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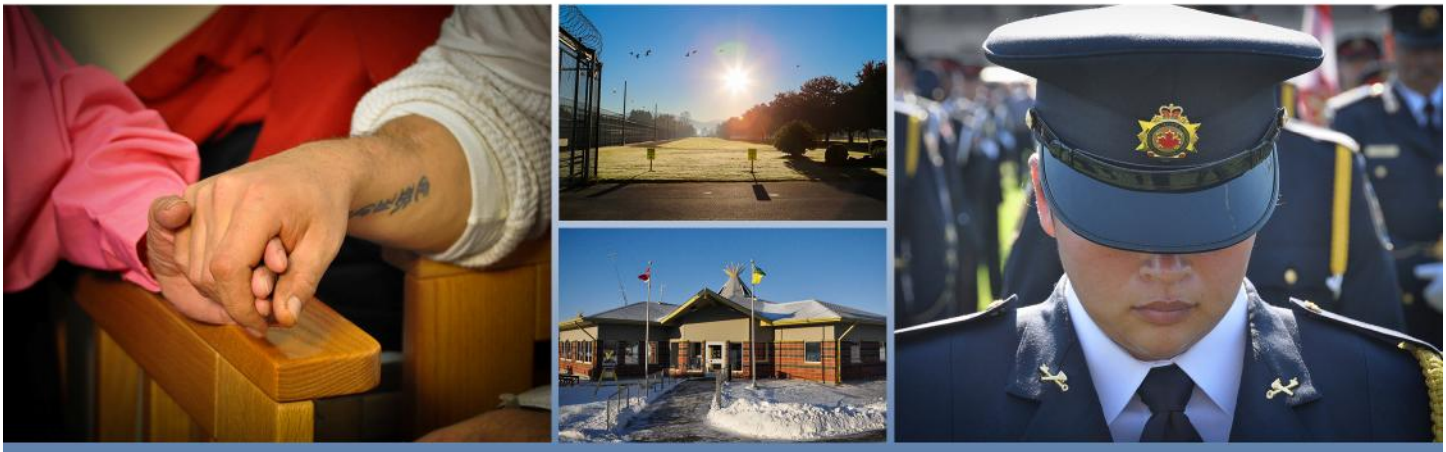

RESEARCH REPORT

Health and service access challenges for correctional offenders with mental health and substance use problems in transition from incarceration to community: a literature review

2018 Nº R-398

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Health and service access challenges for correctional offenders with mental health and substance use problems in transition from incarceration to community: A literature review

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Octobre 2018

Executive Summary

Key words: *mental illness, substance use, literature review, health problems, community corrections, transition, offenders*

This study compiled a narrative review of the literature identifying: health problems and breakdown of access to care and services for offenders with mental health and substance use issues during transition from incarceration to the community, the factors contributing to these outcomes, and evaluated interventions or approaches for mitigating these harms.

We searched key databases for publications on experiences or challenges of transition/release from incarceration among mentally ill and/or substance user populations for studies published in 1996 to present. The information was organized into three broad themes relating to challenges and outcomes during release from correctional institutions, contributing factors to these challenges, and interventions aimed at reducing poor outcomes. Contributing factors were further divided into individual (i.e., personal explanations for behaviour), structural (i.e., those dealing with economic and social environments), and systemic factors.

Individual factors related to addictions and personality disorders contributed to a heightened difficulty to remain engaged in treatment services. Structural factors, such as restrictive housing and employment policies or requirements, posed barriers that did not accommodate the specific needs of mentally ill and substance-using inmate populations. Systemic factors, including inadequate pre-release planning and unstable housing were obstacles to attaining social stability and engaging in treatment during the transition from incarceration to community.

Approaches most consistently beneficial across all outcomes were those that provided in-custody treatment with pre- and post-release care planning, arrangement and follow-up. Pre- or post-release interventions alone usually did not ensure consistent contact with and engagement of offenders in treatment during the critical point of release to ensure uninterrupted treatment during transition from incarceration to community. Offenders engaged in post-release mental health or substance use treatment experienced lower rates of hospitalization, drug use, death, and re-incarceration.

Interventions that provided both pre-release initiation of care and ensured continuation of aftercare through case management or enrolling offenders in community programs before release were associated with less relapse to drug use and return to risky pre-incarceration behaviour, lower likelihood of re-arrest, and higher levels of retention in treatment. Many released offenders with mental health or substance use issues noted their most pressing needs upon release were for housing and employment or other financial assistance. Their inability to access or remain in mental health or substance use treatment after release was due to their primary need to pursue social stability (i.e., housing, employment).

In summary, continuity of treatment post release for offenders with mental disorders is important to improve outcomes but is jeopardized when other pressing social needs are prioritized. Stressors that contributed to poorer outcomes were lack of social support and challenges in obtaining financial and housing stability during reintegration.

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Introduction

Globally, an estimated 11 million people are in correctional institutions at any one time, and over 30 million people are moving through the prison system each year (Kinner, Forsyth, & Williams, 2013; United Nations Office on Drugs and Crime (UNODC) Regional Office for South Asia, 2008). In Canada, roughly 40,000 people are in correctional institutions, with approximately 15,000 in federal custody (Reitano, 2016). Thus, over 24,000 of those imprisoned are in provincial/territorial custody (of whom over 13,000 are on remand awaiting trial or sentencing), meaning they will likely be released into the community within two years; the vast majority are released within six months (Correctional Services Program, 2015; Maxwell, 2015). Furthermore, in 2014/15 there were over 205,000 adult admissions to correctional custody recorded in Canada (Correctional Services Program, 2015).

The generally poorer health status of offenders relative to the general population has been well documented, particularly in regards to the higher prevalence of chronic illness – including mental health and substance use disorders (Beaudette & Stewart, Binswanger, Krueger, & Steiner, 2009; Fazel, Hayes, Bartellas, Clerici, & Trestman, 2016; Kouyoumdjian, Schuler, Matheson, & Hwang, 2016; Nolan & Stewart, 2017; Stewart, Sapers, Nolan, & Power, 2014; United Nations Office on Drugs and Crime (UNODC), 2016). Compared to the general population, inmates of western nations have exhibited disproportionately higher prevalence (e.g., roughly 40% in U.S. inmate surveys) of chronic and/or severe diseases including hypertension, asthma, hepatitis, diabetes, HIV, and arthritis (Binswanger et al., 2009; Fazel & Baillargeon, 2011; Wilper et al., 2009). Fazel and Seewald (2012) conducted a systematic review on the psychiatric status of 33,588 inmates, revealing that roughly one in seven offenders had either a psychotic illness or major depression, thus 2-4 times more likely than the general population. Prevalence of psychotic illness was around 4% and major depression at 10-14%; these figures were steady in comparison to a similar systematic review conducted a decade earlier involving 22,790 inmates (Fazel & Danesh, 2002; Fazel & Seewald, 2012). Substance abuse was assessed in a separate systematic review of 7,563 inmates; estimates of the prevalence of substance abuse/disorders ranged between 14.0-30.0% for alcohol abuse/dependence and 10.0-48.0% for drug abuse/dependence among male offenders, and 10.0-52.4% and 17.1-60.4%, respectively, among female offenders entering incarceration (Fazel, Bains, & Doll, 2006). Again, this

translated to a slight excess in prevalence among males and 2-4 times increased likelihood among female offenders to have alcohol abuse/dependence, and two- to ten-fold among male and at least 13-fold among female offenders to have drug abuse/dependence in comparison to the general population (Fazel et al., 2006). Rates of substance misuse and mental disorder in the Canadian prison population appear to be even higher both for men (Beaudette & Stewart, 2016) and women (Derkzen, Barker, McMillan, & Stewart, 2017) than those cited in this research.

In Canada, 70% of incoming federally-sentenced men in 2014/15 presented at least one mental disorder, including alcohol or substance use disorders (49.6%) and antisocial personality disorders (44.1%) (Beaudette& Stewart, 2016). Excluding these disorders, 40% of these men still met the criteria for at least one mental disorder, compared to 12.4% in the general population (Beaudette et al., 2015); more than a third of incoming offenders met criteria for concurrent disorders (Sapers, 2015).

Incarceration may offer a unique and "only opportunity for an ordered approach to assessing and addressing health needs" for some offenders (World Health Organization Regional Office for Europe, 2007, p.16). Thus, correctional institutions can act as a crucial first point of contact with healthcare, and may be an opportunity for chronic disease, mental health, and/or substance abuse treatment for many offenders who have untreated and unmet health needs. For example, routine screening and testing for infectious diseases in institutions has identified substantial previously unknown HIV-positive cases, allowing for referral to and initiation of appropriate treatment (Beckwith et al., 2012; de Voux et al., 2012). Testing rates for infectious diseases have increased in recent years in Canadian corrections; in 2000 around 37% of inmates in federal corrections were tested for HIV and Hepatitis C Virus (HCV), but by 2008 this figure increased to about 57% (Correctional Service Canada, 2012; Zakaria, Thompson, Jarvis, & Smith, 2010). About 53% of HIV-positive inmates in Canadian federal correctional institutions were taking antiretroviral therapy (ART) in 2007, though 60% of those who have ever had ART reported experiencing interruptions in treatment in corrections; of HCV-positive federal inmates, 33% had ever seen a medical professional or received treatment while incarcerated (Zakaria et al., 2010).

Correctional Service Canada's Mental Health Strategy involves a screening and assessment of inmates at intake to connect to primary care services while imprisoned, and pre-discharge planning to facilitate community care linkages upon release (Correctional Service

Canada, 2015). Group and individual substance abuse programs of varying intensity had historically been offered in Canadian correctional institutions but are now subsumed under an Integrated Correctional Program Model that addresses multiple criminogenic needs (Correctional Service Canada, 2014;). However, in 1997, methadone maintenance therapy (MMT) programs were introduced in Canada for federal inmates already receiving MMT in the community to continue treatment while incarcerated; by 2002 the program expanded to allow the initiation of MMT in correctional institutions (Betteridge & Dias, 2007). Over the past decade, some 5% of the male and approximately 10% of the female federal correctional population initiated MMT in corrections (Johnson, Farrell MacDonald, & Cheverie, 2011; Luce & Strike, 2011; MacSwain, Cheverie, Farrell MacDonald, & Johnson, 2012). Most provincial institutions provide continuation of MMT, but initiation of MMT once incarcerated still is not provided universally (Betteridge & Dias, 2007; Luce & Strike, 2011).

Importantly, turnover in correctional institutions is vastly larger than the incarcerated population at any given time; globally, an estimated 30 million individuals are detained and released back into the community each year (Walmsley, 2013). In Canada, the vast majority of offenders will be released within a year of sentencing; 87% of individuals sentenced to custody in 2013/14 received sentences of six months or less (Maxwell, 2015). The period following release is somewhat of an 'Achilles' heel' for correctional populations, a critical moment of heightened morbidity and mortality risk and for the disruption of healthcare services received while in custody (Binswanger et al., 2007; Rosen, Schoenbach, & Wohl, 2008). When released from custody, offenders with chronic diseases requiring care, including mental health and substance use related issues, cannot simply be returned into the community without appropriate mechanisms in place to ensure continuity of care at release. If interruptions or gaps in medication occur for certain treatments received in correctional institutions (e.g., MMT), the effects of such treatment while in custody will be negated upon release, and offenders will be at increased risk of negative health consequences and death.

The heightened health burden of correctional populations due to chronic illnesses including mental health and substance use disorders has been identified as an issue, and efforts in many constituencies have been made to initiate or provide treatment in correctional institutions to those offenders. Without ensuring continuation of care upon release into the community, the efforts to provide such in-custody treatment will be largely for naught. The main objective of this study

was to compile a narrative review of the literature identifying the health problems and breakdown of access to care and services for mental health and substance abuse during transition from incarceration to the community, the factors contributing to these outcomes, and evaluated interventions or approaches for mitigating these harms over the last twenty years.

Method

In order to identify relevant literature and data, we conducted searches in key databases (e.g., PubMed, OVID, Medline, ProQuest) for publications that presented data on experiences or challenges of transition/release from incarceration among mentally ill and/or substance user populations. Searches using keywords (i.e., corrections; prison; jail; inmates; parolee; release; transition; community; aftercare; substance use; mental health; experiences; challenges; relapse; interventions) were conducted for studies published in 1996 to present, to cover a span of twenty years. The information gathered was organized into three broad themes, relating to challenges and outcomes during release from correctional institutions, contributing factors to these challenges, and interventions and approaches aimed at reducing these outcomes. The contributing factors were further divided into individual (i.e., personal motivations/explanations for behaviour), structural (i.e., those dealing with economic and social environments), and systemic (i.e., failing systems of care or networks) factors that emerged.

Results

Health and care challenges following release from correctional institutions

Indicators of health outcomes following release

The aforementioned elevated mental health and substance use issues of offenders at admission to incarceration create unique challenges that put inmates at risk for poor health outcomes during transition to the community. Inmates with a lifetime diagnosed mental disorder in Australia, compared to controls, were significantly more likely to report risky drinking behaviours (22.3% vs. 13.9%) and injection drug use (16.0% vs. 9.4%) at six-month follow-up (Cutcher, Degenhardt, Alati, & Kinner, 2014). Recently released (within 6 months) women offenders in Baltimore, Maryland, were more likely to have smoked crack-cocaine (adjusted odds ratio [AOR] 2.61), injected drugs (AOR 1.90), or engaged in transactional sex for drugs (AOR 11.30) in the past month than never-incarcerated women; there were no significant differences in risk behaviours between women released more distally and those never incarcerated (Hearn, Whitehead, Khan, & Latimer, 2015). In Canada federally sentenced offenders with mental disorders and particularly those with co-occurring mental disorders including substance abuse demonstrate poorer outcomes than offenders without these disorders (Stewart & Wilton, 2014),

More inmates with a lifetime diagnosed mental disorder in Australia compared to controls reported various indications of worse health outcomes at six-month follow-up, such as very high distress (16.2% vs. 6.0%), having seen a general practitioner (60.7% vs. 44.9%), contacted a mental health service (29.5% vs. 8.5%), or been hospitalized (13.0% vs. 8.3%) (Cutcher et al., 2014). Mental health disorders (MHDs) were responsible for 27% of hospitalizations among releasees in Western Australia (Alan, Burmas, Preen, & Pfaff, 2011), and having a MHD or substance use disorder (SUD) in a released offender population in Rhode Island increased the likelihood of experiencing an emergency room visit by 43% and 93%, respectively (Frank et al., 2013). Further, nearly a third of a sample of U.S. offenders reported worse levels of depression (30.8%) and stress (29.8%) three weeks following release compared to levels reported during incarceration (van den Berg et al., 2016). Frequent self-reported overdose was observed in the first 1-3 months following release from incarceration in samples from Colorado, Western Australia and Russia (Binswanger et al., 2012; Cepeda, Niccolai et al.,

2015; Winter et al., 2015).

Released offenders are also at an increased risk of death (approximately 3.5 times more likely during a mean follow-up of two years) after release compared to the general population, and particularly so (12.7 times) within the first two weeks after release (Binswanger et al., 2007). Mental health problems have been linked to a heightened risk of death after release from incarceration; for example, of deceased ex-offenders in Australia and Sweden, 30% and 16%, respectively, were due to suicide, though actual diagnoses of mental health disorders in these deaths were unclear (Andrews & Kinner, 2012; Chang, Lichtenstein, Larsson, & Fazel, 2015). This risk is higher in the critical period shortly after release; of 382 suicides among releasees in a one-year period in England and Wales, 21% were committed in the first 28 days, and 51% in the first four months following release (Pratt, Piper, Appleby, Webb, & Shaw, 2006).

Drug-related deaths are also a substantial driving factor behind high mortality rates during transition from incarceration. In a five-year follow-up of male and female releasees after release from incarceration in Sweden, SUD-related deaths amounted to 34% and 50% of all-cause mortality or 42% and 70% of external-cause mortality, respectively (Chang et al., 2015). In an Australian review of coroner records for deceased ex-offenders, 36% of deaths were accidental overdose deaths (ODs) – thus the leading cause of death – and an additional 9% were from mental and behavioural disorders caused by psychoactive substance use (Andrews & Kinner, 2012). Of 261 drug-related deaths among ex-offenders (amounting to 59% of all ex-offender deaths in England and Wales in 1998-2003), 55% were attributed to 'mental and behavioural disorders due to drug use', and 42% due to accidental or intentional ODs (Farrell & Marsden, 2008). ODs were the leading cause of death (23.3%) among all deaths of ex-offenders released between 1999-2003 in Washington State, and were responsible for 71% of deaths within the first two weeks following release (Binswanger et al., 2007). Similarly, the odds of drug-related death were over ten times greater among women and eight times greater among men in the first two weeks after release in England and Wales, compared to one year later (Farrell & Marsden, 2008). In Ontario, Canada, nearly 10% of all drug toxicity deaths in the province between 2006 and 2013 were attributed to provincial corrections inmates within their first year after release; 20% of the 702 deaths were within the first week after release (Groot et al., 2016).

Breakdown of treatment services and care following release

To facilitate a successful transition from incarceration to community, substance use disorder and mentally ill offender populations require access to services upon release, be it through enrollment in treatment programs or continuation of medication or counselling that was initiated and/or received while in custody. However, despite elevated service needs, actual engagement in – and continuation of – treatment after release remains low. In a sample of recently released offenders in the United States, 62.5% anticipated requiring substance use services upon release, but at follow-up only 44% had received them; likewise, 48% anticipated requiring mental health services upon release, yet only 15% had received them (Begun, Early, & Hodge, 2016). In a separate study in Australia, only a quarter (25%) of offenders who identified 'very high' and 'high increasing' levels of psychological distress accessed community mental health services in the first year after release (Thomas et al., 2016). Even among those receiving treatment, the amount, quality and effectiveness of such services remain an issue. For example, 58% of a mentally ill offender sample in Washington accessed community mental health services during the 1.5-4 years following release, but analysis found that the prevalence of steady service use (receiving services for at least 9 of the first 12 months after release) was only 16% for mental health and 5% for drug- or alcohol-related services (Lovell, Gagliardi, & Peterson, 2002).

Additional disease burdens in these populations, such as HIV or other infectious diseases, warrant distinct care plans following release from correctional institutions. Discharge plans specific to HIV care needs were provided to 72% of HIV-positive releasees from New York City jails in 2011, of whom 73% were linked to care within 30 days of release (Jordan et al., 2013). Importantly, ever accessing services is not necessarily an adequate indication of receiving satisfactory treatment or remaining engaged in treatment services. In particular, certain treatments such as ART or MMT require seamless continued retention in treatment at the point of release and in transition into the community, or else will negate the benefits of having received such treatment while in custody. Yet, only 5% of HIV-positive offenders in Texas filled ART prescriptions in time to avoid gaps in treatment after release, and 30% had filled prescriptions within 60 days after release (Baillargeon, Black, Pulvino, & Dunn, 2000); similarly, 15% of HIV-positive inmates in San Francisco maintained ART while in-and-out of custody over nine years (Pai, Estes, Moodie, Reingold, & Tulsky, 2009). Discontinuation or interruption of ART among HIV-positive injection drug users in a Canadian setting in 1996-2008 occurred in 63% of the sample; disruption of ART was found to be associated with public drug

use (adjusted hazard ratio [AHR]: 1.67) and being female (AHR: 1.23) (Werb et al., 2013).

Among offenders who initiated MMT in Canadian federal corrections, only about 25% of male (2006-2008) and 27% of female (2003-2008) offenders continued MMT in the community (Farrell MacDonald, MacSwain, Cheverie, Tiesmaki, & Fischer, 2014; MacSwain, Farrell MacDonald, Cheverie, & Fischer, 2013). Released inmates who continuously retained their opioid maintenance treatment (OMT) after release had significantly lower mortality outcomes both four weeks and one year post-release, compared to those who experienced interruptions or had never received treatment in Australia (Degenhardt et al., 2014). There was no protective effect against mortality outcomes for those receiving some OMT despite interruptions compared to those releasees who received no treatment (Degenhardt et al., 2014). This study exemplifies the vital importance of continuous treatment – with no disruption – for the effectiveness of OMT/MMT for opioid dependent offenders.

Contributing factors to transitional challenges

Individual factors

Behavioural concerns of ex-offenders with mental health or substance use issues may impede the attainment of social stability within conventional structures that would facilitate reintegration into the community. For example, certain symptoms specific to mental health disorders (e.g., personality disorder symptoms) obstructed former inmates from engaging in traditionally structured environments, such as employment settings with many colleagues (Binswanger et al., 2011). Stress, anxiety, and a sense of hopelessness emerged as major themes over several qualitative studies of recently released offenders, which in turn may amount to worsened psychiatric conditions or outcomes, and culminate in the form of suicidal thoughts (Binswanger et al., 2011; J. E. Johnson et al., 2013; van Olphen, Eliason, Freudenberg, & Barnes, 2009). Poorer mental health levels and hazardous drinking or drug use shortly after release from custody were associated with particular stressors such as problems with family, significant others, or friends (Calcaterra, Beaty, Mueller, Min, & Binswanger, 2014; J. E. Johnson et al., 2013; Wallace et al., 2016). Substance use was referred to as a coping mechanism: “That’s my coping skill is to drink and drug when I’m feelin’ insecure about myself” (J. E. Johnson et al., 2013). One former inmate in a U.S. study explained that the stress of the transition from incarceration and struggle for survival is significant enough to contribute to

overdose death, through recklessness or by intentional overdose:

> I think [the reason] people overdose on drugs is…they're in a lot of stress. They don't know which way to go and they feel like everything is against them when they first get out so they looking for a way out. So they overdose on drugs or they commit suicide, they ain't got that problem no more. (Binswanger et al., 2011, p.253).

In addition, recently released substance users may be further susceptible to overdose death due to unfamiliarity with their changed physical tolerances toward substances after a period of abstinence or limited drug access while incarcerated (Binswanger et al., 2012).

Among mentally ill or substance abusing ex-offenders, self-denial that treatment is needed was identified as an initial barrier for not seeking services after release from custody (J. E. Johnson et al., 2013). However, even among those who did acknowledge a need or desire for treatment, stigma acted as a barrier to actual engagement in services (J. E. Johnson et al., 2013; van Olphen et al., 2009). In addition, stigma may be a greater hindrance among female ex-offenders than males due to gender-based stereotypes and a heightened perception of being judged for requiring treatment, or if/when unable to conform to specific requirements of treatment programs (van Olphen et al., 2009). Half (50%) of a substance-using female offender sample in California indicated early discharge from parole as a motivation for entering aftercare; other incentives included the availability of employment (34%), quality of the program (33%), availability of family services (25%), location (23%), length of the program (21%), ability to have children at the program (20%), receiving a recommendation for the program (17%), and the availability of mental health services (14%) (Grella & Rodriguez, 2011). Even if initial access to treatment was successful, lower satisfaction with transitional aftercare programs and parole or aftercare staff were found to be associated with dropping out of programs (Binswanger et al., 2011; Hiller, Knight, & Simpson, 1999). Releasees reported requiring positive reinforcement or tangible benefits to continue participation in programs (Angell, Matthews, Barrenger, Watson, & Draine, 2014). HIV-positive substance-using releasees in North Carolina expressed difficulties in managing HIV medication due to substance use relapse resulting from the breakdown of relationships and stress following release from custody (Haley et al., 2014).

Structural factors

Employment and housing or shelter policies aimed at restricting access for previously incarcerated persons deterred some ex-offenders from pursuing such opportunities unless very

persistent (van Olphen, Freudenberg, Fortin, & Galea, 2006; van Olphen et al., 2009). As one man recently released from the New York City jail system explained:

> I stayed on top of the people (in trying to follow through on his referral to temporary shelter). I said, 'I have a five day referral here,' and they said 'No' and I said, 'Well you going to have to call the police to take me back to Rikers Island, because this is where they sent me.' So at about 11 P.M. they said, 'Okay we are going to give you a room.' But, the first thing they told me was, 'Get out of here.' (van Olphen et al., 2006, p.378).

Yet, this perseverance in the face of obstacles for shelter and other existential needs is particularly difficult for those managing mental health and/or substance use issues with other needs that inhibit devoting their full efforts to securing housing and employment, despite acknowledging the burden that a lack of employment poses on their ability to successfully reintegrate into communities and obtain financial stability (Binswanger et al., 2011; Binswanger et al., 2012; Cepeda, Vetrova et al., 2015; J. E. Johnson et al., 2013; van Olphen et al., 2006). Accordingly, poverty among an Illinois sample of mentally ill released offenders was associated with return to custody, psychiatric hospital, and homelessness (McCoy, Roberts, Hanrahan, Clay, & Luchins, 2004).

Many studies have identified barriers, even for well-intentioned releasees, to the initial contact with mental health or substance abuse treatment services. For example, many inmates explained being released from correctional institutions early in the morning (i.e., the middle of the night) when services are not open and therefore inaccessible; without shelter arrangements or contacts in the outside world, many releasees spent the night (or longer) on the streets, returned to familiar illicit street networks and became re-engaged with substance users, thus vulnerable to relapse into drug use (van Olphen et al., 2006). Some women releasees required but could not access shelter or treatment services that could accommodate their children, or were greatly discouraged from accessing treatment if not located in the immediate neighbourhood (O'Brien, 2007).

Overly punitive or strict consequences for violations of the terms of a program were identified as a deterrent for retention in treatment among mentally ill and/or substance-using releasees (Angell et al., 2014; J. E. Johnson et al., 2013; J. E. Johnson et al., 2015; van Olphen et al., 2009). In addition, oftentimes conditions of parole were difficult to meet, yet, those with co-occurring psychiatric and substance use disorders were subject to closer parole supervision,

contributing to more frequent detection of treatment or parole violations, thus resulting in more punishment (Binswanger et al., 2011; Wood, 2011). Conversely, not enough accountability or follow-up by parole officers or court personnel meant that failing to remain in treatment had little consequence to releasees (O'Brien, 2007).

Systemic factors

A lack of arranged shelter before release from correctional institutions may result in the dependence upon pre-incarceration illicit networks for support, increasing the likelihood of engaging in similar behaviour (Binswanger et al., 2011; Binswanger et al., 2012; Cepeda et al., 2015; J. E. Johnson et al., 2013; van Olphen et al., 2009). If returning to the same circumstances as prior to incarceration, and not provided with adequate tools or strategies for attaining stable employment and housing, released offenders may end up homeless and/or reoffending and re-incarcerated (Luther, Reichert, Holloway, Roth, & Aalsma, 2011; van Olphen et al., 2009). Homelessness was associated with re-arrest and re-incarceration for mentally ill and substance user populations in the U.S. (Freudenberg, Daniels, Crum, Perkins, & Richie, 2008; McCoy et al., 2004), and with decreased likelihood of having a usual HIV care provider (66.2% of homeless vs. 78.6% of housed) and receiving ART (46.0% vs. 57.9%) in a sample of HIV-positive ex-offenders (Zelenev et al., 2013).

Offenders in a U.S. mental health re-entry program identified their anticipated needs upon release primarily as housing (63%) and financial assistance (35%), well before treatment needs (12%) (Blank Wilson, 2013). Yet, among U.S. male offenders with trauma histories approaching their release date, those with a history of substance use or mental health problems were predicted to receive less personal support upon release than other offenders (Pettus-Davis, 2014). Employment levels for adolescent males and adult women were unchanged from six months before arrest and one year after release from New York City jails (Freudenberg et al., 2008). Inmates with a lifetime diagnosed mental disorder in Australia were more likely than those with no lifetime diagnosis to report unstable housing (24.4% vs. 17.3%) and unemployment (69.6% vs. 60.5%) at six-month follow-up (Cutcher et al., 2014).

The risk of entering a cycle of re-arrest and re-incarceration is a reality for offenders with mental health or substance use issues, and in particular for those with co-occurring disorders; these factors commonly disrupt access to care and services after release from correctional

institutions. Parolees with serious psychiatric and substance use disorders were rearrested sooner on average (between 2.5-4.5 months sooner) than those without dual diagnosis in a nationally representative sample of state correctional inmates in the U.S. (Wood, 2011). Among seriously mentally ill offenders released in New York State, the likelihood of re-arrest within 30 days of release increased by 26% for those with a co-occurring substance abuse diagnosis (Hall, Miraglia, Lee, Chard-Wierschem, & Sawyer, 2012). Similarly, a higher risk of multiple re-incarcerations was observed over a six-year follow-up period of those with co-occurring psychiatric and substance use disorders in a sample of inmates in Texas; dually diagnosed inmates were 1.5 times and 2.3 times more likely to experience ≥4 re-incarcerations than inmates with a psychiatric or substance use disorder alone, respectively (Baillargeon et al., 2010). Similar poorer outcomes for those who had both a mental disorder and a substance abuse disorder were found among Canadian offenders after their release compared to those offenders with a mental disorder without the comorbidity of a substance disorder (Wilton & Stewart, 2017)

Following a series of interviews with recently released male offenders (aged 18-29) across the U.S., poorer ratings of global reintegration, social consistency of personal relationships, and social support were associated with illicit 'hard' drug use (i.e., excluding marijuana) in the past 30 days (Seal et al., 2007). Conversely, family support, parole services, and housing were identified by substance users as important to maintain sobriety after release from custody (Binswanger et al., 2012; Salem, Nyamathi, Idemundia, Slaughter, & Ames, 2013). Recently released female substance users explained that insufficient resources for treatment in correctional institutions contributed to a lack of coordination or development of coping mechanisms to effectively deal with substance use triggers or challenges once released into the community (J. E. Johnson et al., 2013).

Contact with services or case workers shortly after release from incarceration – and, ideally before release from incarceration – have been recognized as crucial for entry into treatment or access of services. Understandably, long wait periods between release and contact with a court or probation officer were associated with decreased motivation to seek care (Aalsma, Brown, Holloway, & Ott, 2014; Binswanger et al., 2011). Lack of knowledge about how to access healthcare has deterred engagement in care (Binswanger et al., 2011).

Offenders with a serious mental illness were more likely to be released from correctional institutions due to unpredictable mechanisms – thus, receiving inadequate discharge planning –

than other detainees in Philadelphia jail systems (49% versus 42%, respectively) (Draine, Blank Wilson, Metraux, Hadley, & Evans, 2010). Not being released as expected thwarted coordination efforts for post-release treatment for substance-using inmates with Hepatitis C Virus in New York City (Klein et al., 2007). Among those with mental health issues, insufficient time before release hindered the ability to ensure and coordinate medication continuity of in-custody treatment after release, especially among those with comorbidities and co-occurring disorders (Binswanger et al., 2011; Binswanger et al., 2012; J. E. Johnson et al., 2013). Such delay in accessing medication and care is impractical for those with mental illness transitioning out of incarceration, as one former inmate explained:

> …these people…that actually have serious mental problems that are walking around and talking to themselves and seeing things and everything else, why they think that they're going to sit down there and wait day after day to get seen [by a mental health professional]. (Binswanger et al., 2011, p.251).

Interventions to mitigate harms associated with release

Pre-release interventions

Interventions initiated in correctional institutions for mentally ill and substance user populations largely sought to ensure or increase post-release engagement in treatment, with some demonstrated effects. Serious violent offenders with mental health needs in a U.S. sample were more likely to receive treatment within three months after release if they received pre-release case management (OR 2.37) or assistance in accessing health insurance (OR 2.45) than those who did not (Hamilton & Belenko, 2016). Offenders with substance use issues were more likely to engage in drug or alcohol treatment if 'met at the gate' upon release by a case manager, compared to those who were not (Jacob Arriola, Braithwaite, Holmes, & Fortenberry, 2007); similarly, having a pre-release needs assessment completed in custody increased the odds (odds ratio [OR]: 1.77) of receiving post-release substance abuse treatment (Hamilton & Belenko, 2016).

Initiating opioid substitution and maintenance treatments in custody resulted in some higher retention rates in post-release treatment compared to referral to treatment only after release (Gordon, Kinlock, Schwartz, & O'Grady, 2008; Gordon et al., 2014; Kinlock, Gordon, Schwartz, Fitzgerald, & O'Grady, 2009; McKenzie et al., 2012; Zaller et al., 2013). There may

be some indication that the type of in-custody treatment predicts retention in care upon release; 93% of an in-custody buprenorphine maintenance group stated an intention to continue treatment after release compared to 44% of a methadone maintenance group (Magura et al., 2009). Actual treatment retention was 48% and 14%, respectively; no differences in self-reported arrests or illicit opioid relapse were reported between the two groups (Magura et al., 2009). The introduction of an opioid substitution therapy (OST) program in all Scottish correctional institutions reduced drug-related deaths within 12 weeks after release to 154 (rate: 2.2 per 1000) from 305 (3.8/1000) prior to the program, though there was no difference in the proportion of drug-related deaths in the first 14 days after release (Bird, Fischbacher, Graham, & Fraser, 2015).

There was no association between receiving in-custody opioid maintenance therapy (OMT) of some sort and re-incarceration among released offenders in France (Marzo et al., 2009). Similarly, there was no difference in risk of return to custody between opioid-dependent female offenders in a Canadian correctional institution (2003-2008) who received in-custody MMT but discontinued treatment upon release and those who never received MMT (Farrell MacDonald et al., 2014).

Post-release interventions

Interventions initiated after release from correctional institutions produced varied results for preventing adverse transitional outcomes. The number of average hospital days decreased from 65 days in the year prior to enrollment to 7 days in the first year of participation in a community treatment program for mentally ill releasees who were homeless prior to incarceration (McCoy et al., 2004). Inmates of a U.S. urban city jail were randomly assigned to receive group aftercare therapy, individual case management in mental health agencies, or referral through normal procedures to general aftercare after release; there were no differences in mental health outcomes after one year by type of service received (Solomon & Draine, 1995). Drug-involved parolees in a U.S. sample who engaged in collaborative behavioural management (based on role induction, behavioural contracting and contingent reinforcement) including a treatment counselor during parole reported fewer months using their primary drug (adjusted risk ratio [ARR]: 0.20) or alcohol (ARR: 0.38) than those in standard parole; however, this effect was only seen on marijuana or other non-hard drug use, and stimulant and opiate users did not benefit

from the treatment program (Friedmann et al., 2012). Risk of death was mitigated by 75% if engaged in OST within the first four weeks after release from incarceration in Australia in 2000-2012, however the protective effect declined quickly over time (Degenhardt et al., 2014).

Post-release parole supervision was found to be a protective factor against re-arrest among parolees in mental health treatment (Hartwell, Fisher, Deng, Pinals, & Siegfriedt, 2016). In a Canadian sample of substance-using women released from incarceration at a one-year follow-up, those who did not receive aftercare were 10 times more likely to return to custody – one-third of whom were re-incarcerated within the first three months – than those who received aftercare (Matheson, Doherty, & Grant, 2011). A program designed to assist federal offenders with a mental disorder on release found that while the discharge planning component did not appear to improve outcomes, participation in both the discharge planning and the post release sessions did (Stewart, Farrell-MacDonald, & Feeley, 2016).

A critical access period was found for released offenders in Australia where physician contact within one month of release from custody predicted greater likelihood of service access within six months for mental health services by 1.65 times, and for alcohol or drug services by 1.48 times than those who had had no physician contact (Young et al., 2015). Women who received monthly check-ups following release from an Illinois correctional institution were more likely than those without such check-ups to return to treatment sooner and participate in substance use treatment during a three month follow-up; once engaged in treatment, they were also more likely to remain abstinent from drugs at follow-up than those who did not engage in treatment (Scott & Dennis, 2012).

A separate Illinois transitional corrections program found increased engagement over a three-year period following modifications to the treatment programs, such as more communication to participants regarding the requirements and expectations of the program, communication between parole officers, increasing the number of community-based service providers, more effective referral and monitoring, and the addition of more trained staff. Though it was not possible to isolate the effect of any one change to the program's structure, compared to the first cohort (2005), each successive cohort of releasees presented a higher likelihood of retention in aftercare (OR: 1.43, 2007; OR: 2.02, 2008) (Olson, Rozhon, & Powers, 2009). Other studies provided indications of preferences for certain types of treatment among substance-using offender populations. For example, residential drug treatment for released substance-using

women retained participants for a longer period of time (276 days) than other, less comprehensive treatment programs (180 days) (Freudenberg et al., 2008).

Combined pre- and post-release interventions

Interventions providing both pre-release and aftercare treatment management have shown the most consistent effects at minimizing negative post-release outcomes. Women with trauma experiences who received continuing care (receiving in-custody and aftercare services) in California reported less substances used, lower scores in psychiatric severity and higher self-efficacy scores at follow-up than those who received either or no services (Saxena, Grella, & Messina, 2016). Similarly, heroin dependent offenders who received methadone maintenance therapy (MMT) in a Baltimore correctional institution and continued into community-based treatment were more likely to actually enter treatment once released and less likely to be re-incarcerated at three-month follow-up, and less likely at one-year follow-up to have urine tests positive for opioids or cocaine than those who were passively referred or transferred to MMT after release (Kinlock et al., 2007; Kinlock et al., 2009; Kinlock, Gordon, Schwartz, & O'Grady, 2008). Continuing care was shown to be effective at reducing recidivism, particularly in comparison to receiving no treatment or dropping out of aftercare (Grella & Rodriguez, 2011; Hiller et al., 1999; Knight, Simpson, & Hiller, 1999). Though there was no reduction in re-incarceration among offenders who received only in-custody OMT in Australia, there was a 20% reduction in the risk of re-incarceration if retained in treatment after release (Larney, Toson, Burns, & Dolan, 2012). In a Canadian sample of female offenders, those who received in-custody MMT and continued treatment in the community had less a 63% lower risk of return to custody than who never received treatment (Farrell MacDonald et al., 2014).

A longitudinal study of a Delaware corrections population presented mixed results based on length of follow-up. At six-month follow-up, those who received both in-custody and transitional therapeutic community treatment reported less re-arrest and drug relapse than those who received only in-custody treatment or no treatment at all; these results continued at one-year follow-up (S. S. Martin, Butzin, & Inciardi, 1995; S. Martin, Butzin, Saum, & Inciardi, 1999). At three-year follow-up, much of the effect faded; for arrest-free outcomes, there was no longer a significant difference between offenders who received any type of treatment compared to those who received no treatment at all (S. Martin et al., 1999). Further analysis revealed that those

who actually completed the transitional therapeutic community treatment program and/or aftercare were still more likely to be arrest-free than those who dropped out of the program, who became as likely to be arrested on a new charge as the group who received no treatment (S. Martin et al., 1999). In comparison of drug-free outcomes, those offenders who received in-custody or transitional therapeutic community treatment – even if they dropped out of treatment – were more likely to report being drug-free at three- and five-year follow-ups than those who did not, though the effects were lesser than was observed at one-year follow-up (Inciardi, MartIn, & ButzIn, 2004; S. Martin et al., 1999). Of that sample, a higher proportion of those who received post-release transitional therapeutic community treatment for substance use disorders were abstinent at a five-year follow-up (32.2%) than those who received standard post-release supervision (9.9%) (Butzin, Martin, & Inciardi, 2005).

Informal efforts to ease transitions after release

Aside from formal interventions, indicators of social stability such as having a job and health insurance decreased the likelihood of re-arrest in the year after release among adolescent males and women released from New York City jails (Freudenberg et al., 2008). Among substance-using women released from incarceration, having a committed partner protected against crack smoking and injection drug use in a six-month follow-up (Hearn et al., 2015). Systematic coordination of efforts between the mental health system, court, and offender's family were found to facilitate a successful connection and engagement with services after release from detention (Aalsma et al., 2014). Similarly, engagement in mental health care following release from custody was improved when relationships with service providers and staff were created prior to release, especially when also engaging a third party such as a family member (Angell et al., 2014). Health insurance or social healthcare coverage was also a determining factor in access to services upon release; offenders with Medicaid were more likely to access mental health services, accessed them more quickly, and received more days of services in a 90 day follow-up after release in two U.S. offender samples than those without (Morrissey et al., 2006).

Discussion

Correctional populations exhibit a higher prevalence of chronic illness-related, including mental health and substance use, care needs than the general population (Binswanger et al., 2009; Fazel et al., 2016; Kouyoumdjian et al., 2016; Stewart et al., 2014; United Nations Office on Drugs and Crime (UNODC), 2016). Incarceration has, at times, provided offenders a first opportunity for assessment and initiation of treatment for a variety of health problems, including mental health and substance use related problems. The majority of offenders will complete their sentences and be returned to the community; the point at which they are released is a critical time of risk – an Achilles' heel – for negative health outcomes as evidenced by hospitalizations, worsened psychiatric illnesses, and relapse to drug use, or even deaths (e.g., overdose). Without seamless continuation after release of treatment initiated or received in correctional institutions, health or treatment gains made in corrections (e.g., from MMT or HIV treatment) may be lost, and offenders may revert back to pre-incarceration health status or worse, including fatal consequences.

A combination of individual, structural, and systemic factors were found to inhibit successful engagement and retention in mental health and substance use related treatment after release from correctional institutions. Specific individual needs related to mental health or substance use disorders (e.g., addictive behaviours, personality disorders) contributed to a heightened difficulty to remain engaged in treatment services. Certain structural factors, such as restrictive housing and employment policies or requirements, posed barriers that did not accommodate the specific needs of mentally ill and substance-using inmate populations. Systemic factors, including inadequate pre-release planning and unstable housing, further contributed to a cycle of obstacles for attaining social stability and engaging in treatment during the transition from incarceration to community. All of these factors hindered the successful continuation of care and treatment that was received while in custody, thus putting offenders with chronic illnesses – including mental health and substance use issues – at risk for poor health outcomes and even death.

Three types of approaches were identified in the present review that sought to mitigate some of the challenges faced upon release from correctional institutions: interventions that provided treatment to offenders only while in custody, only once released, or that initiated

treatment in corrections and ensured continuity of care following release. Those that were most consistently beneficial across all outcomes were those that provided in-custody treatment with pre- and post-release care planning, arrangement and follow-up. It is evident that pre- or post-release interventions alone usually lacked the ability to ensure consistent contact with and engagement of offenders in treatment during the critical point of release to ensure uninterrupted treatment during transition from incarceration to community. Specifically, some studies found that initiating in-custody MMT was associated with higher retention in post-release MMT compared to simply referring offenders to MMT upon release (Gordon et al., 2008; Gordon et al., 2014; Kinlock et al., 2009; McKenzie et al., 2012; Zaller et al., 2013). Other studies found that in-custody MMT alone did not result in any difference in risk of death in the first two weeks after release, nor re-incarceration rates compared to those who received no treatment (Bird et al., 2015; Farrell MacDonald et al., 2014; Marzo et al., 2009). Similarly, offenders engaged in post-release mental health or substance use treatment experienced lower rates of hospitalization, drug use, death, and re-incarceration (Matheson et al., 2011; McCoy et al., 2004), though the effect declined over time and reduced drug use was limited to certain substances (Degenhardt et al., 2014; Friedmann et al., 2012).

Therefore, while in-custody and post-release interventions demonstrated some benefits for post-release outcomes of mentally ill or substance-using offenders, the strongest effectiveness for retention in care and minimizing adverse health outcomes resulted from interventions that provided both pre-release initiation of care and ensured continuation of aftercare through case management or enrolling offenders in community programs before release from corrections. These interventions were associated with less relapse to drug use and return to risky pre-incarceration behaviour, lower likelihood of re-arrest and re-incarceration, and higher levels of retention in treatment. Thus, the most effective way to meet the needs of offenders with chronic illness needs, including those relating to mental health and substance use problems, would be to initiate treatment services in correctional institutions and guarantee the uninterrupted continuation of such services and treatment following release and during transition into the community.

Importantly, many released offenders with mental health or substance use issues in qualitative studies identified their most pressing needs upon release to be for support obtaining housing and employment or other financial assistance (i.e., social stability). Yet, in our review

we did not find evaluations of interventions aimed to meet these needs or mitigate the social challenges of transition from incarceration to the community. Importantly, many offenders revealed in these qualitative studies that their inability to access or remain in mental health or substance use related treatment after release was due to their primary need to pursue social stability (i.e., housing, employment). Consequently, at the point of release, continuity of treatment received in corrections is jeopardized when other pressing social needs are prioritized by released offenders. Further, the stressors identified by releases that often contributed to adverse health outcomes (i.e., drug use, overdose death, and suicide) were those related to poor social support and challenges in obtaining stability during reintegration. This indicates an important area for study with implications for the allocation of resources and development of interventions aimed at reducing these social stability barriers for those with mental health and substance use care needs during transition out of incarceration.

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