Analysis of the Melbourne Medically Supervised Injecting Room's heroin overdose rates in its first 18 months

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Executive Summary

On 5 June 2020 the Victorian government released the first 18 month review of the Melbourne Medically Supervised Injecting Room (MSIR).

During those months the MSIR intervened in 2,657 overdoses, with 271 overdoses requiring the administration of naloxone. With 112,830 heroin injections during that period, the MSIR's overdose rate was 23.5/1,000 injections. This is an extraordinary rate of overdose.

The most comparable Australian group of opiate users, new clients of the Sydney Medically Supervised Injecting Centre (MSIC), record their previous number of overdoses as well as the length of their injecting career, allowing a pre-MSIC overdose rate to be calculated. Calculating on a conservative three injections per day, with an average 3 overdoses during an average 12 years of injecting, the 45% of MSIC clients who had ever overdosed yielded an overdose rate of 0.23/1,000. The MSIR overdose rate of 23.5 is 102 times higher than the MSIC's own client overdose rate. MSIC rates are 63 times higher than their clients' histories.

Overdoses are chiefly the result of using larger doses of opiates, using opiates with alcohol, using cocktails of opiates with other drugs, particularly CNS depressants such as benzodiazepines, or using opiates soon after release from prison.

The MSIR rejects clients who have used alcohol before presenting at the facility. While 23.3% of the MSIR's 4,000 clients had been released from prison three months before registering, the vast majority of overdoses were clearly from using more heroin in the facility, or due to using heroin with other drugs in toxic combinations.

Ex-client testimony univocally confirms that experimentation in the safety of the injecting rooms drives the extraordinary overdose rates. Greater amounts of consumed heroin entail increased purchases from drug dealers, as do the extra drugs to create a toxic cocktail. The inescapable implication is that high overdose rates clearly indicate Australian injecting rooms act as accessories to the local drug trade and must therefore be closed immediately.

INTRODUCTION

This analysis, which has been coordinated by Drug Free Australia, compares rates of overdose recorded in the first formal review of the Melbourne Medically Supervised Injecting Room (MSIR). The review was chaired by Margaret Hamilton, with Alex Cockram, John Ryan, Ken Lay and Ruth Vine making up the review team. The review, titled "Review of the Medically Supervised Injecting Room" was released by the Victorian government on 5 June 2020. The review can be found at https://www2.health.vic.gov.au/Api/downloadmedia/%7B52D63022-19E8-4347-9170-1ACDA991D926%7D.

THE MSIR REVIEW

The review evaluated the MSIR's performance against 6 legislated objectives (see pages x-xiv)

1. **Reduce heroin deaths**
2. **Referrals to treatment and other services**
3. **Reduce ambulance and hospital attendances**
4. **Reduce discarded needles on streets**
5. **Improve public amenity**
6. **Reduce the spread of blood-borne viruses**

Addressing the first objective of reducing heroin deaths, which is arguably of greatest concern for the public, the reviewers wrote:

"The MSIR trial has supervised 116,802 injections (96.6 per cent of which involved heroin) and responded to 2,657 overdoses, with no fatalities. Compared with other people who inject drugs, MSIR clients are significantly more likely to have recently injected in high-risk settings, as well as to have recently experienced a non-fatal overdose, a known predictor of fatal overdose. Prior to registering, more than half of MSIR clients had overdosed and nearly half had witnessed an overdose.

Of those who do attend the service, the nature of the overdoses is significant, and without intervention it is likely that many would have died or been permanently injured.

In the first 18 months of operating, there were 271 extremely serious incidents that required the opioid reversal agent naloxone. Many more required oxygen and measures to keep the airways open, potentially saving additional lives and avoiding harms associated with lack of oxygen to the brain. Advice provided to the Panel from an experienced medical practitioner consulted for the review was that 'the [overdoses] are at least as acute an emergency as those we receive in an [emergency department]'. Of those who attend the service, the nature of the overdoses is significant, and, without intervention, it is likely that some would have died or been permanently injured.

The harms associated with overdoses can be profound; some are permanent. The facility has the appropriate equipment and MSIR staff are well trained and

In the Melbourne MSIR's first government-funded review of its first 18 months in operation, the reviewers claimed that the facility averted 21-27 heroin deaths . . .

clearly demonstrate the capacity to respond, manage and administer interventions required to avoid death or further harm. Staffing levels ensure timely responses.

however, their claim is clearly in error, most likely calculated from the inordinate number of overdoses in the MSIR.

The MSIR has advanced its critical objective to save lives. While these results are not observable in coronial data, the Panel assesses that without responses to overdoses provided by the MSIR, the number of deaths could have increased during the trial period.

Modelling allows an estimate of the number of lives that the MSIR may have saved and, while there are different ways to model this, using conservative estimates, these data suggest that between 21 and 27 deaths were avoided over the 18 months of this review. This does not include the prevention of permanent disability including acquired brain injury."

This analysis focuses on the MSIR's first objective, that of reducing heroin-related deaths.

ESTIMATES OF DEATHS AVERTED DERIVED FROM OVERDOSES

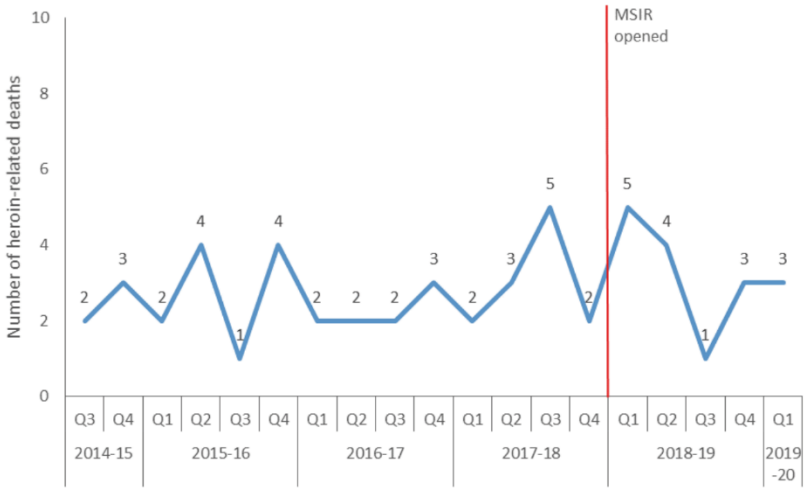
The MSIR reviewers calculated that the facility had averted 21-27 deaths, according to their modelling, which is accorded no explication in their report.

It is highly likely that their estimates of averted deaths have been derived from the number of overdoses in the MSIR – whether they have been derived from the total number of overdose interventions or from the lesser number of naloxone administrations is not apparent.

It is beyond dispute that the estimates bear no relation to the realities of deaths averted at the community level, as they have acknowledged above. Figure 17 on page 45 of the review reveals no impact by the MSIR on heroin-related deaths at the community level. Focusing on heroin deaths within 1 kilometre of the MSIR, the results are graphed below.

At the community level there was no change in recorded heroin-related deaths within 1 km of the MSIR . . .

Figure 17: Number of heroin-related deaths within 1 km of the MSIR, Quarter 3, 2014–15 to Quarter 1, 2019–20

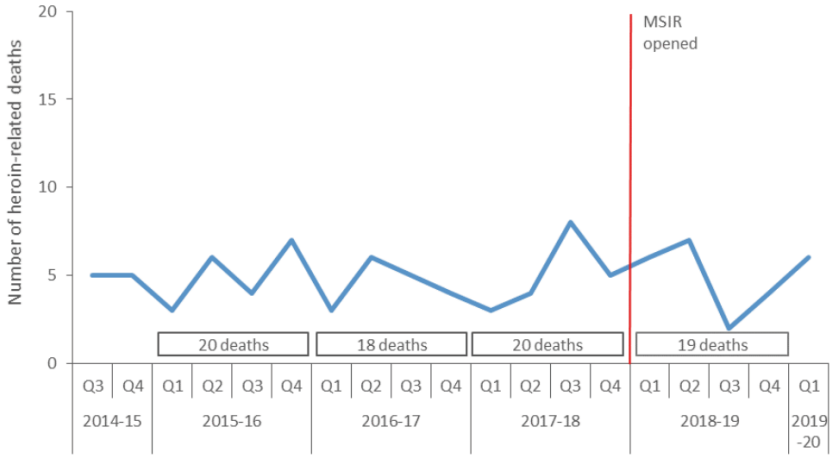


15 Months **BEFORE** MSIR opened	15 deaths
15 Months **AFTER** MSIR opened	16 deaths

Broadening the focus to the entire host Local Government Area, Figure 15 from the MSIR Review shows the following:

nor any reductions in its LGA, Yarra . . .

Figure 15: Number of heroin-related deaths in Yarra LGA, Quarter 3, 2014–15 to Quarter 1, 2019–20, quarterly and financial year

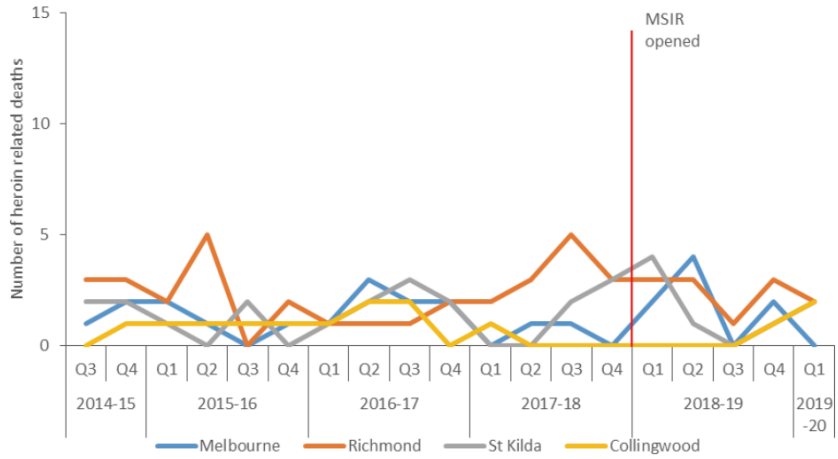


15 Months **BEFORE** MSIR opened	24 deaths
15 Months **AFTER** MSIR opened	25 deaths

Broadening the scope to those suburbs from which the highest number of MSIR registrants were drawn:

nor in the suburbs from which the highest number of its clients were drawn . . .

Figure 20: Number of heroin-related deaths in selected suburbs, Quarter 3, 2014–15 to Quarter 1, 2019–20 – top suburbs MSIR users report at registration



Source: Coroners Court of Victoria

15 Months **BEFORE** MSIR opened	25 deaths
15 Months **AFTER** MSIR opened	28 deaths

It should be noted that the latter figure excludes two quarters' data for St Kilda, which is not shown.

nor any reductions for the State of Victoria. Neither was there any reductions in overdose presentations at local hospitals when surveyed.

The MSIR review, on page 44, records 176 deaths for the rest of Victoria in the 12 months prior to the opening of the MSIR, and 175 in the year following.

Clearly, at the community level, the MSIR failed to make any observable impact on heroin-related deaths.

It can be concluded that estimates of 21–27 deaths averted by the MSIR are based on indefensible and inept assumptions, most likely on bloated overdose numbers within the facility. These unprecedented numbers of overdose in the facility thereby must necessarily be analysed.

We further note that numerous government-funded evaluations of the Sydney MSIC failed to find any positive impact on overdoses at the community level. For example, p 55ff of the MSIC Evaluation 1, completed in 2003, found no positive impact on overdose deaths in surrounding postcodes, and pp 54,55 found no reductions in presentations for overdose at nearby hospitals.

The same for the Sydney MSIC, no reductions in the community or in hospital presentations.

The MSIR review found no reductions in hospital presentations for heroin overdose (see p xi).

EXTRAORDINARY NUMBERS OF MSIR OVERDOSES

Data in the MSIR review gives an overdose rate of 23.5/1,000 injections . . .

There is sufficient data in the MSIR review document to calculate rates of overdose in the facility, just as there is sufficient data in evaluations of the Kings Cross Medically Supervised Injecting Centre (MSIC) to calculate street overdose rates for a directly comparable injecting population in a similarly large Australian city. With this data, overdose rates in the MSIR can be measured against overdose rates on the street for a clientele similar to that using the MSIR.

Overdose calculation for Melbourne MSIR

The MSIR review records that the facility had a total 116,802 supervised injections (p x) in its first 18 months, of which 96.6% (p x) were heroin injections subject to fatal overdose. This gives 112,830 heroin injections against 2,657 overdoses (p x), an overdose rate of 23.5/1,000 injections.

Conservative estimate of street rates of overdose

against a comparable population . . .

Clients of the Kings Cross MSIC, the most comparable clientele[1] relevant to those at the Melbourne MSIR, were considered by the 2003 1st MSIC Evaluation to be at a higher risk of overdose than normal (see p 62). The pre-MSIC overdose rates of that facility's clients, from data they recorded when registering to use the facility, makes a useful comparison with the MSIR overdose rates.

[1] The 1st MSIC Evaluation (see p 62) noted that "In this study of the Sydney MSIC there were 9.2 heroin overdoses per 1000 heroin injections in the MSIC, and this rate of overdose is likely to be higher than among heroin injectors generally. The MSIC clients seem to have been a high-risk group with a higher rate of heroin injections than heroin injectors who did not use the MSIC, they were often injecting on the streets, and they may have taken more risks and used more heroin in the MSIC." The evaluators never attempted to measure this inordinately high rate of overdose against MSIC clients' own histories of overdose or rates of overdose derived therefrom.

which before registering to use the Sydney MSIC had an overdose rate of 0.23/1,000 injections.

In the 1st MSIC Evaluation, 44% (see p 8) of MSIC clients had overdosed before registering, with a heroin-use career spanning an average 12 years (see p 8) and a median average of three overdose episodes during those average 12 year injecting careers (see p 16). From this data, their average rate of overdose can straightforwardly be calculated. Using the MSIC 1st Evaluation's own estimate of 'at least' three injections per day per dependent heroin user (see p 58), and keeping in mind that, for example, 8 injections per day for heroin users is not extraordinary, we can calculate the number of injections per user per year (3 x 365 = 1,095 injections per year), then calculate one non-fatal overdose every 4 years giving a rate of 1/4,380 injections (4 x 1,095 injections) or 0.23/1,000.

The real rate of overdose would be quite a deal lower given that an average 3 injections per day is a low estimate, and this is the rate for only 44% of clients in the MSIC, where the other 56% have no history of overdose. This 56% can be considered unlikely to have many overdoses in the MSIC after registering, given their track records. Generalising the overdose rate of 44% of MSIC clients to 100% of MSIC clients makes this estimate generously conservative and an overestimate.

Cross verification from MSIC's 1st Evaluation data

A cross verification method from 1st 2003 MSIC Evaluation data only makes the MSIR overdose rate more disproportionate – 133 times higher

Other data in the first 2003 MSIC Evaluation indicates substantial agreement with our the above street OD rate. Out on the streets of Kings Cross during the MSIC's first 18 months of operation there were 431 OD ambulance callouts. Clients who had ever overdosed recorded that an ambulance had attended in 74% of their overdoses in the past, so adjusting for unattended overdoses, there would likely have been 582 overdoses on the streets during the first 18 month evaluation period.

The same evaluation estimated that there were 6,000 injections per day in Kings Cross (p 58) which extended to 18 months gives an overdose rate, according to their projections, of 0.18/1,000. This lower rate of overdose would only serve to make the overdose rate in the MSIR even more disproportionate – where the MSIR rate of 23.5/1,000 is 133 times higher

Cross verification from ambulance callouts for the whole of Victoria

While the MSIR intervened in 2,657 overdoses in the facility, the whole of Victoria in the 18 months before MSIR commencement had 1,680 overdose callouts for ambulances

The MSIR review records on p63 that the entire state of Victoria had a total of **1,241** ambulance callouts where Naloxone was delivered in the 12 months before the MSIR opened. A graph with a more extended timeline on p65 allows us to reasonably accurately calculate that there were **1,680** ODs for the 18 months before the MSIR opened. So the MSIR had 2,657 ODs (of which 271 required Naloxone, but they claim that they can preclude the need for Naloxone because they are constantly monitoring ODs in the facility) and the whole of Victoria, by comparison, had only 1,680.

Of course not all ODs have Naloxone administered. For instance, Sydney MSIC clients in 2003 recorded that an ambulance attended 74% of their ODs. So if we take the 1,680 Victorian ambulance-attended ODs for the 18 months before the MSIR opened and factor in non-attended ODs there would likely have been around 2,270 comparable ODs for the whole of Victoria. This still is not close to the 2,657 in the first 18 MSIR months.

To amplify the magnificent disproportion of ODs in the MSIR, basic data from the MSIR review indicates that the 3,936 clients were averaging 14 injections

The MSIR, with only a small number of Victorians attending, averaging only 3% of injections in the facility, nevertheless outstripped ODs for the whole of Victoria, so disproportionate is its OD rate

per day (or about 4.3 million injections for the entire client group over 18 months) but also that they injected only 116,802 times in the MSIR (p x) of which 96.6% were heroin (p x) indicating that not even 3% of their cumulative injections were in the facility. So MSIR clients, almost 4,000 of them as against an ultra-conservative estimate of 20-25,000 opiate users in the whole of Victoria, had more ODs in the MSIR than the whole of Victoria, despite only injecting 3% of the time in the MSIR.

RATES 102 TIMES HIGHER THAN STREET RATES

As previously detailed, the rate of overdose inside the MSIR can be compared to a 'street' rate of overdose for a comparable clientele – in this case the overdose histories of Sydney MSIC clients before they registered to use the Sydney injecting room.

The MSIR had overdose rates a full 102 times higher than other similar injecting populations, and extraordinary number . . .

OD rate for the MSIR	OD rate on the streets
23.5/1,000	0.23/1,000
MSIR OD rates 102 times higher than street rates	

This OD rate is cross verified by other methods of calculation, as seen above.

Comparing the MSIR's overdose rate of 23.5/1,000 with pre-MSIC rates of Sydney clients, a rate of 0.23/1,000, yields MSIR rates which are fully 102 times higher than street rates of overdose.

This overdose rate eclipses the extraordinary rates recorded by the Sydney MSIC, where in 2010 its overdose rate was its highest to that date - 14.6/1,000 or 63 times higher than its own clients' pre-MSIC overdose rates.

even higher than the Sydney injecting room which had rates 63 times higher than the pre-MSIC overdose rates of its own clientele.

Table 10-2 : Overdoses by 1,000 injections

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	Total
Overdose per 1000 heroin injections	11.5	6.7	7.6	6.7	7.8	10.6	10.1	12.9	14.6	9.1
Overdose per 1000 other opioid injections						0.3	1.2	1.9	5.4	2.0
Overdose per 1000 other injections	4.2	2.6	1.8	1.2	0.8	1.1	0.5	0.8	1.3	1.6

Source: Medically Supervised Injecting Centre (MSIC)

http://www.directionsact.com/pdf/drug_news/MISC_evaluation.pdf

These extraordinary rates of overdose need to be explored.

Relevant factors driving heroin overdose

There is a considerable science on the causes of heroin overdose within Australia, which is covered in Research Paper 1 'Heroin Overdose' http://www.ancd.org.au/publications/pdf/rp1_heroin_overdose.pdf

researched for the Prime Minister's Australian National Council on Drugs in 2001.

Some of the extraordinary number of overdoses were likely from clients who were recently released from prison, where lowered tolerance makes the susceptible to overdose . . .

The paper summarises the causes of heroin overdose, nominating polydrug use (p 16) as the biggest factor, particularly where Central Nervous System (CNS) depressants such as alcohol or benzodiazapenes are used with heroin. Another identified factor is lowered tolerance (p 25), particularly after completing a prison sentence.

The MSIR review records that 23.3% of service users (p 37) were released from prison in the previous three months. This might possibly explain a quarter of the overdoses in the MSIR, but leaves the remaining three quarters of overdoses as explained by polydrug use.

but this would explain less than a quarter of the overdoses.

Given that the MSIR turns away all alcohol-intoxicated clients who present at the facility, alcohol would appear to be a less likely explanation for the high overdose rates than use of other drugs with heroin.

In light of the unprecedented number of overdoses in the MSIR, which are orders of magnitude greater than what should be expected, it is this latter recognition of non-alcohol polydrug use that should concern Australian Parliamentarians. *Overdose rates which are orders of magnitude greater than expected must inevitably be caused by drug purchases from local drug dealers which are likewise orders of magnitude greater than usual.*

The rest must come from polydrug use, the main cause of heroin overdoses, and with clients not allowed to use heroin with alcohol the other drugs used with heroin would have undoubtedly been mostly illegal drugs.

Australia is a signatory to the United Nations' 1961 Single Convention on Narcotic Drugs, as well as other drug Conventions, obligating our nation to deter drug use rather than facilitate it. The MSIR and MSIC are unquestionably multiplying drug use in Melbourne and Sydney, as well as multiplying drug dealer profits. This effect is, most important of all, intrinsically caused by the nature of what these facilities offer.

Experimentation - the factor driving high overdose rates

Testimony by ex-clients of the MSIC and MSIR in rehab[2] is that the overdose rates are so extraordinarily high because clients experiment with higher doses and broader ranges of drugs in the facility.

Below is the written testimony of a former Melbourne MSIR client who later went to rehab and is living without drugs.

There is uniform evidence from ex-clients of the Sydney injecting room that the safety provided by the room prompts users to experiment with toxic cocktails of drugs or with higher doses of heroin.

> My experience with the injecting rooms was around the time frame of March-April 2018. When I was needing clean needles, I always knew there was a vending machine out the front just like you would see for soft drinks like coca cola. This meant that I always knew in the back of my mind I could always find a way of using if all other options failed. I can remember other times when I had scored on Victoria Street and I would be on foot I would always end up in the injecting rooms. **The reason behind this was I knew it was a safe place to use and a perfect**

[2] See Hansard record of speeches by NSW MLC Gordon Moyes https://www.parliament.nsw.gov.au/Hansard/Pages/HansardResult.aspx#/docid/HANSARD-1820781676-38267 and by NSW Andrew Fraser MP https://web.archive.org/web/20121102211713/https://www.parliament.nsw.gov.au/Prod/parlment/hanstrans.nsf/V3ByKey/LA20101021/$File/541LA217.pdf recording the observations of MSIC ex-clients on why the overdose rate is so imaginably high.

> **environment to test my tolerance and my limits on how much I could take.**
>
> During this season of my life, I was in a very destructive headspace and I would find myself thinking a lot about ending my life. **The injecting rooms themselves created a network of people that enabled you to stay the same or introduce you to more contacts for more drugs.** Once again, this all only aloud (sic) you to push the limits more to test how much drugs you could take at any given time.
>
> **I had so many conversations during the time of my usage of the injecting rooms that it only highlighted more and more to me how many people were thinking the same thing.** The reality of what these rooms bring is more drug contacts which allows more dealers to make a profit. The sad thing is that this very profit was created from my misery as it was for everyone.
>
> To make matters worse no one ever tried to help me out of my self-destructiveness by pushing me towards counselling or showing any signs of sympathy. The reason behind all of this is because people make profit off addiction, but I was in too much of a dark place to care. **My honest opinion is if there was no injecting room in Richmond, I can honestly say I would have never relapsed.** It was too easy to fall into the pattern of full-blown addiction and roll the dice on death. These rooms only enabled me to stay on the path of destruction and hopelessness not the other way round.

This testimony gives a current and final validation to the previous testimonies of three ex-clients of the MSIC which were in rehab in 2007 recorded by NSW Parliamentarians in Hansard, the record of all Parliamentary speeches. One of the three gave her testimony directly to Andrew Fraser MP, independent of the other two clients from the William Booth rehab in Sydney.

From NSW Parliament Hansard's record of Legislative Council speeches on 26 June 2007, Gordon Moyes MLC recounted evidence from a taped recording where an ex-client was directly asked why the number of overdoses in the MSIC was so high.

> **DFA:** Have you been a client of the injecting room?
>
> **Ex-client:** I have, I have. To me I believe it has got a lot to do with the pills, people using pills in injecting rooms. They shouldn't be allowed to inject pills in my opinion.
>
> **DFA:** Our understanding was that they weren't allowed to be polydrug [using], you know, mixing … drugs [and pills].
>
> **Ex-client:** Yeah, but they don't know that, do you know what I mean? Like they go in there, and they start using, I have seen that they are going in for one thing but really they are going in for two [or three], with the heroin on top of the pills, but they won't … [tell anybody that].
>
> **DFA:** And the kinds of pills, I mean, benzodiazepenes we know are very dangerous when it comes to mixing with heroin and overdose. They are an extremely dangerous mix.

Ex-client: Extremely.

DFA: What other kind of pills are you talking about?

Ex-client: I was talking about Normasins, Oxycodones, just yeah all that kind of stuff. Xanax. Everyone I have seen drop in there, like one every now and again will drop on heroin, but it is the pills and the heroin [that they mix] together.

DFA: That's very revealing. There is something that has been going on in the injecting room, but we just haven't been able to work out why there are such high overdoses. And we've imagined that it must be experimentation … Is it the case that people would be experimenting with drugs in a way they wouldn't … [out] on the street?

Ex-client: They feel a lot more safer, definitely because they know they can be brought back to life straight away. They know … they can, like some people go to the extent of using even more. So in a way they feel it is a comfort zone, and no matter how much they use if they drop [meaning, die] they … [might] be brought back. What users look for in heroin and pills is to get the most completely out of it as they can, like virtually be asleep … For … [example] to get that you have to test your limits. And by testing your limits that is how you end up dropping [dead].

DFA: This does put some question marks on how the injecting room is being used and how lax they are, if they are being lax and allowing people to experiment.

Ex-client: Really people are sneaking behind their backs. They [don't know what is going on in there. They don't] … do it in front of them, but they're sneaking … they're criminals. You can hide anything from everybody. If you are doing it every day, night and day, you are only going in there for 10 minutes and you can just put yourself in front of your needle, something there so you can mix them up and then you can mix it up again, and they don't know you are mixing up again something different if you are just mixing up pills or mixing up heroin, they are just standing behind you and you're covering or you get the guy beside you to mix up something and [they look at him and] you can get kicked out for it—I've seen people get kicked out for passing things over, but they try and stop it, it is not the workers [fault] … they try their best, it is just [that we] are [all] sneaky people …

What these ex-client testimonies confirm

These client testimonies confirm the following:

Ex-client testimonies confirm that the extraordinary overdose rates are the result of high percentages of clients experimenting with more toxic drug doses, that this increases the amount of drugs they purchase to service the extraordinary overdose rate, that a successful experiment with a more toxic dose of drugs in the facilities means

1. That the extraordinary overdose rates in both facilities are caused by the same dynamic – the safety provided by the injecting rooms allow for **experimentation** with higher doses of heroin or with drug cocktails such as mixing benzodiazapenes with heroin, a noted cause of fatal overdose within Australia.

2. That this experimentation implies the **purchase of more drugs** than are usually consumed, which increases the profits of local drug dealers

3. That this is a **predominant reason** for using injecting rooms, which is attested by the extraordinary rates of overdose. When Drug Free Australia's Research Director asked the Melbourne MSIR ex-client how many other MSIR clients he had spoken to about experimentation at the MSIR he emphatically said 'hundreds, literally hundreds',

increased drug intakes thereafter and that injecting rooms can encourage recovered users to relapse given their promise of reviving a user who has overdose it in the room.

mentioning that he was well connected in the Melbourne drug scene.

4. That verbal testimony of the Melbourne MSIR ex-client stated that after testing limits at the MSIR, all subsequent injections would use higher amounts of drugs, thus **perpetuating the increased profits** for drug dealers even if users do not return to the injecting room after their experimentation.

5. That the written testimony of the Melbourne MSIR ex-client confirms that there would **not have been a relapse** into heroin use without the MSIR being available – such is the 'safety' that it offers.

The MSIC's own 2003 evaluation confirms the ex-client testimony

On page 62 of the first MSIC evaluation in 2003, the researchers stated that:

Even the 2003 government-funded evaluation of the Sydney facility not.ed the high overdose rates, confirming experimentation as a possible cause.

> "In this study of the Sydney MSIC there were 9.2 heroin overdoses per 1000 heroin injections in the MSIC, and this rate of overdose is likely to be higher than among heroin injectors generally. The MSIC clients seem to have been a high-risk group with a higher rate of heroin injections than heroin injectors who did not use the MSIC, they were often injecting on the streets, and **THEY MAY HAVE TAKEN MORE RISKS AND USED MORE HEROIN IN THE MSIC."**

The MSIR Review's incorrect explanation

It is telling that the MSIR review avoids any assessment of the facility's overdose rates in comparison to other known rates of overdose within Australia.

The MSIR review claimed unknown purity of heroin and harmful contaminants as explanation for the high overdose rates, to which they failed to draw any specific attention . . .

On page 13 of the MSIR review, footnote 4 records the review's explanation for the high overdose rates. It claims that,

> "An increase in drug-related deaths does not necessarily relate to overall increased consumption but may also relate to the purity (strength) and quality (contamination) of drugs available, and to changing patterns of poly-drug use."

This explanation does not accord with the science on Australian heroin-related deaths. Research Paper 1 'Heroin Overdose' http://www.ancd.org.au/publications/pdf/rp1_heroin_overdose.pdf researched for the Prime Minister's Australian National Council on Drugs in 2001 had the following observations on purity and contamination.

> ***Purity***
> Two popular misconceptions, among both heroin users and the wider community, are that the major causes of opioid overdose are either unexpectedly high potency of heroin or the presence of toxic contaminants in heroin. The evidence supporting these notions is, at best, sparse.
>
> If overdose were a simple function of purity, one would expect the blood morphine concentrations of fatal overdose victims to be significantly higher than living intoxicated heroin users. As described above, it has been found that many individuals who die of an opioid overdose have blood morphine concentrations at autopsy that are below the commonly accepted toxic dose.

Studies that have investigated the relationship between the purity of street heroin seizures and fatality from overdose report a weak correlation, or no correlation, between heroin purity and fatality from overdose.

But both of their explanations rarely occur in Australia.

Contaminants

It is highly unlikely that toxic contaminants in heroin are responsible for fatalities associated with heroin use in Australia. If it were the case that contaminants were associated with fatalities, one would expect decreases in rates of fatal overdose as heroin purity increased. While seizures of street heroin in Australia between 1996 and 1999 have shown an increase in purity over this period, no corresponding decrease in fatalities has been observed.

In general, studies outside the eastern United States do not report the detection of impurities in seized heroin. Adulterants found in Australian heroin samples are largely pharmacologically inactive dilutants (used to add bulk) or caffeine (believed to increase the bioavailability of heroin when smoked).

Despite the MSIR reviewer's appeal to purity and contamination issues as causes for high heroin overdose rates, Australian evidence negates their explanations, leaving lowered tolerance upon leaving prison and experimentation as the only defensible alternatives.

ENHANCED PROFITS FOR DRUG DEALERS

Polydrug use, where other (mostly) illegal drugs are bought from dealers and used with heroin, inevitably means that the MSIC, with overdoses 102 times higher than normal, is helping to enrich drug dealers – to have all those overdoses users have to buy more drugs than for yesterday's hit . . .

Experimentation with higher doses of heroin or more particularly with cocktails of heroin co-used with other CNS depressants or stimulants *inevitably* entails more drugs purchased from local dealers to service the inordinate overdose rates. More overdoses inevitably entails more profits for drug dealers. *This conclusion is as inescapable as it is damning for injecting rooms in Australia.*

This makes the MSIR a government-funded accessory to the North Richmond drug trade, where the inordinate number of extra drugs purchased created overdose rates 102 times higher than normal.

IN CONTRAVENTION OF INTERNATIONAL OBLIGATIONS

Australia is a signatory to the United Nations' 1961 Single Convention on Narcotic Drugs. Our country agreed to inhibit drug dealing, yet we have facilities in our two biggest cities demonstrably enhancing drug dealer profits, the very antithesis of what the Conventions seek.

and with both injecting rooms increasing drug use, with the safety for experimentation intrinsic to their operation, both are in breach of international Drug Conventions, to which Australia is a signatory

Australia has international obligations as a signatory, and is bound by those obligations to remove any interventions which are increasing drug use. For this reason the two facilities must be immediately closed, given that the high overdose rates are an intrinsic effect of the safety offered to an experimenting clientele by these facilities.

MSIR – 18 MONTHS TO AVERT ONE DEATH

The MSIR is not statistically capable of averting even one death per year . . .

Australian overdose statistics indicate that the MSIR is not even capable of averting one death per annum.

That is not to say that supervised injecting facilities cannot save any lives – the MSIR did host enough injections in its first 18 months to avert one death, but not enough in 12 months to do the same. This explains why no effect is seen for the MSIR at the community level.

The maths is very straightforward.

It derives from the European Monitoring Centre's (EMCDDA) 2004 Review of Drug Consumption Rooms http://www.emcdda.europa.eu/html.cfm/index54125EN.html. Their method avoids the error of many other studies which have made the simplistic error of calculating averted deaths from the raw number of overdoses in the supervised injection facility assessed. If the safety of the room is vastly and unnaturally elevating overdoses, artificially inflated overdoses within a facility cannot possibly be defended as the starting point for calculating averted deaths. Yet too often, enthusiastic researchers seeking to promote injecting rooms, see the high overdose figures as an opportunity for demonstrating that many lives have been saved, casting proper methods to the wind.

There is well-utilised Australian data indicating that one in every 100 dependent heroin users die each year from an opiate overdose. So well established is this ratio it has been used to officially back-calculate the number of Australian heroin users in a given year using the number of heroin fatalities for that year.

From this ratio we know that on any of the streets of Australia, one heroin user on average will die for every 109,500 opiate injections. It is calculated as follows.

Dependent heroin users, the ones most at risk of overdose, inject 'at least' 3 times a day. This was a fact that formed the backbone of 'deaths averted' calculations in the 1st MSIC Evaluation as seen on page 58 of that document. One user will inject 3 times daily for 365 days in the year, or 1,095 times in a year, just as 100 users will inject 109,500 times (3 injections per user per day x 365 days in a year x 100 users) of which one injection will be fatal. The 112,830 heroin injections hosted during the MSIR's first 18 month evaluation period is minimally more than the 109,500 injections which would have normally been associated with one death.

but costs $6 million before it can statistically claim it has saved one life . . .

The aversion of just one death in 18 months accords well with the community-level deaths observed within 1 kilometre of the MSIR, in the Yarra LGA, in the city of Melbourne as well as the State of Victoria, where no observable difference was made at any of these levels.

Calculating deaths averted from overdose numbers within the MSIR - without first comparing MSIR overdoses to other known overdose rates in the community – leaves only two invidious options for reviewers - the claimed 21–27 deaths averted is inept or possibly fraudulent. Governments need to be made very aware of this fact.

which via rehab would save many, many more lives.

For the $6 million spent by the MSIR to save one single life, the Victorian government could provide 73 optimally-funded residential rehab beds for a full year.[3] $6 million can statistically save one life in the MSIR (which can nevertheless be lost tomorrow injecting elsewhere) or alternatively make many users drug-free, given that a residential rehab bed is filled by more than one opiate user in a year. Successfully rehabilitated users reduce the need for police expenditures and ambulance interventions as drug use is ceased altogether.

CLOSURE THE ONLY OPTION

Encouraging drug use, lining the pockets of drug dealers, and being in breach of our international obligations indicates that urgent closure of these facilities is the only option.

Closure of the MSIR will immediately stop the mass experimentation with drugs currently happening, an experimentation which is likely to only promote more opiate-related deaths outside the facility.

This is a matter of urgency, and State Premiers must be given this information alongside advice on our obligations to the international Drug Conventions.

The United Nations' International Narcotics Control Board (INCB) must likewise be given this information and charged with investigating all Supervised Consumption Sites world-wide in light of high overdose rates recorded almost uniformly across all sites.

Governments should never be in the business of lining drug dealers' pockets.

Note: Readers of this document may also find Drug Free Australia's exposure of the inept or fraudulent Lancet study on Vancouver's Insite injection facility enlightening.
https://drugfree.org.au/images/13Books-FP/pdf/Lancet_2011_Insite_Analysis.pdf

[3] In August 2018 the NSW Legislative Council's Portfolio Committee No.2 (Health and Community Services) Report 49 recommended "That the NSW Government significantly increase funding to drug and alcohol related health services" (Recommendation 2). The NADA submission https://www.nada.org.au/wp-content/uploads/2019/03/NADA-Submission_-NSW-AOD-Beds_120319.pdf recommended $224.95 of funding per bed day for residential rehabs, which equals $82,106 per annum or 73 bed years for the $6 million to save one life in an injecting room. If patients are offered 6 months of rehab each over 140 users will have been assisted towards being drug-free, freeing them from the morbidity of non-fatal overdoses and freeing the community of crime and public nuisance

Analysis of the 2011 Lancet study on deaths from overdose in the vicinity of Vancouver's Insite Supervised Injection Facility

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Executive Summary

In an article published in *The Lancet* on April 18 2011, it was claimed that Vancouver's Insite Supervised Injection Facility, which commenced operations on 21 September 2003, was associated with a 35% decrease in overdose deaths in its immediate surrounding area compared with the rest of Vancouver which had decreases of 9%. However, the article contains serious errors which make that claim unsustainable.

The *Lancet* article's claim that all overdose deaths in Vancouver declined between 2001 and 2005 is strongly influenced by the inclusion of the year 2001, a year of markedly higher heroin availability and overdose fatalities than all subsequent years. A study period starting from 2002 in fact shows an increasing trend of overdose deaths. The higher availability of heroin in 2001 was the subject of two previous journal articles by three of the *Lancet* article's researchers, but was not acknowledged in this current study.

The *Lancet* article's researchers also failed to mention that 50-66 extra police were specifically assigned to the 12 city blocks surrounding Insite since April 2003 which are a significant part of the target area in which the questionable 35% reduction was said to occur. A change in policing such as this could account for any possible shift in overdose deaths from the vicinity of Insite. Remarkably, three of the *Lancet* article's researchers had previously published a detailed analysis of the effects of the changed policing, where they described drug users as 'displaced' from the area around Insite.

The facility is statistically capable of saving just one life per year from fatal overdose, a reduction which would not be detectable at the population level. This estimate is backed by the European Monitoring Centre's methodology and avoids the error of naively assuming overdose rates in the facility match overdose rates in the community.

In their unsubstantiated claim of decreased overdose deaths as a result of Insite's presence, the researchers further failed to mention that 41% of British Columbia's overdose fatalities are not even injection-related, and therefore not relevant to any putative impact Insite may have.

Overdose deaths and Vancouver's supervised injection facility

The report by Brandon Marshall and colleagues (April 23, p 1429),[1] in which it is claimed that the opening of a supervised injection facility on Sept 21, 2003, in Vancouver, BC, Canada, was associated with a 35% decrease in overdose deaths in its immediate surrounding, contains serious errors.

The claim that all overdose deaths in Vancouver declined between 2001 and 2005 is strongly affected by the highly questionable inclusion of the year 2001—a year of much higher heroin availability and overdose fatalities than all subsequent years. A study period starting from 2002 in fact shows an increasing trend of overdose deaths both for Vancouver and for the Downtown Eastside area in which the facility, Insite, is situated (figure),[2] the control areas compared in Marshall and colleagues' study.

Curiously, the higher availability of heroin up until 2001, which declined by 2002 and which has remained low since that year, was specifically tracked in two previous articles[3,4] by three of the current paper's researchers and therein treated as extraordinary. In their latter 2007 study,[4] the aforesaid three researchers noted that, in a large cohort of Vancouver drug users, 21% had reported non-fatal overdoses in the previous 12 months in 1997, dropping to 12% at the beginning of 2001 and to 5% by the end of 2001, rising to 6% in 2004. They clearly point to reduced heroin supply as the reason, and yet in the *Lancet* paper specifically state that "we have no evidence that significant changes in drug supply or purity occurred during the study period", which of course was 2001 to 2005.

Of even greater concern is the statement in the *Lancet* paper that "we know of no changes in policing policy that could have confounded our results". Again, three of the researchers were so well appraised of major policing changes in the area immediately around Insite during 2003, the same year it opened, that they wrote a 2004 article tracking the "displacement" of drug users out of the policed area around Insite and into other areas of Vancouver.[5] In that article they record counts of discarded needles reducing by 46% in the policed areas whereas needle counts in other areas of Vancouver increased by similar proportions. Most of the overdoses that were the subject of the questionable 35% reduction immediately around Insite lay specifically in the 12 city blocks patrolled by 48–66 police added in 2003 and operative to this day (personal communication). This major change in policing around Insite is clearly the most likely cause of any real reductions in overdoses that might be found in the immediate vicinity of the injection facility.

Finally, Marshall and colleagues do not declare that 41% of British Columbia's overdose mortality is non-injection-related.[6] This being the case, the researchers had the obligation of declaring the specific proportion of deaths that were non-injection-related in the vicinity of Insite, compared with the rest of Vancouver.

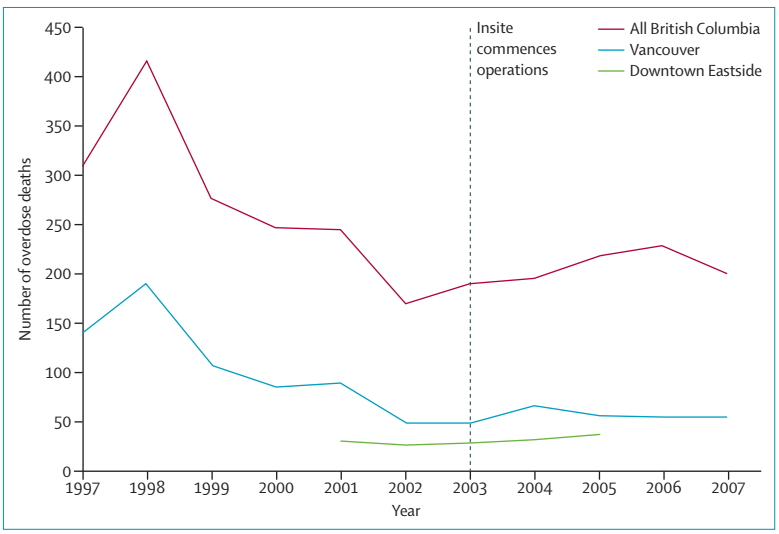

Figure: **Drug overdose deaths 2001–05**

An extended analysis is available online. We declare that we have no conflicts of interest.

For the **extended analysis** see http://www.drugfree.org.au/fileadmin/Media/Global/Lancet_2011_Insite_Analysis.pdf

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