


# Socioeconomic consequences of the COVID-19 pandemic for people who use drugs

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## Abstract

The COVID-19 pandemic triggered widespread socioeconomic hardship, disproportionately impacting disadvantaged populations. People who use illicit drugs are more likely to experience unemployment, homelessness, criminal justice involvement and poorer health outcomes than the general community, yet little is known about the socioeconomic impacts of the pandemic on their lives. To address this gap in the literature, we conducted in-depth interviews with 76 participants from two cohort studies of people who use illicit drugs (people who inject drugs and/or use methamphetamine) in Victoria, Australia. Findings support claims that pandemic-related Social Security supplementary payments and initiatives to reduce homelessness, although not systemically transforming people's lives, produced temporary relief from chronic

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socioeconomic hardship. Results also indicate how temporary interruptions to drug supply chains inflated illicit drug prices and produced adverse consequences such as financial and emotional stress, which was exacerbated by drug withdrawal symptoms for many participants. Furthermore, increased community demand for emergency food and housing support during the pandemic appeared to reduce participants' access to these services. Our findings about the unintended consequences of pandemic responses on the socioeconomic lives of a group of people who use illicit drugs provide insights into and opportunities for policy reform to redress their entrenched disadvantage.

#### KEYWORDS

COVID-19, injecting drug use, methamphetamine, qualitative research, socioeconomic

## 1 | INTRODUCTION

The COVID-19 pandemic (“the pandemic”) triggered widespread socioeconomic hardship globally (Delardas et al., 2022). While people were affected differently across social axes, low-income population groups were disproportionately impacted (Morante-García et al., 2022). Australian Government supplementary income supports, introduced to provide financial relief for those who were unable to work or earn an income, lifted many Australians above the poverty line (Davidson et al., 2023). Nonetheless, since pandemic income supports were ceased in 2021, it is estimated that poverty levels in Australia have risen to a level higher than before the pandemic (Davidson et al., 2023). Australian studies have examined the socioeconomic impacts of pandemic responses on disadvantaged families and other vulnerable population groups such as refugees and young people (Kent et al., 2022; Mupenzi et al., 2020; Naidoo et al., 2022; O’Keeffe et al., 2022; Parsell & Pawson, 2023). These studies point to how public policy responses to the pandemic, such as lockdowns, rapidly diminished household incomes and how for those already experiencing income inequality, poverty and socioeconomic disadvantage were exacerbated (Davidson et al., 2023).

It is widely acknowledged that many people who use illicit drugs experience multiple social and health disadvantages. People who inject drugs are more likely to experience mental health conditions such as depression, anxiety and post-traumatic stress disorder than the general population (Topp et al., 2013), along with physical health conditions including nonfatal overdose, HIV and hepatitis C infections (Butler & Simpson, 2017; Topp et al., 2013). Furthermore, many people who inject drugs experience homelessness and criminal justice involvement; almost half (46 per cent) of people entering Australian prisons in 2016 reported histories of injecting drug use (Butler & Simpson, 2017). Methamphetamine use is also associated with poor social and health outcomes, including homelessness, unemployment, low educational attainment and lack of access to social support (Quinn et al., 2021; Sutherland et al., 2021). For example, Australian studies have found that 30–60 per cent of people who use methamphetamine have experienced a mental health disorder such as anxiety or depression (Australian Institute of Health and Welfare, 2020; Duncan et al., 2022). For many people who use illicit drugs, competing health and socioeconomic priorities are exacerbated by barriers to drug treatment and stigma experienced in healthcare settings (Broady et al., 2020; Treloar et al., 2016).

Several studies have examined the unintended consequences of Australian pandemic mitigation measures on the lives of people who use illicit drugs, but most focus on patterns of drug use, risk factors and access to harm reduction and drug treatment services. The near cessation of international air travel, jurisdictional border closures and restrictions on movement within local geographical areas interrupted illicit drug supply chains, with shifts in drug availability, price and purity and consequently the amounts and types of drugs people consumed during the pandemic. (Price et al., 2022; Rathnayake et al., 2023) Studies of the impact of pandemic lockdowns on access to harm reduction services in Australia found social distancing requirements and travel restrictions prevented access to sterile injecting equipment and forced people to inject alone, increasing their risk of exposure to overdose, injecting-related injuries and disease and blood-borne viruses (Dietze & Peacock, 2020; Efunuga et al., 2022). Adjustments in service provision (e.g. telehealth services replaced in-person service contact and outreach) disadvantaged some people who preferred face-to-face contact or had limited access to digital technology, whereas for others these altered service responses were preferred (Coleman et al., 2022; Searby & Burr, 2021). Similarly, policy changes during the pandemic that increased access to unsupervised opioid agonist treatment takeaway doses produced both positive and negative consequences for people who use opioids (Conway et al., 2023; Dunlop et al., 2020) On the contrary, the reduced capacity of drug treatment services to take on new clients impacted people who use drugs adversely (Dunlop et al., 2020). While these studies provide valuable insights about the impacts of the pandemic and associated responses on people who use illicit drugs, they have not been used to determine the impacts of these complex intersecting factors on their socioeconomic well-being, including potential sustained impacts beyond the pandemic.

More than 3 years after the pandemic began, researchers continue to highlight how ongoing deep-seated inequalities have been exacerbated for disadvantaged population groups (Fitzpatrick et al., 2023; Zorbas et al., 2023). Our study contributes to this body of work by examining the narratives of 76 participants recruited from two cohorts of people who use illicit drugs (people who inject drugs and people who use methamphetamine) in Victoria, Australia, to understand the consequences of the pandemic and associated responses on their social, emotional and financial well-being.

We apply an equity lens to examine how, for the participants in our study, the pandemic exacerbated or mitigated socioeconomic impacts. In doing so, we draw on the work of Turcotte-Tremblay and colleagues (Turcotte-Tremblay et al., 2021), who argue that focussing on “unintended” (a neutral term) consequences (or impacts) is advantageous because it enables the examination of both unforeseen undesirable (negative) and desirable (positive) impacts—the latter of which, they argue, have been given less attention in research on the effects of pandemic responses (Turcotte-Tremblay et al., 2021). Focussing on both unintended negative and positive socioeconomic consequences can produce insights for informing the development of new or adapted policies and interventions that reduce undesirable consequences and capitalise on desirable ones. Furthermore, we argue that examining interventions for unplanned effects is a minimal ethical obligation, ensuring policies and interventions do not cause more harm than good (Turcotte-Tremblay et al., 2021).

Below, we describe the research setting and study methods used, followed by our findings and their implications for future policy responses.

## 2 | RESEARCH SETTING

The city of Melbourne in the state of Victoria, where approximately three quarters of our participants lived during the pandemic, experienced what has been characterised as one of the world's longest cumulative “lockdowns.” (Rathnayake et al., 2023) Melbourne had six lockdowns between March 2020 and October 2021, involving more than 260 days of

high-level containment measures, including only being allowed to leave home for care/caregiving, exercise for varying limited times, authorised work/study, medical appointments and shopping for essential items (Department of Health, 2021). Night-time curfews and travel restrictions were variously imposed, including being unable to travel more than 5 km from home for an extended period. Fewer lockdown periods occurred in the remainder of Victoria and restrictions were less severe during much of the time that Melbourne was in strict lockdown.

Early in the pandemic, Australian governments launched several policy interventions that were intended to mitigate economic hardship, including short-term increases to income support payments and accommodation support for people experiencing homelessness (Klein et al., 2022a; Parsell et al., 2022). In 2020, approximately \$4 billion was committed to homelessness responses (Mason et al., 2020)—the largest such investment in Australia's history (Mason et al., 2020). Most funding was used to place homeless people in self-contained accommodation such as motels and unused student housing (Parsell et al., 2022). Furthermore, in April 2020, a supplementary payment (Coronavirus Supplement [Davidson et al., 2021]) of \$550/fortnight was introduced for people receiving unemployment benefits (termed JobSeeker, Youth Allowance). These supplementary payments were reduced to \$250/fortnight in September 2020 and ceased altogether in April 2021, after which a permanently increased payment was introduced, raising unemployment benefits to \$50/week more than was being provided prior to the pandemic (Davidson et al., 2021). This \$50 increase moved Australia from having the lowest to the second lowest income support rates for the unemployed among OECD countries (Davidson et al., 2021). During the pandemic, people on other Social Security benefits such as Disability Support Pensions or Carer Payments received a one-off support payment of \$750 in mid-2020 and another payment of \$250 between December 2020 and March 2021 (Davidson et al., 2021). After these supplementary payments were introduced, the number of people living below the poverty line in Australia (defined as people living below 50 per cent of the median or “middle” household disposable income [Davidson et al., 2023]) fell from approximately 3 million (11.5 per cent of the population) before the pandemic to 2.6 million (9.9 per cent) in June 2020 (Davidson et al., 2023). It has been estimated, however, that after the supplementary payments ceased, the number of people living below the poverty line rose to 3.8 million (14 per cent), with more people continuing to rely on manifestly inadequate incomes than before the pandemic (Davidson et al., 2023).

### 3 | RESEARCH METHODS

This qualitative research is embedded in a mixed methods study examining pandemic-related impacts on the lives of people who inject drugs and/or use methamphetamine in Victoria, Australia (Rathnayake et al., 2023). Participants were recruited via two prospective observational studies: the Melbourne Injecting Drug User Cohort Study (SuperMIX), involving 1303 people who inject drugs (Van Den Boom et al., 2022); and the Understanding Methamphetamine Use in Victoria Study (VMAX), involving 853 people from Melbourne and regional Victoria, who predominantly smoke methamphetamine (Quinn et al., 2021). Ethics approval for the study was received from the Alfred Hospital Ethics Committee in 2020.

#### 3.1 | Participant recruitment

To recruit participants into the qualitative study, we used an ethno-epidemiological (“ethno-epi”) technique that allowed the complimentary use of sampling methods typically used

in quantitative research. Ethno-epi approaches have been described as an emergent cross-disciplinary research methodology that combines the strengths of ethnographic and other qualitative methods for understanding social meanings and contexts with the design, sampling, data collection and analytical strategies developed in epidemiology (Almeida Filho, 2020; Mayock et al., 2015). The technique we used was based on pandemic-related questions added to SuperMIX and VMAX questionnaires in March 2020 (Rathnayake et al., 2023). Eligible participants were those who completed at least one questionnaire and reported using illicit drugs since March 2020. To maximise recruitment of information-rich cases, eligibility also included those who reported at least two pandemic-related impacts on their lives, as indicated by survey responses to questions on housing and income status, drug use experiences, health outcomes and police interactions. Randomised lists of eligible participants ( $n=291$ ) were generated for each cohort study, stratified by gender and geographical location. Participants were contacted (via phone, Facebook or email) in the randomised order they appeared in lists until sufficient responses were obtained for reaching data saturation. Seventy-six individuals participated in an interview. Reasons for nonparticipation included refusal ( $n=4$ ), failure to attend a scheduled interview ( $n=5$ ), disconnected telephone ( $n=35$ ), nonresponse to attempted contact ( $n=56$ ) and data saturation being achieved before a contact attempt ( $n=115$ ).

### 3.2 | Data collection

The first author conducted in-depth semistructured interviews with 38 SuperMIX and 38 VMAX participants between August 2021 and April 2022. Participants provided informed voluntary consent, and interviews were audio-recorded. Topics of investigation included impacts of pandemic responses on housing, employment and income status; social relationships and supports; access and use of health, drug treatment and harm reduction services and supports; drug use experiences; interactions with law enforcement; and views of pandemic mitigation measures. Most interviews were conducted via telephone or video call ( $n=71$ ) during strict lockdown periods, and five were conducted face-to-face after pandemic restrictions were removed.

### 3.3 | Data analysis

Data were thematically analysed using Neale's Iterative Categorisation approach (Neale, 2016). This flexible non-linear technique involved creating deductive codes based on interview topics and literature addressing study aims. As data extracts were assigned to these codes, additional codes and subcodes were created to represent new themes and subthemes (Fereday & Muir-Cochrane, 2006). This inductive process of differentiating extracts involved checking for similarities and differences within individual transcripts and between participant accounts. Following this first phase of coding, a second stage of analysis occurred. Earlier analytic processes were repeated by creating additional codes that represented themes related to socioeconomic consequences of pandemic responses on participants' lives. As new themes were identified, additional literature was found and examined to ensure direct links between the analysis and established knowledge. New ideas were formulated iteratively as findings were written up. The research team met regularly throughout the analysis phase to ensure processes were transparent and trustworthy. In the text below, identifiable information has been removed from participant quotes. Each quotation is labelled with a pseudonym, the participant's geographical location (metro or regional) and a unique interview number.

### 3.4 | Participant characteristics

Participants were aged 24–64 years (median 34 years). Thirty-seven participants identified as women, and the remainder ( $n=39$ ) identified as men. Eight participants identified as Aboriginal and/or Torres Strait Islander, and 10 were born outside Australia. Almost one-in-five ( $n=13$ ) were studying or in paid employment, around one third ( $n=25$ ) were receiving a disability support pension, and half ( $n=38$ ) were recipients of unemployment benefits. Almost a third ( $n=23$ ) were homeless or living in unstable housing during the pandemic, and almost half ( $n=36$ ) reported that they had ever been incarcerated.

## 4 | RESEARCH FINDINGS

Three main themes illustrate the positive and negative socioeconomic consequences of pandemic policy responses: pandemic supplementary payments; fluctuations in the price of illicit drugs; and housing and food insecurity.

### 4.1 | Pandemic supplementary payments

Most participants had been poor and reliant on Social Security benefits for much of their lives. The supplementary payments improved their social and economic situations substantially, mostly described as providing a temporary reprieve from chronic financial stress. The unintended consequences for participants included being able to “catch up” on payments that were overdue prior to the pandemic. Several said it was the first time in years that they had felt somewhat financially stable. Many spoke of relief at being able to avoid additional crises, such as having their opioid agonist treatment ceased because they were in arrears (some faced pharmacy dispensing fees of more than \$50/week), receiving court orders for unpaid fines or having services such as gas or electricity disconnected. Supplementary payments were used to pay rent or household bills and to put food on the table or petrol in the car—essential needs many struggled to meet previously.

On top of the rent payments, I have to pay gas, electricity and water bills as well as buying food and pet supplies ... and then trying to support a drug habit on top of that [...] like trying to do everything I just mentioned on \$420 is very, very difficult. So, with the extra money I was able to do everything and still have ... on average I was ending up with an extra \$60 or \$70 a fortnight that I could put towards savings.

(Dave, metro, #27)

Accounts of the supplementary payments enabling money to be put aside for later use were common. Some homeless participants saved money for the bonds required for stable accommodation, and one planned to spend it on reapplying for her driver's licence. For many, this was the first time in their lives they reported having intentionally saved money. Some reported buying items such as clothes, birthday gifts for children or household items that were previously unaffordable.

Unintended positive impacts of the supplementary payments extended beyond those of monetary value. All participants described having had more control and agency over their lives because they were better equipped to meet their financial needs, which provided a sense of pride and an opportunity to experience something closer to a “normal life,”

... the financial stresses just shrunk a little bit [...] I had a little bit more room for just being a normal person [...] I think I managed to probably put 15% of it into my bank account, which lasted ... not very long. Some might have gone towards [drugs], but at least there was a demonstration of, "oh, I have money in my bank account". Yes, it was really, really, good. Definitely, fantastic. Especially when your options are so limited.

(James, metro, #12)

In addition to having financial burdens lifted, the supplementary payments shifted participants' emotional and social well-being in positive ways many had not previously experienced.

I usually live on such a small amount yeah [...] the extra \$500 ... it was amazing how much better I was eating ... I noticed how much more enjoyable days you'd have out of the fortnight, like days you go out, get out with a bit of coin in your pocket [...] Me and my partner were hanging out more, getting outside. Just you know – having money in your pocket, it's like a real motivator to get outside.

(Sarah, metro, #37)

For a handful of participants, the supplementary payments catalysed major positive change in their lives. Kane, who had been using heroin for at least 15 years, described how saving money each fortnight gave him "a bit of confidence that maybe [he] could gain some control over his life." He had reduced his drug use and was now actively looking for work:

I didn't stop using drugs fully, but I still managed to save a small amount of money [...] From the age of about 24—up until then basically I've been spending every cent I had on drugs, and I constantly had no money for anything, and I was living this nomadic lifestyle, crashing at friend's houses, and trying to find a job. As bad as 2020 and COVID things were, yes, that extra money gave me—it was a turn-around point in my life.

(Kane, regional, #44)

Experiences of chronic poor health and disability were common, and although healthcare for many conditions was subsidised, this was not always the case. For participants in these circumstances, the financial supplements provided some reprieve. Dana described how the supplementary payments allowed her and her partner to attend to painful dental issues.

I went to the dentist multiple times last year. That seems like a small thing, but this year my appointment came up and I was like, "I just can't afford to go ...". I feel like that should be a basic thing that everyone should get to do—go to the bloody dentist. Last year because of the extra money we were both able to do that [...] JobSeeker is such a pittance, and those double payments should never have stopped.

(Dana, metro, #15)

Despite knowing the supplementary payments were only temporary, participants found life extremely difficult when they were ceased. Sherrie, for example, described how she had to resort to crime to feed herself once the payments stopped.

It felt great to have that extra money. I didn't have to worry about those couple of days that I was left without money between pay days ... sometimes you're resorted to maybe shoplifting ... just to make sure you get that, you know, meal or whatever

into you. Yeah, it's hard because you get used to the money and then when it stops, it's changing the way you're living all over again [...] The extra money made a huge difference because you don't have to worry about where you're going to get that extra money from and if you're going to have to do crime, do you know what I mean? (Sherrie, regional, #64)

When asked how they had used the supplementary payments, approximately half ( $n=37$ ) openly described how at least some of the supplemental money went toward purchasing illicit drugs—a factor many associated with the inflated prices of heroin and methamphetamine (see below). Attached to most responses, however, was a sense of shame and guilt at not having used the payments for a “good” purpose, including some who believed others would view this as an inappropriate use of the money.

Yeah, it was great ... look, just ... yeah [big pause]. No, not good. Like by [the second time] I'd learnt that maybe, yeah, buying a lot of gear [drugs] wasn't any good. But yeah, so we basically—I paid a few bills. But, yeah, I didn't do a lot of good with it. [...] It's my life—but yeah, it's not what society would necessarily think should have been done with the money.

(Peter, metro, #3)

Although the supplementary payments provided financial and social relief, they did not increase people's income sufficiently to address issues of deep-seated poverty—an issue exacerbated by increases in the prices of illicit drugs in street markets.

## 4.2 | Fluctuations in the price of illicit drugs

Many participants noted increases in the prices of methamphetamine, heroin and other illicit drugs, such as cannabis and unprescribed diazepam. For example, a point (0.1 g) of heroin or methamphetamine was consistently described as having doubled or tripled in price during the pandemic (e.g. from \$30–50 to \$100–150). Some described prices peaking during lockdowns but returning to prepandemic levels when restrictions eased, while others said prices remained inflated after lockdowns. Illicit drug market shifts were perceived as a response to border closures and restrictions that posed risks for people transporting drugs (including fines of up to \$10,000 for travelling outside restricted zones and curfews) (Department of Health, 2021) and/or dealers and traffickers further “up the food chain” capitalising on the pandemic to increase profits.

The unintended consequence of pandemic restrictions on illicit drug market prices produced adverse impacts on the lives of most participants. Seven participants said they had a trusted dealer who was still charging prepandemic prices or had increased the price minimally (e.g. from \$50 to \$60 for 0.1 g methamphetamine), and five participants who used methamphetamine recreationally said their drug use was not affected. For the remaining 64 participants (84 per cent), inflated prices placed enormous financial and emotional strain on their lives, despite their receipt of the supplementary payments. Thirty-five participants described being forced to reduce their drug use because they could not afford the inflated prices. Many suffered withdrawal symptoms that reduced their mental and physical health, which was exacerbated by the emotional stress of lockdowns, including feeling isolated and bored.

.. the [hardest] thing has been the price of meth [...] I've ended up going through heaps of withdrawals because I couldn't afford to get what I was used to taking ... and half the time I have to go without ... I get sick. [...] I HAVE to buy it. I don't have a choice ... and, yeah, it's leaving me broke every fortnight, even with



the bonus payments, because after I buy meth, smokes, pay my bills, and a bit of phone credit, that's my whole pay gone [and] the quality is pretty shit, so I'm not getting high off it. I take it and it just stops me from getting sick and that's it.

(Cindy, regional, #62)

Around one in 10 participants described wanting to access drug treatment to either reduce their use or stop using altogether. However, because these services were at capacity or unable to take on new clients due to pandemic restrictions or because participants preferred in-person appointments or outreach rather than telehealth services, obtaining treatment was difficult.

... so before COVID I would probably be using half a gram per fortnight, so just before COVID I was looking into doing a detox referral to try and cut back on my usage. I'd gotten as far as making the referral appointment and then COVID hit [...] and that appointment got cancelled because of COVID. Yeah, it's been a bit hard, especially because since lockdowns and curfews and stuff, my usage has increased to almost a gram a week and because I've been having to pay so much to get by.

(Trevor, metro, #27)

Forced isolation during lockdowns exacerbated preexisting mental health issues, with many community programmes (e.g. drop-in centres, supported accommodation services and community meals) closed during lockdowns, (Conway et al., 2023) a factor that created additional stress and encouraged drug use among participants. More than a third ( $n=29$ ) described using more drugs than usual during lockdowns; fifteen of these participants said they had used some of the supplementary payments for this purpose. For example, Ben said, "I just ended up using more [heroin] to be honest ... it was more money that I spent on drugs" Most of these participants, however, said they consumed more drugs when the stresses of boredom and isolation during lockdown periods were difficult to bear, with inflated prices adding extra stress.

It wasn't brilliant for my mental health and it increased my drug use [...] Like I think that my [heroin] use is a lot associated with being isolated, being locked up at home by yourself, to not be able to do stuff—like I used to get meals at [the community hub] and now you can't even do that—that's why my use increased. Like over the months of being locked out, it just went up and then I was using ... like up to a gram a day. Yeah like half a gram went up to like \$300 to \$350. Yeah, it's a struggle, especially now we're not getting those extra payments. That's where all my money was going.

(Stevie, metro, #47)

The pressure to fund increased use caused constant anxiety for many, particularly during lockdown periods. Feeling ashamed because their drug use had increased exacerbated this anxiety, despite it being the only practical mechanism available to deal with stress. Preexisting mental health conditions intensified these issues.

I usually just get three points [of methamphetamine] but since being in lockdown it's increased to five, which means I'm paying \$400. I'm trying really, really, hard to just not think about it, cos I don't want to be doing that—but sometimes it's just too hard. I've never done any illegal things. I'll always go without, so it might be petrol, food, not paying a bill. I try not to do it that way because I always have to catch up the next fortnight and then I'll be strapped for cash even more. Yeah, mostly, I'm fucked. I'm so depressed. I have PTSD, anxiety.

(Fran, metro, #17)

While the unintended flow-on effect of shifts in street market drug prices mostly produced adverse socioeconomic consequences, the opposite was true for eight participants. For these participants, whose drug use declined during the pandemic, expressions of pride were commonplace. Most said the inflated drug prices were the catalyst for their reduced use, which was often defined as the most positive outcome of the pandemic on their lives.

Since COVID, my shard [methamphetamine] use—it's more than halved [...] The prices last March when COVID kicked in, more than doubled over night. It was insane [...] It makes it impossible. I don't use anywhere near what I was using. \$100 a point, \$350 a half gram [and] a half ball [1.75 gm] is \$750. For me, I just have to go without [methamphetamine] a lot more, which is hard on my psyche, but I feel proud of it as well.

(Cara, regional, #1)

### 4.3 | Housing and food insecurity

An adverse unintended consequence of pandemic restrictions was that emergency relief services, such as those that provide food and housing support, faced unprecedented demand from the many people in the wider community who lost jobs or income—many of whom had never accessed these services previously (Chakraborty et al., 2023; McCosker et al., 2022). More than half of the participants in our study ( $n=41$ ) were reliant on these services throughout the pandemic, including many who had been dependent on them previously. As our findings below highlight, the increased demand placed on these services reduced their capacity to meet the needs of long-term clients like those in our study.

Less than a quarter of participants reported that their housing situation had been stable during the pandemic; most were living in public housing or private rentals. For the remainder, experiences of chronic housing insecurity were commonplace. Thirteen participants experienced homelessness, including sleeping on the streets, couch surfing and living in crisis accommodation (e.g. refugees or homeless shelters); most had been homeless for many years. Five women said family violence had exacerbated their housing stress, and nine participants described conflict with housemates in crisis housing, rooming houses or motel accommodation because they were so closely confined during lockdown periods and unable to leave.

Participants described difficulties accessing housing services because drop-in services were closed, services were not taking on new clients, or phone helplines were overwhelmed—an additional unintended negative impact of pandemic restrictions (McCosker et al., 2022). For example, Jane who had been couch surfing between bouts of rough sleeping since pre-pandemic times said:

You couldn't go in to services, so then when you try to ring up you get told, "We're experiencing a whole volume of calls", so then you get put on a call waiting, and then it's just like, what the heck! [...] They reckon it's to do with COVID. I don't know, like [some services] have a program to help you rent a house and they sort of negotiate on your behalf. We can't get through to that though—yeah, it's over the phone, but they don't even answer. So they just say, "if you need like somewhere to stay tonight, go to—call the Crisis Centre".

(Jane, metro, #48)

Six participants feared they would be evicted because they could not afford their rent, a factor that was exacerbated by the inflated prices of heroin and methamphetamine and being unable to access housing support.

We're gonna be evicted cos we can't pay the rent [...] We're having to spend so much on meth now, so it's too expensive ... but the thing is, everyone is trying to access the services as well now because of COVID. They're either booked out of appointments or we can't get in touch with them.

(Chelsea, regional, #17)

Nine participants who were homeless during the pandemic were housed in motel accommodation for a short period, as part of the government homelessness intervention—intended to (1) address the unintended housing crisis in the community and (2) prevent COVID-19 transmission among people who were homeless (Parsell et al., 2022). All said they were grateful for this opportunity, including Candice, who had been living in a tent. She said, with a tone of sarcasm, “yeah, of course it was better than being on the streets!” Although a few participants were able to access transitional housing after being housed in motels, for most the reprieve was short-lived; once the homelessness intervention ended, they found themselves back in precarious housing situations. David, who appreciated being temporarily housed because it meant he did not have to “pester people to crash on their couch” described how this felt, as he questioned why a housing crisis even existed:

I don't expect to ever get a government fucking house [public housing]. Personally, I can deal with that. But putting people up in a motel for three months, and then saying, “sorry, we're not doing that anymore, out you go” is fucking shit. They keep saying there is greater demand since COVID, but how can there be greater demand? There're no tourists coming so there's empty space everywhere.

(David, metro, #52)

Despite the benefits of being placed in temporary motel accommodation, some described serious problems because these places housed large numbers of disadvantaged people with histories of drug dependency, criminal justice involvement and poor mental health.

Putting all those people who use drugs into hotels together with nothing to do [...] Like one of the motels—there was like fifty rooms and there was so much violence and stuff going down—just drugs, like everything was going bad. They had security, and a nurse down there ... and we had the ambulance coming out all the time and everyone was just all stuck with each other and ... not being able to go anywhere. So, everyone just hung out in each other's rooms and, you know, caused trouble.

(Tara, metro, #45)

Johnnie, who was placed in a motel for 3 months, and initially said “it was okay,” went on to describe how the situation had engendered his return to drug use and threats of violence from old connections with whom he no longer wanted to associate.

I was running into people. I lost my safety bubble, and I started using again. Yeah, it wasn't a good situation for me, no [...] I was on my own and I just had people come round and cause trouble and I let somebody stay I've known for ten years and then they wouldn't leave because of COVID, and then he ended up getting people to come over and threaten me.

(Johnnie, regional, #42)

Participants who experienced housing instability during the pandemic and were unable to access motel accommodation described how unfair and disappointed they felt. For example, Tom who spent 6 months sleeping on a mattress on the floor in an overcrowded rooming house said:

Apparently, some homeless services pay for people to live in a motel room. I've never been given that opportunity. Yeah, I was talking to a guy at a bus stop [...] he said that he had just landed a motel with his daughter. I don't know—there must be special requirements or something like that because that never happened to me!

(Tom, regional, #6)

Emergency food services faced similar challenges to those of housing services in meeting increased community demand, which created additional adverse flow-on effects for those who were reliant on them. Although many participants did receive food or shopping vouchers, several described how much harder it was because services were at capacity or closed (Chakraborty et al., 2023). For example, some described how the value of vouchers was lower than before the pandemic or that they received vouchers or food less regularly. Others said that although they received food, it was often not food they would eat, which meant it went to waste.

Like before, they might have given me a \$30 [shopp voucher], whereas now they give me \$20. And they're enforcing the ninety-day rule [validity period] much stricter too [...] Yeah, it was a lot harder because stocks were running really low because so many people were in need, and it wasn't like before COVID. Some of them aren't open, a lot of them had closed, and if I did get something, that could sit in the cupboard forever and you wouldn't use it.

(Brenda, metro, #24)

For some, difficulty in accessing emergency food relief increased emotional stress and catalysed increased drug use, which exacerbated stress due to inflated drug prices.

Obviously, accessing services and food vouchers and things like that was harder. That then means you're on the drugs and stuff more, to get through. Then because its more expensive it affects your finances.

(Kira, metro, #22)

Feelings of shame for having to rely on emergency food services adversely affected some participant's self-esteem. For example, Teresa said she managed to get a grocery card that was a “huge help” when the price of heroin doubled, but she also said it made her feel like she had “taken ten steps back,” because she “hadn't needed to access the service for at least ten years.”

The narratives presented above highlight how pandemic mitigation measures and policies introduced during the pandemic produced both unintended socioeconomic challenges and benefits for the participants in our study.

## 5 | DISCUSSION

Our study fills an important gap in the literature about the positive and negative socioeconomic consequences of the COVID-19 pandemic and associated responses on the lives of a

group of people who inject drugs and/or use methamphetamine. Findings underscore how health and well-being outcomes are inextricably bound to the socioeconomic environment (Cohen et al., 2022; Dasgupta et al., 2018; Ruiz et al., 2022) and, thus, that the impacts of pandemic restrictions go further than those involving drug-related harms or benefits. Our study also extends understandings of how, for socioeconomically disadvantaged populations, the pandemic increased existing inequities (Davidson et al., 2023; Delardas et al., 2022; Kent et al., 2022; Morante-García et al., 2022).

Notably, our findings support claims that the rapid introduction of supplementary payments to Social Security recipients, although short-lived and not systemically transformative on people's lives, produced temporary relief for Australians experiencing chronic and prolonged socioeconomic hardship (Davidson et al., 2023; Klein et al., 2022a, 2022b). While the payments were primarily intended to address the unintended financial insecurity faced by people who lost jobs and incomes during the pandemic, our findings point to the additional (likely unintended positive consequence) they had on the lives of people already living in poverty.

Participant accounts, of being able to pay overdue household bills to avoid electricity or gas disconnections, having enough money to purchase petrol or nutritious food and of saving money and feeling like a “normal person” for the first time in their lives, highlight not only the benefits of the supplementary payments but also the enormous and chronic financial stress participants were experiencing before the pandemic. Although an intended consequence of the supplementary payments was to prevent people in the broader community falling into poverty, our findings draw attention to their enormous but unintended positive impact on a group of people already experiencing financial stress.

Our results indicate that poverty and inequality are not an inevitable state of being and that while the temporary supplementary payments did not end the entrenched chronic socioeconomic hardship faced by our participants, the provision of adequate income support during the pandemic improved their quality of life substantially. With estimated increases in poverty in Australia since the pandemic (Davidson et al., 2023), one policy option is to permanently increase Social Security payments to a level that can satisfactorily alleviate the social, emotional and financial pressures of poverty.

Furthermore, our findings highlight the potential to address socioeconomic inequities through government investment in large-scale homelessness initiatives. It is widely accepted that having safe, stable and secure housing is vital to combatting underlying socioeconomic factors that lead to and sustain harmful prolonged drug use (Dasgupta et al., 2018; Rog et al., 2014; Ruiz et al., 2022), and yet, experiences of living in chronic homelessness and unsafe and unstable housing were commonplace for many participants in our study. Although emergency responses that involved transitioning homeless people into temporary accommodation during the pandemic benefited some participants in our study, findings suggest the responses were often inadequate. That is, providing only temporary solutions and placing individuals in overcrowded locations (often with others who use drugs and without sufficient social and community supports to address their health and well-being needs) and not accommodating everyone in need (Mason et al., 2020; Parsell et al., 2022; Parsell & Pawson, 2023) served to perpetuate socioeconomic inequalities and increased illicit drug use for at least some participants in our study.

It has been argued that the Australian Government response to homelessness during the pandemic was primarily motivated by a health crisis that threatened the health and well-being of the wider community (to prevent COVID-19 transmission and reduce the burden on the health system) rather than a deep concern for the health and well-being of people who were homeless (Baxter et al., 2021). The (potential) unintended consequence of this homelessness initiative on the lives of people living in precarious housing situations has been highlighted by our study. Homelessness is a social justice issue that requires an investment by governments in

long-term sustainable solutions that ensure all Australians have access to safe, affordable and secure housing.

Our findings underscore how providing people like those in our study an adequate income and stable housing has the potential to positively impact their socioeconomic situation and their mental and physical health and well-being (Baxter et al., 2021; Coates & Cowgill, 2021). Nonetheless, as our findings highlight, the provision of adequate financial support and housing must be accompanied by responses that also tackle other underlying socioeconomic and structural drivers of illicit drug use (Cohen et al., 2022; Dasgupta et al., 2018). For example, for many participants, illicit drug consumption was the only mechanism they felt they had at their disposal to deal with the additional stresses of the pandemic, including isolation and boredom during lockdowns, challenges accessing scarce emergency food and housing services, being placed in overcrowded crisis housing and limited access to drug treatment (Coleman et al., 2022; Efunuga et al., 2022). Increasing their drug use to deal with these stresses—while understandable given the consumption of drugs (in particular, alcohol) in the general Australian community also rose during the pandemic in response to these and other stresses (Sutherland et al., 2023)—was exacerbated by the added financial burden of increased methamphetamine and heroin market prices, which offset the benefits of the supplementary payments. Although inflated illicit drug prices (an unintended consequence of pandemic mitigation measures) enabled some participants to reduce their drug use, painful withdrawal and financial and emotional stress were commonplace, including for some, fears they would be forced to commit crime to purchase drugs. Therefore, a commitment from governments to invest in initiatives that increase access to drug treatment and harm reduction programmes (Conway et al., 2023; Dunlop et al., 2020) and responses that address stigma (Sutherland et al., 2023; Treloar et al., 2022) is also needed.

We acknowledge that our findings are limited to Victoria and are not representative beyond the cohorts we recruited from. Furthermore, we were unable to reach all participants in our randomised lists, which may have compromised the internal generalisability of our sample. Nonetheless, we believe the novel ethno-epidemiological recruitment approach we used allowed us to interview a more representative sample from our two cohorts than would have been possible using purposive or snowball sampling and thus improved the rigour and trustworthiness of the evidence gathered.

## 6 | CONCLUSION

Many people who use illicit drugs face socioeconomic disadvantage, and as our findings attest, their drug use is often inextricably linked to other compounding structural inequities. Paradoxically, the COVID-19 pandemic revealed new possibilities for reducing this cohort's entrenched disadvantage. Examining the positive and negative unintended socioeconomic consequences of pandemic policies on the lives of people who inject drugs and/or use methamphetamine enabled us to highlight opportunities for innovative, socially just policy reform. The lives of people who use illicit drugs matter, and policy responses need to reflect this.

### AUTHOR CONTRIBUTIONS

**S. Walker:** Conceptualization; data curation; formal analysis; writing – original draft; methodology; investigation; project administration; writing – review and editing; validation. **P. Dietze:** Conceptualization; writing – review and editing; supervision; project administration; funding acquisition; methodology; validation. **B. Ward:** Methodology; writing – review and editing; funding acquisition; validation. **C. Treloar:** Writing – review and editing; validation. **M. Stoové:** Writing – review and editing; funding acquisition. **J. Doyle:** Writing – review and

editing; funding acquisition. **M. Hellard:** Writing – review and editing; funding acquisition. **L. Maher:** Conceptualization; writing – review and editing; supervision; methodology; funding acquisition; validation.

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## CONFLICT OF INTEREST STATEMENT

We declare the authors have no conflicts of interest in relation to this manuscript.

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## REFERENCES

- Almeida Filho, N. (2020) Ethnoepidemiology and mental health: Insights from Latin America. *Salud Colect*, 16, e2786. Available from: <https://doi.org/10.18294/SC.2020.2786>
- Australian Institute of Health and Welfare. (2020) National drug strategy household survey 2019. <https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey-2019>
- Baxter, J., Cobb-Clark, D., Cornish, A., Ho, T., Kalb, G., Mazerolle, L. et al. (2021) Never let a crisis go to waste: Opportunities to reduce social disadvantage from COVID-19. *The Australian Economic Review*, 54(3), 343–358. Available from: <https://doi.org/10.1111/1467-8462.12428>
- Broadly, T.R., Brenner, L., Cama, E., Hopwood, M. & Treloar, C. (2020) Stigmatising attitudes towards people who inject drugs, and people living with blood borne viruses or sexually transmissible infections in a representative sample of the Australian population. *PLoS ONE*, 15(4), e0232218. Available from: <https://doi.org/10.1371/journal.pone.0232218>
- Butler, T. & Simpson, M. (2017) *National prison entrants' blood-borne virus survey report 2004, 2007, 2010, 2013, and 2016*. Sydney: Kirby Institute (UNSW Sydney). <https://kirby.unsw.edu.au/report/national-prison-entrants-bloodborne-virus-and-risk-behaviour-survey-report-2004-2007-2010>
- Chakraborty, J., Aun, J.J. & Schober, G.S. (2023) Assessing the relationship between emergency food assistance and social vulnerability during the COVID-19 pandemic. *Applied Spatial Analysis and Policy*, 16(1), 259–276. Available from: <https://doi.org/10.1007/s12061-022-09478-8>
- Coates, B. & Cowgill, M. (2021) *The JobSeeker rise isn't enough*. Melbourne: Grattan Institute. [https://grattan.edu.au/wp-content/uploads/2021/03/housefin\\_2021\\_jobseeker\\_submission.pdf](https://grattan.edu.au/wp-content/uploads/2021/03/housefin_2021_jobseeker_submission.pdf)
- Cohen, A., Vakharia, S.P., Netherland, J. & Frederique, K. (2022) How the war on drugs impacts social determinants of health beyond the criminal legal system. *Annals of Medicine*, 54(1), 2024–2038. Available from: [10.1080/07853890.2022.2100926](https://doi.org/10.1080/07853890.2022.2100926)
- Coleman, M., Taran, M. & Cuesta-Briand, B. (2022) Responding to regional adversity: A qualitative study of alcohol and other drug service users' experiences of service response to COVID-19 in Western Australia's Southwest. *Australasian Psychiatry*, 30(1), 74–78. Available from: <https://doi.org/10.1177/10398562211036125>

- Conway, A., Treloar, C., Crawford, S., Degenhardt, L., Dore, G.J., Farrell, M. et al. (2023) "You'll come in and dose even in a global pandemic": A qualitative study of adaptive opioid agonist treatment provision during the COVID-19 pandemic. *The International Journal on Drug Policy*, 114, 103998. Available from: <https://doi.org/10.1016/j.drugpo.2023.103998>
- Dasgupta, N., Beletsky, L. & Ciccarone, D. (2018) Opioid crisis: No easy fix to its social and economic determinants. *American Journal of Public Health*, 108(2), 182–186. Available from: <https://doi.org/10.2105/AJPH.2017.304187>
- Davidson, P., Bradbury, B. & Dorsch, P. (2021) COVID income support: Analysis of income support in the COVID lockdowns in 2020 and 2021. ACOSS/UNSW Sydney, Poverty and Inequality Partnership, Build Back Fairer Series, Report No. 1. [https://povertyandinequality.acoss.org.au/wp-content/uploads/2021/10/Covid-income-support\\_build-back-fairer-report-1.pdf](https://povertyandinequality.acoss.org.au/wp-content/uploads/2021/10/Covid-income-support_build-back-fairer-report-1.pdf)
- Davidson, P., Bradbury, B. & Wong, M. (2023) Poverty in Australia 2023: Who is affected. Poverty and Inequality Partnership Report no. 20. Australian Council of Social Service and UNSW Sydney; [https://povertyandinequality.acoss.org.au/wp-content/uploads/2023/03/Poverty-in-Australia-2023\\_Who-is-affected.pdf](https://povertyandinequality.acoss.org.au/wp-content/uploads/2023/03/Poverty-in-Australia-2023_Who-is-affected.pdf)
- Delardas, O., Kechagias, K.S., Pontikos, P.N. & Giannos, P. (2022) Socio-economic impacts and challenges of the Coronavirus pandemic (COVID-19): An updated review. *Sustainability*, 14(15), 9699. Available from: <https://doi.org/10.3390/su14159699>
- Dietze, P.M. & Peacock, A. (2020) Illicit drug use and harms in Australia in the context of COVID-19 and associated restrictions: anticipated consequences and initial responses. *Drug and Alcohol Review*, 39(4), 297–300. Available from: <https://doi.org/10.1111/dar.13079>
- Duncan, Z., Kippen, R., Sutton, K., Ward, B., Agius, P.A., Quinn, B. et al. (2022) Correlates of anxiety and depression in a community cohort of people who smoke methamphetamine. *The Australian and New Zealand Journal of Psychiatry*, 56(8), 964–973. Available from: <https://doi.org/10.1177/00048674211048152>
- Dunlop, A., Lokuge, B., Masters, D., Sequeira, M., Saul, P., Dunlop, G. et al. (2020) Challenges in maintaining treatment services for people who use drugs during the COVID-19 pandemic. *Harm Reduction Journal*, 17(1), 1–7. Available from: <https://doi.org/10.1186/s12954-020-00370-7>
- Efunnuga, H., Higgs, P., Walker, S. & O'Keefe, D. (2022) Health service utilisation and access for people who inject drugs during COVID-19. *Drug and Alcohol Review*, 41(6), 1304–1310. Available from: <https://doi.org/10.1111/dar.13456>
- Fereday, J. & Muir-Cochrane, E. (2006) Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80–92. [http://www.ualberta.ca/~iiqm/backissues/5\\_1/pdf/fereday.pdf](http://www.ualberta.ca/~iiqm/backissues/5_1/pdf/fereday.pdf)
- Fitzpatrick, K.M., Harris, C.T., Willis, D., Obermaier, A. & Drawwe, G. (2023) Place still matters: social vulnerabilities, place-level disadvantage, and food insecurity during COVID-19. *Nutrients*, 15(6), 1430. Available from: <https://doi.org/10.3390/nu15061430>
- Department of Health. (2021) Independent Pandemic Management Advisory Committee. <https://www.health.vic.gov.au/covid-19/independent-pandemic-management-committee>
- Kent, K., Murray, S., Penrose, B., Auckland, S., Godrich, S., Lester, E. et al. (2022) Food insecure households faced greater challenges putting healthy food on the table during the COVID-19 pandemic in Australia. *Appetite*, 169, 105815. Available from: <https://doi.org/10.1016/j.appet.2021.105815>
- Klein, E., Cook, K., Maury, S. & Bowey, K. (2022a) Understanding Covid-19 emergency social security measures as a form of basic income: Lessons from Australia. *Journal of Sociology*, Jun, 14407833221106242. Available from: <https://doi.org/10.1177/14407833221106242>
- Klein, E., Cook, K., Maury, S. & Bowey, K. (2022b) An exploratory study examining the changes to Australia's social security system during COVID-19 lockdown measures. *Australian Journal of Social Issues*, 57(1), 51–69. Available from: <https://doi.org/10.1002/ajs4.196>
- Mason, C., Moran, M. & Earles, A. (2020) *Policy coordination and housing outcomes during COVID-19*. Melbourne: Australian Housing and Urban Research Institute Ltd. <https://www.ahuri.edu.au/research/final-reports/343>
- Mayock, P., Cronly, J. & Clatts, M.C. (2015) The risk environment of heroin use initiation: Young women, intimate partners, and "drug relationships". *Substance Use & Misuse*, 50(6), 771–782. Available from: <https://doi.org/10.3109/10826084.2015.978629>
- McCosker, L.K., Ware, R.S., Maujean, A., Simpson, S.J. & Downes, M.J. (2022) Homeless services in Australia: Perceptions of homelessness services workers during the COVID-19 pandemic. *Australian Social Work*, 11, 1–17. Available from: <https://doi.org/10.1080/0312407x.2022.2105162>
- Morante-García, W., Zapata-Boluda, R.M., García-González, J., Campuzano-Cuadrado, P., Calvillo, C. & Alarcón-Rodríguez, R. (2022) Influence of social determinants of health on COVID-19 infection in socially vulnerable groups. *International Journal of Environmental Research and Public Health*, 19(3), 1294. Available from: <https://doi.org/10.3390/ijerph19031294>
- Mupenzi, A., Mude, W. & Baker, S. (2020) Reflections on COVID-19 and impacts on equitable participation: The case of culturally and linguistically diverse migrant and/or refugee (CALDM/R) students in Australian



- higher education. *Higher Education Research and Development*, 39(7), 1337–1341. Available from: <https://doi.org/10.1080/07294360.2020.1824991>
- Naidoo, Y., Valentine, K. & Adamson, E. (2022) *Australian experiences of poverty: Risk precarity and uncertainty during COVID-19*. Sydney: Australian Council of Social Service (ACOSS) and UNSW Sydney. [https://povertyandinequality.acoss.org.au/wp-content/uploads/2022/12/Australian-experiences-of-poverty\\_risk-precarity\\_uncertainty\\_PRINT.pdf](https://povertyandinequality.acoss.org.au/wp-content/uploads/2022/12/Australian-experiences-of-poverty_risk-precarity_uncertainty_PRINT.pdf)
- Neale, J. (2016) Iterative categorization (IC): A systematic technique for analysing qualitative data. *Addiction*, 111(6), 1096–1106. Available from: <https://doi.org/10.1111/add.13314>
- O'Keefe, P., Johnson, B. & Daley, K. (2022) Continuing the precedent: Financially disadvantaging young people in "unprecedented" COVID-19 times. *Australian Journal of Social Issues*, 57(1), 70–87. Available from: <https://doi.org/10.1002/ajs4.152>
- Parsell, C., Clarke, A. & Kuskoff, E. (2022) Understanding responses to homelessness during COVID-19: An examination of Australia. *Housing Studies*, 38(1), 8–21. Available from: <https://doi.org/10.1080/02673037.2020.1829564>
- Parsell, C. & Pawson, H. (2023) COVID-19 and the meaning of home: How the pandemic triggered new thinking on housing. *Housing Studies*, 38(1), 1–7. Available from: <https://doi.org/10.1080/02673037.2023.2148337>
- Price, O., Man, N., Bruno, R., Dietze, P., Salom, C., Lenton, S. et al. (2022) Changes in illicit drug use and markets with the COVID-19 pandemic and associated restrictions: Findings from the ecstasy and related drugs reporting system, 2016–20. *Addiction*, 117(1), 182–194. Available from: <https://doi.org/10.1111/add.15620>
- Quinn, B., Ward, B., Agius, P.A., Jenkinson, R., Hickman, M., Sutton, K. et al. (2021) A prospective cohort of people who use methamphetamine in Melbourne and non-metropolitan Victoria, Australia: Baseline characteristics and correlates of methamphetamine dependence. *Drug and Alcohol Review*, 40(7), 1239–1248. Available from: <https://doi.org/10.1111/dar.13194>
- Rathnayake, K., Agius, P.A., Ward, B., Hickman, M., Maher, L., Stoové, M. et al. (2023) The impacts of COVID-19 measures on drug markets and drug use among a cohort of people who use methamphetamine in Victoria, Australia. *Addiction*, 118, 1–12. Available from: <https://doi.org/10.1111/add.16189>
- Rog, D.J., Marshall, T., Dougherty, R.H., George, P., Daniels, A.S., Ghose, S.S. et al. (2014) Permanent supportive housing: Assessing the evidence. *Psychiatric Services*, 65(3), 287–294. Available from: <https://doi.org/10.1176/appi.ps.201300261>
- Ruiz, M.S., Williams, A., O'Rourke, A., MacIntosh, E., Moné, S. & Clay, C. (2022) The impact of housing insecurity on access to care and services among people who use drugs in Washington, DC. *International Journal of Environmental Research and Public Health*, 19(13), 7561. Available from: <https://doi.org/10.3390/ijerph19137561>
- Searby, A. & Burr, D. (2021) The impact of COVID-19 on alcohol and other drug nurses' provision of care: A qualitative descriptive study. *Journal of Clinical Nursing*, 30(11–12), 1730–1741. Available from: <https://doi.org/10.1111/jocn.15732>
- Sutherland, R., King, C., Karlsson, A., Treloar, C., Broady, T., Chandrasena, U. et al. (2023) *Experiences of stigma while visiting healthcare services among people who use drugs in Australia*. Sydney: Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney. <https://www.drugsandalcohol.ie/38315/>
- Sutherland, R., Uporova, J., Chandrasena, U., Price, O., Karlsson, A., Gibbs, D. et al. (2021) *Australian drug trends 2021: Key findings from the National Illicit Drug Reporting System (IDRS) interviews*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney. <https://ndarc.med.unsw.edu.au/resource/australian-drug-trends-2021-key-findings-national-illicit-drug-reporting-system-idrs>
- Topp, L., Iversen, J., Baldry, E. & Maher, L. (2013) Housing instability among people who inject drugs: Results from the Australian needle and syringe program survey. *Journal of Urban Health*, 90, 699–716. Available from: <https://doi.org/10.1007/s11524-012-9730-6>
- Treloar, C., Lancaster, K., Gendera, S., Rhodes, T., Shahbazi, J., Byrne, M. et al. (2022) Can a new formulation of opiate agonist treatment alter stigma? Place, time and things in the experience of extended-release buprenorphine depot. *The International Journal of Drug Policy*, 107, 103788. Available from: <https://doi.org/10.1016/j.drugpo.2022.103788>
- Treloar, C., Rance, J., Yates, K. & Mao, L. (2016) Trust and people who inject drugs: The perspectives of clients and staff of Needle Syringe Programs. *The International Journal of Drug Policy*, 27, 138–145. Available from: <https://doi.org/10.1016/j.drugpo.2015.08.018>
- Turcotte-Tremblay, A.-M., Gali Gali, I.A. & Ridde, V. (2021) The unintended consequences of COVID-19 mitigation measures matter: Practical guidance for investigating them. *BMC Medical Research Methodology*, 21, 1–17. Available from: <https://doi.org/10.1186/s12874-020-01200-x>
- Van Den Boom, W., Quiroga, M.M., O'Keefe, D., Kumar, D., Hill, P.L., Scott, N. et al. (2022) Cohort profile: The Melbourne injecting drug user cohort study (SuperMIX). *International Journal of Epidemiology*, 51(3), e123–e130. Available from: <https://doi.org/10.1093/ije/dyab231>
- Zorbas, C., Browne, J., Chung, A., Peeters, A., Booth, S., Pollard, C. et al. (2023) Shifting the social determinants of food insecurity during the COVID-19 pandemic: The Australian experience. *Food Security*, 15(1), 151–170. Available from: <https://doi.org/10.1007/s12571-022-01318-4>

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