Improving Health Care System Responses to Chronic Disease among British Columbia's Immigrant, Refugee, and Corrections Population:

A Review of Current Findings and Opportunities for Change

Summary: Corrections Population

Prepared for the

Reducing Health Inequities:
A Health System Approach to Chronic Disease Prevention

Project Steering Committee

by

Phoebe M. Long, MPH

March 2010

Summary: Corrections Population

Prison and penitentiary inmates experience disproportionately high levels of chronic and acute physical and mental health problems, resulting in increased utilization of health services within correctional institutions and once released from custody. The provision of health care in correctional facilities differs from care for the non-prison population in community settings in numerous ways. These include the need for greater control of medications, heightened security and escort services necessary when inmates require health services beyond what is offered within the correctional facility, and some tension between the goals of inmates seeking care and the staff providing health services.

There are several demographic features of the inmate population that distinguish it from the Canadian population. On average, inmates are much younger, they are predominantly male, and Aboriginal people are substantially overrepresented. In recent years the demographic profile of the incarcerated population has been shifting, as the number and proportion of female, Aboriginal, and older prisoners entering custody has increased. Such shifts have important implications for correctional services in terms of the types of rehabilitative and health programming needed and the infrastructure required to house this changing population.

From a health determinants perspective, several critical factors influence the health of inmates, including: low rates of education completion and literacy; poor employment histories and financial instability; unstable accommodation; poor social networks and attachments; and extensive criminal histories. Additionally, the three subgroups seen in higher numbers and proportions of the corrections population in recent years—Aboriginals, women, and older offenders—have a higher risk of poor health outcomes, when compared with the general inmate population.

Mental health and infectious diseases are of particular concern among the corrections population. Substantial proportions of offenders are identified as having mental and substance abuse disorders at intake, and concurrent disorders are extremely common. The correctional environment can challenge mental health, and may lead to the development of new disorders as well as the exacerbation of those that are pre-existing. Offenders are at increased risk of having acquired several types of infectious diseases prior to incarceration, including HIV and hepatitis. Furthermore, transmission of communicable diseases within corrections facilities is considerable, and is influenced by the extent of risky behaviour initiated and continued

throughout incarceration. Inmates in custody have substantially higher mortality rates than comparably aged members of the general population. Violent deaths, cardiovascular disease, cancer, liver disease, and HIV/AIDS are among the most significant causes of death for this population, and reflect the diseases and risk behaviours that are highly prevalent (e.g., hepatitis infection and lung cancer, smoking and injection drug use).

Institutionalized offenders have substantially higher utilization rates of health care services than similarly aged individuals in the community. Penitentiary and prison health services make extensive use of nurses, which reflects the institutional setting of correctional facilities as well as specific inmate health issues.

Key Findings

Mortality and Health Status

- *Mortality.* Inmates have substantially higher mortality rates in institutions than comparably aged members of the general Canadian population. Violent deaths, both self-inflicted and involving others, are a major cause of death for inmates. Over half of all deaths among male and female inmates in federal penitentiaries are due to "natural causes". Where specific causes are available, cardiovascular disease and cancer account for nearly two-thirds of this category, and a third of all cancers have been attributed to lung cancers. Liver disease and HIV/AIDS are also leading causes of death among the incarcerated population. These high rates are likely due to the high rates of HIV and hepatitis infection in offenders, as well as risky behaviours including injection drug and alcohol use.

- *Health Status.* Upon intake to federal penitentiaries, records demonstrate that nearly one-quarter of female inmates and 13% of male inmates are deemed to have health concerns requiring immediate attention. The proportion of inmates with health-related concerns increases with age, wherein over half of male inmates over 65 years of age are on medication and over one-quarter have immediate health concerns noted during intake assessment.

Specific Chronic Disease Concerns

- *Mental Health.* Promoting mental health in correctional settings is challenging since a prison is, by definition, a coercive environment. Stressors particular to the corrections environment can challenge inmates' mental health, and decreased ability to cope with such stressors may lead to the development of mental health issues among some offenders and the exacerbation of pre-existing disorders among others.

- *Intellectual Disabilities*. Although systematic testing for intellectual disabilities is not performed on inmates, a crude assessment of mental ability is performed upon intake to federal and provincial institutions. Mental ability needs or deficits are identified in roughly 3% of male prisoners and 5% of female inmates.

- *Mental Health Issues Identified at Intake.* Substantial proportions of inmates are identified as having trouble with substance abuse at intake into custody, and drug abuse is more commonly identified than alcohol abuse. Nearly one third of female prisoners and one sixth of male inmates are reported to have emotional or mental health problems at intake, and significant proportions have received recent psychiatric or psychological treatment prior to incarceration.

- *Older Inmates*. In general, older inmates (age 50 and older) have slightly better mental health profiles and considerably lower rates of alcohol and drug abuse than younger inmates.

- *Patterns of Mental Health Concerns.* The prevalence of current mental disorders among federal male inmates in BC has been found to increase with age and decreasing educational level. Co-occuring disorders are highly prevalent, with over 90% of prisoners diagnosed with mood, psychotic or anxiety disorders having at least one other disorder.

- *Substance Abuse.* Substance abuse disorders have been found in higher numbers among Aboriginal inmates than among Caucasian inmates, and among all inmates with lower education levels. Importantly, nearly half of all offenders with substance abuse disorders had a concurrent disorder, which should be taken into account for the design and implementation of substance abuse treatment programs.

- *Female Offenders.* Available information on the prevalence of mental disorders in female offenders suggests that mental disorders are more common in females inmates than in their male counterparts. Among females in custody, the potent mixture of personality disorders, depression and other mood disorders, substance abuse, self-injurious behaviour, and histories of physical/sexual abuse presents substantive challenges for programming, rehabilitation, and health maintenance in prison settings.

- *Long-term Communicable Diseases.* Incarcerated offenders are at increased risk of having acquired several types of infectious diseases prior to incarceration, and transmission of communicable diseases within corrections facilities is also influenced by the extent of risky behaviour initiated or continued throughout incarceration. The most common bloodborne viral diseases are the human immunodeficiency virus (HIV), the hepatitis C virus (HCV), and the hepatitis B virus (HBV).

    - *HIV/AIDS.* HIV infection rates among inmates in BC are estimated to be about ten times higher than infection rates among all Canadians.

  - *HCV.* HCV infection rates in offenders are more than twenty times higher than the estimated prevalence of hepatitis infection in Canada. Within the corrections population, rates are higher among female inmates and offenders who inject drugs.

  - *Intervention and Treatment Programs.* A variety of interventions are currently in place to reduce the risk of transmission of bloodborne viruses within federal and provincial institutions, including education and harm reduction initiatives. Needle exchange programs are not currently available within prisons or penitentiaries, but methadone maintenance programs, and bleach and cleaning supplies for injection equipment are available, as are drug treatment programs and condom and dental dam distribution.

- *Cancer.* The exact incidence and prevalence of cancer among inmates is not known. However, mortality statistics reveal that lung cancer may be particularly high among male and females in the corrections system. Testing rates and results for Papanicolau and mammography screening among female inmates is not systematically tracked, but some research suggests that there is a need for improved screening programs within prisons and penitentiaries and enhanced follow-up care for women once they are released from custody.

- *Heart Disease.* Among deaths due to natural causes, cardiovascular disease is the leading cause of death among offenders in custody in Canada. Cardiovascular disease appears to be significantly more common among inmates than the non-incarcerated Canadian population. These findings are based on extrapolation from regional pharmacy data, however, and so some of this excess may be attributable to the use of beta-blockers to control chronic migraines.

- *Diabetes.* Treatment rates for diabetes among federal inmates exceed rates in the general population.

- *Asthma.* Treatment for asthma is substantially higher among male and female penitentiary inmates than the Canadian population. Inmates with COPD may be treated with inhalers and this could inflate the asthma prevalence estimate. Smoking and/or exposure to second-hand smoke would necessitate more intensive treatment for asthmatic individuals in correctional facilities. A substantial portion of inhalers may be prescribed for other indications, including airway hyper-activity due to colds and other upper respiratory conditions.

- *Epilepsy.* Seizure disorders among offenders in custody may result from many different causes, including previous head injuries and substance withdrawal. There may be a higher risk of developing seizure disorders in inmates as a result of the higher prevalence of head injuries and substance use in this population.

- *Injury and Disability.* Incidents involving injury of inmates are relatively common within corrections institutions and are predominantly related to the prison environment (e.g.,

assaults on inmates or staff, self-injury, hostage taking, etc.). Research has shown that inmate injuries are significantly more likely than injuries in the general public to be non-accidental and to be more serious, presenting a higher likelihood of fractures, head injuries, long-term disability, and death.

Health Service Utilization

- *Utilization Rates.* Offenders institutionalized in federal penitentiaries have substantially higher utilization rates of health care services than in similarly aged individuals in the community. Overall, increased utilization of health services can be explained by several factors, including:
    - Greater need (inequitable distribution of health determinants, more health conditions, limited coping mechanisms and recourse to self-care or informal care);
    - Administrative requirements (admission screening, incident reporting, excused duty from work or programs due to illness);
    - Greater supervision and control of medication use;
    - Increased accessibility to service;
    - Opportunity to interact with caregivers.
- *Patterns of Use.* Notably, penitentiary health services make extensive use of nurses, which reflects the institutional setting of correctional facilities as well as specific inmate health issues. The vast majority of health care encounters are reported to be with nurses. A small minority of offenders have extremely high rates of use, and so account for a substantial portion of inmate interactions with the system. Health service utilization generally increases with age, as would be expected for any aging population. Younger offenders tend to use services as often, and sometimes more frequently, than older inmates.
- *Reasons for Use.* Little information is readily available on reasons for use. This may be due to the fact that reasons for visit to CSC and provincial health services are not collected or recorded in a standardized format or made available in an electronic information system. Some institutions do have recorded data on visits to their health care facilities, however.
    - Musculoskeletal concerns predominate recorded reasons for visits to health care facilities, which is consistent with data on injuries.
    - Although all correctional facilities provide psychologists, mental health issues are not identified as a common reason for visits. This is particularly surprising given the high prevalence of mental health disorders in the corrections population.

Population-specific Opportunities

System and Policy

- *Adaptation of health care services to reflect shifting population demographics:* The three sub-groups seen in higher numbers and proportions of the corrections population in recent years—Aboriginals, women, and older offenders—have a higher risk of poor health outcomes, when compared with the general inmate population. As the proportion of inmates who are female, Aboriginal, and/or over the age of 50 expands, health care services must respond to the specific health concerns and chronic conditions predominant among these subgroups.

- *Improvement of continuity of care between correctional health facilities and health authorities:* High rates of concurrent mental and substance abuse disorders, as well as certain long-term communicable disease (i.e., HIV/AIDS and Hepatitis C) mean that a substantial number of inmates have been treated for such illnesses while in custody. Thus, a thorough treatment plan and continuity of care must be continued after release. This is particularly relevant for individuals in provincial corrections centres, as they will be released from custody after less than two years. Reliable communication, information and knowledge sharing between correctional health facilities and regional health authorities should ensure appropriate responses to the health of previously incarcerated individuals.

- *Enhancement of prevention efforts:* Incarceration provides an opportunity for preventive health care among men and women who might not otherwise receive such services outside of the corrections context. This is particularly true for members of populations that are typically undeserved by provincial health care systems (e.g., Aboriginals, women, individuals with low income, people with mental illnesses and/or substance abuse disorders). Prevention efforts should include expanded and thorough screening programs as well as health promotion, education, and behavioural modifications.

- *Modification of existing services to respond to specific mental health concerns of inmates:* Almost half of incarcerated individuals estimated to have substance use disorders also have an additional mental disorder, which has important implications for the design and implementation of substance abuse treatment programs.

- *Expansion and enhancement of harm reduction interventions:* Existing programs that provide bleaching equipment, condoms and dental dams should be improved and expanded to reach as many incarcerated individuals as possible. In parallel, corrections institutions should consider the adoption of approaches proven effective in other contexts and jurisdictions, such as needle-exchange and violence reduction programs.

- *Expansion of culturally appropriate services:* These should include effective and appropriate services for Aboriginals and ethnic minorities. Translation and interpretation services may be necessary in facilities with groups of men and women with low official language

proficiency. Additionally, the particular needs and concerns of women and transgendered individuals should be considered.

- *Revision of policies on smoking within corrections institutions:* Given the association between lung cancer and smoking, and the high mortality rate from lung cancer observed among the corrections population, policies allowing inmates to smoke in living areas warrants reconsideration.

Research

- *Qualitative studies of health service utilization:* Future research should aim to elucidate some of the factors affecting inmates' utilization of health care services. This could include qualitative studies examining the perceived need for care, health beliefs, and engagement with available resources. The low rate of psychiatric and psychological consults is concerning, given the predominance of mental health and substance abuse disorders in the corrections population. Qualitative research could attempt to explain such discrepancies as:
    - High prevalence of mental health disorders and low utilization of psychiatric and psychological services;
    - High prevalence of HIV/AIDS and HCV infection and relatively low treatment uptake.
- *Quantitative studies of health status indicators.* Further quantitative understandings of various chronic conditions among inmates are needed. Little longitudinal data is available, which would help in elucidating trends in health status and service utilization over time. Additionally, current information does not clearly distinguish between health issues predating incarceration, and those which are developed or exacerbated while in custody.
- *Consideration of subgroups:* In this review, little research on the health status and health care service utilization of young offenders was found. Research on the health of other subgroups of inmates, such as women and Aboriginal offenders, is also limited, particularly at the provincial level.