



## Fentanyl behind bars: The implications of synthetic opiates for prisoners and correctional officers

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### ABSTRACT

**Background and Aims:** Fentanyl and derivatives are lethal components of North America's opioid crisis. Prisons often house a disproportionate number of illicit opiate users. To date, no on-the-ground empirical research exists on how opioids are altering the health and risk profile of prisons. The objectives of this study were to examine (1) how fentanyl and its analogues have shaped the prison experience for prisoners; and (2) how these opioids have altered the occupation of correctional officers (CO's).

**Methods:** We conducted semi-structured interviews with 587 adult prisoners and 131 COs across four provincial prisons in Western Canada. Prisoners were recruited on their housing units and randomly selected. COs were recruited through non-probability, theoretical sampling. We employed a generalized prompt guide and asked a range of questions pertaining to how the presence of fentanyl and its analogues have changed the prison experience for prisoners and have impacted the work routine of COs. Interviews were digitally recorded, transcribed verbatim, thematically coded and analyzed using Nvivo 11.

**Results:** For *prisoners*, we identified four main results: (1) the presence of fentanyl leads to an increased number of overdoses; (2) prisons are nonetheless perceived as a comparatively safe place to use drugs; (3) fentanyl is often mixed into other drugs, making it hard for drug users to avoid fentanyl; and (4) prisoners fear fentanyl is being weaponized. For *officers*, we identified: (1) increased fears about inadvertent personal exposure or widespread institutional opioid contamination; (2) fear of targeted poisonings; (3) changing attitudes towards opioid-using prisoners; and (4) a declining commitment to correctional careers.

**Conclusion:** The presence of fentanyl in prisons has significantly influenced how prisoners experience prison and relate to each other and how COs perceive their job. COs now identify fentanyl as the greatest risk to their safety in prisons.

### Introduction

A recent United Nations report found Canadians to be the world's second largest per-capita consumers of opioids (Weeks & Howlett, 2015). In 2015, Canadian doctors wrote a sufficient number of opioid prescriptions to provide a prescription to one in every two of Canada's 36 million citizens (Howlett, Giovannetti, Vanderklippe, & Perreux, 2016). This has contributed to a well-publicized health crisis, with 2861 Canadians dying from opioid overdoses in 2016. Approximately 1000 more individuals died of an opioid overdose that year than died in traffic accidents in 2016 (Transport Canada, 2017). Health officials have concluded that 2923 Canadians died from overdoses in 2018 (Public Health Agency of Canada, 2018), with over 1600 having occurred in Western Canada alone, despite increasingly urgent govern-

ment interventions.

A key contributor to the escalating levels of opioid addiction and fatalities has been the emergence of the synthetic opioid fentanyl and its analogues, such as carfentanyl (World Health Organization, 2017). These drugs are exceptionally potent, with fentanyl being 100 times more powerful than morphine, and carfentanyl a staggering 10,000 times more potent than morphine (National Center for Biotechnology Information, nd). Physicians prescribe fentanyl to patients experiencing chronic or acute pain, while carfentanyl is used to tranquilize large animals, such as elephants. Russia has also weaponized carfentanyl, spraying an aerosol version into Moscow's Dubrovka Theater Center in 2002 to incapacitate Chechen rebels who had taken more than 800 people hostage—126 of whom died from inhaling the drug (Wax, Becker, & Curry, 2003).

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The Canadian opioid crisis has been most acute in the Western provinces, specifically British Columbia, Alberta, and Saskatchewan. In April 2016, the British Columbia government declared an opioid public health emergency. The adjacent province of Alberta—with a population of roughly 4 million—saw 368 opioid-related deaths in 2016, up from only 6 in 2011 (Alberta Health, 2017). In May of 2017, the Alberta provincial government declared opioids a public health crisis and formed an opioid emergency response commission. While Saskatchewan has been less affected by the opioid crisis than British Columbia and Alberta, the province's capital, Regina, ranked fifth in 2017 for the highest rate of opioid poisoning hospitalizations of all Canadian cities with a population over 100,000 (Richards, 2017).

As is common with many public health emergencies, the risks associated with opiate use are most pronounced for marginalized members of society (Shi & Stevens, 2010). Prisons figure prominently in this equation, as they tend to house a disproportionate number of individuals with histories of substance use/abuse, street-involvement, and mental illness (Bland, Newman, Thompson, & Dyck, 1998). Men and women in prison also suffer disproportionately from related health concerns, including HIV, Hepatitis C, and tuberculosis (Dufour et al., 1996; Kouyoumdjian, Schuler, Matheson, & Hwang, 2016; Poulin et al., 2007). Prisons consequently have a disproportionate number of opiate users and appear to be acute 'concentration points' for the use and attendant risks of powerful new synthetic opioids.

On any typical day in Canada, over 40,000 men and women are held in Canadian prisons, the majority of whom are incarcerated in provincial institutions (Reitano, 2017). Only a small amount of independent prison research has been conducted in Canada (Weinrath, 2016), and no prior empirical research in Western Canada has looked at the profile of drug use among prisoners. It is widely acknowledged, however, that illicit drugs can be regularly found in prisons both in Canada and globally, although the local specifics and concentrations vary (Crewe, 2005; Mjåland, 2014; Wheatley, 2016). Previous researchers have examined the role of drugs in prison culture in other national contexts (For example, Beyrer et al., 2003; Crewe, 2005), as well as drug harm reduction in Canada's federal correctional system (Wheatley, 2016).

With respect to drug use, it is well established in the scholarly literature that patterns of life-time drug use, injecting drug use, and problematic drug use are higher among prisoners than the general population (AIHW, 2013; Boys et al., 2002; Fazel, Bains, & Doll, 2006; Kolind & Duke, 2016). As Kolind and Duke (2016) have argued, however, studies on drug use and drug users in prison are characterized by having numerous limitations in relation to validity and reliability. Most importantly, prisoners have often been reluctant to divulge their drug use activities in survey research due to the fact that drug use is illegal in most prison research settings. Fear of formal or informal consequences, such as sanctions and punishment by correctional officers or the courts, as well as further surveillance, contribute to a low willingness to self-report drug use to researchers.

Likewise, the situation with fentanyl and carfentanyl is dramatically different from previous drug crises, and is of such recent origin that no on-the-ground empirical research exists on how these opioids are altering the health and risk profile of prisons. While the provincial corrections ministries do not release official data on overdoses in prisons, it became clear to us during an extended period of research in provincial prisons in Western Canada that the introduction of fentanyl and its analogues into prison was altering a range of dynamics for both prisoners and correctional officers.

Based on these considerations, the objectives of our analysis here are to examine: (1) how fentanyl and its analogues have changed how prisoners relate to each other; and (2) how fentanyl and its analogues have altered the occupation of correctional officer (CO). These findings draw from 587 semi-structured qualitative interviews with prisoners

and 131 interviews with correctional officers across four provincial jails in Western Canada.<sup>1</sup>

## Methods

Our project was approved by the Ministry of Justice and Solicitor General and the university's research ethics board in 2016 (Pro00061614). Two of the four prisons we studied were pre-trial (remand) custody centers, housing over 1600 prisoners and 700 prisoners during our research, respectively. One prison was a smaller, sentenced facility housing around 300 prisoners, and one was a mixed facility, detaining both remand and sentenced prisoners (500 in total). Remand facilities hold all adults awaiting trial, a group encompassing individuals who have missed paying a speeding ticket all the way to those accused of multiple murder. Provincial sentenced facilities house those sentenced to a term of incarceration of two years or less. Except for the sentenced facility, all prisons contained female and male prisoners. Ninety-two of our 587 prisoner participants and 21 out of the 131 correctional officer participants were women, reflecting the proportionate gender profile of both populations.

We received ministerial sign-off on our project, something that appeared to provide us with considerable legitimacy in the eyes of many correctional officers, who tend to be suspicious of outside researchers (Liebling, Price, & Shefer, 2010). Our main research focus was on prison life in general and security threat groups (gangs and radical groups). Drugs made up a significant part of the discussions on prison life, as did prison gangs. Our research agreement allowed us to spend 3 to 4 weeks of intensive fieldwork at each institution conducting interviews. We also spent some weekends in prisons (when different routines are in operation). We could walk freely inside the prison and go on every living unit, including segregation and special handling units. With a team of six to eight researchers, our strategy was to place one researcher on each living unit to interview prisoners and have one researcher move from unit to unit to recruit potential correctional officer participants.

We announced our project on each prison living unit, and prisoners self-identified if they wanted to participate by listing their name or ID number on a sign-up sheet. The only inclusion criterion was participants had to be housed in one of the prisons, excluding the mental health unit (we did not interview on those units, which typically housed between 0 and 10 prisoners). As we could not interview every prisoner who volunteered, we randomly selected participants from the sign-up sheet. Since we were not allowed access to any written documentation on prisoners (such as their criminal record), quasi-random sampling was our only option. However, given the large sample size and the fact that almost every prisoner signed up for the interview on every unit, we believe we achieved a representative cross-section of prisoners housed in provincial prisons in our setting.

We recruited officers through non-probability, theoretical sampling—i.e., 'snowball' sampling (Biernacki & Waldorf, 1981; Maxwell, 2013; Warren, 2001). Although one limitation of snowball sampling is that it depends on relationships amongst research participants, its utility for accessing suspicious, hard-to-reach populations is widely accepted (Wright, Decker, Redfern, & Smith, 1992). Variations of this approach are common in other qualitative studies (Bourgois, 2003; Bucerius, 2013; Fassin, 2017; Kruttschnitt & Gartner, 2005; Sloan, 2016), and have proven useful for studying tightly-controlled sub-cultural groups, such as police and correctional officers (Chan, 1996; Crawley, 2004; Loftus, 2010; Miller & Selva, 1994; Waddington, 1999).

To meet our objectives, we gathered our data relating to both groups through semi-structured qualitative interviews. We employed a generalized prompt guide to ensure consistency between interviews. During the preliminary sensitizing discussion with each interviewee the topic of

<sup>1</sup> As part of our research contract, we do not name the province in Western Canada in which our research took place.

drugs regularly was raised in relation to questions about the prison routine, challenges to being in/working in prison, and what they saw as ‘new’ in prison. When the issue of drugs was raised we would ask a range of questions pertaining to drugs—for example, what percentage of prisoners on their unit they estimated were regular substance users; if and how the presence of fentanyl has changed their interactions with other prisoners; and if and how the presence of fentanyl was different from other drugs in prisons. Our correctional officer participants, were asked, for example, if and how the opioid situation is affecting their work, and if and how the presence of fentanyl in prison is different from other drugs.

We interviewed prisoners in private meeting spaces available on, or adjacent to, their respective unit. We interviewed officers primarily in private offices or empty rooms within the jails, but sometimes at a nearby coffee shop or restaurant. Interviews averaged approximately 50 min for correctional officers, and 90 min for prisoners. We digitally recorded the interviews, transcribed them verbatim, and analyzed them thematically using Nvivo 11 coding software. A group of four researchers developed a detailed data coding scheme. The prisoner data consists of 63 main codes, such as gangs, violence, drugs, extremism and 275 sub nodes, whereas the correctional officer data consists of 27 main codes and 74 sub nodes. Once we reached between 85–90% overlap in how we coded the transcripts we co-coded the entire data set.

## Results

### *The influence of fentanyl on prisoners*

As our study progressed during 2016/2017 fentanyl was becoming increasingly common in the prisons we studied, a development that unnerved a significant subset of the prisoner population, with interview participants referring to fentanyl as “scary as fuck” and “Mr. Murder.” Prisoners identified four areas where the presence of fentanyl has had a profound impact on the dynamics of prison units: 1) an increased number of overdoses; 2) prison nonetheless being a comparatively safe place to use; 3) fentanyl being mixed with other drugs available in prison; 4) the prospect fentanyl was being weaponized. We will speak to these themes in turn. As is common in qualitative studies, we have selected interview quotes that best reflect our findings. If we present a minority view, we have indicated it as such.

Despite the fact that prisoners can be deeply distrusting, approximately 80% of male prisoners and 90% for female prisoners agreed to participate in this study. When asked about how many of their fellow prisoners have substance abuse issues, the answers ranged between 85 and 90 percent among our male participants, and 90–100 for our female participants. Over 75% of the inmates we spoke with knew someone who overdosed in prison (though did not necessarily die, as the majority of inmates who overdose are saved). As noted, correctional ministries do not release statistics on overdoses, but our conversations with correctional officers, managers, and nurses suggests the number of overdoses in a given month on a particular prison unit (typically housing between 50 and 80 individuals) ranged between zero and 9, depending on the facility. The remand prisons and intermittent sentencing units in our sample tended to be higher on this scale, something likely attributable to the greater degree of prisoner movement on such units. For sentenced prisons, the presence of drugs was significantly lower. Consequently, sentenced prisons experienced fewer overdoses (with the exception of the intermittent sentencing units where prisoners serve weekend sentences). Only a small minority of these overdoses lead to the death of a prisoner; most prisoners who overdose are revived with Naloxone.

Our findings suggest despite efforts by correctional officials to control the drug trade, opioids and other drugs (notably methamphetamine) are often widely available in Western Canadian provincial prisons. This is especially true for the remand facilities. Turn-over in remand is high; the average length of stay is less than two weeks (Reitano, 2017). Remanded prisoners are regularly moved within the

prison to attend court hearings or meet their lawyers. Such constant movement makes it relatively easy for prisoners to smuggle drugs into prison and smuggle it onto different units (drugs are often smuggled within body cavities). As one inmate told us:

*“Some of the gangs, it’s their business to run the drug trade in here. They look around for little kids who have a cash bail. They get the money together, bail the kid out and tell him to pack up [drugs] outside and then come back in. Like, get yourself picked up by the cops and go back to remand. The kids hand off the drugs. Boom. It’s a business. It’s all a business.”*

While our prisoner participants talked about the stark increase in overdoses in prisons since the onset of the opioid crisis, they also perceived prison to be a comparatively safe place to use drugs. The correctional officers have Naloxone, and monitor prisoners for overdose symptoms. Prisoners also typically use in the presence of another inmate who could potentially inform nearby officers in the event of an overdose. *“You take turns. Your buddy uses and you watch and then you use and your buddy watches. Kind of like spotting at the gym.”*

The extreme potency of fentanyl and carfentanyl means users can overdose on small amounts. Given the potency, most participants told us they do not purchase pure fentanyl/carfentanyl, but typically encounter the drug mixed (buffered) with other substances, such as baby powder or powdered sugar or mixed with other street drugs as an inexpensive way to enhance a user’s high. Given inconsistent mixing practices, it can be impossible for users to tell how much fentanyl is contained in the drug they are consuming, which increases the overdose risk as well. Justin, a street-level cocaine dealer, gives us a sense of the fentanyl situation:

*A: Oh, it’s everywhere. It’s in your cocaine. It’s everywhere. They’re sprinkling it on pot for fuck’s sakes. It’s because it’s addictive. You smoke a joint or something, and now you’re all fentied out. You want more of that, you want that same high. Next thing you know, they are like... ‘Oh, that’s fentanyl? Well, I may as well just get fentanyl.’ It’s stupid...*

*Q: So, they’re sprinkling it on weed?*

*A: Yeah, on everything.<sup>2</sup>*

Our interviewees regularly observed, for example, that it is difficult to now buy heroin because “It’s all fentanyl.” At the time of our research a considerable portion of fentanyl use consequently appears to be unintentional, consumed by users who thought they were ingesting something else, a situation that significantly increases the chances of accidental fatalities (Almani et al., 2015). Poor mixing practices can result in some portions of a batch of pills, for example, containing little or no fentanyl, while others having many grains—a potentially lethal dose.

Many of our participants focused their comments on how fentanyl has changed relationships amongst prisoners. For example, sharing food in prison is one of the few ways prisoners can enjoy socially reciprocal interactions commonplace outside of correctional institutions (Crewe, 2005). Sharing birthday cakes made from snacks purchased through the canteen is a well-established ritual that helps maintain some semblance of “normalcy” while in prison. While the majority of our participants continue to share food, a minority in our sample (about 10 percent) are increasingly wary about such practices, and refuse to consume anything but pre-packaged food. As one participant explained: *“You don’t know what’s in that bag of chips, you know? You can’t trust no one anymore. Anything can be laced.”*

While the fear of food being laced with opioids was more common among prisoners involved in organized crime who likely had more

<sup>2</sup>In fact, the question of whether marijuana was being laced with fentanyl was hotly debated, but all parties (prisoners, correctional officials, police, and health authorities) agreed fentanyl was routinely being laced into almost all other street drugs.

reason to fear for their lives, it also speaks to the prospect that new opioids can be weaponized. Prisoners involved in upper level gang activities or who occupied the higher ranks of organized crime groups, told us “*not every overdose you see is actually an overdose. It’s called ‘Mr. Murder’ for a reason.*” It is this prospect that fentanyl is being (or could be) weaponized that represents the most dramatic change fentanyl is producing in prison. Traditionally, prisons are informally controlled by the “heavies” (Skarbek, 2014; Sykes, 1958), i.e., prisoners with the power to influence the rest of the men or women on their unit. Heavies, often connected to prison gangs, use the drug trade to make money inside the facility, as numerous participants told us: “*the heavies or the gangs holding the floor get a cut of what comes in.*” Consequently, drugs provide an important source of income in prison, with trafficking drugs often being one of the few ways for prisoners to make money they will need to survive upon release, or to simply buy canteen products, such as food or toiletries. With the introduction of fentanyl, however, many prisoners became less tolerant of the presence of drugs on their unit. This is particularly true among the “maximum security inmates” in our sample, i.e., those subjected to the tightest security controls based on the crime they have committed or their behavior inside the jail, oftentimes involving violence. These prisoners are more likely to have ongoing disagreements with other prisoners, potentially over long-standing gang conflicts or other feuds, commonly related to their lives outside prison. In other words, they are more likely to have enemies wanting to kill them. Numerous maximum-security prisoners in our sample told us how, as a consequence, they prefer their units to be “dry,” i.e., drug free. When asked why, they explained: “*...because I tell you what they do. They put a fucking straw in your nose and blow fentanyl up your brain. Perfect overdose. No one can proof anything. It’s happened here. You can’t trust anyone on these units*”<sup>3</sup>

#### *Influence on how correctional officers do their job*

While the opioid crisis has profoundly altered relationships amongst prisoners, our data show it also affects correctional officers in several ways. Such individuals oversee a complex security infrastructure designed to combat the presence of drugs in prison, something that includes, among other things, cell searches, body searches, mail openings, drug detection dogs, drug testing, ‘dry cells,’<sup>4</sup> and electronic body scanners. Nonetheless, our data show that correctional officers have often approached drugs in prison in much the same way as a gardener understands the presence of weeds in her garden; as a common annoyance against which she must fight a constant battle.

The emergence of new, more powerful, and lethal opioids has markedly transformed this longstanding orientation towards drugs in prison. For correctional officers, our data suggest the fentanyl situation is contributing to: 1) increased fears about inadvertent personal exposure or widespread institutional opioid contamination; 2) fear of targeted poisonings; 3) changing attitudes towards opioid-using prisoners, and 4) a declining commitment to careers in corrections.

Officers are particularly unnerved by the lethality of these powerful opioids, and regularly commented on the risk of inadvertent exposure and contamination. Dozens of Western Canadian officers have been hospitalized due to fentanyl exposure (Grant, 2017). The fear fentanyl might be inadvertently absorbed through the skin or that officers might be exposed to airborne carfentanyl is pervasive. Our interviewees frequently referred to one instance, for example, where an officer, after having been in a fight with an inmate, brushed dust from his uniform. Soon afterwards he experienced physiological symptoms, was

<sup>3</sup> The extent to which such attacks had happened was impossible to discern, but the fear of such surreptitious poisoning was palpable for many prisoners.

<sup>4</sup> A ‘dry cell’ is a special cell designed to hold prisoners who are suspected of holding drugs in their body cavities. The cells do not have drains or flush toilets, and officers inspect an inmate’s bodily waste for contraband.

administered Narcan, and was rushed to the hospital, as the dust he had casually brushed away was a fentanyl analogue.

As previously noted, such poisonings can also be intentional. Both prisoners and guards are vulnerable to attacks using fentanyl. One prisoner who was heavily involved in selling drugs (but not fentanyl), reflected on the prospect that fentanyl could be weaponized against guards:

*One of these times man, an inmate is going to have too much of a certain guard trying to push his weight around and he is going to catch some of that, and he is going to blow it in his face or whatever. That stuff, you need like a grain of salt, or whatever. You don’t need much. And to get it in here is not very hard.*

While it seems unlikely someone would blow fentanyl or carfentanyl in someone’s face, the reality is these potentially lethal substances are circulating unregulated in an environment characterized by frequent antagonisms and violent altercations between staff and prisoners. All parties housed and working in the prison know it would not take much ingenuity or initiative to deliberately poison officers with these drugs.

Fentanyl in prison also brings with it the prospect of institutional disruption or pandemonium. For example, one unit in a prison we studied had recently been quarantined when two officers and one inmate became ill and were rushed to the hospital. It was assumed they had been exposed to fentanyl or carfentanyl,<sup>5</sup> and the situation was treated as a biohazard; prisoners were locked in their cells, officers were evacuated from the unit, and the emergency response team was eventually sent in wearing full biohazard respiratory suits. Officers who had potentially been exposed underwent a full decontamination procedure. Prison management was wholly unprepared for this situation, suggesting the risk of institutional chaos can hardly be overstated should carfentanyl go airborne on a large scale in prison. As one of the prison managers who was at the scene for this incident concluded, the main lesson of this event was “*if we had a major outbreak of an agent, there would be multiple casualties.*”

The true likelihood of inadvertent contamination and overdose is ultimately unknown and perhaps over-dramatized by correctional officers (Faust, 2017). Nonetheless, their fear of such exposure is acute, and has serious repercussions. While it is possible that some officers are not actually experiencing overdose symptoms but something more akin to a panic attack, the outcome on their work is the same: officers are concerned about potential exposures which affects their attitude and commitment towards their job. For example, a vital security responsibility of correctional officers is to search prisoners’ cells for weapons, drugs, or other contraband. The fentanyl crisis has significantly reduced officers’ willingness to do so, as they do not want to accidentally contact hidden fentanyl or stir it up into the air (Bell, 2017). As one officer noted: “*...it’s to the point now where nobody wants to go into the cell, because I’m not going to the fucking hospital.*” A different officer, who has worked in corrections for sixteen years, was more direct, saying she simply no longer searches cells: “*I won’t. I won’t do it. ... I wasn’t scared of the [gang conflict] problem. I wasn’t scared of any other drug problem that we have. But I’m scared of fentanyl. I’m scared to walk in the cells. I am.*”

Correctional officers’ concerns about inadvertent contamination also produce downstream consequences for prisoners. Some officers insist on wearing protective equipment such as masks before entering cells to resuscitate overdosing prisoners. However, collecting and donning such equipment during an overdose emergency increases response times—time that can affect whether an overdose victim will live, die, or have permanent brain damage.

The escalating number of prisoner overdoses also qualitatively changes the nature of an officer’s job, as officers are increasingly dealing with overdose emergencies and resuscitating overdosing

<sup>5</sup> The exact contaminant was never identified, as the emergency response unit somewhat inexplicably failed to save a sample of the substance.

prisoners.<sup>6</sup> As one participant recounted, “It’s like in two weeks I’ve probably seen three or four blue bodies come back to life, because of Narcan. They were shot three or four times. I’ve done chest compressions on a guy who was vomiting all over himself.” No correctional officer wants a prisoner to die on his or her shift – a potentially psychologically traumatic experience that also gives rise to unwelcome questions about how it happened, and what officers were doing when the prisoner was overdosing. As one officer put it, a dead prisoner also “results in a lot of paperwork.”

Officers have varied responses to this situation. Some have become more vigilant. Bed checks—which involve officers peering through a cell’s window—now appear to be more regular and thorough, as officers doing their rounds make an extra effort to see the faces of sleeping prisoners to ensure they have not turned blue from asphyxiation. One officer who was working on a female unit recounted how “I’m hyper alert to watching an inmate breathe in their cell. I don’t remember being so ‘Oh my god, is she overdosing? She hasn’t moved in a while.’ You know what I mean? I’m paranoid. I don’t want someone to die on my watch.”

For other officers, the pattern of recurrent prisoner overdoses has produced a heightened degree of cynicism. Officers were particularly jaundiced about those prisoners who they saw as overdosing because they were voluntarily taking the risk of using fentanyl, or who continued using despite having previously overdosed. One officer, who works on the emergency response team, spoke directly to this resignation: “It’s kind of frustrating. At the same time, you start to react to these codes [health emergencies] by saying ‘Why do we even care? Because it’s just going to continue.’ So, unfortunately you get desensitized to it. You don’t even want to help them, sadly.” A different officer wearily referred to the problem of prisoners using fentanyl as “a self-correcting problem,” by which he meant fentanyl users would all eventually overdose and die.

The fentanyl crisis has fundamentally unsettled correctional officers. Prison managers told us of rumored ‘wildcat’ strikes designed to protest the fentanyl-related health risks officers now face. Less dramatically, one constant theme we encountered was of officers contemplating leaving corrections because the risk of fentanyl exposure was so acute. Officers regularly referred to having spouses and children at home, and how the arrival of fentanyl tipped the balance towards the job being too dangerous. It should be noted these men and women are accustomed to a considerably higher degree of physical risk than most people might experience in their jobs.

## Discussion

Our research finds the recent emergence of fentanyl and its analogues is significantly changing the lives of prisoners and correctional officers, and by extension, altering the nature of prison and imprisonment. To our knowledge this is the first study that shows the impact of the opioid crisis within carceral institutions. It raises questions about how other first responders, such as police, fire, or medical personnel are dealing with the fentanyl crisis. As one officer told us: “It is a game changer, similar to when HIV came around.” Many of these changes are in response to the real health and security risks associated with these opioids, and some result from the heightened and perhaps exaggerated fears amongst correctional officers about inadvertent contamination. An immediate policy recommendation is to provide correctional officers (and potentially, other law enforcement personnel) with adequate training about fentanyl. The officers in our sample all perceived the risk of inadvertent exposure to be high, and many believed that fentanyl could easily be absorbed through the skin. The collateral consequence of these perceived risks were officers who did not appropriately search

cells, potentially missing out on identifying weapons that could put themselves or other inmates at risk. Adequate training on fentanyl contamination and how to avoid inadvertent exposures will not only help ease some of the fears of correctional officers but also address the collateral implications of such fears.

While official numbers are unavailable that can testify as to whether correctional officers are leaving their jobs at a higher rate than before the opioid crisis, about a third of the officers in our sample stated that they are considering leaving corrections because of the perceived risks related to fentanyl. Future research will have to establish the long term impact of the perceived risks of fentanyl on the job commitment for correctional officers. If the presence of fentanyl leads to an actual higher than usual turn-over rate, there might be unintended consequences for the operation of prisons and the prison experiences of inmates and correctional officers. Possible implications could be higher rates of violence due to a larger number of inexperienced and younger correctional staff members.

Having pointed to the presence and serious repercussions of these drugs in prison, at a minimum what is now required is public discussion about introducing measures to confront these prison-based risks. The potency and potential lethality of fentanyl means that its presence in prison poses unprecedented health risks. Those dangers are exacerbated by the fact fentanyl is often mixed into other substances, meaning prisoners often cannot know how much fentanyl is contained in a specific dosage. All of this is compounded by the fact that in provincial prisons harm reduction measures are unavailable or poorly delivered.

Traditionally, in North America, harm reduction measures have been limited or not introduced into prisons at all. Our interviews with officers and prisoners, for example, revealed that at the time of our research in provincial jails prisoners could not initiate opioid substitution programs such as methadone or suboxone, and the prisons provided virtually no programming pertaining to addictions or drugs. This lack is typically due to overriding security concerns (Watson, 2016) and opposition from correctional officers who believe harm reduction does not represent a ‘solution’ to the drug problem, and that drug users do not necessarily deserve such services (Watson, 2016). As one officer—who was representative of a considerable subset of his colleagues—told us: “if they want to kill themselves, let them kill themselves. Problem solved.”

The anxieties correctional officers articulate about fentanyl, however, may encourage change with respect to harm reduction measures in correctional settings. The magnitude of the opioid crisis makes the current situation unique and possibly opens up new risk-reduction and programming opportunities. Prisoners are overdosing at an alarming rate, and as our data show, correctional officers are scared (some terrified) of being inadvertently exposed to a lethal dose. The union is contemplating job action. The combination of these factors makes it possible that politicians, prison administrators and correctional officers might be more open to introducing into prison a larger palette of harm reduction measures. Research designed to assess the realistic prospects for introducing a range of harm reduction initiatives into such environments continues to be a pressing priority.

Our study has some limitations that could be rectified through future research. Researchers have established that the local context matters in shaping the dynamics of crime and criminal justice (Wikström & Sampson, 2006), and stress the need for research to be conducted in different settings and jurisdictions before firm conclusions can be reached on any particular development in criminal justice. Having collected the data set within one province, our study cannot be generalized to different regions in Canada or across North America. While qualitative studies usually have a much smaller data set than quantitative studies, our study relies on an unusually large qualitative data set, allowing us not only to rely on over 600 interviews but also to reap the benefits from deep qualitative interviews uncovering nuances that would likely remain hidden in survey research. Our qualitative methodology directly addresses the described limitations with studies on drug use in prison by allowing us to build trust and rapport with our participants and approach topics, such as drug use, that are usually

<sup>6</sup> In October 2017 provincial corrections instructed supervisory officers to carry Narcan nasal spray on their belts. Other correctional staff (i.e., those working on the prison units) are not allowed to do so, reducing the medication’s availability, which can significantly increase overdose response time.

sensitive in nature (Bucerius, 2014).

While we have established the consequences of fentanyl in prison and associated fears related to its presence, future quantitative research could show which harm reduction strategies might be most supported by both prisoners and correctional officers. There are currently no data available on whether officers, prison managers, or inmates might support the introduction or expansion of harm reduction strategies. This is crucial given the evidence from research on ‘implementation science’ which demonstrates that harm reduction strategies can only be optimally effective when supported by staff and implemented in a supportive institutional environment (see Proctor et al., 2011; Damschroder and Hagedorn, 2011).

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## CRedit authorship contribution statement

**Sandra M. Bucerius:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing - original draft. **Kevin D. Haggerty:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Writing - review & editing.

## Declaration of Competing Interest

We have no conflict of interest to declare.

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