

# Hepatitis C risk behaviour among people who inject pharmaceutical opioids

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## Introduction

Global use of opioid analgesic medicines has doubled over the past decade, with 96% of use in 2011-2013 occurring in North America, Western and Central Europe and Oceania<sup>1</sup>. Over the decade 2000-2010, the proportion of Australian Needle and Syringe Program (NSP) attendees who reported last injecting pharmaceutical opioids (PO) increased fourfold from 4% to 16%<sup>2</sup>, and among opioid treatment episodes, the proportion where PO were identified as the main drug of concern almost doubled from 19% to 33%<sup>3</sup>.

This study utilises serological and self-reported data from a large national sample of PWID conducted in 2014 to investigate hepatitis C risk behaviour among a large national sample of people who inject PO.

## Methods

The Australian NSP Survey (ANSPS) is an annually repeated bio-behavioural surveillance system that consists of a brief self-reported questionnaire and provision of a capillary dried blood spot (DBS). DBS are routinely tested for HIV and HCV antibodies.

The primary outcome for this study was recent (past six months) injection of PO. PO were defined as any opioid analgesics, excluding opioid substitution. Respondents were asked to identify each PO they had injected in the previous six months; the PO they had injected most frequently in the previous six months (main PO); whether they had heated this drug the last time they injected it; whether they had used a filter the last time they had injected this drug and the type of filter used.

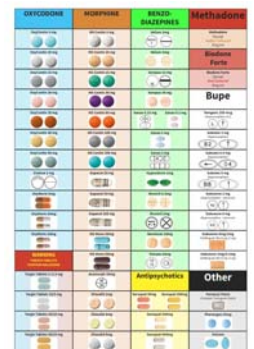
Logistic regression models were used to estimate crude and adjusted odds ratios (AOR) and 95% confidence intervals (95% CI) to identify factors associated with recent pharmaceutical opioid injection.

## Results

Among 1,488 ANSPS respondents who were identified as opioid injectors, more than half (57%, n=848) reported injection of PO in the previous six months. Independent predictors of PO injection included daily injection, receptive sharing of syringes, receptive sharing of drug preparation equipment, drug overdose in the previous year and residence in inner regional or outer regional/remote areas of Australia. Although the majority (85%) of respondents reported using a filter the last time they injected their main PO, only 7% reported using an efficacious wheel filter. Exposure to HCV was not associated with PO injection, although HCV prevalence was endemic in both PO and non-PO groups (60% and 57% respectively).

### Type and main PO injected in the last 6 months

	Injected in the last 6 months N (%)	Main PO injected in the last 6 months N (%)	Exclusively injected this PO N (%)
	N=848	N=848	N=848
Codeine	100 (12)	42 (5)	29 (3)
Fentanyl	193 (23)	72 (8)	43 (5)
Morphine	569 (67)	409 (48)	270 (32)
Pethidine	27 (3)	3 (<1)	4 (<1)
Hydromorphone	52 (6)	12 (1)	8 (1)
Oxycontin®	368 (43)	175 (21)	95 (11)
Targin®	17 (2)	5 (<1)	6 (1)
Other oxycodone	155 (18)	37 (4)	27 (3)
More than one	--	91 (11)	366 (43)
Not reported	--	2 (<1)	--



### Factors associated with recent PO injection among people who inject opioids

Variable	Total sample (N= 1,488)	No recent PO Injection (N=640)	Recent PO injection (N=848)	Multivariate relationship	
				AOR (95% CI)	p-value
Born in Australia (%)	1,264 (85)	523 (82)	741 (87)	1.51 (1.10-2.07)	0.011
Ever imprisoned (%)	797 (54)	315 (49)	482 (57)	1.34 (1.06-1.69)	0.013
Daily or more frequent injection last month (%)	844 (57)	300 (47)	544 (64)	1.65 (1.31-2.08)	<0.001
Used another's used syringe in last month (%)	247 (17)	67 (10)	180 (21)	2.00 (1.43-2.78)	<0.001
Used another's used drug preparation item in last month (%)	460 (31)	153 (24)	307 (36)	1.55 (1.19-2.01)	0.001
Self-reported overdose in previous 12 months	309 (21)	98 (15)	211 (25)	1.81 (1.36-2.42)	<0.001
History of OST (%)					
Current (reference)	662 (44)	360 (56)	302 (36)	--	--
In past	492 (33)	169 (26)	323 (38)	1.88 (1.45-2.45)	<0.001
Never	326 (22)	109 (17)	217 (26)	2.23 (1.65-3.01)	<0.001
Geographic location (%)					
Major city (reference)	1,192 (80)	581 (91)	611 (72)	--	--
Inner Regional	147 (10)	34 (5)	113 (13)	3.27 (2.21-5.23)	<0.001
Outer regional/remote	149 (10)	25 (4)	124 (15)	5.50 (3.42-8.84)	<0.001

## Conclusions

PO injection is highly prevalent and geographically widespread among Australian PWID and appears to take place in the context of extensive poly-drug use. People who inject POs are at high risk blood borne viral infections, including HCV reinfection/superinfection following treatment or spontaneous clearance. Harm reduction programs in regional and remote parts of Australia must ensure that the needles and syringes used to inject POs (typically larger bore syringes) are accessible. Harm reduction services should also implement take-home naloxone programs and provide specialist pill filters where possible.

## References

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