Trends in awareness, uptake and deployment of naloxone among a sample of people who inject drugs in Australia

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Key Findings:

- Nearly half (45%) of participants in the 2019 survey of people who inject drugs (PWID) conducted as part of the Illicit Drug Reporting System (IDRS) reported having had an opioid overdose in their lifetime.
- Fifteen per cent reported having an opioid overdose in the last year.
- Awareness of take home naloxone programs to address opioid overdoses varies greatly between jurisdictions, but appears to be increasing over time.
- Participants reported being more willing to deploy intranasal spray forms of naloxone than injectable formulations in the event of an overdose.

Introduction

Opioid overdose is a major public health issue associated with substantial morbidity and mortality in Australia (1), and people who inject drugs (PWID) often report experiencing non-fatal opioid overdoses (2). Interventions such as naloxone are useful to prevent fatal and non-fatal opioid overdose. Initiatives such as the rescheduling of naloxone in 2016, allowing supply over the counter (OTC) without prescription (3), and the advent of jurisdictional take home naloxone (THN) programs have been implemented with the intention to increase the uptake and deployment of this medication (4).

More recent changes, such as listing the intranasal spray formulation (Nyxoid) on the Pharmaceutical Benefits Scheme (PBS) (5), and a Commonwealth-funded pilot providing free THN in NSW, SA and WA (6), have been introduced in an attempt to overcome some of the previously noted barriers to naloxone uptake (4).

Here we report on trends and jurisdictional variations in awareness of naloxone and the programs intended to increase its use, as well as recent deployment of the different forms of naloxone available.

In addition we assess any differences among demographics of our sample, in order to inform future targeted promotion of naloxone distribution programs, including a multi-state roll out of free THN.

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Methods

Data were drawn from the surveys of PWID conducted as part of the Illicit Drugs Reporting System (IDRS) between 2013 and 2019. Annually, participants were approximately 800-900 PWID who injected regularly and were recruited from all capital cities of Australian states and territories, through services such as needle and syringe programs and peer-referral. Participants were administered structured questionnaires in face-to-face interviews that canvassed a broad range of topics including participant demographic characteristics, drug use patterns, drug markets and use of health and harm reduction services. For further details on the overall methods of the IDRS see (2).

For the purposes of this Bulletin we examined a series of questions that were included in relation to the use of naloxone to counter opioid overdose.

Descriptive statistics on selected demographic and drug use characteristics of the 2019 sample (outlined in Table 1) and the frequency of self-reported awareness in 2019 (Figure 1) were generated. Changes in the uptake and use of naloxone between 2016 and 2019 were examined (Figures 2).

Logistic regression analyses were used to examine associations between these sample characteristics and behaviours relating to naloxone using data from 2013-2019. Those who participated in multiple years were excluded from these analyses. Factors significantly linked were included in multi-variable regression models, producing adjusted odds ratios (AOR) and 95% confidence intervals (CI_{95}). All analyses were undertaken using Stata, with $p<0.05$ used as the level of statistical significance.

Results

Sample Characteristics

Table 1 shows the characteristics of participants recruited for the survey of PWID in the 2019 IDRS. The sample recruited was similar to most samples of PWID recruited for the IDRS since 2000 but showed an increased age over recent years (mean age 2019 = 44 years; mean age 2000 = 29 years).

Most participants were aged over 35 years, were unemployed, born in Australia, and had been injecting drugs for more than 16 years. Over half specified heroin or other opioids as both their drug of choice and the drug injected most often during the last month: one in five (20%) reported having injected heroin at least daily.

In 2019, 15% of the sample had experienced an opioid overdose in the last year, and 72% of those were not alone when this happened.

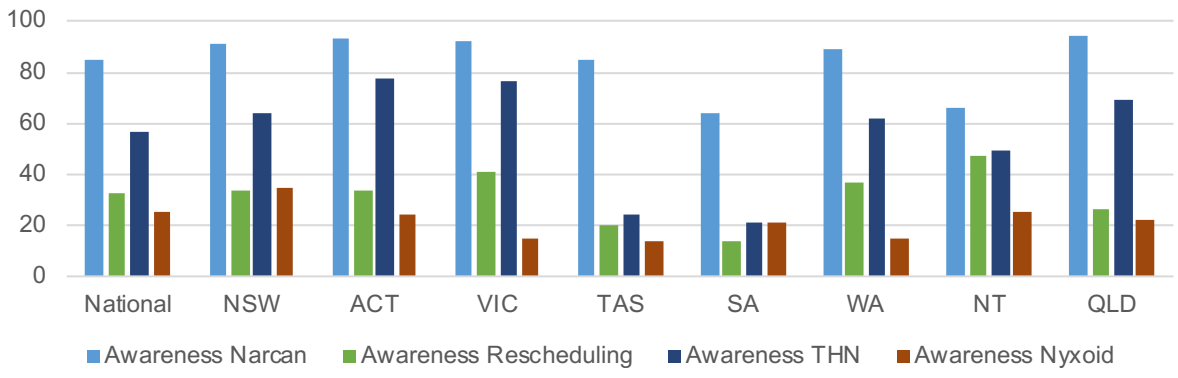
Table 1: Characteristics of national IDRS PWID survey respondents, 2019

Demographic characteristics	(N=905) %
Aged over 35 years	85
Male	66
Indigenous	19
Unstable accommodation	32
Post-school qualification completed	53
Unemployed	87
Drug injected most often last month	
Heroin	**40**
Other opioids	**13**
Meth/amphetamine	45
Other	<1
Drug of choice	
Heroin	**45**
Other opioids	**7.5**
Meth/amphetamine	33
Cannabis/other	10

Awareness of Naloxone and Recent Changes

Figure 1 shows that in 2019, 85% of the national sample were aware of naloxone, with some variation by jurisdiction seen. National awareness had changed little since 2013 (86%); while jurisdictional levels had fluctuated somewhat since 2013, these remained consistently above 60% for all (data not shown due to space constraints). Fewer 2019 participants had heard of the rescheduling to make it available OTC (14-47%; 32% nationally), but this was higher in all jurisdictions than 2016. Awareness of THN programs was generally higher in 2019 (21-77%; 57% nationally). Although respondents in TAS and SA (where THN programs had not recently operated) were least aware, national-level awareness of these had increased since 2013. The new intranasal formulation, first listed on the PBS in late 2019, was not well known to participants (14%-35%; 22% nationally).

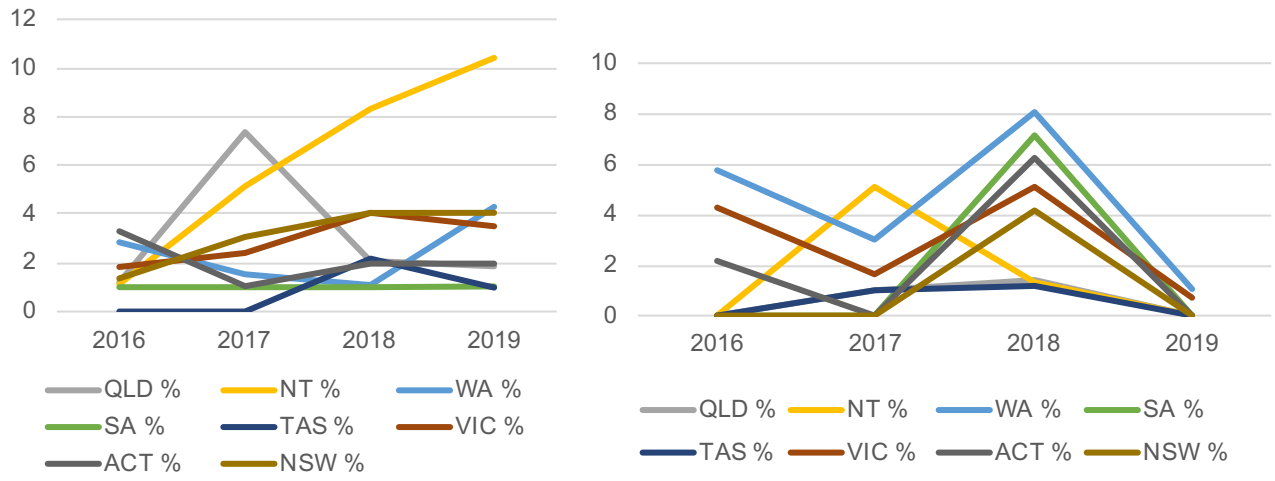
Figure 1: Awareness of naloxone and programs, by jurisdiction, 2019



Access and Use of Naloxone

Despite participants being aware of THN programs, only small proportions reported accessing naloxone themselves without a prescription (Figure 2, left) or having been resuscitated with THN (Figure 2, right) between 2016 and 2019. Fewer than 4% had used THN to resuscitate someone else during this period (data not shown). Low numbers of people having used naloxone make it difficult to see trends over time.

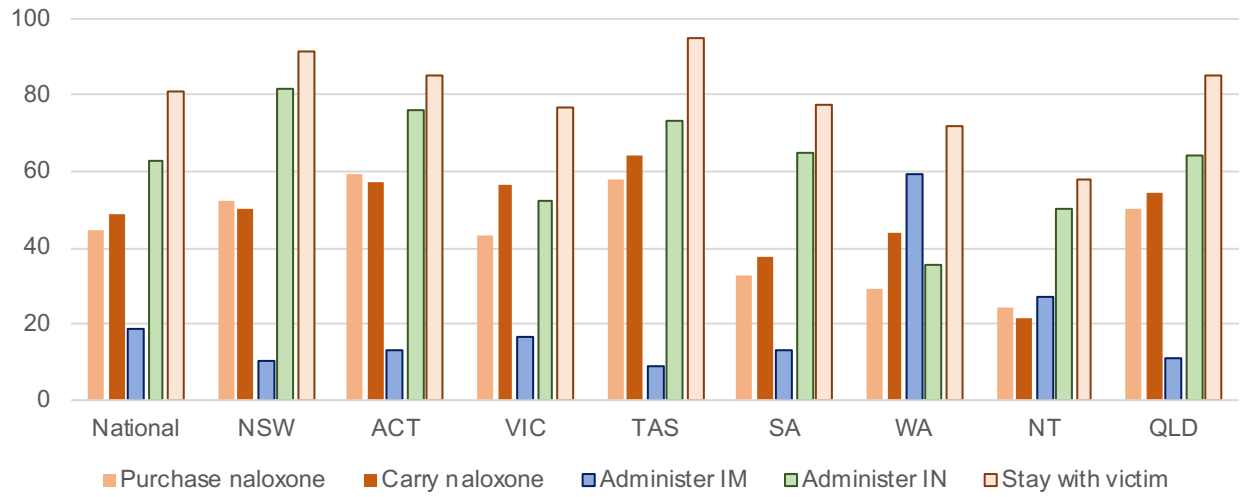
Figure 2: Changes in uptake (left) and receipt (right) of naloxone without a prescription, by jurisdiction, 2016-2019



Acceptance of Naloxone

There was reasonable acceptance of naloxone – about 40% nationally reported they would be willing to purchase it and carry it (Figure 3). Fewer reported being willing to administer intramuscular naloxone (IM) by injection than were willing to deploy the intranasal (IN) spray formulation in the event of an opioid overdose.

Figure 3: Acceptance of naloxone, by jurisdiction, 2019



Regression Findings

Multivariate regression analyses showed that those with tertiary education or some form of employment were more likely to be aware of naloxone, rescheduling and THN programs, as were people who injected at least daily (Table 2). Those whose drug of choice and drug most often injected were other than heroin were less likely to be aware of these programs. Awareness of rescheduling and THN were significantly higher in the ACT, Victoria and WA, compared to NSW, and lower in TAS, SA, NT and QLD. Although access of OTC naloxone nationally was higher in 2018 and 2019 than 2016 (when it was rescheduled), numbers in individual states were too small to detect significant increases.

Having accessed naloxone without a prescription or used it to resuscitate someone else were not clearly linked with specific characteristics. Having been resuscitated with naloxone was more likely for those whose drug used most often was pharmaceutical opioids (excluding opioid agonists).

Table 2: Multivariate regression models of awareness and use of naloxone among PWID in Australia, 2013-2019

	Aware of THN programs AOR (CI95)	Accessed OTC naloxone AOR (CI95)	Been resuscitated with OTC naloxone AOR (CI95)
Employed	1.79 (1.46, 2.20)	n/s	1.42 (1.07, 1.89)
Post-school qualification	1.86 (1.49, 2.32)	n/s	n/s
At least daily injection	1.17 (1.46, 2.20)	n/s	n/s
Drug of choice not heroin (other opioids)	0.56 (0.46, 0.69)	n/s	n/s
Drug most often injected not heroin (other opioids)	0.78 (0.65, 0.96)	0.40 (0.19, 0.86)	1.48 (1.11, 1.97)

Models mutually adjusted for factors above plus jurisdiction, gender, sexual identity, frequent (≥daily) injection; repeat participants excluded; not all results shown due to space constraints

Conclusion

Our findings show there is appetite among PWID for naloxone and take-home programs that make it more accessible, but access to naloxone has increased less that might be hoped. Distribution of more acceptable formulations (such as intranasal sprays) may increase the use of naloxone to prevent opioid overdose deaths.

Awareness varies greatly across states, and raising this is important to increase uptake and use. Targeting those who are more disadvantaged, less experienced PWID, and those who may be less engaged with services is critical to address opioid overdoses. As most overdoses happened when the person was not alone, including witnesses in such campaigns is also essential.

References

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