




## COMMENTARY

## COVID-19 vaccine acceptability among people in Australia who inject drugs: Update from the 2021 Illicit Drug Reporting System interviews

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### Abstract

People who inject drugs may be at higher risk of COVID-19 transmission and more severe negative health outcomes following COVID-19 infection. Early research on hypothetical COVID-19 vaccines suggests this population may be less likely to accept vaccination. This commentary extends this research by presenting vaccine intention data from Illicit Drug Reporting System interviews conducted in June–July 2021, in the early stages of vaccine rollout, with people in Australia who inject drugs (N = 888). Half the sample (48%, n = 419) reported that they were hesitant to receive the COVID-19 vaccine, with key barriers relating to vaccine safety and side effect concerns. This level of hesitancy is substantially higher than that of the general population at a similar time. While we note that the subsequent Delta variant-driven third wave of cases in Australia and efforts to increase population vaccination coverage may have altered intent in this group, this level of hesitancy warrants a targeted strategy to mitigate vaccine-related concerns and maximise uptake. Ideally, this should comprise an inclusive health response that is peer-led, with peer-based organisations ideally positioned to direct immunisation service delivery and provide vaccine-related messaging. [Price O, Dietze PM, Maher L, Crawford S, Peacock A. COVID-19 vaccine acceptability among people in Australia who inject drugs: Update from the 2021 Illicit Drug Reporting System interviews. *Drug Alcohol Rev* 2022;41:1025–1028]

**Key words:** COVID-19, vaccine hesitancy, vaccination barriers, people who inject drugs.

### Background

People who inject drugs may be more susceptible to adverse health outcomes following COVID-19 infection due to high prevalence of comorbid health conditions, including human immunodeficiency viruses (HIV), chronic liver disease and chronic respiratory conditions [1,2]. They may also face structural barriers to health care after contracting COVID-19, such as economic disadvantage and stigma [3]. Moreover, people who inject drugs may be at increased risk of COVID-19 transmission; the inherently social nature

of drug acquisition and use may create barriers to adherence to non-pharmaceutical public health interventions, such as physical distancing and self-isolation [4]. There are also high rates of incarceration and unstable housing among this population, settings in which the attack rate of SARS-CoV-2 and risk of COVID-19 outbreak is higher [5,6].

Vaccination is the most effective method to prevent morbidity and mortality during the COVID-19 pandemic. While it has been argued that people who inject drugs should be prioritised for COVID-19 vaccination [1], they were not considered a target population in

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the Australian vaccination program [7]. Although the prevalent chronic health conditions among this population mean many were eligible for vaccination in the early stages of rollout [2,7], it is possible that they may be less likely to be vaccinated. However, there is a paucity of studies exploring vaccine uptake among people who inject drugs [8].

A recent paper involving the authors in *Drug and Alcohol Review* [9] described the acceptability of a hypothetical COVID-19 vaccine among a sample of 100 people who regularly inject drugs from Melbourne, Australia interviewed in late 2020 as part of the Illicit Drug Reporting System (IDRS). At this time, the second wave of COVID-19 cases was subsiding in Victoria (largely based in Melbourne; peak 725 daily cases 5 August), stringent mobility restrictions were being eased, and initial results from Phase III trials of candidate vaccines had been released. This study asked participants 'if a COVID-19 vaccine was to become available to everyone in Australia, do you think you would have it yourself?' and showed that 42% of participants were hesitant to receive the vaccine, higher than that observed in surveys of the Australian general population at a similar time (23%; [10]). The main barrier cited among those unwilling or undecided on whether to be vaccinated was safety, which aligned with the general population [10].

However, since these data were collected, multiple vaccines were approved by the Australian Therapeutic Goods Administration and vaccination rollout commenced in mid-February 2021 [11]. While the implementation plan and priority populations were developed nationally, with the exception of aged care residents and health and other critical workers, states and territories controlled the supply of vaccines to their population, contributing to variations in vaccine uptake across jurisdictions. There were relatively few COVID-19 cases in Australia between the second wave in June–October 2020 and the third wave that began June 2021 (peak daily cases 2717 14 October), which was driven by the Delta variant and prompted 'lock-downs' in the majority of states and territories. While Australia's vaccination coverage initially lagged behind countries with similar gross national income, the third wave drove a steep increase in vaccine uptake [12].

### **An Update on Vaccine Intentions Since Vaccine Rollout Commenced in Australia**

Here, we present preliminary findings of COVID-19 vaccination intentions from IDRS interviews that occurred in June–July 2021 across all Australian capital cities. Recruitment methods and eligibility criteria

were similar to those described previously [9]. In brief, eligible participants were at least 18 years of age, currently residing in a capital city and had injected drugs at least monthly in the past 6 months. The target sample size was 900 ( $n = 150$  in Melbourne and Sydney and  $n = 100$  in the remaining six capital cities). Participants ( $N = 888$ ) were recruited through needle-syringe programs, treatment services and word-of-mouth, and completed a structured interview (78% face to face, 22% on the telephone or online). Interviews took place prior to and during the early stages of the third wave of cases in Australia, when cases were largely concentrated in Sydney (peak daily cases during interview period 261). At the start of the third wave, COVID-19 vaccines were only available to priority groups (the elderly, Aboriginal and Torres Strait Islander people, health and other critical workers, and people with an underlying medical condition) and the Australian Technical Advisory Group on Immunisation had recently recommended the AstraZeneca vaccine be restricted to those aged over 60 due to safety concerns. During the survey period, first dose COVID-19 vaccine coverage among Australian adults increased from 18% to 33% [12].

The median age of participants was 45 years (range 18–71), most were male (65%,  $n = 579$ ), unemployed (88%,  $n = 782$ ) and residing in stable housing (84%,  $n = 731$ ), with approximately two-fifths currently in drug treatment (37%,  $n = 330$ ). Questions regarding COVID-19 vaccination were prefaced with a statement that summarised the vaccine situation at the time: 'the Australian Government has announced that the COVID vaccine will be free of charge but not mandatory'. Of 884 participants who responded, 10% ( $n = 88$ ) had received at least one dose of the vaccine. Vaccine uptake was highest in Sydney (17%) and Melbourne (16%), followed by Darwin (9%), Perth (9%), Brisbane/Gold Coast (7%), Canberra (6%), Hobart (6%) and Adelaide (4%). Unvaccinated participants were asked 'do you intend to get vaccinated for COVID-19?'. Approximately half of this group (48%,  $n = 419$ ) reported hesitancy to receive the vaccine, comprising 22% who said 'definitely not', 13% who said 'probably not' and 13% who indicated they were 'not sure yet'. Hesitancy varied by jurisdiction and was highest in Adelaide (60%), followed by Darwin (59%), Brisbane/Gold Coast (57%), Melbourne (49%), Perth (44%), Sydney (43%), Canberra (37%) and Hobart (33%).

We asked vaccine-hesitant participants ( $n = 419$ ) the reason(s) for their hesitancy. The predominant barriers were concerns relating to vaccine safety (i.e. the vaccine has not been tested enough; 41%) and vaccine side effects (35%). Less frequently cited barriers were perceived low risk of disease acquisition (17%) and

disease severity (11%). Fewer than 10% of participants who were vaccine hesitant reported that they would 'not accept any vaccines for themselves' (9%).

Vaccine hesitancy in this study (48%) was comparable to that observed in our aforementioned study of 100 people who inject drugs in Melbourne prior to the publication of studies on vaccine efficacy and the start of the vaccine rollout. However, it is higher than a study of people who inject drugs in San Diego, USA, which reported that one-third of participants were vaccine hesitant [13]. This difference may be a result of the different pandemic experiences in the two countries; the USA has seen far greater COVID-19-related morbidity and mortality than Australia, and vaccine hesitancy is linked to perceived low risk of disease acquisition [14]. The level of vaccine hesitancy in our study was also higher than in the Australian general population (range 22–32% during the IDRS survey period) [15], a pattern observed in other studies of COVID-19 vaccine acceptability among marginalised populations, including people living with HIV [16] and culturally diverse communities [17]. However, key barriers cited in our study are similar to those cited by the Australian general public [18], with concerns relating to side effects and an intention to 'wait and see if it's safe' both highly cited.

## Summary and Recommendations

The high level of vaccine hesitancy among our sample suggests a need for targeted interventions to increase vaccine uptake among people who inject drugs. Provision of vaccination in settings familiar to this population, including needle-syringe programs, prisons, emergency departments and homeless shelters, could increase uptake opportunistically [19]. However, given the highly cited safety and side effect concerns, vaccine provision should be accompanied by information on the safety and utility of the COVID-19 vaccines available to build trust in COVID-19 vaccination.

Peer-based organisations are ideally positioned to enable an inclusive health response and ensure meaningful engagement with this population. As an example, we note the success of the Australian Capital Territory alcohol and drug sector which has maximised COVID-19 vaccine uptake among people who inject drugs by leveraging government funding and an existing peer-based organisation with strong community relationships [20]. Here, vaccination was offered and encouraged by peers at a drug health service and via an outreach program to community housing and private dwellings. Crucially, the peer-based organisation was involved in vaccination service delivery, in addition to vaccination messaging.

Importantly, the timing of our surveys relative to the third wave of cases in Australia means it is possible that vaccine intentions subsequently changed. The increased transmissibility of the Delta variant caused most Australian jurisdictions to move away from an elimination approach and focus on maximising vaccination coverage. Indeed, as of November 2021, vaccine hesitancy among the general public is at an all-time low and 90% of Australian adults have received at least one dose of the vaccine [12,15]. Nevertheless, as free vaccination does not necessarily ensure equitable uptake and coverage, we need targeted strategies to maximise vaccine uptake among vulnerable sub-populations, including people who inject drugs. Peer-based organisations are already well-engaged with this population but require dedicated funding to facilitate uptake and address concerns and misinformation about vaccination. The recent emergence of the Omicron variant and Australian Technical Advisory Group on Immunisation recommendation for a third 'booster' vaccine dose are timely reminders that prevention of COVID-19-related morbidity and mortality requires an ongoing effort. It remains important to monitor COVID-19 vaccination uptake among people who inject drugs, who may be more susceptible to severe infection and less likely to be reached by traditional health campaigns.

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## Conflicts of Interest

AP has received untied educational grants from Seqirus and Mundipharma for study of opioid medications.

PMD has received untied educational grants from Gil-ead Sciences for work related to hepatitis C and an untied educational grant from Indivior. PMD has served as an unpaid member of an Advisory Board for Mundipharma. All other authors have no conflicts of interest to declare

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