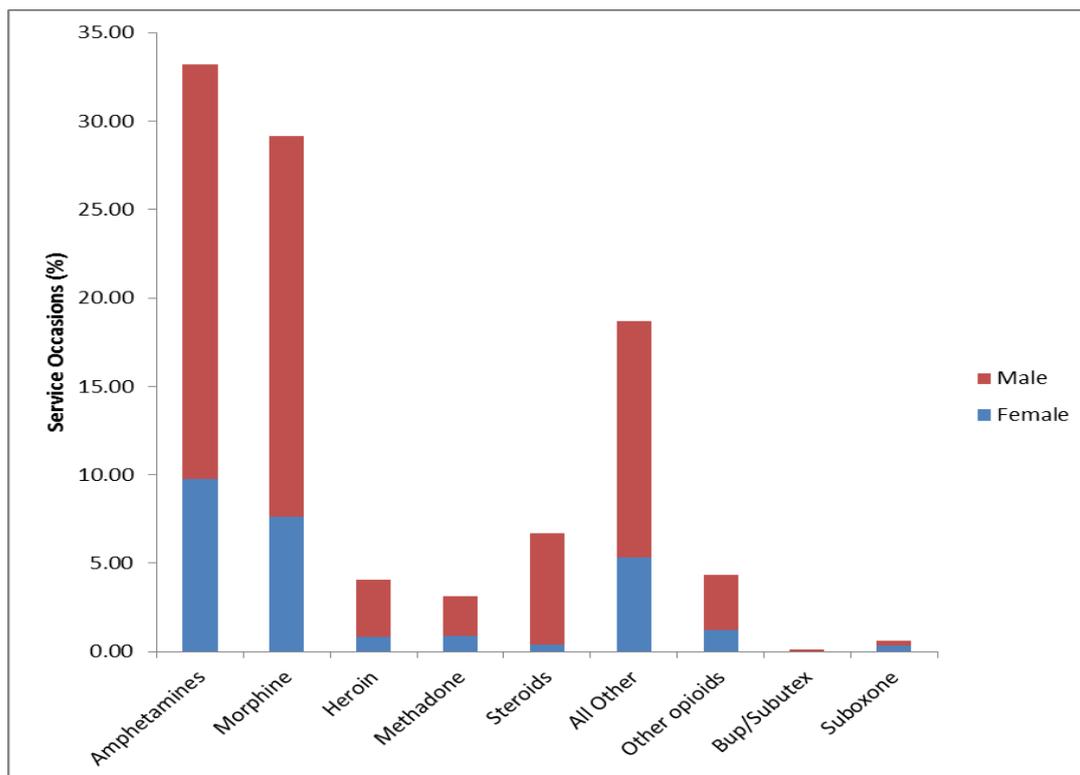


Figure 21 Northern Region: Age distribution, 2016 (N=22,364)

- The average age of clients attending was 39.7 years, the highest in the state. The age distribution for this region was different to the state-wide distribution, there were lower proportions of clients aged less than 30 years and higher attendance of clients aged over 40 years.

## Drug trends



**Figure 22 Northern Region: Service occasions related to male and female drug use, 2016 (N=24,014)**

- Amphetamine and morphine-related service occasions were more common than service occasions for any other drug type for both males and females in the Northern region (Figure 22).
- Heroin use in the Northern region is substantially lower than state-wide; it accounts for 3% of male and 1% of female service occasions, compared to approximately 13% of male and 4% of female service occasions state-wide.

## Interventions provided

**Table 6 Northern Region: Interventions provided, 2016**

Information/Education	Interventions
BBV Information	3256
Hepatitis Service	1955
Safe Disposal	1023
Condom Provision	517
Other Information	499
NSP Policy Information	416
Safe Injecting Information	387
Physical Health	300
Client Complaint	217
Drug Treatment	130
OST	115
Mental Health Information	70
Sexual Health	51
Antenatal	27
<b>Total interventions</b>	<b>8963</b>

- At least one intervention was provided on 40% of service occasions.

## Referrals to services

**Table 7 Northern Region: Referrals provided, 2016**

Services	Referrals
Welfare Service	562
Hepatitis Service	315
Opioid Treatment	171
Medical Service	95
Drug and Alcohol Treatment	88
Other Referral	73
Oral Health	48
Sexual Health Service	46
Mental Health Service	41
Other NSP	40
Accommodation	19
NGO	18
HIV Service	10
All Other*	21
<b>Total Referrals</b>	<b>1547</b>

\* All Other includes hospital, legal service, antenatal and client complaint.

- At least one referral was provided on 7% of service occasions.

## Southern Region

- There were a total of 61,743 occasions of service (35% of total) conducted in this region in 2016.

### Client gender

- Male and female attendance was similar to state-wide attendance; with 74% of service occasions being for males and 26% for females.
- Aboriginal and Torres Strait Islander clients made up 16% of occasions of service in Southern Region which was higher than the 11.7% state-wide representation and the highest of the four regions.

### Client age

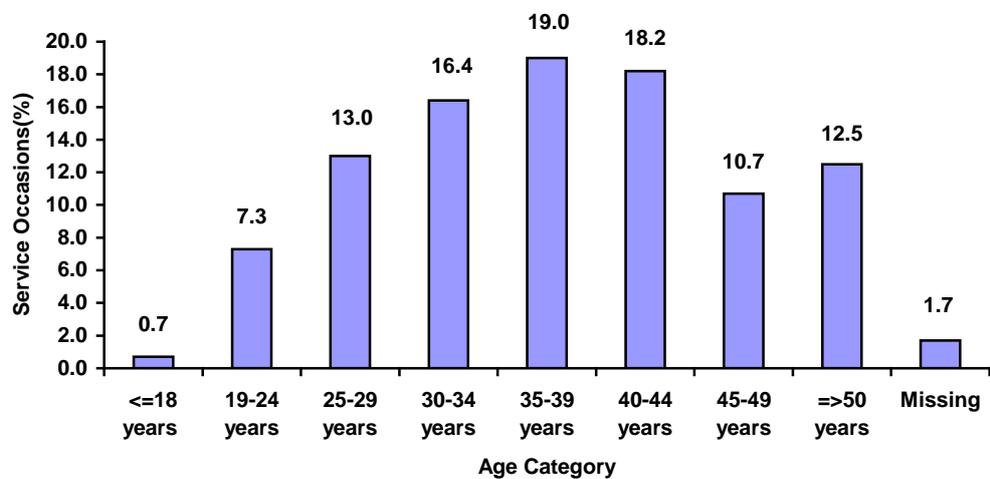
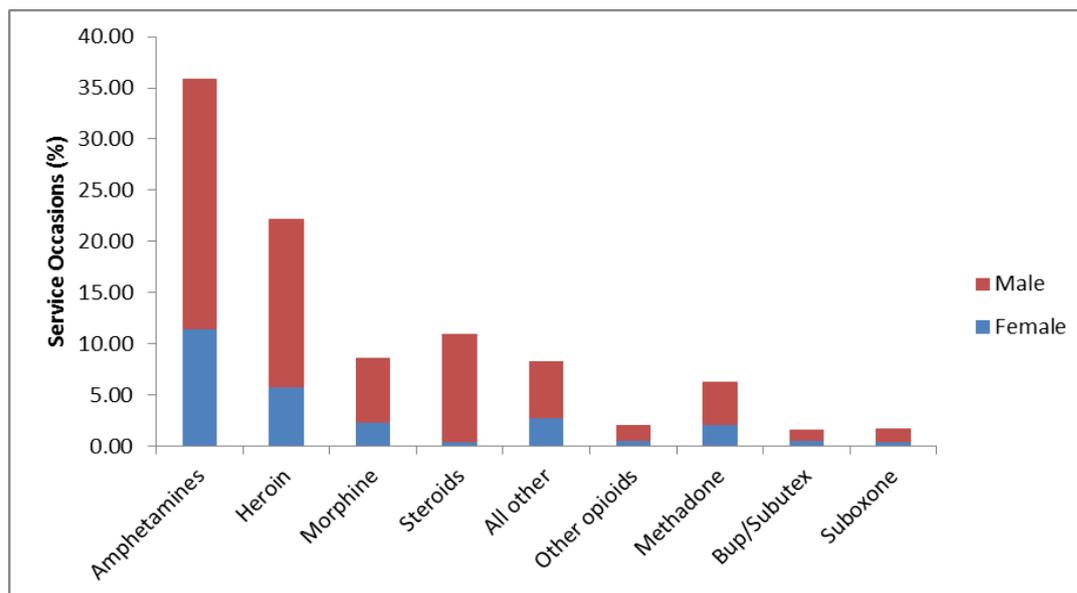


Figure 23 Southern Region: Age distribution, 2016 (N=61,391)

- The average age of clients attending was 37, similar to the state-wide average.
- The age distribution for this region was very similar to the state-wide distribution.

## Drug trends



**Figure 24 Southern Region: Service occasions related to male and female drug use, 2016, (N=59,817)**

- For Southern region, the most commonly used drug types for males and females were amphetamines, heroin and morphine, consistent with state-wide data.
- Male and female service occasions for amphetamine use were lower than the state-wide average at 38%, while morphine occasions were lower than state-wide trend at 8.6%; steroid use among males was highest in the southern region at 11% in comparison to other regions.
- Steroid use was greater than the state-wide trends and higher than all other regions.

## Interventions provided

**Table 8 Southern Region: Interventions provided, 2016**

Information/Education	Interventions
BBV Info	27824
Safe Disposal	7981
Viral Hepatitis	556
Safe Injecting Information	468
Physical Health Information	383
Mental Health Treatment	252
Client Complaint	191
Other Information	171
NSP Policy Information	102
Drug Treatment	96
Sexual Health	47
OTP	40
All Other*	225
<b>Total interventions</b>	<b>38336</b>

\*All Other includes condom provision and antenatal information.

- On 62% of service occasions, at least one intervention was provided.

## Referrals to services

**Table 9 Southern Region: Referrals provided, 2016**

Services	Referrals
Hepatitis Service	782
Medical Service	752
Drug and Alcohol Treatment	184
Mental Health Treatment	169
Other NSP	117
Sexual Health Service	113
Accommodation Service	91
NGO	77
Legal Service	73
Oral Health	61
Welfare Service	55
OTP	45
All Other*	47
<b>Total Referrals</b>	<b>2566</b>

\*All Other includes hospital, HIV service and antenatal.

## Discussion

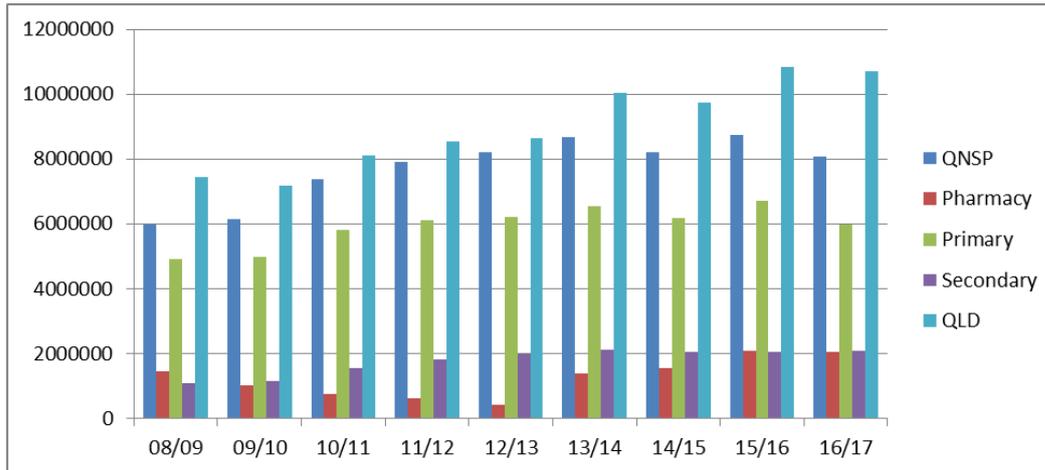
### Trends in service access

There were 174,641 occasions of service in 2016. This was a 5% decline on the 183,839 occasions of service across the 25 participating NSPs reported in 2015, further to the 8% decline in client activity among participating NSPs between 2013 and 2015. This can be largely attributed to the pharmacy NSP enhancement initiative. Northern region (31,000 to 22,498), Brisbane City (59,673 to 46,744) and Southern region (72,900 to 61,743) have seen the biggest decrease in occasions of service between 2013 and 2016 respectively. The impact of the pharmacy initiative had been anticipated.

### Enhanced pharmacy NSP

The Enhanced Pharmacy NSP commenced on 1 December 2013. It is an initiative of the Department of Health and the Pharmacy Guild of Australia, Queensland Branch (“the Guild”) and consists of the Department of Health supplying pre-packaged needles and syringes to pharmacies free of charge. The packs include a wider range of equipment, similar to that provided through public secondary NSP sites. In return pharmacists agree to charge a set handling fee of \$3 to dispense the pre-packaged needles and syringes while the Guild provides increased staff training and ensures pharmacies provide safe disposal facilities. The key difference between pharmacy and public secondary NSPs is the set handling fee, paid by the client to the pharmacy. This program was implemented following a decline in pharmacy sector needle and syringe distribution from 1,625,785 syringes in 2009/2010 to 417,781 syringes in 2012/2013 (Figure 25).

As of July 2017, 737 community pharmacies had signed up to become an enhanced pharmacy NSP; providing a range of sterile injecting equipment to clients and facilitating safe disposal of used injecting equipment. Over 6,500,000 syringes have been ordered by pharmacy NSPs since the initiative began in December 2013. This has decreased pressure on the public NSPs; demand for sterile injecting equipment decreased by 6.9% for primary public NSPs and 2.5% for secondary public NSPs between 2013/14 and 2016/17 financial years (Figure 25).



**Figure 25 NSP ordering activity in QLD by sector, 2008/09 to 2016/17**

## Drug use patterns and trends

There are a number of key findings in terms of drug use patterns. The use of all opioids continues to be greater than amphetamine use, and makes up 43% of all service occasions.

Of all opioid related occasions of service, heroin (37%) and pharmaceutical opioids (35%) made up 72% of opioid related occasions of service. Methadone is the OST drug most often reported by clients.

In 2013, crystal methamphetamine overtook base methamphetamine to become the most reported amphetamine type. This trend continued in 2014, 2015 and 2016 with crystal methamphetamine being reported on 80% of occasions of service where amphetamine type was reported in 2016. On 98% of amphetamine-related service occasions the client reported a specific type of amphetamine.

Service occasions for steroid use remained at 8% with males continuing to be 25 times more likely than females to report steroid use.

## Age, gender and Aboriginal and Torres Strait Islander status

The average age of injectors in Queensland for 2016 remained similar to 2015. The average age of clients was 38, with the 35-39 age group comprising the largest proportion of clients (19%). Only eight per cent of occasions of service were under 25 years of age while 80% were aged 30 years or more.

The majority of NSP clients are male, which is consistent with established patterns of program utilisation. Of the 174,641 service occasions, approximately 72% were male and 24% were female.

In 2016, of 174,641 service occasions, 12% were for clients who identified as an Aboriginal and/or Torres Strait Islander person. Aboriginal and Torres Strait Islander clients were younger with a mean age of 35 years and had a higher representation of females in the younger age groups.

## Injecting equipment and drug use

The QMDS-NSP shows the state-wide distribution trends for different types of injecting equipment. Amphetamine-related service occasions were associated with the highest distribution of 1ml fixed needle syringes. Morphine related service occasions were associated with the highest distribution of 3, 5 and 10ml syringes, as well as butterflies. 20ml syringes were mostly distributed for methadone use. Steroid-related service occasions have increased to 8% in 2016 from 3.6% in 2009, and the related 3 ml syringe distribution was second only to morphine.

Amphetamine and steroid use were more prevalent in the younger age group. In 35% of service occasions involving clients less than 25 years, amphetamine was reported as the drug they intended to use. Heroin and morphine were the dominant drugs of choice for clients 40 years and older (45%). Steroid use was largely limited to clients aged less than 35 years, who accounted for 75% of the occasions of service related to steroids.

## Interventions

The intervention data indicate that primary NSPs perform a major role in delivering information and education to clients to reduce HIV, hepatitis C, other BBVs, injection-related harm, and build trust and rapport with PWIDs, the target population.

NSP interventions comprise information and education on topics such as BBVs, safe injecting practices, safe disposal, drug-related topics, physical, mental and sexual health, provision of condoms and dams, and antenatal and parenting information. Interventions also include recording complaints of clients and informing them about NSP policies and directing them to other more convenient to access NSPs.

Staff provided a primary intervention on 40% of service occasions. The top five interventions provided were BBV information, safe injecting information and education, safe disposal information, customer complaints and drug information. Complaints related primarily to the change in equipment supplied. The prominence of these interventions reflects the health needs and concerns of clients.

## Referral activity

As part of an NSP occasion of service a client may be referred to another service. There were 5,871 referrals provided by NSP staff during 2016; three per cent of all occasions of service involved referrals.

The top four referral destinations (excluding the 'Other' category) were referrals to medical services, hepatitis services, welfare services and drug and alcohol counselling services. Medical services include treatment (by nurses or medical practitioners) for bacterial infections and vascular disease, in addition to any other medical services not classified elsewhere.

It is important to note that there is under reporting of referral activity across the programs. This is being addressed through ongoing data collection training and simplification of referral reporting, while retaining the capacity to comprehensively report on the referrals provided.

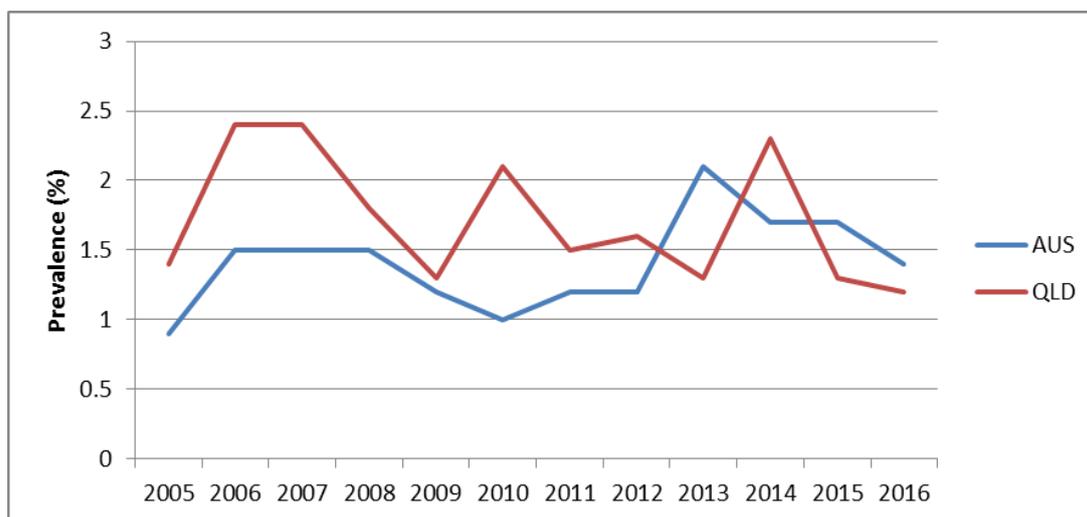
Intervention data indicate that primary NSPs perform a major role in delivering information and education to clients to reduce injection-related harm, demonstrating the unique and sentinel position of NSPs in the healthcare system.

## Australian NSP survey

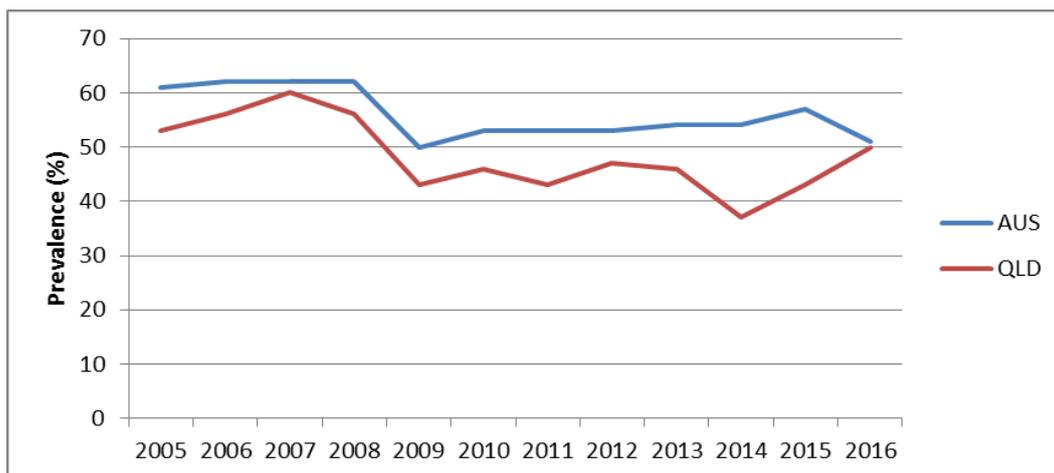
The Australian NSP survey, conducted by The Kirby Institute, University of NSW monitors Human Immunodeficiency Virus (HIV) and hepatitis C virus (HCV) antibody prevalence among PWIDs in Australia. The information gathered annually through the survey is used to guide policy and planning for treatment, prevention and harm reduction services in Australia. In 2016, a total of 2,210 participants were recruited through 50 NSP sites including 349 participants at eight sites in Queensland.

Data collected from the survey shows that prevalence of HIV antibody has declined among survey participants in Australia and Queensland (Figure 26).

Hepatitis C antibody prevalence for Queensland has been lower than the National average since 1995 and declined further in 2014 to 37%, slightly increasing to 50% for 2016 (Figure 27). National HCV antibody prevalence had been stable at 62% from 2006 to 2008, then declined in 2009 to 50% and has remained reasonably steady with 51% of respondents tested testing positive for HCV antibody in 2016.

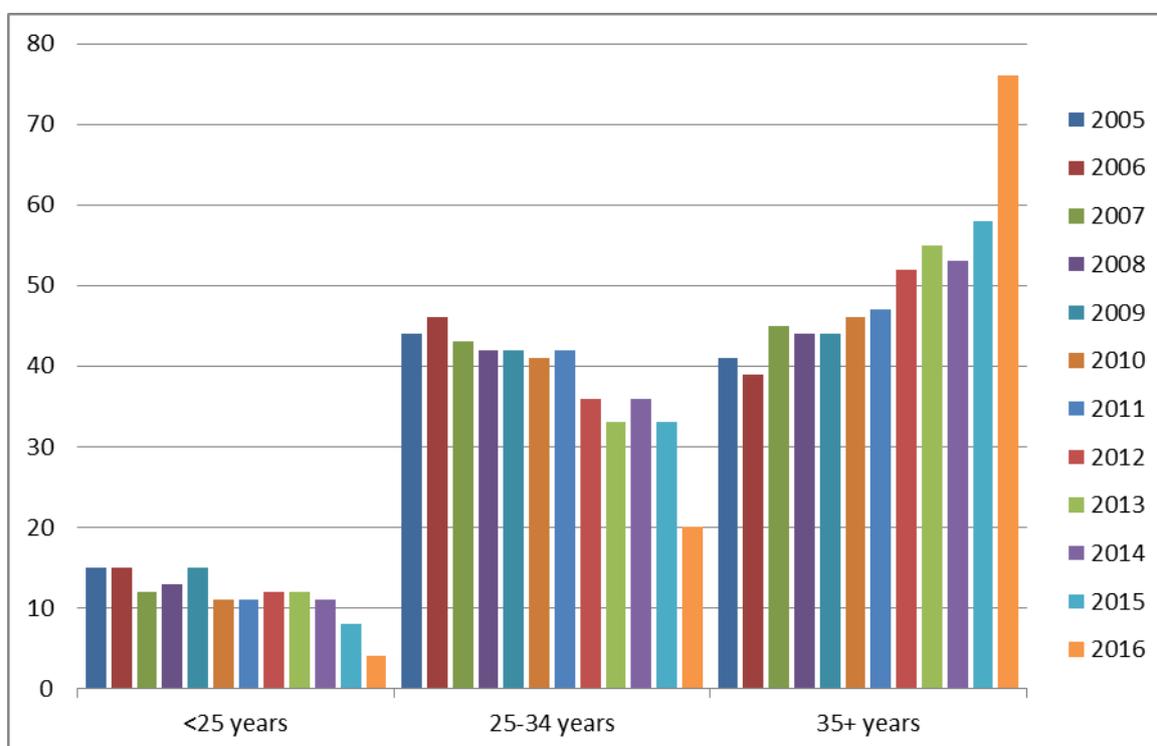


**Figure 26** HIV antibody prevalence by year of survey, Australia & Queensland, 2005-2016



**Figure 27 HCV antibody prevalence by year of survey, Australia & Queensland, 2005-2016**

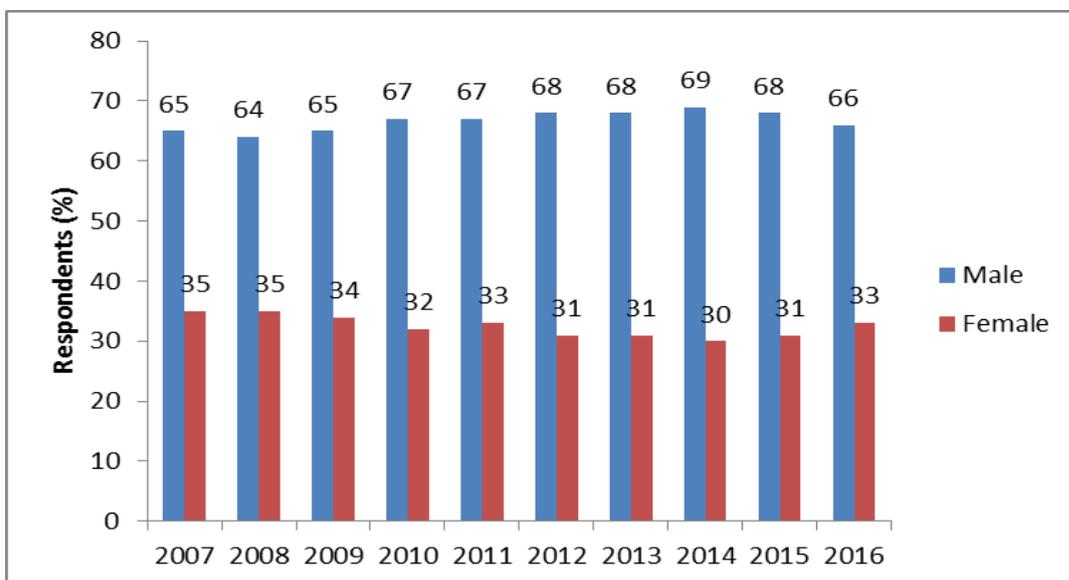
The median age of the participants across Australia was 40 years for 2015 and shows a steady increase over the years. The largest proportion of NSP survey participants were aged 35+ years followed by the 25-34 years age group (Figure 28). The proportion of participants aged less than 25 years has declined annually from 14% in 2005 to four per cent in 2016 (Figure 28). A corresponding increase can be observed for participants aged 35 years and above with 76% of participants in 2016 compared to 41% in 2005. Similar data trends across the age categories can be observed for survey participants from Queensland which points towards a cohort of ageing PWIDs.



**Figure 28 Age profile of respondents by year of survey, Australia, 2005-2016**

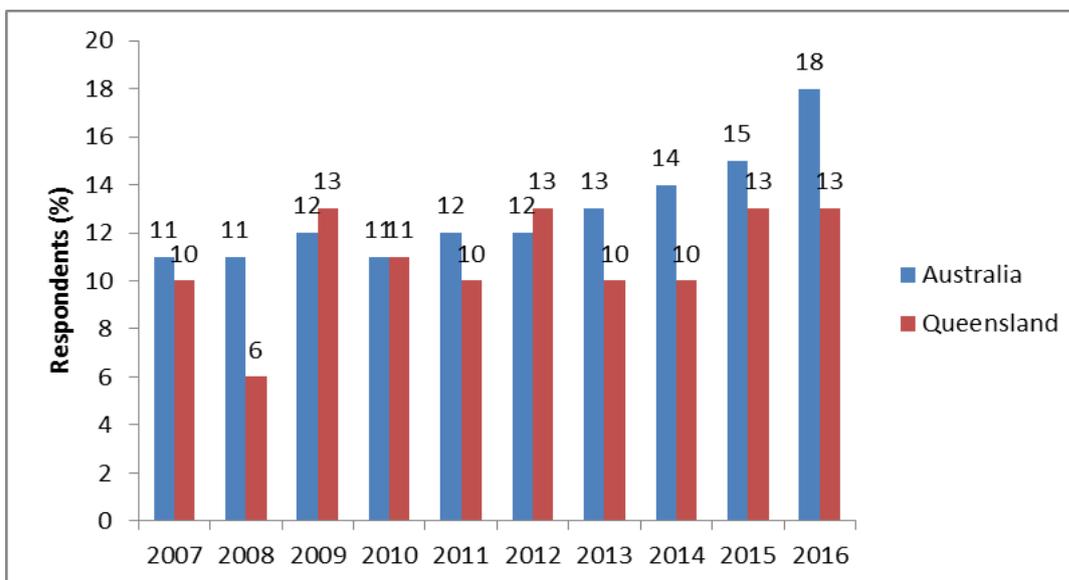
The survey reported that respondents were predominantly males in the age group of 30+ years; the male to female ratio was approximately 1:2 over all reported years.

The gender differences among the respondents to the Australian NSP survey over a ten year period can be observed in Figure 29.



**Figure 29 Gender profile of respondents by year of survey, Australia, 2007-2016**

There was a marked increase in the proportion of survey respondents identifying as Aboriginal and/or Torres Strait Islander people over the ten year period nationally. In comparison Queensland observed fluctuations in proportion of respondents identifying as Aboriginal and/or Torres Strait Islander people in the same period.



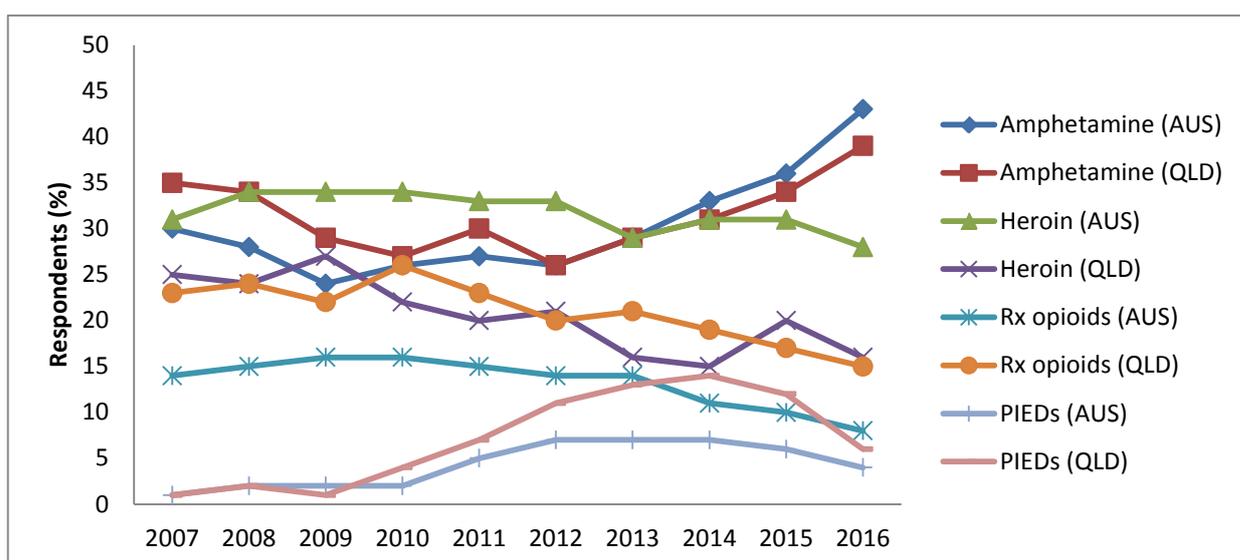
**Figure 30 Aboriginal and Torres Strait Islander status of respondents by year of survey, Australia, 2007-2016**

According to the Australian NSP survey there have been changes in the last drug injected in Australia since 2005 with initial increases and later plateauing and decreasing in reporting of pharmaceutical opioids and increasing for amphetamines;

heroin reporting has remained stable. Performance and image enhancing drugs (steroids) have seen an increase since 2006. Similarly in Queensland, heroin has declined as has pharmaceutical opioid reporting by the survey respondents along with an increase in steroid reporting (Table 10). A similar trend can be observed to Table 10 for clients accessing NSP services in Queensland and submitting data for the QMDS-NSP. Opioid drugs made up the greater proportion among the drugs reported with an increase observed for amphetamines.

**Table 10 Drug last injected by respondents by year of survey, QLD, 2007- 2016**

Drug Last Injected (%)	07	08	09	10	11	12	13	14	15	16
	N = 417	N = 508	N = 801	N = 550	N = 571	N = 624	N = 565	N = 490	N = 532	N = 349
<b>Amphetamines</b>	145 (35)	171 (34)	232 (29)	149 (27)	170 (30)	165 (26)	162 (29)	155 (31)	183 (34)	136 (39)
<b>Heroin</b>	106 (25)	124 (24)	218 (27)	123 (22)	114 (20)	129 (21)	91 (16)	75 (15)	107 (20)	56 (16)
<b>Rx Opioids</b>	96 (23)	120 (24)	177 (22)	141 (26)	132 (23)	124 (20)	117 (21)	94 (19)	92 (17)	53 (15)
<b>Methadone</b>	19 (5)	32 (6)	38 (5)	36 (7)	27 (5)	45 (7)	36 (6)	22 (4)	31 (6)	28 (8)
<b>Performance/Image Enhancers</b>	5 (1)	11 (2)	9 (1)	24 (4)	41 (7)	70 (11)	71 (13)	71 (14)	62 (12)	21 (6)
<b>Bup/Subutex®</b>	28 (7)	26 (5)	53 (7)	32 (6)	39 (7)	41 (7)	32 (6)	20 (4)	21 (4)	24 (7)
<b>Cocaine</b>	1 ( $<1$ )	2 ( $<1$ )	7 ( $<1$ )	2 ( $<1$ )	6 (1)	3 ( $<1$ )	3 ( $<1$ )	3 ( $<1$ )	5 (1)	1 ( $<1$ )
<b>Other</b>	6 (1)	6 (1)	20 (2)	22 (4)	6 (1)	8 (1)	1 ( $<1$ )	16 (3)	31 (5)	30 (9)



**Figure 31 Drug last injected by respondents by year of survey, Australia, 2007-2016**

## Glossary

Cohort	A group of people with shared characteristics.
Butterflies	Winged infusion sets
Data elements	A unit of data for which the definition, identification, representation, and permissible values are specified by means of a set of attributes.
Descriptive analysis	Analysis of data that helps describe, show or summarise data in a meaningful way to identify emerging patterns.
Drug to be injected	The drug that the client intends to inject following the occasion of service, using the equipment obtained from that occasion of service.
Aboriginal and Torres Strait Islander status	A measure of whether a person identifies as being of Aboriginal or Torres Strait Islander origin or both.
Interventions	Any education, provided to a client by needle and syringe program staff on a single occasion of service.
Needle dispensing machines	Self-contained units that store and dispense sterile injecting equipment.
Occasion of service	Contact between a needle and syringe program staff member and client for the purpose of dispensing injecting equipment and/or providing another service.
Opioid Substitution Therapy	A medical treatment that involves substituting an illegal opioid, such as heroin, with a longer acting but less euphoric opioid; methadone and buprenorphine are typically used and administered/taken under medical supervision.
Primary programs	A program that employs staff whose primary role is the provision of needle and syringe program services and catering to the needs of people who inject drugs.
Referral	Referring a needle and syringe program client to a service or agency during a needle and syringe program occasion of service.
Secondary programs	A program that provides needle and syringe program services as an adjunct to other health and community services. Secondary program staff provide limited needle and syringe program services as part of their general duties.

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