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Abstract | This study aims to better understand the motivations of Australian police detainees who use non-prescribed fentanyl. Respondents who had used non-prescription fentanyl ($n=44$) began using it to achieve intoxication, or to reduce physical pain, mental distress or the symptoms of withdrawal from other drugs. Some had also used fentanyl as a more potent substitute for other drugs. Although detainees rated the risks of fentanyl overdose and dependence as high, these risks were not the main deterrents to fentanyl use.

Why Australian police detainees choose to use (or not use) non-prescribed fentanyl

Alexandra Voce and Tom Sullivan

Fentanyl is an opioid prescribed to treat chronic or severe pain that can be diverted for illicit non-medical use. This non-prescribed fentanyl use has been associated with polydrug use, overdose and death (Roxburgh et al. 2013; Voce & Sullivan 2020). Recent data from the Drug Use Monitoring in Australia (DUMA) program suggests police detainees who tested positive to fentanyl were also more likely to test positive for illicit drugs, implying people may use fentanyl to enhance the effects of other drugs or ease withdrawal symptoms (Voce & Sullivan 2020). The current study surveyed a large sample of police detainees across Australia to examine reasons for fentanyl use or non-use, the perceived risks associated with fentanyl and factors that motivate people to continue to use fentanyl.

Method

Data were collected through the DUMA program conducted by the Australian Institute of Criminology (Voce & Sullivan 2019). The program collects drug use, criminal offending and socio-demographic data from individuals detained at selected police stations and watch houses. Questions related to fentanyl were appended to the main DUMA survey in July and August 2019. The detainees who completed this addendum ($n=566$) were mostly male (81%, $n=460$), non-Indigenous (76%, $n=430$) and unemployed (74%, $n=420$) and had a median age of 33 (interquartile range=26–41). Detainees were interviewed in Adelaide (17%, $n=95$), Brisbane (34%, $n=194$), Perth (37%, $n=208$) and Sydney (12%, $n=69$).

Eighty-four percent ($n=418$) of eligible detainees agreed to provide a urine sample. Three percent ($n=13$) of detainees tested positive for fentanyl and 11 percent ($n=65$) reported having used any form of fentanyl in their lifetime (Voce & Sullivan 2020). Most of these (68%, $n=44$) were ‘non-prescribed users’ who had used fentanyl without a prescription during their lifetime.

Results

Initiation of non-prescribed fentanyl use

Among non-prescribed fentanyl users, the most common reason for first using fentanyl was to get high (55%, $n=24$; see Table 1). One-fifth used non-prescribed fentanyl to self-medicate unpleasant experiences, including withdrawal symptoms from other drugs (21%, $n=9$), physical pain (18%, $n=8$) or mental distress (18%, $n=8$). Other respondents began using fentanyl as a cheaper, stronger or more accessible substitute for other drugs (9–14%, $n=4–6$), particularly for heroin, oxycodone or methamphetamine. One in 10 respondents (9%, $n=4$) reported unwitting fentanyl use—that is, they believed they had taken or been sold other drugs laced with fentanyl.

Table 1: Reasons for initiating and continuing fentanyl use among non-prescribed users				
	Initiating use		Continuing use	
	<i>n</i>	%	<i>n</i>	%
To get high (recreational use)	24	54.6	8	72.7
To reduce withdrawal symptoms from other drugs ^{ab}	9	20.5	3	27.3
To reduce physical pain/discomfort	8	18.2	3	27.3
To reduce mental distress	8	18.2	4	36.4
Boredom	6	13.6	3	27.3
To increase effects of other substances	2	4.6	0	0.0
As a cheaper substitute for other drugs	4	9.1	2	18.2
As a more potent substitute for other drugs	6	13.6	2	18.2
As a more available substitute for other drugs	4	9.1	1	9.1
Unwitting use ^c	4	9.1	0	0.0
Other reasons (ie curiosity)	1	2.3	2	18.2
Total	44		11	

a: Initiated use to ease withdrawal from methamphetamine (*n*=3), heroin (*n*=2), other opioids (*n*=3) or cannabis (*n*=1)

b: Continued use to ease withdrawal from methamphetamine (*n*=3) or heroin (*n*=1)

c: Unwitting consumption of fentanyl among detainees who were not unaware they were ingesting the drug

Note: Percentages do not total 100 as respondents could give more than one reason

Source: AIC DUMA collection 2019 [computer file]

Continuation of non-prescribed fentanyl use

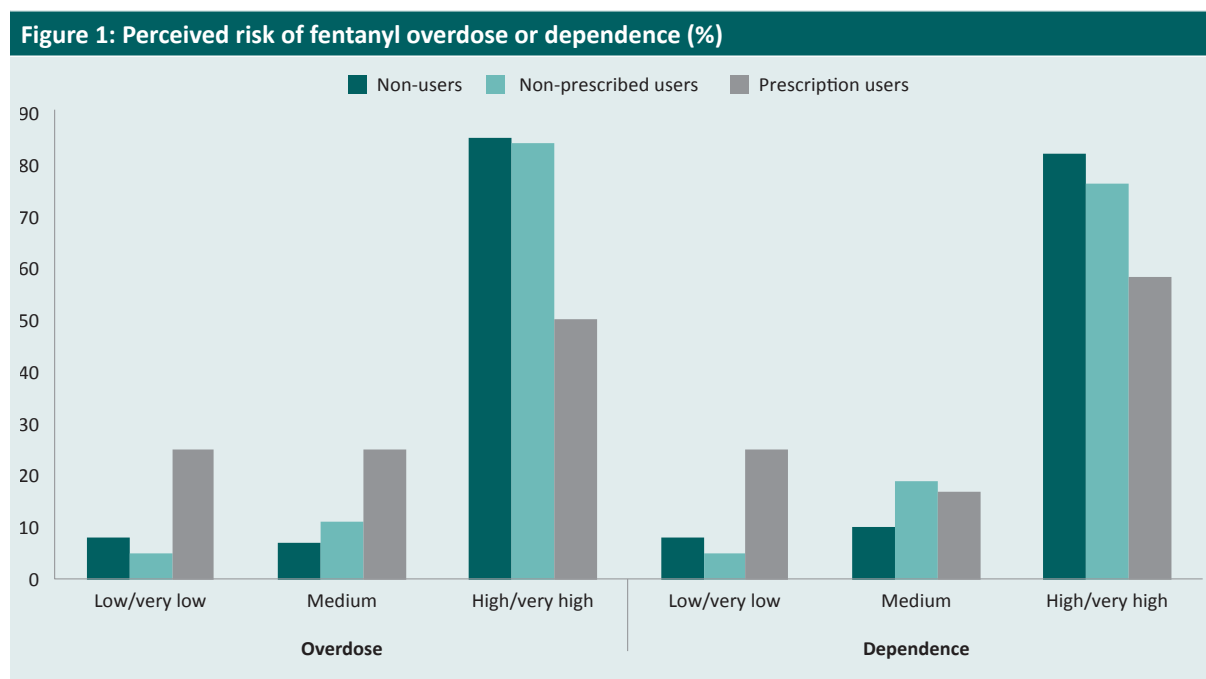
Of the 44 detainees who had ever used non-prescribed fentanyl, three-quarters reported that they no longer used the drug (75%, *n*=33). Among those who continued to use fentanyl (25%, *n*=11), most did so to get high (73%, *n*=8). Fisher's exact tests found statistically significant differences between detainees who continued to use non-prescribed fentanyl and those who desisted. Those who continued to use non-prescribed fentanyl were more likely:

- to have tried fentanyl to get high (82%, *n*=9 vs 45%, *n*=15; $\chi^2(1)=4.40$, $p=0.04$, $\Phi=0.32$);
- to report using heroin in the past year (82%, *n*=9 vs 30%, *n*=10; $\chi^2(1)=8.9$, $p=0.003$, $\Phi=0.45$); and
- to report dependence on methamphetamine in the past year (82%, *n*=9 vs 39%, *n*=13, $\chi^2(1)=5.9$, $p=0.015$, $\Phi=0.37$).

Perceived risk of fentanyl overdose and dependence

All respondents, whether or not they had ever used any form of fentanyl, were asked about the perceived risk of fentanyl overdose and dependence. Over half of all respondents (57%, $n=323$) stated that they were unsure about the risk of overdose or dependence associated with fentanyl use. These respondents were excluded from the following analysis.

Among detainees who had never used fentanyl, 85 percent ($n=164$) rated the drug's overdose risk as high or very high (see Figure 1), whereas few rated the risk as low or very low (8%, $n=16$) or medium (7%, $n=14$). Similar proportions of non-prescribed fentanyl users rated the risk of fentanyl overdose as high or very high (84%, $n=31$), medium (11%, $n=4$), or low or very low (5%, $n=2$). The risk of fentanyl dependence was also perceived as high or very high among most respondents who had not used fentanyl (82%, $n=159$) and among those who had used non-prescribed fentanyl (76%, $n=28$). Compared to other respondents, a higher proportion of prescription fentanyl users rated the risk of overdose as low or very low (25%, $n=3$) or medium (25%, $n=3$), and the risk of dependence as low (25%, $n=3$).



Note: Excludes non-users ($n=307$), non-prescribed users ($n=7$), and prescribed users ($n=9$) who were unsure about the risk of overdose or dependence. Percentages may not total 100 due to rounding; see Table A1

Source: AIC DUMA collection 2019 [computer file]

Willingness to try fentanyl among non-users

Most respondents who had never used fentanyl reported they would be unlikely or very unlikely (83%, $n=415$) to ever use non-prescribed fentanyl if given the opportunity (excludes two missing responses). The leading reason they did not want to try fentanyl was they had no desire to experience its effects (60%, $n=250$). Other reasons included not knowing enough about the drug (20%, $n=83$), and the risk of overdose (16%, $n=65$) or dependence (13%, $n=54$). Few respondents indicated they would not use fentanyl because it was poor in quality (2%, $n=8$) or too expensive (3%, $n=13$).

A small proportion of those who had never used fentanyl reported they would be likely or very likely (11%, $n=54$) to try fentanyl if given the opportunity. The most common reasons for wanting to try fentanyl were to get high (56%, $n=30$) or reduce physical pain or discomfort (44%, $n=24$). Some detainees also reported they would use fentanyl to reduce mental distress (37%, $n=20$) or boredom (33%, $n=18$). Seventeen percent ($n=9$) reported they would use fentanyl to ease withdrawal symptoms from heroin or other opioids, methamphetamine, cannabis or benzodiazepines. A small proportion reported that they would try fentanyl as a more potent (11%, $n=6$) or cheaper (9%, $n=5$) substitute for illicit drugs.

Analysis revealed statistically significant differences between respondents who were willing to try fentanyl and those who were not. The following variables were associated with willingness to try fentanyl:

- being male (91%, $n=49$ vs 79%, $n=327$; $\chi^2(1)=4.3$, $p=0.038$, $\Phi=0.10$);
- reporting heroin use in the past year (28%, $n=15$, vs 6%, $n=24$; $\chi^2(1)=30.2$, $p<0.001$, $\Phi=0.25$);
- reporting other opioid use in the past year (35%, $n=19$ vs 10%, $n=42$; $\chi^2(1)=26.5$, $p<0.001$, $\Phi=0.24$);
- reporting methamphetamine use in the past year (70%, $n=38$ vs 50%, $n=206$; $\chi^2(1)=8.0$, $p=0.005$, $\Phi=0.13$); and
- reporting heroin dependence in the past year (15%, $n=8$ vs 3%, $n=14$; $\chi^2(1)=13.9$, $p<0.001$, $\Phi=0.17$).

Discussion

The main reason police detainees started and continued using non-prescribed fentanyl was for recreational purposes. Reducing physical pain, drug withdrawal symptoms and mental distress also motivated initiation and particularly continuation of fentanyl use. While most detainees who had never used fentanyl did not want to try the drug, largely out of a lack of desire to experience its effects, those who were willing to try the drug if given the opportunity cited recreational use and self-medication as reasons. These findings are consistent with Rigg and Ibañez's (2010) study, which found that respondents with a history of illicit drug use reported misusing prescription drugs to achieve intoxication, to self-medicate depression and anxiety, and to avoid withdrawal from other drugs.

The effects of fentanyl appear to be attractive to those who already use illicit drugs. A history of methamphetamine or opioid use was associated with a willingness to try fentanyl among non-users, and drug use and dependence were also associated with continued non-prescription use of fentanyl. These findings align with Voce and Sullivan's (2019) suggestion that police detainees who engaged in illicit drug use, especially opioid and methamphetamine use, may be at an increased risk of using fentanyl if the drug became more widely available in Australia.

The high risk of fatal overdose associated with fentanyl use has been emphasised in messages from law enforcement, health services and media campaigns (National Drug and Alcohol Research Centre 2019). However, our findings suggest that the perceived risk of overdose was not a common deterrent to fentanyl use (16%) among those who had not used the drug. These results contrast with findings by Rosansky and Rosenberg (2019), who found that fears of physical and psychological damage were common reasons for abstinence among respondents who did not use illicit drugs. Fears of overdose or dependence may be less salient among people with extensive illicit drug histories, which were common among the current sample. Fentanyl's extremely high potency may even be attractive to some detainees, as almost one-fifth of non-prescribed users said they used fentanyl as a more potent substitute for other drugs.

This study suggests non-prescribed fentanyl use is driven by the same motivations underlying other forms of illicit drug use, particularly a desire for intoxication, easing withdrawal from other drugs, and self-medicating physical and psychological distress. As these detainees often began using illicit fentanyl to get high, public health strategies that aim to prevent people transitioning from legitimate (prescribed) opioid use to illicit use and dependence (Department of Health 2017) may not be as relevant to this sample as to the general population. Likewise, messages that emphasise the risk of overdose associated with fentanyl may not deter use among those dependent on other drugs.

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URLs correct as at April 2020

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Appendix

Table A1: Perceived risks of fentanyl use among detainees							
	Non-users		Non-prescribed users		Prescribed users		Total
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>
Risk of overdose							
Low/very low	16	8.3	2	5.4	3	25.0	21
Medium	14	7.2	4	10.8	3	25.0	21
High/very high	164	84.5	31	83.8	6	50.0	201
Risk of dependence							
Low/very low	15	7.7	2	5.4	3	25.0	20
Medium	20	10.3	7	18.9	2	16.7	29
High/very high	159	82.0	28	75.7	7	58.3	194
Total	194		37		12		243

Note: Excludes non-users (*n*=307), non-prescribed users (*n*=7) and prescribed users (*n*=9) who stated they were unsure about the risk of fentanyl overdose or dependence

Source: AIC DUMA collection 2019 [computer file]

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