



Prison Health as Public Health in Ontario Corrections

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ABSTRACT

The majority of incarcerated individuals in Canada, and especially in Ontario provincial correctional institutions, are released into the community after a short duration in custody. Adult correctional populations have generally poor health, including a heightened prevalence of mental health and substance use disorders. There are legal and ethical obligations to address health care needs of incarcerated individuals, and also public health benefits from ensuring adequate, appropriate, and accessible health services to individuals in custody. The Independent Review of Ontario Corrections recommended the transformation of health care in Ontario provincial corrections in 2017, including transferring health service responsibilities to the Ministry of Health and Long-Term Care. The *Correctional Services and Reintegration Act, 2018*, would affirm the provincial government's obligation to provide patient-centred, equitable health care services for individuals in custody. We encourage the Government of Ontario to proclaim the *Act* and continue the momentum of recent reform efforts in Ontario.

Key Words Public health; prison health; Ontario; correctional institutions; correctional health care, Independent Review of Ontario Corrections.

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INTRODUCTION

The World Health Organization defines public health as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (Acheson, 1988; Marks, Hunter, & Alderslade, 2011). In Ontario, Canada, the Ministry of Health and Long-Term Care—the governing provincial body for health care services—operates under this vision and asserts a number of standards to protect and promote the health of Ontarians (Ministry of Health and Long-Term Care, 2018). Yet, the health of individuals in custody in Ontario provincial institutions is not managed the same way as that of other Ontarians. In 2016-2017, there were about 40,000 adults in custody on an average day in Canada; 64% of those were in provincial or territorial facilities (Malakieh, 2018). In Ontario's adult provincial institutions, 7,699 people were in custody on an average day in 2016-2017 (Malakieh, 2018). The vast majority of inmates in provincial institutions will be released within six months after admission to custody (Malakieh, 2018). Not only is there an ethical and legal responsibility to provide health care to these individuals (Ministry of Health and Long-Term Care, 2018), but it also would be in the public's interest and in line with public health principles to prevent disease and promote health

among this high-needs and high-risk population, who will be returning to the community following a short duration in custody.

METHODS

The primary objective and scope of this paper was to present a narrative review of the health status, risks, and needs of adult correctional populations and strategies aimed to address those needs in Ontario provincial correctional institutions. Keywords (i.e., corrections, prison, inmates, public health, mental health, drug use) were used in searches conducted in key databases (e.g., PubMed, Medline) for relevant academic publications. In addition, government reports and published studies were scanned and reviewed for Canadian and Ontario-specific data on correctional populations. Data previously gathered from the Ministry of Community Safety and Correctional Services (MCSCS) for the Independent Review of Ontario Corrections' 2017 *Corrections in Ontario: Directions for Reform* report was used for information pertaining to governing policies within MCSCS in the Government of Ontario. Information pertaining to the recent efforts towards reform by MCSCS is based on public announcements, legislation, and the firsthand knowledge gathered by the Independent Review of Ontario Corrections.

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RESULTS

Legal Regulations and Responsibilities

The management of people charged with criminal offences in Canada falls under two jurisdictions—federal and provincial or territorial. The Correctional Service of Canada manages the federal correctional institutions across the country that administer custodial sentences of two or more years (Correctional Service Canada, 2016). Provincial and territorial corrections are managed by the respective provincial or territorial governments, and administer probation sentences and sentences of less than two years' incarceration, hold inmates on remand awaiting bail, trial, or sentencing, as well as those on immigration hold (Malakieh, 2018). In Ontario, Canada's most populous province, provincial corrections are under the jurisdiction of the Ministry of Community Safety and Correctional Services (MCSCS); there are 25 provincial correctional facilities throughout the province (Ministry of Community Safety and Correctional Services, 2018b). Over two-thirds (70%) of those in provincial custody in Ontario are being held on remand (Malakieh, 2018).

There are laws and norms internationally and locally that identify a duty to provide health care to incarcerated individuals. The United Nations General Assembly adopted and proclaimed the *Basic Principles for the Treatment of Prisoners* in 1990. Principle nine states, "prisoners shall have access to the health services available in the country without discrimination on the grounds of their legal situation" (United Nations General Assembly, 1990). In 2015, the *Standard Minimum Rules for the Treatment of Prisoners*, first adopted in 1977, were revised and adopted as the *Nelson Mandela Rules* (United Nations General Assembly, 2015). The *Nelson Mandela Rules* further recognized that medical and health care services for those in prison are the state's responsibility and should be provided at an equal standard to those available in the community. Though neither of the United Nations' proclaimed principles or rules are legally binding, they act as a framework and a primary source of standards for the treatment of prisoners.

Canadian legislation follows similar principles: the *Canada Health Act (CHA)* identifies the primary objective of health care policies, which is "to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers" (*Canada Health Act*, 1985). However, the *CHA* explicitly excludes federal correctional inmates—those under the jurisdiction of the Correctional Service of Canada serving a sentence of two years or more in a federal penitentiary. For federal inmates, the *Corrections and Conditional Release Act* assigns the Correctional Service of Canada the duty to provide "every inmate with essential health care and reasonable access to non-essential mental health care that will contribute to the inmate's rehabilitation and successful reintegration in the community" ("*Corrections and Conditional Release Act*," 1992).

Provincial and territorial correctional inmates remain as insured persons under the *Canada Health Act*. In Ontario, health services to the public are organized under the auspices of the Ministry of Health and Long-Term Care, however, the health care of inmates is managed in isolation from the public by MCSCS. The Ontario *Ministry of Community Safety and Correctional Services Act* reflects the view of health care as merely

one of a number of service programs offered to inmates, with the superintendent of an institution responsible for arranging outside hospitalization when an inmate requires medical treatment not available within the correctional facility (Independent Review of Ontario Corrections, 2017). MCSCS as a ministry, and superintendents as decision-makers for the institution, have no particular expertise in the design, delivery, management, or oversight of health care for any patient population, let alone a complex correctional population. The new *Correctional Services and Reintegration Act, 2018*, passed in May 2018, identifies that every inmate shall be provided with access to health care services, including mental health services, and outlines principles of health promotion and disease prevention. This yet-to-be proclaimed legislation reflects a shift in perspective in Ontario to health care identified as a right of inmates.

Health Status and Risks of Adult Correctional Populations

Presently, MCSCS does not broadly collect data on the health status of provincial inmates in Ontario. As a result, it is necessary to look to targeted studies on correctional populations to understand the common health status, risks, and needs of inmates in custody. Generally, adult correctional populations have been identified as having poor physical and mental health. When compared with the general population, international studies have shown that correctional populations have a heightened prevalence of chronic illnesses including hypertension, asthma, hepatitis, diabetes, human immunodeficiency virus (HIV), and arthritis (Binswanger, Krueger, & Steiner, 2009; Fazel & Baillargeon, 2011; Harris, Hek, & Condon, 2007; Wilper et al., 2009). Further, compared with the general population, correctional inmates have exhibited a heightened prevalence of mental illnesses and substance use disorders, including comorbid disorders (Birmingham, 2003; Butler, Indig, Allnutt, & Mamoon, 2011; Fazel, Bains, & Doll, 2006; Fazel & Danesh, 2002; Fazel, Hayes, Bartellas, Clerici, & Trestman, 2016; Fazel & Seewald, 2012; Fazel, Yoon, & Hayes, 2017; James & Glaze, 2006).

Canadian studies have produced similar findings. For example, self-reported rates of HIV and hepatitis C virus (HCV) infections among male and female federal inmates in 2007 were substantially elevated compared with the general population in Canada (Zakaria, 2010). Over 70% of newly sentenced federal male inmates in Canada between 2012 and 2014 met the criteria for at least one mental disorder, including alcohol or substance use disorders (Beaudette, Power, & Stewart, 2015). Localized studies on Canadian inmate populations have further noted a heightened prevalence of psychiatric, substance use, and comorbid disorders (Bland, Newman, Thompson, & Dyck, 1998; Brink, Doherty, & Boer, 2001; Lafortune, 2010).

Studies specifically on Ontario correctional populations have also identified an elevated prevalence of blood-borne viruses, illicit drug use, and mental health issues. For example, compared with the general population, prevalence rates of HIV were 11 times higher and rates of HCV were 22 times higher in a sample of inmates on remand from 13 facilities across Ontario in 2003-2004 (Calzavara et al., 2007). Of 500 inmates in a provincial institution in 2009, 56% had used opioids, cocaine, crack, or methamphetamines in the

last year (Kouyoumdjian, Calzavara, Kiefer, Main, & Bondy, 2014). Nearly two-thirds (65%) of an Ontario inmate sample reported having a chronic health condition, including 42% who reported suffering from depression, and 21% who reported having bipolar disorder, mania, manic depression, or dysthymia in the 12 months prior to incarceration (Green, Foran, & Kouyoumdjian, 2016).

In addition to inmates' existing health issues, the physical correctional environment itself also contributes to their poor health. For example, unhealthy living conditions, such as overcrowding, a lack of fresh air, and an inadequate means of maintaining personal hygiene can exacerbate the transmission of communicable diseases (*Moscow Declaration*, 2011; John Howard Society of Ontario, 2016). Isolation and a lack of stimulation and social supports pose mental health challenges to inmates (World Health Organization, 2013). Further, years of difficult and/or unhealthy living prior to incarceration, coupled with the stresses of life behind bars, may add years to the physiological age of an inmate (John Howard Society of Ontario, 2016).

An aged inmate population implies an additional burden on health care services for incarcerated individuals. The proportion of the inmate population in Canada aged 50 or older—the typical standard for “older” inmates accepted by the Correctional Service of Canada—in federal custody has grown to 25% in 2016, up from 12% in 2000 (Sapers, 2015; Zinger, 2017). In Ontario provincial institutions, older inmates comprised about 13% of inmates in custody between October 2017 and March 2018 (Ministry of Community Safety and Correctional Services, 2018a). Moreover, the proportion of admissions to custody in Canada for older inmates has been increasing. Of admissions to federal custody, 16% in 2015-2016 were for older inmates, an increase of 22% from five years earlier (Reitano, 2017). About 12% of 2016-2017 admissions to Ontario provincial custody were for older inmates, compared with about 8% in 2007-2008 (Ministry of Community Safety and Correctional Services, 2018a). In addition to shifting demographics and incarceration rates, the impact of recent sentencing (e.g., new mandatory minimum sentences) and parole reforms (e.g., restrictions on parole eligibility criteria) in Canada have contributed to an increasing number of inmates serving longer sentences, and longer portions of that sentence before first release (Sapers, 2011). Identifying and assessing some age-related health conditions, such as dementia, is increasingly difficult in individuals who may already exhibit other behavioural disorders. However, accommodation for these illnesses, in addition to the usual physical, visual, and hearing impairments associated with aging, will be required in correctional institutions with growing older inmate populations.

Risky behaviours of inmates before or during incarceration, such as illicit substance use, needle sharing, or engaging in unprotected sex, also contribute to a heightened risk of transmission of blood-borne viruses and sexually transmitted diseases, as well as elevated mortality rates. A survey of 3,370 inmates in Canadian federal institutions revealed that 22% of men and 29% of women had engaged in injection drug use in the six months prior to admission to custody, and 17% of men and 14% of women had injected drugs while in custody in the six months prior to the survey (Zakaria, Thompson, Jarvis, & Borgatta, 2010). Notably, of inmates who reported

injecting drugs while in custody, 55% of men and 41% of women used someone else's needle, and 38% of men and 29% of women knowingly shared needles with someone with HIV, HCV, or an unknown infection status (Zakaria et al., 2010). A number of studies of correctional population samples across Canada, including Ontario provincial inmates, have similarly highlighted the prevalence of injection drug use, including sharing used needles, prior to and during incarceration (Kouyoumdjian et al., 2014; Martin et al., 2005; Poulin et al., 2007; Wood et al., 2005). Further, injection drug use with used needles was equally prevalent, at a rate of 32%, before and during incarceration for injection drug users in six provincial correctional facilities in Ontario (Calzavara et al., 2003).

Sexual contact is formally restricted to conjugal visits in federal correctional institutions in Canada, and explicitly forbidden in Ontario provincial institutions, yet, inmates continue to engage in sexual activity—often by way of unsafe or unprotected practices—while in custody. For example, in a sample of 3,370 federal inmates, 17% of male and 31% of female inmates reported having had sex while in custody in the six months prior to the survey, of which 99% reported at least one instance of having engaged in unprotected oral, vaginal, or anal sex (Zakaria et al., 2010). Though data pertaining to the in-custody sexual activity of Ontario provincial inmates was not available, studies have shown pre-incarceration risky sexual behaviours and a history of sexually transmitted diseases and infections in Ontario correctional populations (Kouyoumdjian et al., 2014; Kouyoumdjian, Main, Calzavara, & Kiefer, 2011).

Correctional populations are also at a heightened risk of death compared with the general population both during incarceration and after release from custody. The Correctional Service of Canada has identified that between 2000-2001 and 2015-2016, 857 deaths occurred in federal custody; more than half of these deaths were due to natural causes, and the most common type of non-natural death was suicide (Correctional Service Canada, 2017). Mortality rates were elevated for inmates in custody in both federal and provincial correctional institutions in Ontario between 1990 and 1999 compared with the average Canadian male population; in particular, homicide and suicide rates were much greater than those of the general population (Wobeser, Datema, Bechard, & Ford, 2002). Of 48,000 adults admitted to provincial custody in Ontario in 2000, 4,126 individuals (8.6%) died in custody or after release between 2000 and 2012; life expectancy was 4.2 years less for men and 10.6 years less for women who had been incarcerated, compared with the general population (Kouyoumdjian, Kiefer, Wobeser, Gonzalez, & Hwang, 2016). Of the 74 deaths that occurred in provincial custody during this time period, nearly a fifth were drug overdose deaths and nearly a quarter were attributed to suicide or self-injury (Kouyoumdjian et al., 2016). A review of coroner records revealed that, in Ontario, one in ten drug toxicity deaths among adults occurred within one year of release from a provincial correctional institution, 20% of which occurred within one week of release (Groot et al., 2016). Inmates with health care needs—including mental health and substance use disorders—may experience interruptions in care or treatment following release from custody, putting them at heightened risk for adverse health outcomes, including death (Binswanger et al., 2007; Pratt, Piper, Appleby, Webb, & Shaw, 2006; Rosen, Schoenbach, & Wohl, 2008).

An Opportunity for Health Care Interventions

Correctional institutions are often a first opportunity for access to health care for incarcerated individuals, as many may have health needs that were poorly addressed in the community before admission to custody. For example, about one third of inmates sampled in Ontario provincial institutions had no primary care provider in the 12 months prior to incarceration, and 48% reported unmet health needs prior to incarceration (Green et al., 2016). Admission to custody may act as a first point of contact with health care services and may be an opportunity for the initiation of chronic disease, mental health, and/or substance use treatment for many individuals with untreated health needs.

However, there are tensions between balancing the provision of appropriate medical care and meeting security needs in institutions (World Health Organization, 2013; International Centre for Prison Studies, 2004), and limited human resources place a strain on the available health care services for inmates in an institution. In the federal correctional system, a vacancy rate for all health care staff positions was reported at just over 8.5% in 2013, varying by position and reaching as high as 29% of psychologist positions lying vacant in Ontario federal institutions (Sapers, 2013). Inmates may be denied access to their prescribed medications while waiting for a physician's assessment or due to lack of inventory, which may allow their health conditions to worsen or destabilize, putting both themselves and others who are incarcerated at risk of illness or injury (John Howard Society of Ontario, 2016). Further, certain health care personnel, such as occupational therapists, physiotherapists, or dietitians, may not be frequently available in correctional institutions to provide care, and therefore only individuals with acute care needs will be treated by such professionals (John Howard Society of Ontario, 2016). This results in reactionary treatment of health needs for individuals in custody and neglects the benefits of preventive medicine and health care.

Given the transient nature of the provincial inmate population, intake assessment of health needs and determining a care plan are difficult, owing to the uncertainty of the duration of incarceration. In 2016-2017, there were 74,664 admissions to Ontario provincial correctional facilities, though some of these admissions may have been the same individual with multiple admissions to custody in one year (Malakieh, 2018). In addition, the duration spent in custody for many admissions was short. By the nature of provincial institutions as facilities for holding individuals awaiting trial or serving sentences of less than two years, the average duration in custody will be considerably shorter than for federal inmates in Canada. For example, of individuals who were sentenced to provincial or territorial custody in Canada in 2016-2017, 30% spent one week or less in custody and 59% spent one month or less in custody (Malakieh, 2018). These proportions were even greater among individuals held on remand: over half (52%) were released after a week or less, and three quarters (76%) spent a month or less in custody in provincial/territorial institutions in 2016-2017 (Malakieh, 2018). Therefore, it can be expected that inmates held in provincial correctional institutions in Ontario are going to be back out in the community within a fairly short period of time.

The point of release is a critical moment posing a heightened risk of negative health consequences for correctional

populations, including death (Binswanger et al., 2007; Chang, Lichtenstein, Larsson, & Fazel, 2015; Pratt et al., 2006). In particular, recently released inmates are at a greater risk of death due to drug toxicity than the general population, and are especially susceptible to death involving opioid use (Andrews & Kinner, 2012; Farrell & Marsden, 2008). About 10% of all adult drug-toxicity deaths in Ontario between 2006 and 2013 were attributed to individuals who had been released from a provincial institution within the last year; 20% of these deaths occurred within one week of release, and 77% involved opioids (Groot et al., 2016).

The short duration of custody for provincial inmates poses a challenge for adequate and timely assessment of health needs, initiation of treatment, and discharge planning to ensure continuation of health care services upon release from custody. Leaving an institution with health problems hinders successful reintegration into the community, and, in a cyclical manner, structural and systemic factors—such as restrictive employment policies or unstable housing that pose barriers to attaining social stability—also impact the ability to engage in treatment or health services following release (Davis et al., 2009; John Howard Society of Ontario, 2016; Visser & Mallik-Kane, 2007).

DISCUSSION

It is clear that individuals who are incarcerated experience heightened health problems before, during, and after incarceration. There is a legal and ethical obligation to provide health care services to correctional populations. The provincial inmate population will, in the majority of cases, be returning to the community following a short duration in custody. Assessing and treating the health care needs of inmates in Ontario provincial institutions—and ensuring continuity of care and connections with community treatment and health services—would be beneficial not only for the health and safety of individuals who have been in custody, but also for public health.

Considering the heightened needs and challenges that correctional populations face, it is of utmost importance that those with the most experience and expertise in providing health care services and planning be responsible for ensuring that the health needs of these individuals are met. Untreated health conditions will inevitably require costly treatment interventions. Early screening and access to primary care can help reduce the severity of illness and act as preventive measures towards the development of comorbidities and more serious health issues that result in a higher health care burden and the use of more costly medical and/or emergency services.

As provincial inmate health care is currently governed and delivered by MCSCS, and not the Ministry of Health and Long-Term Care, correctional health care service and delivery may vary from the services and objectives of the body governing health for the rest of Ontarians. There is an international and academic consensus that the responsibility for health care in correctional facilities must rest with the government authority in charge of health. Many jurisdictions around the world, including four provinces in Canada—Alberta, British Columbia, Nova Scotia, and Newfoundland and Labrador—have moved to transition the responsibility for health care in

their correctional facilities to their respective health authorities (Independent Review of Ontario Corrections, 2017).

In the *Corrections in Ontario: Directions for Reform* report, released in September 2017, the Independent Review of Ontario Corrections recommended that the Government of Ontario clearly articulate a commitment to transfer the responsibility for the provision of health care within provincial correctional institutions to the Ministry of Health and Long-Term Care. This included the establishment of a common understanding of what services are to be transferred, and the development of a timeline for the transfer. Further, the report outlined that any proposed service delivery models should be evaluated against their ability to provide a principled, health-focused approach to care in corrections (Independent Review of Ontario Corrections, 2017). The chosen model must subscribe to a broad definition of health and health care, thus allowing for a comprehensive approach to correctional health care that follows the whole-prison approach (World Health Organization, 2007). In addition, the model must ensure equivalency, accessibility (physical and economical), and continuity of care for inmates, including facilitating seamless transitions between providers within and outside of institutions. Third, the model must ensure the clinical independence of health care professionals to operate and provide services within the public safety and security context of a correctional facility. Furthermore, the model must be integrated into the broader provincial health care system, including training, research, and provincial and local health priorities and initiatives. Additionally, the model must have robust accountability mechanisms to ensure that it adheres to core principles and standards, including accreditation and quality control measures. Lastly, the model must facilitate a stable, health-focused employment environment to develop a sustainable, experienced, and dedicated work force to deliver health care and meet the complex needs of the incarcerated population.

When *Corrections in Ontario: Directions for Reform* was released, the Government of Ontario recognized the need for change in the provision of health care in its correctional facilities. Legal and ethical obligations support the notion that the health care of inmates in provincial institutions should be managed in the same manner as the health care of Ontarians in the community. Reforming health services for this population and transitioning responsibilities to the Ministry of Health and Long-Term Care is a necessary—though complex and multi-step—process. On February 20, 2018, the provincial government announced that it would be “improving health outcomes for those in custody” by creating a new expert advisory committee, engaging in public consultations, and completing a comprehensive review of the health care needs of inmates and current services provided in each correctional facility (Ministry of Community Safety and Correctional Services, 2018c). The advice provided in the report submitted to the Government of Ontario by the expert advisory committee aligns with the health care recommendations made in the *Corrections in Ontario: Directions for Reform* report.

On May 7, 2018, the *Correctional Services and Reintegration Act, 2018*, received Royal Assent, and it is set to repeal and replace the *Ministry of Correctional Services Act*. The legislation proposes a phased implementation plan in order to ensure that the provincial correctional system is ready for the transformation ahead. This includes making sure that appropriate

supports are in place to maintain a safe environment for both inmates and staff. Once proclaimed, this legislation will mandate the completion of an initial assessment on all newly admitted inmates to provincial institutions in Ontario to identify their needs while in custody and upon release. The legislation will require that an individualized case management plan be created for every inmate in order to address his or her unique needs and establish a plan for successful reintegration into the community. It will affirm the provincial government’s obligation to provide patient-centred, equitable health care services that respect clinical independence and will define the health care services that incarcerated individuals should have access to, including health promotion, mental health and addictions care, and traditional Indigenous healing and medicines.

The *Correctional Services and Reintegration Act, 2018*, was passed shortly before an election in June 2018 that brought in a new provincial government. We encourage the Government of Ontario to proclaim the *Correctional Services and Reintegration Act, 2018*—thus adopting a public health approach to health care in provincial corrections—to continue the momentum of recent reform efforts in Ontario. There is a window of opportunity to turn aspirations of a fairer, more empathetic, and more effective justice system into a reality. Providing adequate, appropriate, and accessible health care services to incarcerated individuals is one crucial aspect of this vision.

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CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

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REFERENCES

- Acheson, D. (1988). *Public Health in England: The Report of the Committee of Inquiry into the Future Development of the Public Health Function, 1988*. London, England: Her Majesty’s Stationery Office.
- Andrews, J. Y., & Kinner, S. A. (2012). Understanding drug-related mortality in released prisoners: a review of national coronial records. *BMC Public Health, 12*(1), 270.
- Beaudette, J. N., Power, J., & Stewart, L. A. (2015). *National prevalence of mental disorders among incoming federally sentenced men offenders* (Research Report, R-357). Ottawa, ON: Correctional Service Canada.
- Binswanger, I. A., Krueger, P. M., & Steiner, J. F. (2009). Prevalence of chronic medical conditions among jail and prison inmates in the United States compared with the general population. *Journal of Epidemiology & Community Health, 63*(11), 912–919.
- Binswanger, I. A., Stern, M. F., Deyo, R. A., Heagerty, P. J., Cheadle, A., Elmore, J. G., & Koepsell, T. D. (2007). Release from prison—a high risk of death for former inmates. *New England Journal of Medicine, 356*(2), 157–165.

- Birmingham, L. (2003). The mental health of prisoners. *Advances in Psychiatric Treatment*, 9(3), 191–199.
- Bland, R. C., Newman, S. C., Thompson, A. H., & Dyck, R. J. (1998). Psychiatric disorders in the population and in prisoners. *International Journal of Law and Psychiatry*, 21(3), 273–279.
- Brink, J. H., Doherty, D., & Boer, A. (2001). Mental disorder in federal offenders: a Canadian prevalence study. *International Journal of Law and Psychiatry*, 24(4-5), 339–356.
- Butler, T., Indig, D., Allnut, S., & Mamoon, H. (2011). Co-occurring mental illness and substance use disorder among Australian prisoners. *Drug and Alcohol Review*, 30(2), 188–194.
- Calzavara, L., Burchell, A., Schlossberg, J., Myers, T., Escobar, M., Wallace, E., ... Millson, M. (2003). Prior opiate injection and incarceration history predict injection drug use among inmates. *Addiction*, 98(9), 1257–1265.
- Calzavara, L., Ramuscak, N., Burchell, A. N., Swantee, C., Myers, T., Ford, P., ... Raymond, S. (2007). Prevalence of HIV and hepatitis C virus infections among inmates of Ontario remand facilities. *Canadian Medical Association Journal*, 177(3), 257–261.
- Canada Health Act, C-6 (1985).
- Chang, Z., Lichtenstein, P., Larsson, H., & Fazel, S. (2015). Substance use disorders, psychiatric disorders, and mortality after release from prison: a nationwide longitudinal cohort study. *The Lancet Psychiatry*, 2(5), 422–430.
- Correctional Service Canada. (2016). *Our role*. Retrieved from <http://www.csc-scc.gc.ca/about-us/006-0001-eng.shtml>.
- Correctional Service Canada. (2017). *Annual report on deaths in custody 2015/2016*. Ottawa, ON: Correctional Service Canada.
- Corrections and Conditional Release Act, 20 (1992).
- Davis, L. M., Nicosia, N., Overton, A., Miyashiro, L., Derose, K. P., Fain, T., ... Williams III, E. (2009). *Understanding the public health implications of prisoner reentry in California*. Santa Monica, CA: Rand Corporation.
- Farrell, M., & Marsden, J. (2008). Acute risk of drug-related death among newly released prisoners in England and Wales. *Addiction*, 103(2), 251–255.
- Fazel, S., & Baillargeon, J. (2011). The health of prisoners. *The Lancet*, 377(9769), 956–965.
- Fazel, S., Bains, P., & Doll, H. (2006). Substance abuse and dependence in prisoners: a systematic review. *Addiction*, 101(2), 181–191.
- Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23 000 prisoners: a systematic review of 62 surveys. *The Lancet*, 359(9306), 545–550.
- Fazel, S., Hayes, A. J., Bartellas, K., Clerici, M., & Trestman, R. (2016). Mental health of prisoners: prevalence, adverse outcomes, and interventions. *The Lancet Psychiatry*, 3(9), 871–881.
- Fazel, S., & Seewald, K. (2012). Severe mental illness in 33 588 prisoners worldwide: systematic review and meta-regression analysis. *The British Journal of Psychiatry*, 200(5), 364–373.
- Fazel, S., Yoon, I. A., & Hayes, A. J. (2017). Substance use disorders in prisoners: an updated systematic review and meta-regression analysis in recently incarcerated men and women. *Addiction*, 112(10), 1725–1739.
- Green, S., Foran, J., & Kouyoumdjian, F. G. (2016). Access to primary care in adults in a provincial correctional facility in Ontario. *BMC Research Notes*, 9(1), 131.
- Groot, E., Kouyoumdjian, F. G., Kiefer, L., Madadi, P., Gross, J., Prevost, B., ... Persaud, N. (2016). Drug toxicity deaths after release from incarceration in Ontario, 2006–2013: review of coroner's cases. *PLOS One*, 11(7), e0157512.
- Harris, F., Hek, G., & Condon, L. (2007). Health needs of prisoners in England and Wales: the implications for prison healthcare of gender, age and ethnicity. *Health & Social Care in the Community*, 15(1), 56–66.
- Independent Review of Ontario Corrections. (2017). *Corrections in Ontario: Directions for reform*. Toronto, ON: Government of Ontario and Independent Review of Ontario Corrections.
- International Centre for Prison Studies. (2004). *Prison health and public health: The integration of prison health services*. Paper presented at the International Centre for Prison Studies, London, England.
- James, D. J., & Glaze, L. E. (2006). *Mental health problems of prison and jail inmates*. Washington, DC: Office of Justice Programs, U.S. Department of Justice.
- John Howard Society of Ontario. (2016). *Fractured care: Public health opportunities in Ontario's correctional institutions*. Toronto, ON: John Howard Society of Ontario.
- Kouyoumdjian, F. G., Calzavara, L. M., Kiefer, L., Main, C., & Bondy, S. J. (2014). Drug use prior to incarceration and associated socio-behavioural factors among males in a provincial correctional facility in Ontario, Canada. *Canadian Journal of Public Health/Revue canadienne de santé publique*, 105(3), e198–e202.
- Kouyoumdjian, F. G., Kiefer, L., Wobeser, W., Gonzalez, A., & Hwang, S. W. (2016). Mortality over 12 years of follow-up in people admitted to provincial custody in Ontario: a retrospective cohort study. *CMAJ Open*, 4(2), E153.
- Kouyoumdjian, F. G., Main, C., Calzavara, L. M., & Kiefer, L. (2011). Prevalence and predictors of urethral chlamydia and gonorrhea infection in male inmates in an Ontario correctional facility. *Canadian Journal of Public Health/Revue Canadienne de Santé Publique*, 102(3), 220–224.
- Lafortune, D. (2010). Prevalence and screening of mental disorders in short-term correctional facilities. *International Journal of Law and Psychiatry*, 33(2), 94–100.
- Malakieh, J. (2018). *Adult and youth correctional statistics in Canada, 2016/2017*. Ottawa, ON: Statistics Canada.
- Marks, L., Hunter, D. J., & Alderslade, R. (2011). *Strengthening public health capacity and services in Europe: A concept paper*. Copenhagen, Denmark: World Health Organization and Durham University.
- Martin, R. E., Gold, F., Murphy, W., Remple, V., Berkowitz, J., & Money, D. (2005). Drug use and risk of bloodborne infections: a survey of female prisoners in British Columbia. *Canadian Journal of Public Health/Revue Canadienne de Santé Publique*, 96(2), 97–101.
- Ministry of Community Safety and Correctional Services. (2018a). [Age at Admission Trends FY 0607 to 1617]. Unpublished raw data.
- Ministry of Community Safety and Correctional Services. (2018b). *Correctional Services*. Retrieved from https://www.mcscs.jus.gov.on.ca/english/corr_serv/CS_main.html.
- Ministry of Community Safety and Correctional Services. (2018c). *Ontario Transforming. Newsroom*. Retrieved from <https://news.ontario.ca/mcscs/en/2018/2/ontario-transforming-adult-correctional-system.html>.
- Ministry of Health and Long-Term Care. (2018). *Protecting and promoting the health of Ontarians—Ontario public health standards: Requirements for programs, services, and accountability*. Toronto, ON: Government of Ontario.
- Moscow Declaration. (2011). First global ministerial conference on healthy lifestyles and noncommunicable disease control, Moscow, Russia.
- Poulin, C., Alary, M., Lambert, G., Godin, G., Landry, S., Gagnon, H., ... Claessens, C. (2007). Prevalence of HIV and hepatitis C virus infections among inmates of Quebec provincial prisons. *Canadian Medical Association Journal*, 177(3), 252–256.

- Pratt, D., Piper, M., Appleby, L., Webb, R., & Shaw, J. (2006). Suicide in recently released prisoners: a population-based cohort study. *The Lancet*, 368(9530), 119–123.
- Reitano, J. (2017). *Adult Correctional Statistics in Canada, 2015/2016*. Ottawa, ON: Statistics Canada.
- Rosen, D. L., Schoenbach, V. J., & Wohl, D. A. (2008). All-cause and cause-specific mortality among men released from state prison, 1980–2005. *American Journal of Public Health*, 98(12), 2278–2284.
- Sapers, H. (2011). *Annual report of the Office of the Correctional Investigator 2010-2011*. Ottawa, ON: The Correctional Investigator Canada.
- Sapers, H. (2013). *Annual report of the Office of the Correctional Investigator 2012-2013*. Ottawa, ON: The Correctional Investigator Canada.
- Sapers, H. (2015). *Annual report of the Office of the Correctional Investigator 2014-2015*. Ottawa, ON: The Correctional Investigator Canada.
- United Nations. (1990 December 14). General Assembly. Resolution 45/111, *Basic principles for the treatment of prisoners*, A/RES/45/111. Available from <https://www.ohchr.org/en/professionalinterest/pages/basicprinciplestreatmentofprisoners.aspx>.
- United Nations. (2015 December 17). General Assembly. Resolution 70/175, *United Nations standard minimum rules for the treatment of prisoners*, A/RES/70/175 Stat. Available from <https://undocs.org/A/RES/70/175>.
- Visher, C. A., & Mallik-Kane, K. (2007). Reentry experiences of men with health problems. In R. Greifinger (Ed.), *Public health behind bars* (pp. 434–460): New York, NY: Springer.
- Wilper, A. P., Woolhandler, S., Boyd, J. W., Lasser, K. E., McCormick, D., Bor, D. H., & Himmelstein, D. U. (2009). The health and health care of US prisoners: results of a nationwide survey. *American Journal of Public Health*, 99(4), 666–672.
- Wobeser, W. L., Datema, J., Bechard, B., & Ford, P. (2002). Causes of death among people in custody in Ontario, 1990–1999. *Canadian Medical Association Journal*, 167(10), 1109–1113.
- Wood, E., Li, K., Small, W., Montaner, J. S., Schechter, M. T., & Kerr, T. (2005). Recent incarceration independently associated with syringe sharing by injection drug users. *Public Health Reports*, 120(2), 150–156.
- World Health Organization. (2007). *Health in prisons: A WHO guide to the essentials in prison health*. Copenhagen, Denmark: World Health Organization Regional Office for Europe.
- World Health Organization. (2013). *Good governance for prison health in the 21st century. A policy brief on the organization of prison health*. Copenhagen, Denmark: World Health Organization Regional Office for Europe.
- Zakaria, D. (2010). *Testing and treatment for human immunodeficiency virus and hepatitis C virus infections among Canadian federal inmates*. Ottawa, ON: Correctional Service of Canada.
- Zakaria, D., Thompson, J. M., Jarvis, A., & Borgatta, F. (2010). *Summary of emerging findings from the 2007 national inmate infectious diseases and risk-behaviours survey*. Ottawa, ON: Correctional Service of Canada.
- Zinger, I. (2017). *Annual report of the Office of the Correctional Investigator 2016-2017*. Ottawa, ON: The Correctional Investigator Canada.