# THE CEDAR PROJECT: EXPLORING THE HEALTH RELATED CORRELATES OF CHILD WELFARE AND INCARCERATION AMONG YOUNG ABORIGINAL PEOPLE IN TWO CANADIAN CITIES

by

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#### **ABSTRACT**

**Background:** Aboriginal leadership and communities at large are deeply concerned about the disproportionate number of young Aboriginal people entering the child welfare and justice systems in Canada. The current institutionalization of young Aboriginal people must be understood as an extension of Canada's colonial history, including generations of family disruption and child apprehensions. More knowledge is needed on the impacts of these experiences among young Aboriginal people

**Purpose:** This study compares sociodemographics, trauma experiences and drug and health related vulnerabilities between young Aboriginal people who were taken away from their biological parents and those who were not, and between those who were incarcerated in the last six months and those who were not.

Methods: Baseline survey data from on ongoing prospective cohort study of urban Canadian Aboriginal young people was analyzed to determine variables associated with the child welfare system and recent incarceration. To be eligible, participants had to be between the ages of 14 and 30, be living in Vancouver or Prince George, and have used illicit drugs in the past month. Recruitment methods included word of mouth, posters, and street outreach. Surveys were administered between October 2003 and November 2007.

**Results:** Multivariable regression found that child welfare was associated with having at least one parent attend residential school, suicide ideation, and ever being on the street for three nights or more. Among those who injected drugs, being taken from parents was associated with overdose, injecting with used syringes, and self-harming. Recent incarceration was associated with currently self-harming, being male, ever being in juvenile detention, and injection drug use for the total population, and injecting with a used syringe and spending three nights or more on the street for injectors. Eleven percent of injectors who were incarcerated reported injecting while incarcerated.

Conclusions: Dedicated efforts are required to support young Aboriginal people who have been involved in the child welfare and justice systems. Focus on trauma care and on supporting families and communities is crucial in addressing the disproportionate number of institutionalized Aboriginal young people. Jurisdictional reform, cultural programming, supportive housing and harm reduction strategies are urgently needed.

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I would also like to extend my gratitude to my thesis supervisors and committee members, without whom this could not have been possible. I would like to give special thanks to Dr. Gary Poole, my co-supervisor who provided much support and guidance along the way. Thank-you for our many meetings and conversation, for being open to my true interests, for engaging my ideas and adjusting to the many twists and turns that a masters thesis can take. I must also give special thanks to Dr. Patricia Spittal, who has taught me so much about the importance of advocating for and with the Aboriginal peoples of Canada – And of the importance of not writing over the pain and of getting the voice of these young people out there so that as a society, we are held accountable, and so that as a society, we can respond. Thank-you for your commitment and your confidence in me and for your genuine support, academically and emotionally. Your passion for

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#### **CO-AUTHORSHIP STATEMENT**

For the manuscript entitled "Exploring the health related correlates of child welfare among young Aborginla people who use injection and non-injection drugs in two Canadian cities", Adam Clarkson, Dr. Patricia Spittal, and Dr. Matin Schechter were responsible for the design of the analysis. Adam Clarkson, Dr. Spittal, and Wayne Christian, were responsible for the interpretation of the findings and the literature review. Adam Clarkson wrote the manuscript. Adam Clarkson, Dr. Spittal, Dr. Schechter, and AKM Moniruzzaman conducted the analyses, contributed to the methods and results section and were invovled in revising the manuscript with Dr. Gary Poole and Wayne Christian. For the manuscript entitled "Incarceration among young Aboriginla people who use drugs in two canadian cities: an exploration of historical and health related correlates", Adam Clarkson, Dr. Spittal, and Dr. Schechter were responsible for the design of the analysis. Adam Clarkson, Dr. Spittal, Dr. Poole, Vicky Thomas, and Wayne Christian, were responsible for the interpretation of the findings and the literature review. Adam Clarkson wrote the manuscript. Adam Clarkson, Dr. Spittal, Dr. Schechter, and AKM Moniruzzaman conducted the analyses, contributed to the methods and results section and were invovled in revising the manuscript with Dr. Gary Poole and Wayne Christian.

#### **AUTHOR'S NOTE**

It is important at this time to recognize the greater context in which this thesis is situated. To say that the Aboriginal people of Canada have suffered under the colonization of the Europeans in past and present day is an understatement of embarrassing proportion.

We must always remember that Canada's Aboriginal people are today's people, ever changing, ever a continuation of a line of ancestors, ever part of this earth, who, in many ways, are shaped of the very ground on which all Canadians stand.

This time is perhaps the hardest that Aboriginal people have ever faced; generations of subordination by a dominant culture that has taken control of the natural environment and developed policy on the principle that "Indians" are worth less than "white" people. And yet, despite this unfortunate reality, we must not be satisfied with the representation of Aboriginal people as a vulnerable population.

The Aboriginal people of Canada are a dynamic, powerful and resilient population, and their potential to thrive if brought into the light of acceptance and reconciliation both within themselves and within the social fabric at large, is great but not yet fully known. Thankfully, great inroads are being made, and at many turns Canadians, mediated though also often obscured through government, media and status quo, are confronted more and more with the injustices so obviously present in Canadian cities, rural areas and reserves.

Exposure of this injustice, though lacking, is growing. Founded by the hearts of many brave people called to take up the path of advocating for change, for the better, for the people. In short, in reading this thesis I would like to state that this thesis is not just written *for* change, but is written *within* the ever blowing winds of change. It is happening already. My only wish is that it happens faster and that this work be, in some capacity, part of that change.

### CHAPTER 1: CANADA'S HISTORICAL LEGACY OF COLONIZATION AND ABORIGINAL CHILD AND YOUTH WELFARE

#### 1.1 Thesis Overview

The purpose of this thesis is to explore health related outcomes associated with exposure to the child welfare system and recent incarceration among young Aboriginal people who use drugs. By empirically interpreting survey findings, this research explores the relationship between experience in these institutions and specific health related vulnerabilities including: homelessness, drug taking behaviour, risk of injection, risk of overdose, sex-work, self-harm and suicidal tendencies.

In Chapter 1, I frame the historical context of this research with a focus on the impact of European colonialism and governmental policy, specifically child welfare policy, on Aboriginal communities and families. I then discuss the paradigms that inform this work and introduce the Cedar Project, Partnership and Cohort. Lastly, I review the literature on foster care and incarceration as it relates to this study.

The first manuscript is presented in Chapter 2 and addresses the impact of being taken away from one's biological parents on health and HIV-related vulnerabilities, among Aboriginal young people who use drugs. The second manuscript in Chapter 3 explores the factors associated with being incarcerated in the six months previous to enrolment into the Cedar cohort. The papers presented in this thesis contribute to the empirical health research that incorporates historical frameworks for understanding the underlying factors responsible for such large health disparities between the Aboriginal

people and the non-Aboriginal population, as well as the vulnerabilities associated with the disproportionate amount of institutionalization among Aboriginal young people in Canada. These findings are restricted in specificity to young drug using Aboriginal people in Vancouver and Prince George British Columbia. Finally, Chapter 4 will summarize the results, discuss the limitations of this work, and make recommendations for further research.

# 1.2 Introduction: Modes of Colonization, Historical and Current Trauma, Assimilation and Child Welfare in Canada

Disparities among the Aboriginal population in many areas of wellbeing, including poverty (Frohlich, Ross, & Richmond, 2006), homelessness (Walker, 2008), suicide (Kirmayer, Brass, Holton, Simpson et al., 2007), life expectancy (Adelson, 2005), and prevalence of disease including diabetes (Waldram, Herring, & Young, 2006), and HIV (Craib, Spittal, Wood, Laliberte et al., 2003) are alarming considering the ideals of equality espoused by the Canadian constitution<sup>1</sup>. These issues of disparity present a fundamental challenge to health and welfare in Canada, to which all are entitled without discrimination. This challenge is made especially difficult for historical reasons; that is, how can a nation built on a foundation of colonialism achieve cultural equality among its diverse population? It has been suggested that by exploring with a critical lens the systemic components, or policies, of the dominant social structure, one might bring to the surface inequalities which would otherwise function to perpetuate systemic disparity in the Aboriginal population (Jiwani, 2006). For example, it is well known that Aboriginal people are vastly overrepresented in both the child welfare system and the incarcerated

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<sup>&</sup>lt;sup>1</sup> Section 15 of the Canadian Charter of Rights and Freedoms of 1982 Part 1

population in Canada (Bennett & Sadrehashemi, 2008; Statistics Canada, 2005). These disparities must be understood within an historical context of forced assimilation and cultural genocide (Adelson, 2005; Kirmayer, Brass, & Tait, 2000; Rojas & Gretton, 2007; Walters, Simoni, & Evans-Campbell, 2002). Further, by exploring the health related vulnerabilities associated with these experiences in this context, this thesis draws attention to the need to incorporate historical perspectives into the understanding of these current health issues, and the urgency with which this form of disparity must be addressed. This study is specifically concerned with the health outcomes of high-risk Aboriginal young people defined by current use of illicit drugs. This group is of interest due to the many negative impacts this behaviour incurs. It is also of concern because this population reflects the intergenerational transmission of pain and trauma that has persistently and systematically burdened the Aboriginal people of Canada throughout history (Barlow, 2003; Chansonneuve, 2007). For the purpose of this thesis, the historical context presented will focus on the relationship between the Indigenous population and the colonial Europeans, in terms of child welfare. This will be accomplished by describing three definable periods known as: The Assimilation Period (1867-1960), Integration Period (1960-1980), and Self-Government Initiative Period (1980-present) (Durst, 2002).

#### **1.2.1 The Assimilation Period (1867-1960)**

I hope you will excuse me for so speaking but one of the most important commandments laid upon the human by the divine is love and respect for children and parents. It seems strange that in the name of religion a system of education should have been instituted, the foundation principle of which not only ignored but contradicted this command.

Superintendent General of Indian Affairs, 1908 (Milloy, 1999, p. 28)

The Assimilation Period began with the Constitution Act of 1867, which excluded First Nations from sharing power, denied them basic human rights, and bestowed responsibility of the Indigenous population upon the federal government. During this time, Christian missionaries were responsible for the delivery of government sponsored services, including education, to Aboriginal children. The goal of these programs was to 'civilize', or more accurately, to assimilate children of Aboriginal descent with the long term plan of eliminating native ways of knowing and living altogether (Armitage, 1993; Milloy 1999). This mission was philosophically founded on an explicitly racialized discourse, constructed of several basic tenants which depicted two identities: that of the "savage", or other, and that of the "civilized". Moreover, the "savage" way of being was seen as ignorant, blind, and in "need of emancipation" (Milloy, 1999, p. 25). Indeed, it was this philosophy, enacted by church-state partnerships, that would dominate the delivery of child services to Aboriginal children well into the next century, with the overt purpose of 'civilizing' the native race by systematically eradicating Aboriginal culture and beliefs (Armitage, 1993; Fournier & Crey, 1997; Milloy, 1999). Deplorable as it was, the strategy of Canada's founding fathers was clear: "it is to the young that we must look for the complete change of condition" (Milloy, 1999, p. 27).

This strategy captures the basic ideology behind the widespread implementation of the residential school system, initiated in the late 19<sup>th</sup> century. The construction of the schools was reinforced by the *Davin Report* of 1879 which outlined an aggressive approach to colonization and the need to "kill the Indian" in order to save the child (Milloy, 1999). As a result, the residential school system was responsible for removing over one hundred thousand children from their homes between 1874 and 1986 (Royal

Commission on Aboriginal Peoples (RCAP), 1996). By 1920, removal of children into residential schools was enforced by law. Thus, for 10 months of the year, Aboriginal children were subjected to an ill-informed and often ill-equipped school system that was responsible for an unprecedented amount of pain, tragedy, and abuse (Fournier & Crey, 1997). For example, a lack of resources left many schools overcrowded and unsanitary. In 1908, the Honourable S.H. Blake, responded to the heinous state of the schools, and the tragic mortality rate of its students, in some places 50%, by stating that in, "...doing nothing to obviate the preventable causes of death, brings the Department within unpleasant nearness to the charge of manslaughter" (Milloy, 1999, p. 77). In addition to the rampant transmission of disease, the teachers, nuns and priests running the schools used "strict discipline, regimented behaviour, submission to authority, and corporeal punishment" to enforce regulations (Furniss, 1995, p. 49). Children were beaten into unconsciousness, and some into permanent disability (Chansonneuve, 2007). In addition, were disturbing accounts of pervasive sex abuse committed by predatory nuns and priests, including forced intercourse, sexual touching and sexualized punishments (Fournier & Crey; Hylton, 2002; RCAP, 1996; Ross, 2006). This assault on the Aboriginal child was executed as a means of suppressing Indigenous language and forbidding cultural practices, and served a colonial agenda focused on dismantling Aboriginal identity (Law Commission of Canada, 2000). Starved, punished and sexually abused by the white adults at the school, many tried to run away, and some died in the process. Among the tragic stories, is one of a group of boys who escaped from a school in the winter, and only kilometers from their reserve perished, frozen in the snow (Fournier & Crey, 1997).

This whole set of practices is what, in 1922, Dr. P.H. Bryce first termed the "national crime" (Milloy, 1999, p. 75), and remains one of the darkest stains on Canada's history. For, just as foreign diseases introduced by European settlers and explorers rampaged the Indigenous population, killing an estimated 80% of its population by the time of the confederation (Blackstock & Trocme, 2004), so too did this system drastically impact Canada's Indigenous people, but arguably more maliciously. For this was an intentional practice, and one of ethnocide. Through "persistent neglect" and "debilitating abuse" (Milloy, 1999, p. xiv), the residential school system not only perpetuated the spread of fatal infectious diseases such as tuberculosis, but also attacked the very culture and spirit of Canada's first peoples, creating a history of trauma still felt today.

One need only look back on the historical records to get a sense of the regrettable reality this aspect of history created. In 1922, inspector Hutchinson plainly stated that, "[t]hese Indian schools are the biggest farce to be called schools I have ever seen" (Milloy, 1999, p. 178). Unfortunately, such council fell on deaf ears, and many letters were disregarded and stored, not to be brought out of the shadows until John Milloy, for the purpose of the 1996 Royal Commission on Aboriginal Peoples, was given access to the otherwise unavailable letters and files kept in the Department of Indian Affairs and Northern Development. Most shocking, the residential school system would continue to operate after these initial reports for another 70 years, with the same problems, same criticism and with little or, in many cases, no improvement.

The negative impact the residential schools had on the Aboriginal population at large is immeasurable. In some families, five generations of children spent their entire childhood institutionalized in the culturally hostile schools. This had an obvious effect

on Aboriginal communities, as many would return suffering from the unresolved guilt, trauma and rage experienced in the schools (Chansonneuve, 2007). As a result of the pain and degradation suffered at the hands of the Canadian government and Christian institutions, many students who returned from the system were unable to escape the learned cycles of control and abuse, and perpetuated them forward, into their families and communities (RCAP, 1996; Walter, Simoni & Evans-Cambell, 2002). This multigenerational impact of the residential school system has left a legacy of fragmented families, patterned abuse, and cultural identity crises, evident in the numerable challenges Aboriginal families and communities face with regards to mental health, abuse and substance misuse (Fournier & Crey, 1997; Hylton, 2002; Kirmayer, Brass & Tait 2000; RCAP, 1996).

In the end, it was not until the monetary cost, in combination with the human cost and the schools' lack of success in accomplishing any of its goals, that the Canadian government began to phase out the widespread use of the residential schools. In 1951, an amendment to Section 88 of the Indian Act devolved jurisdiction of First Nations health, welfare, and education from the federal to the provincial government. Although this relieved the federal government from its responsibility of implementing education and health programs for First Nations, the federal government remained financially accountable to status Indians. This divide in process has created many hurtles for current Aboriginal child and family services as well as disparities in funding between Aboriginal and non-Aboriginal organizations (Hughes, 2006). The amendment to Section 88 also led to a whole other set of assimilation strategies, this time carried out by provincial social services, marking the beginning of the Integration Period.

#### **1.2.2.** The Integration Period (1960s-1980s)

The Integration Period did not, as the title suggests, mark the beginning of the inclusion or acceptance of Aboriginal culture and traditions into the mainstream. Instead, the forceful imposition of Eurocentric policies took on a new form, as the provinces used their newly appointed authority over the health and welfare of Aboriginal people to assert a paternalistic dominance over the Aboriginal family. In many cases, conditions on reserve were poor, a direct result of rapid change and dislocation driven by colonialism, and many were dealing with the intergenerational impacts of the residential school system. Instead of addressing these issues by supporting Aboriginal communities in their development, the provinces responded by sending non-Aboriginal social workers onto reserve to remove children from condition they judged as unsuitable (Fournier & Crey, 1997). Once again, Aboriginal children were removed from their communities, but this time it was permanent, and most were placed into non-aboriginal families who raised them in total disregard for their Aboriginal heritage (Bagley, Young, & Scully, 1993). Many ended up out of province, and in some cases were placed with adoption families in different countries (Armitage, 1993; Durst, 2002). Johnston (1983) famously termed this period the "60's scoop" because children were literally scooped from their family, justified by assumptions and ideals of cultural superiority (Kimelman, 1985).

Between the years of 1960 and 1990, the Department of Indian Affairs has record of 11,132 status Indian children adopted (RCAP, 1996). By 1980, Aboriginal children were entering care at 6 times the national average (Durst, 2002). These adoptions were not always voluntary and rarely understood by Aboriginal families who traditionally saw adoption as impermanent and involving the family, a stark opposition to the western

model of secrecy and finality (Durst, 1992). In short, by the 1970s the child welfare system had succeeded the residential school system as a government run care system for Aboriginal children (Armitage, 1993; Richardson & Nelson, 2007). What was more troubling was that by the 1980s, it was clear that these two systems shared a disturbing characteristic in common: physical and sexual abuse, suffered by the very people its aim was to protect, the children. In 1985, Manitoba Judge E.C. Kimelman released his report, *No Quiet Place*, raising issue with the persistent abuse and permanent damage the system was imparting upon innocent children. Once again, as Kimelman (1985) noted, "cultural genocide has been taking place in a systematic and routine manner" (p. 14). The recognition of the failure of the child welfare system up until this point, finally led to the period we are now in, the Self-Government Initiatives Period.

#### 1.2.3. The Self-Government Initiative Period (1980s-present)

The Self-Government Initiative Period is named in spirit of what Aboriginal communities in Canada have wanted for a long time: mainly, the right to self-determination and with it, jurisdiction over its own children, which to date, has yet to come. However, during this present time, First Nations leaders have been finally given opportunity to negotiate terms by which they hold more than token authority over the decision making processes and policies that affects their children.

The first clear demonstration of an Aboriginal led, self-government initiative in child welfare came without the initial sanction of the government, and was forwarded instead in a grass-roots movement from the Spallumcheen Band, led by Chief Wayne Christian, who, in 1980, protested for jurisdiction over the children of their community

by marching on the lawn of a municipal official and demanding the enactment of a bylaw bestowing jurisdiction over their children (MacDonald, 1985). Despite its success in maintaining programs to support Aboriginal children, the Spallumcheen Band remains the only Aboriginal community in Canada to have recognized legislation over the future generations of their nation. More commonly, this period marks the formation of culturally appropriate family and child services known as First Nations Child and Family Services (FNCFS) agencies. FNCFS agencies help to provide culturally relevant care to children and are centered on some basic, yet comparatively progressive tenants. These principles include, for example, that native children be placed in native homes, that care should be located within the home community, that welfare workers be native and familiar with cultural practices, and that adequate funding and preventative services be provided. Unfortunately, even with Aboriginal representation at the table, and services delivered by FNCFS agencies, Aboriginal children continue to be placed in non-Aboriginal homes, and issues of adequate funding persist. One of the most highly criticized components of these new developments is the regressive nature of the federal funding scheme, Directive 20-1 (Blackstock, & Trocme, 2004).

Directive 20-1 was initiated in 1991, by the Department of Indian and Northern Affairs to outline the development process, operational structure, and funding schemes of FNCFS agencies. In supporting the development of FNCFS agencies, the Directive states that the funding is without prejudice to any related Aboriginal right or treaties which may or may not exist, obfuscating the link between past trespasses and current social need. In addition, the Directive clearly states that the province has jurisdiction over the reserves with regards to applicable legislation, undermining the inherent authority of the

communities. For example, First Nations agencies functioning under their own jurisdiction are not funded, nor are First Nations children and families living off reserve (Blackstock & Trocme, 2004). In addition, an agency must have 1,000 children under supervision to receive funding and full funding is not granted until the fourth year. Its main weakness however, is that it provides funding for services based on children in care, with a terribly simplistic algorithm of number of children in care times the number of nights in care (Hughes, 2006). In contrast, the federal government will not fund supportive or supplemental services, will not fund in-home supports, or any preventive or educational programs (Durst, 2002). Thus, bound by an ill-conceived funding formula, FNCFS agencies must keep "the number up" to secure funding. Interestingly, the number of First Nation children entering care did in fact increase from 16.9% between 1995-1999 and another 21% between 1999-2000 (McKenzie, 2002), and in 2003, it was estimated that there were more Aboriginal people in state care than there were at the height of residential school operation in the 1940s (Blackstock, 2003); clearly not the trend that suggests an evolving, culturally appropriate child welfare system.

In 1996, the Royal Commission on Aboriginal Peoples had already indentified the Directive's major weaknesses and prepared a report including recommendations for block funding in order move from a substitute focus model to a family supportive one. The main impetus of which was the major underfunding of primary and secondary child maltreatment interventions (First Nations Child and Family Care, 2007). Unfortunately, to date, none of these recommendations have been adopted. This, as a matter of policy, is of concern because the amount of support needed for Aboriginal led agencies is high and the number of Aboriginal children in state care is disproportionately higher than non-

Aboriginal children. To the discredit of Directive 20-1, it was found that, on average, FNCFS agencies receive 22% less funding than their non-Aboriginal counterparts (MacDonald & Ladd, 2000). In 2003, provincial data in Manitoba found that, although Aboriginal children made up 70% of the children in care of the province, Aboriginal families themselves were only benefiting from 30% of the welfare family support budget (Blackstock & Trocme, 2004). Meanwhile, the number of Aboriginal children in care continues to rise. Farris-Manning and Zandstra (2003) found that Aboriginal children represented approximately 40% of the 76,000 children and youth displaced by the state, and many of those continue to be displaced into non-Aboriginal homes (Blackstock & Trocme, 2004). In British Columbia, Aboriginal people represent 7% of the province, however, over 50% of children in foster care are Aboriginal (Bennet & Sadrehashemi, 2008).

These numbers reflect the challenges that many Aboriginal communities are facing in the wake of colonialism, which include higher rates of sexual abuse than in non-Aboriginal communities (Hylton, 2002; RCAP, 1996), as well as more suspected and substantiated cases of child maltreatment and neglect (Trocme, Knoke & Blackstock, 2004). This post-colonial reality also has direct impact on rates of incarceration, as many Aboriginal people in custody come from compromised backgrounds characterized by victimization, family disruption, and substance use (Latimer & Foss, 2004); all outcomes that have been associated with the legacy of the residential school system.

#### 1.3 Paradigms of Research on Aboriginal Health

In all works of research, it is important to consider the paradigm or perspective within which the researcher is situated. In the case of this manuscript, several

complimentary paradigms are at work. The main paradigm within which this research is positioned is that of historical or multigenerational trauma. The historical frame I have presented above provides the basis for what its meant by historical trauma. More generally, historical trauma can be seen as the collective experience of physical, emotional, and spiritual injury, over the lifespan and across generations; in this case, by colonial forces, and more specifically, the residential school and child welfare system. This definition is consistent with that of Aboriginal scholars (Yellow Horse & Brave Heart, 2004).

An important aspect of this paradigm is how it draws causal links between cultural and personal experiences suffered in the past, and health and social functioning in the present. In the case of the residential school system, it is not only that the impacts of these assimilation policies themselves spanned generations, but also that the impacts were perpetuated across generations after the policies had dissolved. One important way this occurred was through the disruption of traditional ways of learning family roles and child care (Fournier & Crey, 1997). Children who were taken from their parents and brought up by authoritarian care givers, whose main goal was the eradication of Aboriginal culture through strict and abusive means, were robbed of the experience of a healthy and nurturing childhood experience from which to base their off child-rearing efforts. This was compounded by the economical situation that many communities were facing due to their forced displacement from lands, consequent disruption of traditional modes of subsistence and exclusion from the dominant social economy.

Research on human development also helps explain how these factors may be transmitted through generations. Although the relationship between social-economic

status and health is well acknowledged, what is also becoming clear is the role of stress, particularly maternal stress and development of young children (Essex, Klein, Cho & Kalin, 2002). Moreover, parents coping with unresolved trauma and pain may have significant impact on the healthy development of children. For example, children living with a depressed mother have been found to be at risk of behavioural problems, psychopathology and social and cognitive deficits (Elgar, McGrath, Waschbusch, Stewart et al., 2004). Research on the biology of addiction is uncovering the drastic role that early experience, from the prenatal period into the first few years of life, has on the development of aspects of the brain that are affected during substance use (Mate, 2008). Emotional or physical neglect as the result of stress, mental health, or addiction on the part of the parents all impact the emotional, social and cognitive development of the child (Shonkoff & Phillips, 2000; Mate, 2008). Thus, the importance of mediating the impacts of stress and historical trauma is important for the individual and the healthy development of the following generations and is explicated in Walters, Simoni and Evans-Campbell's (2002) "Indigenist" Stress-Coping Model.

The Indigenist Stress-Coping Model is based largely on previous stress and coping models where the causal link between stressful events and health outcomes is mediated by the availability and use of coping mechanisms. Walters, Simoni and Evans-Campbell's (2002) model is unique in its focus on issues relevant to the Indigenous population. For example, the main stressors used in the model include historical trauma and physical and sexual abuse, while the health outcomes of these stressors includes HIV risk, alcohol/drug use, and mental health. The mediating factors that, if available, make up the coping aspects of the model include enculturation, spiritual coping, and traditional

health practices. This can be seen in contrast to other coping mechanisms that may be harmful including substance abuse (Barlow, 2003). In addition, it will be useful for this thesis, to consider the current structural barriers, specific to Aboriginal people, that impact socio-cultural and health outcomes. This aspect of the relationship between stressor and outcome will be grounded in the philosophy of Yasmin Jiwani and based on her 2006 book, *Discourses of Denial: Mediations on Race Gender and Violence*.

The discourses of denial arise from a critical, anti-racist framework that purports, in this context, to explicate the links between the discursive fields of race and the structural and interpersonal manifestations of violence:

My aim is to map the discursive fields that govern the discourses of raced and gendered violence...in terms of highlighting the inundated and uneven landscape of these multiple and interweaving structures of domination.

(Jiwani, 2006, p. xii).

The structures of domination that she refers to are the institutionalized structures and systems of power that have developed from "accumulated knowledge...grounded in a legacy of colonialism" (Jiwani, 2006, p. xii). Likewise, the uneven landscape of these structures can be seen as the implicitly culture-biased policies that have resulted from a colonial history. This conceptual framework is particularly relevant to this research, because the goal of this work is to focus on the devices by which the culture of power asserts and maintains itself. For the purpose of this work, the focus will be on state-imposed violence, of which the residential school system mentioned above is a prime

example. As Jiwani (2006) asserts, "it is imperative to recall the violence inherent in the very process of nation building, the creation of the Canadian state through colonization" (p. 7), specifically, the subordination of Aboriginal sovereignty and the appropriation of their resources (Thobani, 2000). As mentioned above, however, this violence is not always overt and not always visible. It is made invisible through use of normative concepts and strategic discourses that obfuscate power relationships within society by reifying theses concepts into "absolutes against which the normative Canadian is implicitly defined as the White, law-abiding, citizen of the nation" (Jiwani, 2006, p.14). I would argue that the same strategy is reflected in the dominant culture's structural components or policies, so that many policies, for example, child welfare policies, remain largely invisibly racist, thus negatively impacting one race disproportionately more than another. For example, Aboriginal families and communities face considerable challenges in terms of social, political and economic marginalization as a result of a legacy of colonization. By not considering how these impacts disadvantage Aboriginal families who are subjected to the same policies that were created for the dominant group who do not share the same cultural history, dominant society, under the guise of equal application, exerts disproportionate and inappropriate control over Aboriginal culture and self-determination. In summary, the paradigm of this research employs a historically critical lens that acknowledges the intergenerational impact of historical trauma. It is concerned with how those stresses are attenuated or perpetuated in the current Aboriginal population through structural systems, and how this affects health related outcomes.

#### 1.4 The Cedar Project

#### 1.4.1 History

The Cedar Project was created in response to the alarming rates of HIV infection experienced among Aboriginal people in Vancouver, and the need to expand the HIV research base beyond the traditional urban setting to other parts of British Columbia. In 2003, the Vancouver Injection Drug User Study (VIDUS) reported a significantly higher risk of HIV infection among Aboriginal men and women, than the non-Aboriginal population (Craib et al., 2003). These results followed a trend observed in all Aboriginal populations across Canada for which ethnic data was available. The Public Health Agency of Canada (2000) found an incredible 91% increase in Aboriginal people living with HIV between 1996-1999. Migration among many VIDUS participants between Vancouver and Prince George led a team of researches from the University of British Columbia to Prince George in 2003 to consult with Aboriginal organizations and health authorities about the VIDUS data. Concern over the lack of resources and HIV research in rural and remote areas led researcher Patricia Spittal to initiate the Cedar Project study, and to do so using the two sites: Vancouver's Downtown Eastside and the northern and rural community of Prince George. Because one of the greatest risks of HIV infection is injection drug use, and due to the work being done at the BC Centre of Excellence in HIV, including the VIDUS cohort, the opportunity to isolate a particularly high-risk subpopulation presented itself. The result of which was the Cedar Project Cohort, a cohort of young Aboriginals people, between the ages of 14-30, who smoke or inject drugs. To our knowledge, this remains the only cohort of its kind.

## 1.4.2. The Cedar Project Partnership: The Importance of Representation in Community Situated Research

Past use of Aboriginal surveillance data has proved problematic for the Aboriginal community at large, for certain reasons. For example, the lack of representation in the process of knowledge generation has resulted in interpretations of the data that may inadvertently function to pathologize how Aboriginal people are perceived in the public imagination and thus perpetuate stigma and discrimination. By focusing only on the prevalence of some of the health and social disparities, without an examination of the underlying factors and socio-historical context, one is led to a mistaken characterization of the Aboriginal peoples. Thus, the Cedar Project Partnership was created to ensure that research generated by the group would be accountable to the communities it affected. In developing the strategy for this study, special attention was paid to section 6.0 of the Guidelines provided in the Canadian Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Subjects, which pertains to research involving Aboriginal participants. As a result, a community-based approach was central to the development of the study, which incorporated Aboriginal investigators, collaborators, and organizers into the Partnership. Likewise, it is the Partnership that decides on the conception, design and implementation of the study, ensuring community representation in this project. In addition, quarterly meetings are held whereby the Partnership gathers to discuss emerging research concerns, knowledge translation, representation of data sets and ethical issues.

#### 1.4.3. Situating the Population

In 2006, census data indicated that there were 4,113,487 residents of British Columbia, 196,075 (4.8%), of whom, constituted the Aboriginal population. Of this

population, 129,575 (66.1%) identified as North American Indian, 59,445 (30.3%) as Metis, 795 (0.4%) as Inuit, 1,655 (0.8%) as having multiple Aboriginal ancestry and 4,605 (2.3%) as Aboriginal not on the census list. One interesting aspect about this population is that it is much younger than the non-Aboriginal population; 44% of North American Indians are under 25. Between the ages of 15-34 there are 40,250 North American Indians and 18,035 are Metis, which constitute 31% and 30% of the Aboriginal population respectively. This age range is closest to the Cedar Project age-range (14-30 years), of which 605 are currently enrolled in the project.

#### 1.5 Literature Review

Research in British Columbia on the impacts of child welfare policy on the health of its indigenous population remains scarce despite its importance in the greater context of the social determinants of health for the First Nations' populous. This review will thus focus first on outcomes found in the general foster care population. Following that, focus will be drawn to what is known about foster care and incarceration among indigenous populations.

#### 1.5.1 Foster Care Outcomes in the General Population

There is some debate within the literature over the long-term outcomes of foster care. Although some studies have found that placement in out-of-care homes can be a positive experience for many children (Festinger, 1983; Kufeldt, Vachon, Simard, Baker et al., 2000), there is little dispute that children in foster care are a highly vulnerable group (Blome, 1997; Zetlin & Weinberg, 2004). As such, research on the impact of foster care in much of the English speaking Western world, including Canada, the United

States (US), Australia, New Zealand, and the United Kingdom (UK) has drawn some common conclusions. For example, after adjusting for socioeconomic status, adults who had a history of public care in the UK were more likely to have had a conviction, to have been homeless, to have psychological morbidity, and to be in poorer general health than those not in care (Viner & Taylor, 2005). A recent literature review, also from the UK, found that most, if not all of children in foster care, experience feelings of confusion, fear, apprehension of the unknown, loss, sadness, anxiety, and stress (Bruskas, 2008). Several studies from the US found similar patterns: foster care children are at considerably higher risk for poorer outcomes across many health and social functioning domains, and present with greater behavioral and psychological needs (Blome, 1997; Doyle, 2007a; Fisher, Burraston, & Pears, 2005; Lawrence, Carlson, & Egeland, 2006). In Australia, young people in home based foster care had significantly poorer Health Related Quality of Life across several areas, when compared to the general community (Carbone, Sawyer, Searle, & Robinson, 2007). In addition, Carbone, Sawyer, Searle, and Robinson (2007) found that this population also experienced high rates of mental health problems and that only a minority of these children accessed professional help.

One issue with many of these analyses, however, is that many of the children who enter care are characterized by factors (e.g. poverty; poor relationship with parents) that might impact negative outcomes independently of their foster care experience. These factors are likely to confound any analysis comparing those in care and those not in care, making the interpretation of these results difficult. For example, the very reasons that a child is put into foster care (e.g. neglect and abuse) may be independently related to factors (e.g. fear of abandonment, low social support) associated with poor health

outcome (e.g. anxiety and depression) independent of time spent in foster care (Kerman, Wildfire, & Barth, 2002).

In order to adjust for possible confounding, several steps can be taken. Firstly, studies can control for factors known to be associated with poor health outcomes such as socioeconomic status, as Viner & Taylor (2005) have done. Another strategy is to use two comparison groups that are similar to each other, in ways that relate to health outcomes. For example, Lawrence, Carlson, and Edgeland (2006) compared three groups: children in foster care, children who were maltreated but remained with their families of origin and children who were not maltreated and did not experience foster care but had similar at-risk demographic characteristics, which was used as a control. In this longitudinal design, the investigators controlled for baseline adaptation scores and socioeconomic factors, to compare the impact of foster care on behaviour problems upon leaving care between groups. Using the Child Behaviour Checklist, the authors found significant differences in behavioral problems between the foster care group and the control group, but not between the foster care group and the maltreated group. In a subsample of children who were placed in care between grade 1-3, significant differences were found between the foster care group and the maltreated group, the foster care group exhibiting greater internalizing and externalizing behavioral problems (Lawrence, Carlson, & Edgeland, 2006). Similarly, Joseph Doyle (2007a) looked at individuals on the margin of foster care placement, meaning those children who were being considered for foster care, and divided his population groups into those who ended up in foster care and those who did not. The study compared children placed in foster care with other children on the margin; namely, those who were also investigated for abuse or neglect but were not placed in care, and looked at long-term outcomes, including juvenile delinquency (n=15,039), teen motherhood (n=20,091), employment, and earnings (n=30,415) (Doyle, 2007a). The sample was primarily non-white (76% African American; 12% Hispanic); however, children of Aboriginal ethnicity were excluded. In this analysis, Doyle (2007a) used removal tendency of the social worker as an instrumental variable, to account for differences between social workers. These results suggest that benefit from being placed in foster care is unlikely for children on the margin across these three domains. In fact, the data suggest that those who end up in foster care have higher delinquency rates, teen birth rates, and lower earnings. However, these results must be interpreted with caution, due to relatively high coefficients and standard errors. Still, in another study, Doyle (2007b) found similar outcomes, indicating that adults who were placed in foster care were 2-3 times more likely to enter the criminal justice system than other children on the margin.

A similar study, this one from the University of British Columbia (Warbuton and Hertzman, 2007), provides rare Canadian data in this area of research. In a report for the Child and Youth Officer in British Columbia, the authors linked and studied the data of thousands of boys between the ages 16-18 who were on the margin of being placed in foster care and were either placed or not placed. The combination of such a large data set allowed these investigators to look at a wide variety of indicators and including 82 explanatory and 32 outcome variables. Using analytic techniques to attribute risk of poor health and social outcomes, they found that being placed in care reduced high school graduation, increased welfare use, increased the likelihood of contact with corrections and increased the likelihood of being treated for a medical disorder related to

substance abuse (Warburton & Hertzman, 2007). The authors did not do a sub-analysis on the Aboriginal population; however, it was suggested that as many as 50% of the study population may have been Aboriginal.

#### 1.5.2 Research on Foster Care and Incarceration Among Indigenous Peoples

In general, there is a paucity of research on the impact of state run child services on the health of Indigenous children. One study in Australia found higher levels of distress and PTSD symptomology and specific issues around cultural identity among a small sample of 9 Aboriginal adults removed from their community (Petchkovski & San Roque, 2002); however, no comparison group was used. In Canada, Aboriginal agencies and organizations advocating for Aboriginal health and social justice, coupled with governmental commissions and reports both on the federal and provincial level, have resulted in publications and reports that have focused the issue of Aboriginal child welfare and the overrepresentation of Aboriginal children in the child welfare system (eg. Blackstock, Trocme & Bennett, 2004; Hughes, 2006; RCAP, 1996). In terms of understanding the overrepresentation of Aboriginal young people in care, the most telling analyses were those done on data from the Canadian Incidence Study on Reported Abuse and Neglect (CIS-98). The CIS-98 was the first national study to look at the profile of children and families coming into contact with the child welfare system (Blackstock & Trocme, 2004). The unit of analysis in the study was child welfare investigations from referral to initial disposition, and sociodemographic data on maltreatment was also recorded. In total, the CIS-98 compiled more than 7,600 reports including over 1,000 on First Nations children (Blackstock, Trocme, & Bennett, 2004). In an article published on the analysis, Blackstock and colleagues (2004) found that the overrepresentation of

Aboriginal children going from 'under investigation' to state removal was present at every decision point in the social services process. This study also found that First Nations children were much more likely to be investigated for neglect and less likely to be investigated for abuse, than their non-First Nations counterparts. Neglect, the authors argue, most likely resultant from the socioeconomic disparities suffered more among Aboriginal families than non-Aboriginal families (Blackstock, Trocme & Bennett, 2004).

To date, there have been no studies in Canada that have directly compared the health related outcomes of Aboriginal young people who have been in the child welfare system with those who have not. Although previous research on the impacts among the general population helps to inform hypotheses, research that is Aboriginal focused is especially important considering the role that colonization has played in the history of this population. There is some indication that experience in the child welfare system is associated with negative outcomes among Aboriginal young people. In a recent survey of street-involved Aboriginal youth, 43% had been in foster care (Saewyc et al., 2008), and in an analysis of Aboriginal adults in federal custody, 63% had been involved in the child welfare system in comparison to only 36% of their non-Aboriginal counterparts (Trevethan et al., 2001). In addition, a survey of youth in custody found that 39% of Aboriginal youth were involved with child protection agencies at the time of their admission (Latimer & Foss, 2004).

Similar to the overrepresentation of Aboriginal children in state care, the disproportionate number of Aboriginal people in custody has provided a stark indicator of the marginalization experienced by this population (RCAP, 1996). Despite only representing about 3.3% of the Canadian youth population, 20% of all prison inmates are

Aboriginal (Statistics Canada, 2005). Accounts of the profiles of Aboriginal adults and youth in custody indicate several vulnerabilities such as high rates of substance abuse and victimization (Latimer & Foss, 2004; Ross, 2006); however, little work has explored the relationship between historical trauma variables and incarceration. In the general population, research has found increased rates of HIV/HCV infection in prisons (Correction Services Canada, 2003; Macalino et al., 2004) and elevated risk of HIV among injection drug users (Tyndall, Currie, Spittal, Wood et al., 2003). Although the burden of both HIV/HCV and incarceration is greater among Aboriginal people, there is a lack of research on the HIV-related vulnerabilities associated with incarceration among Aboriginal people who use drugs. Given the high rates of substance abuse issues found among Aboriginal youth and adults in custody (Latimer & Foss, 2004; Trevethan et al., 2001), research on the risks associated with incarceration among this highly vulnerable population is needed.

#### 1.5.3 Conclusion

In summary, the disruption of Aboriginal culture in Canada by European colonization has been pervasive and systematic. Many of the assimilation strategies implemented by church and government were aimed specifically at dismantling the Aboriginal family by separating children from their families, communities and culture. Presently, there is a disproportionate number of Aboriginal people in both the child welfare system and in custody. The relationship between this disparity and the intergenerational impact of colonization is well acknowledged. However, the health related impacts of the current disparities are not well known for this population. There is evidence to suggest that, in general, youth who have been in foster care experience poorer

outcomes when compared to the general population, and also when compared to other children who were considered for care but remained with their family. In particular, those in care tend to experience greater behavioral and psychological problems and fare worse in terms of education, and contact with the law. In addition, issues of substance abuse have been associated both with youth who have been in foster care, and among Aboriginal young people intersecting with the justice system. Further, research indicates that incarceration may be a risk factor for HIV/HCV infection among those who inject drugs. Given the lack of information on the experiences of the Aboriginal population in this context, the overrepresentation of this population in these systems, and the seriousness of the outcomes associated, more research in this area is needed to improve the current state of disparity and marginalization.

#### 1.6 Purpose of the Study

The manuscripts in this thesis have the following objectives:

**Objective 1:** To compare historical trauma variables, socio-demographics, mental health variables, drug use patterns, injection practices, sexual experiences, and HIV and HCV seroposivity, between young Aboriginal people who use drugs who were taken away from their biological parents, and those who were not.

**Hypothesis 1:** Due the intergenerational impact of historical trauma, and in particular the residential school system, it is hypothesized that those who were taken from their biological parents will be more likely to have had parents who were in the residential school system.

**Hypothesis 1.2:** Based on previous literature in the general population, it is hypothesized that those who were taken will experience more negative outcomes in areas of mental health, drug use patterns, and injection practices.

**Objective 2:** To compare the socio-demographics, trauma variables, drug use patterns and sex-experiences, between young Aboriginal people who use drugs that had been incarcerated in the last six months, and those who had not.

Hypothesis 2.1: Due to previous research that suggests high rates of victimization, substance abuse, and experience with the child welfare system among young Aboriginal people in custody, it is hypothesized that those who had been recently incarcerated will have higher rates of historical trauma including having parents in the residential school system and being taken away from their biological parents, and be more likely to have been in juvenile detention.

**Hypothesis 2.2:** Based on previous literature that suggests higher risk for HIV and HCV infection, it is hypothesized that those who inject drugs and were recently incarcerated will have higher rates of HIV and HCV-related vulnerability.

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# CHAPTER 2: EXPLORING THE HEALTH RELATED CORRELATES OF CHILD WELFARE AMONG YOUNG ABORIGINAL PEOPLE WHO USE INJECTION AND NON-INJECTION DRUGS IN TWO CANADIAN CITIES<sup>2</sup>

# 2.1 Introduction

Throughout history, Aboriginal communities and families have suffered an unprecedented amount of pain and disruption at the hands of colonial, religious, and governmental institutions who have acted unilaterally for dominion over the Aboriginal population (Adelson, 2005; Manuel & Posluns, 1974; Kirmayer, Brass & Tait, 2000). Aboriginal young people continue to suffer the consequences of this history, evident in the extremely troubling statistics of many indicators of health and well-being, including high rates of suicide and substance abuse (Kirmayer, et al, 2007; Christian & Spittal, 2008). To properly understand and begin to heal these issues, Aboriginal and non-Aboriginal scholars alike have insisted on the need to contextualize current health disparities within this historical legacy of colonization and cultural genocide, including forced removal from lands and, in particular, the history of the residential school and child welfare system (Adelson, 2005; O'Neil, 1986; Kirmayer, Brass & Tait, 2000; Walters & Simoni, 2002).

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It is well known that after centuries of contact with Indigenous peoples, characterized by forced displacement, oppression, and high mortality rates due to infectious disease, the settlers of Canada directed their efforts of cultural assimilation towards Indigenous children through the creation of the residential school system (Kirmayer, Brass & Tait, 2000; Milloy, 1999). For Canada's founding fathers, the most effective way to address what had become known as "the Indian problem", was to eradicate Aboriginal culture by forcefully suppressing it among the most vulnerable: the children. In effect, the residential school system became the "laboratory and production line of the colonial system" (Manuel & Polsuns, 1974, p.3), removing over one hundred thousand Aboriginal children from their families between 1874 and 1986 (Miller, 1996; Royal Commission on Aboriginal People (RCAP), 1996). In all, there were over 150 residential schools in Canada, and 22 in British Columbia, more than any other province (Stout & Kipling, 2003). Schools were staffed by under qualified teachers, and Aboriginal students were housed in overcrowded unsanitary buildings, where the spread of tuberculosis was rampant with mortality rates as high as 50% (Milloy, 1999). For ten months a year, children were institutionalized in culturally hostile environments, forbidden to practice their spiritual traditions and taught to be ashamed of their Aboriginal identity. To enforce these regulations, missionary-teachers resorted to harsh discipline and corporeal punishment, and many children were beaten for speaking their native tongue (RCAP, 1996). Deeply disturbing are the accounts of pervasive sex abuse committed at the schools by predatory nuns and priests, including forced intercourse, sexual touching and sexualized punishments (Fournier & Crey; Hylton, 2002; RCAP, 1996; Ross, 2006). These practices served a colonial agenda, and functioned to

systematically dismantle the Aboriginal identity and degrade the psyche of generations of children (Law Commission of Canada, 2000; RCAP, 1996), many of whom still feel the pain today. Among the most negative impacts still affecting the overall health and wellbeing of residential school survivors surveyed in 2002 and 2003, was "isolation from family", "abuse" and "loss of cultural identity" (Assembly of First Nations, 2007).

The way in which the harrowing experiences of the residential school system outlasted the system itself has been made clear. With no healthy family role models within the schools, and forced dissociation from cultural traditions and roles, survivors of the residential schools were robbed of the skills necessary to raise their own children, and bereft of the cultural buffers needed to cope with the psychological trauma associated with their experience (Balckstock & Trocme, 2004; Fournier & Crey, 1997, p.83; Walter, Simoni & Evans-Cambell, 2002). As a result, patterns of control and abuse learned in the schools persisted, and much of the trauma was transferred back into Aboriginal communities and down the generational line. Compounded by the struggles and poverty endemic on many reserves as a result of other oppressive strategies, Aboriginal communities became vulnerable to harsh living conditions and to the scrutiny of the new socio-political body. Nowhere was this seen more than in the transition from the residential school system to the child welfare system.

In 1951, amidst the decreasing popularity of the residential schools, the Canadian government amended Section 88 of the Indian Act (1876). This amendment delegated jurisdiction of the health, welfare and education of First Nations to the provinces, and for the first time, Aboriginal families became subject to provincial child welfare law.

Although the federal government maintained its fiscal responsibility to registered Indians,

money was not used to support families or communities in need, but was dispensed per capita, based on each child apprehended. With new jurisdiction, provincial social workers used "culturally inappropriate judgment" to remove children from conditions they deemed neglectful (Fournier & Crey, 1999, p. 82; Kline, 1992); conditions that were due, in large part, to socio-economic marginalization and the systematic impact of the residential school experience. During this time, vast numbers of Aboriginal children were displaced to non-Aboriginal families with no regard for their identity, Nation of origin, or birth name. Between 1959 and the late 1960s, Aboriginal children in the child welfare system increased from 1% to 30-40% (Fournier & Crey, 1997). For many, displacement into foster homes was the beginning of a "life characterized by trauma," rejection, sexual and physical violence, self blame and self-destructive behaviour" (Bennet & Sadrehashemi, 2008). Some were sold by adoption agencies to families out of province and even out of country, with few background checks on the families, and no records kept to aid the reunification of Aboriginal families after children grew up (Armitage, 1993; Bagley, Young, & Scully, 1993). Johnston (1983) famously termed this period the "60's scoop", as large groups of children were removed from their family, however, mass dislocation took place for decades. By the 1970s the child welfare system had, in many ways, succeeded the residential schools as a government run system responsible for the deterioration of Aboriginal families (Armitage, 1993; Richardson & Nelson, 2007). In addition, it was soon clear that these two systems shared a disturbing characteristic in common: physical and sexual abuse. In 1985, Manitoba Judge E.C. Kimelman released his report, No Quiet Place, raising issue with the persistent abuse and permanent damage the system was imparting upon innocent children, and as a result

many cross-cultural adoptions were stopped. In addition, agreements between Aboriginal bands and provincial governments began to take shape and First Nations Family and Child Agencies (FNFCA) were created in varying form; however, jurisdiction remained in the hands of the provincial governments.

During the 1990s, the Department of Indian Affairs and Northern Development initiated Directive 20-1 to outline the development process, operational structure, and funding schemes for the new First Nations led agencies. Still in place today, Directive 20-1 focuses entirely on removing children from their families by funding agencies based on the number of children taken into care, and providing no money for supportive or supplemental services, in-home support, or any preventative or educational programs (Durst, 2002). This funding scheme has been repeatedly criticized; however, the specific recommendations for change, made explicit since the RCAP (1996), have yet to be implemented (Hughes, 2006).

Meanwhile, recent data suggest that the numbers of Aboriginal children placed in state care continue to rise. Between 1995 and 2001, the number of First Nations children living on reserve who were placed in out-of-home care rose by 71.5% (McKenzie, 2002). Nationwide, 40% of the estimated 76,000 children in care between the years 2000-2002 were Aboriginal. In some provinces, it is as high as 80% (Trocme, Knoke, & Blackstock, 2004). In British Columbia (B.C.), more than half of the 9,271 children in foster care are Aboriginal (Ministry of Children and Family Development (MCFD), 2006). Presently, an Aboriginal child is 9.5 times more likely to placed in care than a non-Aboriginal child (Hughes, 2006). Still, little to no empirical evidence is available on the impact of staterun child welfare services on Aboriginal youth today.

Among the general population, it has been found that the vast majority of children in foster care experience feelings of confusion, fear, loss, sadness, anxiety, and stress (Bruskas, 2008). When compared to children who are not in state-care, children in care suffer poorer outcomes in areas of education, health, and social welfare (Bennett & Sadrehashemi, 2008; Carbone, Sawyer, Searle, & Robinson, 2007; Doyle, 2007; Fisher, Burraston, & Pears, 2005; Viner & Taylor, 2005; Vinnerljung et al., 2005). However, many of the factors that characterize the children who are removed from their families are also associated with poor outcomes (Berger & Waldfogel, 2004), thus controlling for these factors to isolate the true impact of foster care can be difficult.

Despite the challenges, several investigations have improved the rigor of such analyses by using comparison groups of children with similar risk profiles (Lawrence, Carlson, & Egeland, 2006) and instrumental variables, to account for inherent variations in the analyses (Doyle, 2007; Warbuten & Hertzman, 2007). In the first study on the impact of placing children in foster care on health outcomes, income assistance dependence, high school graduation, and contact with the justice system, Warbuten and Hertzman (2007) analyzed the province wide administrative data of B.C. males between the ages of 16-18 who were reported to the MCFD. The authors then compared the outcomes of those who were reported to MCFD and subsequently put in foster care with those who were reported to MCFD but stayed with their parents. No sub-analysis was conducted on the Aboriginal population of this sample, nor was the proportion of Aboriginal youth in the sample determined, however it was suggested to be as high as 50% (Warbuten & Hertzman, 2007, p. 15). In a carefully controlled analysis, results indicated that those admitted into foster care fared worse in terms of treatment related to

substance abuse, welfare dependence, high school graduation, and contact with the justice system (Warbuten & Hertzman, 2007).

Although past research suggests that children in foster care are at higher risk for negative health-related outcomes, research is just beginning to look at the prevalence of child welfare experience among at-risk populations of Aboriginal young people. Latimer and Foss (2004) found that 39% of Aboriginal youth in custody were involved with child protection agencies when they were admitted, and a recent B.C. survey found that 42% of marginalized and street-involved Aboriginal youth had spent time in foster care (Saewyc et al, 2008). However, no research has determined the prevalence of child welfare experience among Aboriginal young people who use drugs, a particularly vulnerable group, at risk of several health related outcomes. For example, research on the rate of HIV among Aboriginal people has found that young people are increasingly at risk of infection, with the most vulnerable group being injection drug users (Public Health Agency of Canada, 2006). In addition, research on antecedent trauma, such as sexual abuse has been found to be associated with increased HIV and health related vulnerabilities among young Aboriginal people who use drugs (Pearce et al., 2008). Considering these results, and the role that the state run child welfare system has played in the lives of Aboriginal people in the past, knowledge generated on Aboriginal young people who have been removed from their parents will prove valuable for Aboriginal communities, and for efforts addressing at-risk populations of Aboriginal people. The objectives of this study are (a) to describe the prevalence of young Aboriginal people who use drugs who were taken away from their biological parents; (b) to describe the vulnerabilities associated with this experience.

### 2.2 Methods

The Cedar study is an ongoing prospective cohort study of young Aboriginal people who use drugs in Vancouver and Prince George. Participants self-identified as descendants of the First Nation Peoples of North America including Métis, Aboriginal, First Nations, Inuit and status and non status Indians. In 2006, the Census of Canada, indicated that 196,075 people in British Columbia were Aboriginal, representing approximately 4.8 percent of the provincial population. To be eligible for this study, participants had to be between 14 and 30 years of age, and have smoked or injected illicit drugs, including crystal methamphetamine, crack-cocaine, heroin or cocaine in the month prior to enrolment. Drug use was confirmed using saliva screens (Oral-screen, Avitar Onsite Diagnostics). In addition, participants had to be residing in the greater Vancouver or Prince George regions, and have provided written informed consent. Recruitment was accomplished using a variety of methods including: referral by health care providers, community outreach, and by word of mouth. The majority of participated were enrolled as a result of word of mouth (39%) and outreach staff (32%). As a result, it is difficult to assess how many young people heard about the study, were eligible and chose not to participate. Anecdotal information from our research coordinator and outreach workers does suggest that the youth who do participate in the Cedar Project appear to be representative of their non-involved peers.

The development and conduct of this study followed the guidelines provided in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Subjects (Canadian Institute of Health Research, 1998), with particular attention to section 6.0 pertaining to research involving Aboriginal subjects. First Nations collaborators were involved in the conception, design and implementation of the Cedar Project. They also reviewed the results of this analysis and approved this manuscript for publication. The study was also approved by the University of British Columbia/Providence Health Care Research Ethics Board.

To obtain data, an Aboriginal study coordinator met with all eligible participants to explain procedures, collect informed consent and confirm study eligibility. All participants were informed of the limitations of research confidentiality including communicable disease reporting and child welfare legislation regarding current sexual abuse. At enrolment, participants completed a detailed interviewer-administered questionnaire to elicit data on socio-demographic characteristics, non-injection and injection drug use, injection practices, sexual vulnerability and service utilization. Study participants had the opportunity to be interviewed by an Aboriginal person and, due to confidentiality, someone they trusted. Aboriginal study personnel were heavily involved in the design and pilot of the research instrument, including addressing sensitivities related to historical trauma. Venous blood samples were drawn and tested for HIV and HCV (hepatitis C) antibodies and interviewers were blinded to the HIV and HCV status of the subjects. All eligible participants had private interviews including pre- and posttest counseling with trained nurses; participants were requested to return for their HIV/HCV serostatus test result at which time referrals for HIV/AIDS and HCV care were provided. Returning for results was encouraged but not required. Study personnel also worked actively with the young people involved in the study in securing whatever

physical and emotional support they requested. Requests for help include access to traditional healing, drug dependency treatment and secure housing. Participants were given a twenty dollar stipend at each study visit as compensation for their time and to facilitate transportation.

This analysis is based on data from the baseline questionnaire of all 605 participants recruited from the study's inception in October 2003 to November 2007. Two main groups were created based on whether or not participants had been taken from their biological parents. Response options were yes or no. If participants answered yes, interviewers asked whether it was voluntary or involuntary and where they were sent. In most cases, this was indicated by being taken into foster care or a group home, therefore 'state care' is used interchangeable for this variable. Sociodemographic variables of interest include age, gender, education and homelessness. Trauma variables include having parents who attended residential school, incarceration, and being sexually abused. Drug using variables included type of drug and frequency of drugs used. Participants who reported using injecting drugs were characterized as "injectors". Risky injection variables include borrowing and lending syringes that had been used by someone else. Frequent drug use was defined by using more than once a day. Bingeing was defined by periods when drugs were used more than their reported usual frequency. Risky sex behaviour variables include having an STD diagnosed in the 6 months prior to the visit and unsafe sex. Regular and casual partners were defined as those partners with whom a sexual relationship lasted more or less than 3 months respectively. Sex work was defined as receiving money, shelter, food or drugs in exchange for sex.

Analysis

Initially, a descriptive analysis was performed for the entire study sample and for a subset of those who reported injecting drugs. Statistical analyses of bivariate categorical data were conducted using Pearson's  $X^2$  test and Fisher's Exact methods when expected cell values were less than 5. Non-normal continuous data were analyzed using the Wilcoxon rank-sum test, and normally distributed continuous data were analyzed using Student's t-test. Both unadjusted and adjusted odds ratios and 95 percent confidence intervals were obtained using logistic regression. All reported p-values are two-sided. Statistical software SPSS (Mac 13.0 version) was used to run the analyses. Multivariate logistic regression analysis determined whether being taken from biological parents was independently associated with a priori outcomes among Cedar Project participants, after controlling for significant sociodemographic factors and ever experiencing sex abuse. All outcomes were determined based on their importance to HIV vulnerability or other health outcomes, and because they were statistically significant at the 0.05 cut-off in bivariable analysis.

# 2.3 Results

Of the 605 Aboriginal young adults included in this analysis, 313 (52%) were male and 292 (48%) were female. The median age of participants at baseline was 23 years, and 85% of those over 18 had not completed high school. Sixty-five percent of the cohort had been taken from their biological parents at some point in their lifetime.

Among those who had reported being taken, 71% were taken into foster care, 42% were taken into group homes, 37% were taken to their relatives, and 12.5% had been adopted.

Numbers add up to more than 100% because many participants had been placed in more

than one setting. Eighty-four percent said they were taken involuntarily. The median age first taken was 4 years old and ranged from 0-19 years.

Tables 2.1-2.2 show comparisons of traumatic/stressful life events as well as drug and sex-related vulnerabilities between participants who were taken from their biological parents and those who were not. In comparative analyses, those who reported being taken were more likely to be younger (p = 0.001), to have at least one parent who attended residential school (p = 0.003), to have been sexually abused (p = <0.001), to have been on the street for more than 3 nights (p = 0.035) and to have an HIV-positive antibody status (p = 0.042). Participants who had been taken were more likely to have ever self-harmed (p = 0.012), to have seriously considered suicide (p = 0.001), to have attempted suicide (p = 0.046), to have been diagnosed with a mental illness (p = 0.022) and to be hospitalized for a mental illness (p = 0.018). In addition, participants who had been taken were more likely to have ever been paid for sex (p = 0.003), and to have been paid for sex at a younger age (p = 0.024). Among injection drug users, those who had been taken from their biological parents were more likely to have overdosed (p =<0.001), to have ever fixed with a used rig (p = 0.023), and to have ever fixed with a used rig in the past 6 months (p = 0.018).

## *Univariate analysis*

Results from the univariate and multivariable logistic regression analyses are listed in Table 3-4. Univariate statistical comparisons were made between the group taken from their biological parents and the non-taken group as a comparison. The reference category in all cases was individuals who reported never being taken from their

biological parents. In univariate analyses, being taken from biological parents was associated with being on the street for more than 3 nights, self-harm, suicide ideation, attempted suicide, having been diagnosed with a mental illness, having been hospitalized for a mental illness, HIV-positive antibody status, having ever been paid for sex, and first being paid for sex at a younger age. Among injection drug users, being taken away from biological parents was a significant predictor of overdose, ever fixing with a used rig, fixing with a used rig in the last 6 months, self-harm, ever being paid for sex, ever being diagnosed with a mental illness.

# Mulitvariate analysis

In the multivariate analysis we controlled for age (UOR: 1.7, CI: 1.2-2.3), gender (UOR: 1.35, CI: .964-1.89) and sexual abuse (UOR: 2.14, CI: 1.5-3.02). The outcomes of this analysis are listed under the adjusted odds ratio (AOR) column in table 2.3-2.4. Being taken from biological parents was independently associated with ever being on the street for more than 3 nights (AOR: 1.53, CI: 1.05-2.23) and suicide ideation (AOR: 1.58, CI: 1.04-2.4). Among injection drug users, being taken was independently associated with overdose (AOR: 3.79, CI: 2.02-7.11), ever fixing with a used rig (AOR: 1.95, CI: 1.07-3.56), ever fixing with a used rig in the past 6 months (AOR: 2.52, CI: 1.14-5.6) and self harm (AOR: 1.84, CI: 1.04-3.27).

# 2.4 Discussion

Scholars have used an historical perspective to situate many of the current disparities evidenced among Canada's Aboriginal population, including high rates of

substance abuse and HIV (Adelson, 2005; Barton, et al., 2005; Kirmayer, Simpson, & Cargo, 2003). In terms of child welfare, historical processes such as the development of the residential school system, have resulted in a culturally disparate scenario, exemplified by the overrepresentation of Aboriginal children in the child welfare system. We found a significant association between having at least one parent who attended residential school and involvement in the child welfare system among Cedar Project participants. That 70% of those who had been taken into the child welfare system had at least one parent who was themselves taken into the residential school system adds testament to the direct link between these two government-led systems and to the multigenerational impact that the residential school system has had on the integrity of Aboriginal families. It is shocking that 65% of our participants were involved in the child welfare system and that the median age of being taken away from their parents was 4. Although many studies have found foster care children to be more likely to engage in drug use (Pilowski & Wu, 2006; Warbuten & Hertzman, 2007), this is the first study to demonstrate the prevalence of child welfare experience among a population of Aboriginal young people who use drugs. Significant contact with the child welfare system observed in other vulnerable populations of Aboriginal youth (e.g. youth in custody, street-involved), and the pervasiveness of this experience among our cohort of drug dependent youth adds further question to the effectiveness of the current child welfare process in supporting the needs of young Aboriginal people. While controlling for age, gender and sexual abuse, those who had been taken from their biological parents were at significantly higher risk for serious negative health outcomes, both in the overall cohort and among those who used injection drugs. These results highlight the urgency with which the needs of young

Aboriginal people must be reflected in the policies and procedures of child and family services.

Among all Cedar Project participants, those who reported being taken from their biological parents were more likely to have seriously considered suicide and to have ever spent more than three nights on the street. These distressing findings are indicative of pain and instability among those who have been made wards of the state. Although a paucity of research exists on the specific impacts of the child welfare system on the wellbeing of the Aboriginal population, the trauma of being taken from family, community, and culture has been associated with elevated rates of suicide (Kirmayer et al, 2007; Chandler & Lalonde, 1998) and issues of mental health (Kirmayer, 2000). Additionally, a study among Indigenous youth found that those who had changed caretakers during childhood or adolescence were more likely to commit suicide (May & Dizmang, 1974). Pathways to suicide are complex and involve a number of interrelated factors, however findings that suggest elevated risk within a high-risk group (i.e. drug dependent youth) are important to consider. Currently, suicide rates among Canada's Aboriginal population have reached crisis proportion, representing over one-third of all deaths among Aboriginal youth and occurring at 5-6 times the rate of the non-Aboriginal population (Health Canada, 2003; Kirmayer, et al., 2007). This rejection of life, experienced disproportionately among Aboriginal youth, speaks to the burden of pain that many are carrying. Scholars agree that the epidemic of suicide is directly related to historical traumatization and social disparity as a result of cultural oppression (Kirmayer, Boothroyd, & Hodgins, 1998; Ross, 2006; Wesley-Esquimaux & Smolewski, 2004). Indeed, Aboriginal oral tradition reveals that suicide was rare before European contact

(RCAP, 1995). Further, studies on Indigenous populations have found that strong cultural and spiritual identity both at the individual and community level, is protective against suicide (Chandler & Lalond, 1998; Garoutte, et al., 2003). Although "culture as intervention" has been recognized as necessary by many Aboriginal organizations in addressing issues of mental health, it is critical that programs also address the impact of intergenerational trauma, unresolved grief, and issues related to family separation (Mitchel & Marade, 2005). In order to be effective, programs must recruit Aboriginal youth who have lived through the child welfare system and have dealt with issues of suicide, to design and implement these programs.

Participants with a history of contact with the child welfare system were 1.5 times more likely to have been on the street for more than three nights. These finding are consistent with previous studies that have linked foster care with an elevated risk of homelessness (Collins, 2001; McDonald, Allan, Westerfelt, & Piliavin, 1996) and emphasize the distressing reality that many of those who were housed by the state end up houseless. Upon leaving foster care, many Aboriginal children are stuck between two worlds; they do not indentify with their foster family, yet they were taken at such a young age that they are not familiar with their cultural roots or traditions (Fournier & Crey, 1997). Recently, a B.C. survey found that 42% of Aboriginal street-involved youth surveyed had at some point been in foster care (Saewyc et al, 2008). This is of grave concern as street-involved young people are emotionally and physically vulnerable (Noell et al, 2001; Radford, et al., 1989), and are more likely to engage in risky behaviours such as injection drug use and sex-work (Roy, et al., 2003; PHAC, 2006). Unstable living conditions precipitate instability in other areas of life and reduce the likelihood of finding

stable work and stable social networks. Thus, there is a desperate need to address the lack of positive long-term housing outcomes for youth, especially those aging out of the child welfare system (Leadbeater, Smith, & Clark, 2008).

Among Cedar Project participants who injected drugs, those who had been in state care were 3.8 times more likely to have overdosed, and nearly twice as likely to have borrowed a used needle. These findings are seminal in showing the relationship between experience in the child welfare system and drug-related health, HIV and HCV vulnerability. Despite the reports of several cohorts of drug injectors investigating proximal risk factors associated with overdose and needle borrowing (Sherman, Cheng & Krai, 2007; Wood Tyndall, Spittal, Li et al., 2001) and the association between needle borrowing and HIV and HCV infection (Roy, Alarly, Morissette et al., 2007; Spittal, Craib, Wood & Laliberte et al, 2002), a lack of literature exists on the upstream social determinants of HIV and HCV infection, especially among Aboriginal people. This is the first study to investigate the relationship between being removed from biological parents and HIV/HCV vulnerability. Given recent knowledge and biological models describing the relationship between early trauma and addiction (Mate, 2008), this is an important step in better understanding the social determinants of health and HIV vulnerability among Aboriginal young people. Further research exploring the association between the socio-historical context of Aboriginal people suffering from addiction and serious health outcomes will prove necessary both to effectively address this critical issue and to develope of any meaningful prevention strategy.

Overdose is the leading cause of death among injection drug users and chances of overdosing have been found to increase after an initial experience (Powis, et al., 2002;

Sherman, Cheng, & Krai, 2007). Further, the damaging effects of chronic and heavy use are so widespread in many Aboriginal communities that this practice is considered a form of slow suicide (RCAP, 1995). Drug use among Aboriginal people has been seen as a means of coping with a history of trauma and abuse (Barlow, 2003). That 46% of all Cedar participants who reported injecting drugs had experienced an overdose, and that those who had been taken from their families were nearly four times more likely to have overdosed, emphasizes both the gravity of the situation, and also some of the possible mechanisms that underlie it.

Needle borrowing has been associated with higher rates of HIV-infection among injection drug users (O'Connell et al., 2005; Roy, Alarly, Morissette et al., 2007; Spittal, Craib, Wood & Laliberte et al, 2002). In scenarios where individuals do not have access to clean needles, but have the opportunity to inject, those dependent on drugs risk exposure to blood born pathogens through the use of previously used syringes. Thus, as a proximal measure, harm reduction strategies such as clean needle programs or safe injection sites, play a pivotal role in supporting vulnerable populations with interventions that reduce the risk of negative health outcomes associated with injection drug use. To be effective however, individuals must access the services. Our results therefore indicate that those who had experienced the child welfare system either encounter barriers to services that would reduce their risk of borrowing needles, or that they are less able or less motivated to care for themselves. Addressing issues that underlie early family disruption, or issues associated with child welfare such as homelessness are needed to attenuated to risk of HIV and HCV infection

Our results suggest that the experience of the child welfare system contributes to a wider range of traumas and challenges, experienced as part of the social, political, and economic marginalization of Aboriginal people, and leads to risky drug taking practices and increased health related vulnerabilities. As a result, there is an urgent need to address the trauma associated with being removed from family and community, within culturally appropriate programming for at-risk or street-involved youth. There is an equal need to reform the child welfare system with strategies that support families, as well as protect children. Although many Aboriginal communities continue to express their ceremonial rites and obligations, creating opportunities for traditional healing, biomedicine and the psychiatric profession have tended to marginalize these practices (Waldram, Herring, & Young, p. 240), limiting the focus on and resourcing of culturally situated, holistic frameworks of health and treatment, and thus preventative strategies. Successful, community driven responses to the vulnerabilities confronting Aboriginal young people will develop from prioritizing both participatory research and programming processes that address the importance of ceremonial and familial obligations related to the safety of Aboriginal children and young people.

#### Limitations

Obtaining a representative sample for this population can be challenging. We addressed this challenge by using a variety of recruitment methods to acquire a representative sample that included snowball sampling. It has been demonstrated that if referral chains are sufficiently long and penetrate sufficiently deeply into the networks of a hidden population, snowball sampling can draw nonbiased samples of the population (Magnani, Sabin, Saidel & Heckathorn, 2005). As a result, although we cannot rule out

selection bias and its impact on our parameter estimates completely, we are confident that our sample is representative of Aboriginal young people who use illicit drugs in both cities. The representativeness of our sample does not necessarily extend to other indigenous peoples due the diversity of communities and experiences in relation to drug use. However, it should be noted that many indigenous cultures around the world have suffered similar denigration as a result of colonialism (Manuel & Posluns, 1974) and are coping with similar health challenges as a result (World Health Organization, 1999).

Vulnerable populations, such as the one is the study, are confronted with a complexity of risk factors that may not have been completely captured by our current instruments. For example, information was not gathered on the details of experience in the child welfare system, such as length of stay and placement stability, which would prove useful for this analysis. Research has indicated that length of time in foster care and number of placements have impact on social and health-related outcomes (Rubin, O'Reilly, Luan, & Localio, 2007; Tevethan et al., 2001). It is also possible that participants may under-report experiences and behaviours that are socially stigmatizing or too painful to recall. We have attempted to minimize this limitation through repeated assurances of confidentiality and through establishment of rapport between participant and Aboriginal interviewer over time. We recognize that our indicators of historical trauma, having parents who attended residential school and being taken from parents into care are limited in that they do not directly assess the extent of the historical trauma experienced by the youth in our study. However, these measures do provide information on the effect of specific events associated with colonization in Canada. Finally, due to the cross-sectional nature of the analysis, causation cannot be inferred.

# Looking Forward

In conclusion, the child welfare system has, in a very basic sense, replaced the residential school system in removing Aboriginal children from their families (Richardson & Nelson, 2007; Union of BC Indian Chiefs, 2002). With an estimated three times as many children in the current child welfare system than were in the residential school system during its peak (Blackstock, 2003), critical focus on the impact of current policies and practices on Aboriginal young people is required. We have found that experience with the child welfare system is associated with devastating health and HIVrelated vulnerabilities among at-risk Aboriginal youth in two Canadian cities. The prevalence of historically situated trauma has demonstrated the multigenerational impact of colonial policy, and the need to address issues of health disparity within a more comprehensive, culturally sensitive framework. Taking children away for their families and communities is not a sustainable solution. It only perpetuates colonial ideology by threatening the cultural continuity of Aboriginal peoples and undermining their right to self-determination. However, Aboriginal communities and families must be safe environments for children to grow up, and so, this is where focus is most needed. For positive change, effective efforts must be preventative and support communities in ensuring culturally appropriate protection for young Aboriginal people at risk. This will include timely response to current recommendations posed to government, such as the replacement of Directive 20-1 with a more appropriate funding formula, and more dedicated support for structural change on an individual, community, and jurisdictional level.

Table 2.1: Comparison of baseline sociodemographic and behavioural vulnerabilities including traumatic/stressful life events between participants who were taken from biological parents (n=391) and those who were not (n=214)

| Variable                                                      | Taken<br>n (%) | Not Taken<br>n (%) | p value |
|---------------------------------------------------------------|----------------|--------------------|---------|
| Baseline interview location Vancouver                         | 195 (49.9)     | 105 (49.1)         | 0.850   |
| Female gender                                                 | 199 (50.9)     | 93 (43.5)          | 0.080   |
| Median age at baseline (Range)                                | 22.8 (14-31)   | 24.4 (15-31)       | 0.001   |
| At least one parent in residential school                     | 185 (69.8)     | 93 (55.7)          | 0.003   |
| Ever sexually abused                                          | 212 (54.8)     | 76 (36.2)          | 0.000   |
| Age first sexually abused under cohort                        | 86 (42)        | 26 (35.6)          | 0.343   |
| median (6 years)* Ever on the street for > 3 nights           | 274 (70.3)     | 131 (61.8)         | 0.035   |
| Ever been in prison overnight                                 | 306 (78.3)     | 174 (81.3)         | 0.376   |
| Age first in prison overnight under cohort median (16 years)* | 122 (51.5)     | 63 (47.7)          | 0.490   |
| Ever self harmed                                              | 163 (41.9)     | 67 (31.5)          | 0.012   |
| Ever seriously considered suicide                             | 226 (57.8)     | 93 (43.5)          | 0.001   |
| Ever attempt suicide                                          | 156 (40)       | 68 (31.8)          | 0.046   |
| Ever diagnosed with mental illness                            | 130 (33.4)     | 52 (24.4)          | 0.022   |
| Ever hospitalized for mental illness                          | 82 (21.2)      | 28 (13.3)          | 0.018   |
| HCV-positive antibody status                                  | 122 (33)       | 67 (33.8)          | 0.835   |
| HIV-positive antibody status                                  | 37 (9.6)       | 10 (4.9)           | 0.042   |

<sup>\*</sup>Dichotomized at the cohort median

Table 2.2: Comparison of sex and drug related vulnerabilities between participants who were taken from biological parents (n=391) and those who were not (n=214)

| Variable                                                           | Taken<br>n (%) | Not Taken<br>n (%) | p value |
|--------------------------------------------------------------------|----------------|--------------------|---------|
| Number of lifetime sexual partners over 20                         | 197 (51.3)     | 100 (47.8)         | 0.421   |
| Inconsistent condom use for insertive sex with regular partner     | 35 (18.1)      | 17 (17.5)          | 0.899   |
| Inconsistent condom use for insertive sex with casual partner      | 76 (52.4)      | 47 (60.3)          | 0.261   |
| Sex with an injection drug user in last six months                 | 53 (27.2)      | 26 (26.5)          | 0.906   |
| Ever involved in survival sex                                      | 163 (49.5)     | 68 (36.2)          | 0.003   |
| Age first involved in survival sex under cohort median (16 years)* | 77 (47.5)      | 21 (31.3)          | 0.024   |
| Ever had an STI                                                    | 158 (40.4)     | 89 (41.6)          | 0.778   |
| Had an STI in the last 6 months                                    | 39 (10)        | 16 (7.5)           | 0.307   |
| Daily or more smoking crack                                        | 215 (62)       | 115 (60.2)         | 0.690   |
| Daily or more smoking cocaine                                      | 45 (29.2)      | 25 (25)            | 0.462   |
| Daily or more smoking heroin                                       | 28 (32.9)      | 19 (35.2)          | 0.785   |
| Binge drug smoking                                                 | 193 (49.9)     | 115 (54.5)         | 0.279   |
| Ever inject drugs                                                  | 215 (55)       | 120 (56.1)         | 0.797   |
| Ever overdose +                                                    | 99 (46)        | 30 (25)            | 0.000   |
| Age of first injection under cohort median (17 years)*+            | 77 (36)        | 50 (41.7)          | 0.304   |
| Ever needed help injecting+                                        | 124 (57.7)     | 66 (55)            | 0.636   |
| Daily or more injection cocaine+                                   | 61 (51.7)      | 25 (42.4)          | 0.242   |
| Daily or more injection heroin+                                    | 55 (60.4)      | 37 (62.7)          | 0.780   |
| Daily or more injection methamphetamine+                           | 14 (36.8)      | 6 (35.3)           | 0.912   |
| Daily or more injection speedballs+                                | 22 (48.9)      | 8 (28.6)           | 0.086   |
| Need help injecting in the last 6 months+                          | 68 (39.8)      | 34 (35.8)          | 0.523   |
| Binge injection drug use last 6 months+                            | 116 (54)       | 65 (54.2)          | 0.970   |
| Ever fixed with a used rig+                                        | 80 (37.2)      | 30 (25)            | 0.023   |
| Fixed with a used rig last 6 months+                               | 44 (20.5)      | 12 (10)            | 0.014   |

<sup>\*</sup>Dichotomized at the cohort median

<sup>+</sup>Includes participants who reported injection drug use only (n=335)

Table 2.3: Unadjusted and adjusted odds ratios of health outcomes and HIV vulnerabilities for those taken from biological parents (n=605)

| Variable                                                                       | UOR (95% CI)       | AOR (95% CI) <sup>a</sup> |
|--------------------------------------------------------------------------------|--------------------|---------------------------|
| At least one parent in residential school                                      | 1.84 (1.23-2.75)*  | 1.92 (1.25-2.96)*         |
| Ever on streets for >3 nights                                                  | 1.46 (1.03-2.08)*  | 1.53 (1.05-2.23)*         |
| Ever self harmed                                                               | 1.57 (1.12-2.24)*  | 1.43 (.989-2.08)          |
| Ever seriously thought about suicide                                           | 1.78 (1.27-2.49)** | 1.58 (1.04-2.4)*          |
| Ever attempted suicide                                                         | 1.43 (1.01-2.04)*  | 1.14 (.737-1.76)          |
| Ever diagnosed with mental illness                                             | 1.55 (1.1-2.3)*    | 1.1 (.689-1.76)           |
| Ever hospitalized for mental illness                                           | 1.75 (1.1-2.8)*    | 1.26 (.713-2.24)          |
| HIV antibody status                                                            | 2.08 (1.01-4.27)*  | 1.44 (.601-3.42)          |
| Ever paid for sex                                                              | 1.73 (1.2-2.5)*    | 1.42 (.881-2.29)          |
| Age first involved in survival sex under cohort median (16 years) <sup>b</sup> | 1.98 (1.09-3.62)*  | 1.54 (.731-3.23)          |

UOR=unadjusted odds ratio; AOR=adjusted odds ratio; 95% CI=95% confidence interval

Table 2.4: Unadjusted and adjusted odds ratios of health outcomes and HIV vulnerabilities for those taken from biological parents among participants who inject drugs (n=335)

| Variable                                    | UOR (95%)          | AOR (95%) <sup>a</sup> |
|---------------------------------------------|--------------------|------------------------|
| Ever overdose                               | 2.56 (1.56-4.19)** | 3.79 (2.02-7.11)**     |
| Ever fixed with a used rig                  | 1.78 (1.08-2.92)*  | 1.95 (1.07-3.56)*      |
| Ever fixed with a used rig in past 6 months | 2.32 (1.17-4.58) * | 2.52 (1.14-5.6)*       |
| Ever self harmed                            | 2.14 (1.32-3.47) * | 1.84 (1.04-3.27)*      |
| Ever been paid for sex                      | 1.67 (1.04-2.7)*   | 1.82 (.896-3.68)       |
| Ever diagnosed with mental illness          | 1.64 (1.01-2.68)*  | 1.13 (.621-2.05)       |

UOR=unadjusted odds ratio; AOR=adjusted odds ratio; 95% CI=95% confidence interval

<sup>\*</sup>p<0.05; \*\*p<0.001

a Adjusts for age, gender and sex abuse
b Dichotomized at cohort median

<sup>\*</sup>p<0.05; \*\*p<0.001

<sup>&</sup>lt;sup>a</sup> Adjusts for age, gender, and sex abuse

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# CHAPTER 3: INCARCERATION AMONG YOUNG ABORIGINLA PEOPLE WHO USE DRUGS IN TWO CANADIAN CITIES: AN EXPLORATION OF HISTORICAL AND HEALTH RELATED CORRELATES<sup>3</sup>

#### 3.1 Introduction

Canada's historical legacy of colonization is at the root of many health and social inequities currently experienced by Aboriginal communities and families, including increased vulnerability to HIV infection (Adelson, 2005; Kirmayer, Brass, & Tait, 2000; Walters & Simoni, 2002). The impact of centuries of assimilation-based practices and policies has reverberated through generations, and is evident in the disparities present in many Aboriginal communities where the right to self-determination has been undermined, traditional socio-cultural systems and economies have been marginalized, and families have been disrupted and displaced (Crichlow, 2002; Fournier & Crey, 1997). Federal legislation of the residential school system lasted over 150 years, and forced over 100,000 Aboriginal children, as young as 4 years old, away from their families between 1831 and 1986 (Chansonneuve, 2007). By 1920, the Canadian government made it punishable by law for Aboriginal parents to keep their children with the family (Christinan & Spittal, 2008). As a tool of assimilation, the schools functioned to breakdown cultural bonds and destroy Aboriginal identity, in order to more easily force European culture upon the Indigenous peoples (Fournier & Crey, 1997; Milloy, 1999).

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Within these institutions, students were made to be ashamed of who they were and forbidden to speak their native language or practice their cultural traditions (Chansonneuve, 2007). Children were subjected to corporeal punishment and physically beaten as part of a church and government led mission to Christianize the children, devalue their Aboriginal identity and degrade their psyches (Law Commission of Canada, 2000). In addition, predatory nuns and priests committed pervasive acts of sex abuse upon the defenseless children. For many of the students, forced intercourse, sexual touching and sexualized punishments became a common and tragic part of the horrific experience of attending these schools (Fournier & Crey, 1997; Hylton, 2002; RCAP, 1996).

Recently, the Prime Minister of Canada and the Leader of the Opposition apologized for the many horrors committed in the residential schools (Harper, 2008). Not only did this apology recognize the wrongs that were committed in the past, but also how past legislation continues to impact families and communities today. Bereft of traditional teachings and positive family role models, and burdened with the unresolved pain and guilt from the abuse suffered at the residential schools, many residential school survivors were robbed of the skills necessary to raise healthy families (Blackstock, & Trocme, 2004). As a result, patterns of control and abuse learned in the schools were brought back into the community and perpetuated through generations (Royal Commission on Aboriginal Peoples (RCAP), 1996). This intergenerational impact is reflected in the high rates of youth suicide, HIVAIDS, addiction, human-rights violation, poverty, children in care, and young people imprisoned (Christian & Spittal, 2008).

As the use of residential schools declined, a 1951 amendment to Section 88 of the Indian Act (1876) devolved all authority for Aboriginal child welfare from the Federal to Provincial Government. Citing non-Aboriginal welfare policy, provincial social workers proceeded to remove thousands of Aboriginals children into foster care homes and adoption agencies, with no consideration for Aboriginal identity or family continuity (Fournier & Crey, 1997; Johnson, 1983). Once again, generations of Aboriginal youth were raised without their cultural heritage, and again many suffered various forms of physical and sexual abuse at the hands of their "caretakers" (Kimelman, 1985). Currently in British Columbia, over 50% of children in foster care are Aboriginal, a rate that is almost ten times that of the non-Aboriginal population (Bennett & Sadrehashemi, 2008), as communities continue to struggle with the poverty, addiction and violence that has been passed down from the residential school era.

Given the cumulative effects of loss and grief that have spanned generations, it cannot be surprising that these debilitating circumstances have been associated with the disproportionate institutionalization of Aboriginal people in Canada's correctional facilities (Hylton, 2002; Royal Commission on Aboriginal Peoples (RCAP), 1996; LaPrairie, 2002). Despite representing only 3.3 percent of the population, Aboriginal people represent over 20 percent of all prison inmates (Statistics Canada, 2005). A comparison of profiles of offenders in federal facilities found Aboriginal offenders to be more likely to have experienced instability in childhood, to have been involved with the child welfare system and to present with greater emotional issues and substance abuse needs when compared to non-Aboriginal offenders (Trevethan, Auger, Moore, MacDonald et al., 2001; Trevethan, Moore, & Rastin, 2002). Aboriginal offenders, aged

12-18, report high levels of family dysfunction, and high rates of substance abuse, mental health issues and victimization, including physical and sexual abuse (Corrado & Cohen, 2002; Latimer & Foss, 2004).

Children who are victimized early in life are particularly vulnerable to substance abuse, and are more likely to victimize others, and engage in criminal activity (Walters & Simoni, 2002; Ross, 2006). Corrado and Cohen (2002) found that, among 100 Aboriginal young offenders with serious and/or violent charges, 95% of males and 94% of females reported using drugs. In a study of young offenders who were detained for sexual offences, Rojas and Gretton (2007) found that Aboriginal offenders were significantly more likely to report a history of substance abuse than their non-Aboriginal counterparts (57% vs. 29%). Finally, in a one-day snapshot of Aboriginal youth in custody in Canada, 81% were confirmed or suspected of having a substance abuse problem (Latimer & Foss, 2004).

Despite these high rates of substance abuse among young Aboriginal people in custody, there is little data available on drug use in custody among this group. In addition, there is a paucity of research on the vulnerabilities associated with incarceration among Aboriginal young people who use drugs. Research in the general population, indicates that exposure to prison is related to high rates of infectious diseases and stress related illnesses (Massoglia, 2008). In particular, people who inject drugs who have been incarcerated have been found to be at elevated risk of HIV and hepatitis C (HCV) infection and related vulnerabilities (Firestone, Fisher, Kalousek, Newton-Taylor et al., 2007; Werb, Kerr, Small, Li et al., 2008). The lack of harm reduction strategies in prisons is a concern as evidence demonstrates significant injection drug use and syringe

sharing in jail (Jurgens, Ball & Vester, 2008; Milloy, Wood, Small, Tyndall et al, 2008; Werb et al., 2008). Given these findings, the disproportionate number of Aboriginal people incarcerated, and the socio-historical context of the Aboriginal experience, research on the incarceration of Aboriginal young people is needed. This study aims to (a) describe the prevalence of historical trauma related events in a cohort of Aboriginal young people who use drugs, and were incarcerated in the six months prior to survey, and (b) to identify health related vulnerabilities associated with this experience.

#### 3.2 Methods

The Cedar study is an ongoing prospective cohort study of young Aboriginal people who use drugs in Vancouver and Prince George. In this study, young people who self identify as Aboriginal people are considered to be the descendants of the First Nation Peoples of North America and include Métis, Aboriginal, First Nations, Inuit and status and non-status Indians. According to 2006 census data, 196,075 people in British Columbia self-identified as "Aboriginal", approximately 4.8 percent of the provincial population. Half of the Aboriginal population is less than 25 years old, compared to only one third of the non- Aboriginal population. The Northern Health Authority, which includes the city of Prince George (PG), spans almost two thirds of the landscape of British Columbia. Vancouver Coastal Health Authority, which includes the city of Vancouver, covers over 58,560 km<sup>2</sup>. There are estimated to be 26,890 young Aboriginal people between the ages of 15 and 34 residing in the Northern Health Authority and 11,450 in the Vancouver Coastal Health Authority (Government of British Columbia, 2001). Our target for enrolment was to recruit 300 at risk subjects in both cities. We define 'at risk' as young people who are either smoking or injecting illicit drugs in either

of these locales. Eligibility criteria for this cohort stipulated that participants be between 14 and 30 years of age, and have smoked or injected illicit drugs, including crystal methamphetamine, crack-cocaine, heroin or cocaine in the month prior to enrolment. Saliva screens (Oral-screen, Avitar Onsite Diagnostics) were used to confirm drug use. Participants must have been residing in the greater Vancouver or Prince George regions, and have provided written informed consent. Participants in both cities were recruited through referral by health care providers, community outreach, and by word of mouth. The majority of young people who participated in the study found out about the study by word of mouth (39%) and by outreach staff (32%). It is therefore difficult for us to assess how many young people heard about the study, were eligible and chose not to participate. However, anecdotal information from our research coordinator and outreach workers suggest that the youth who do participate in the Cedar Project appear to be representative of their non-involved peers.

Guidelines provided in the Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Subjects (Canadian Institute of Health Research, 1998) were followed in the development and conduct of this study, with particular attention to section 6.0 pertaining to research involving Aboriginal subjects. Our First Nations collaborators, including Aboriginal AIDS Service Organizations, were involved in the conception, design and implementation of the Cedar Project. They also reviewed the results of this analysis and approved this manuscript for publication. The study was also approved by the University of British Columbia/Providence Health Care Research Ethics Board.

All participants met with one Aboriginal study coordinator who explained procedures, sought informed consent and confirmed study eligibility. In the consenting

process, all participants are informed of the limitations of research confidentiality including communicable disease reporting and child welfare legislation regarding current sexual abuse. At enrolment, participants completed a detailed interviewer-administered questionnaire to elicit data on socio-demographic characteristics, non-injection and injection drug use, injection practices, sexual vulnerability and service utilization. From the inception of the research process it was clear that study participants must have the opportunity to be interviewed by an Aboriginal person. Since confidentiality issues are a concern, particularly in smaller communities, participants are always given a choice to be interviewed by someone they trust. Aboriginal study personnel were heavily involved in the design and pilot of the research instrument, including addressing sensitivities related to historical trauma. Venous blood samples were drawn and tested for HIV and HCV antibodies and interviewers were blinded to the HIV and HCV status of the subjects.

All eligible participants had private interviews including pre- and post-test counseling with trained nurses; participants were requested to return for their HIV/HCV serostatus test result at which time referrals for HIV/AIDS and HCV care were provided. We actively encourage young people to return for their results, however receiving a result is not a requirement of participating in the study. If a participant indicates in the pre-test counseling process that they want their test result back, the nurse makes an appointment around the approximate date when the results are in. In this case, personnel do extensive outreach to let participants know their test results are available and encourage them to retrieve them. Further, study personnel work actively with the young people involved in the study in securing whatever physical and emotional support they request. Requests for help include access to traditional healing, drug dependency treatment and secure housing.

Participants were given a twenty dollar stipend at each study visit as compensation for their time and to facilitate transportation.

This analysis is based on data from the baseline questionnaire of all participants 19 years of age or older (n=478) at the time of recruitment between October 2003 and November 2007. The variable of interest was whether or not participants had ever been incarcerated in the past 6 months for more than 7 days. A cut-off of 7 days was used in order to exclude those who had been incarcerated overnight or held only for very minor offenses. To determine incarceration, participants were asked, 'over the last six months, have you been in detention, prison, or jail overnight or longer'. Response options were yes, no or unsure. If participants answered yes, interviewers asked which type of jail or prison and how long. Options were youth detention, local jail or prison, provincial jail or prison, and federal jail or prison. Sociodemographic variables of interest included age, gender, and education. Trauma variables include having parents who attended residential school, having been taken away from biological parents, having ever been sexually abused, suicidal ideation or attempt, and self-harm. Interviews defined self-harm as any action of self-inflicted injury on the body to get rid of pain. Drug using variables included type of drug and frequency of drugs used. Participants who reported using injecting drugs were characterized as "injectors". Risky injection variables include borrowing and lending syringes that had been used. Frequent drug use was defined by using more than once a day in the last 6 months. Binging was defined by periods when drugs were used more than their reported usual frequency. Risky sex behaviour variables included having an STD diagnosed in the 6 months prior to the visit and unsafe sex in the last 6 months. Regular and casual partners were defined as those partners with whom a sexual relationship lasted more or less than 3 months respectively. Sex work was defined as receiving money, shelter, food or drugs in exchange for sex.

Analysis

Initially, a descriptive analysis was performed for the entire study sample. Statistical analyses of bivariate categorical data were conducted using Pearson's X² test and Fishers Exact methods when expected cell values were less than 5. Non-normal continuous data was analyzed using the Wilcoxon rank-sum test, and normally distributed continuous data was analyzed using Student's *t*-test. Variables that were marginally significant in the univariate analysis (p<0.10) were considered for inclusion in a multivariable logistic regression model. Multivariate logistic regression analysis was used to model the independent association of trauma variables, demographic variables, and health related vulnerabilities with incarceration in the last six months. Both unadjusted and adjusted odds ratios and 95 percent confidence intervals were obtained using logistic regression. All reported p-values are two-sided. Statistical software SPSS (Mac 13.0 version) was used to run the analyses.

#### 3.3 Results

Demographic characteristics of the Cedar Project participants in this study are listed in Table 3.1. Of the 478 Aboriginal young adults aged 19-30 included in the analysis, 243 (51%) were female and 235 (49%) were male. The median age of participants at baseline was 24.5 years and only 16% had completed high school. Eighty-five (17.8%) had been incarcerated for over 7 days in the six months prior to the baseline interview (25% of males; 11% of females; data not shown). Of those who had been

incarcerated, 17.6% had been in a local jail, 77.6% had been in a provincial jail, and 9.4% had been in a federal prison. Percentages add up to more than 100% because 4 individuals had been in more than one custody centre. Average time incarcerated was 40 days for local prison, 89 days for provincial prison and 174 days for federal prison (data not shown).

Tables 3.2-3.3 compare demographic characteristics and risk factors including traumatic life events, and drug and sex-related vulnerabilities between those who had been incarcerated in the last six months and those who had not. Unadjusted odds ratios (UOR) are also listed. In the comparative analysis, participants who had been incarcerated were significantly more likely to be currently self-harming (UOR: 4.57), to have been in juvenile detention (UOR: 2.38), to be male (UOR: 2.20), and to have been interviewed in Prince George (UOR: 1.98). Those recently incarcerated were more likely to have ever been homeless (UOR: 1.79), to have ever self-harmed (UOR: 1.75), to have had a regular partner in the last 6 months who was an injection drug user (UOR: 2.24), and to have ever injected drugs (UOR: 2.12). Among injection drug users, those who had been incarcerated in the last six months were additionally more likely to have ever injected with a used needle (UOR: 2.27). Results from the final multivariable models are found in Tables 3.4-3.5. In the multivariable model for all participants (Table 3.4), variables independently associated with incarceration in the last six months include: currently self-harming (AOR: 3.59, CI: 1.29-9.97), injection drug use (AOR: 2.35 CI: 1.33-4.17), ever being in juvenile detention (AOR: 2.06, CI: 1.24-3.44), and male gender (AOR: 2.39, CI: 1.39-4.10). Among those who inject drugs (Table 3.5), recent incarceration was independently associated with: currently self-harming (AOR: 3.75, CI:

1.2-11.75), male gender (AOR: 2.73, CI: 1.48-5.03), ever homeless (AOR: 2.49, CI: 1.14-5.4), and ever borrowing a used needle (AOR: 1.85, CI: 1.0-3.4).

#### 3.4 Discussion

It is widely accepted that the historical relationship between Canada's Aboriginal people and European colonial forces have had devastating effects on Aboriginal communities, and in particular, the new generations born into a long legacy of trauma (Christian & Spittal, 2008; Fournier & Crey, 1997; RCAP, 1996). Among our participants, 66% had at least one parent attend residential school, 63% had been taken from their biological parents, and 51% had been sexually abused. Although no significant differences in these trauma variables were found between those who had recently been incarcerated and those that had not, it cannot be assumed that these realties do not play a role in the complex factors that contribute to incarceration. For example, in a recent analysis of American adults, Doyle (2007) found that those who had been placed in foster care were 2-3 times more likely to be involved in the justice system than those who were investigated for maltreatment but not placed in care. Although no difference was observed in our sample, these high rates of family disruption and victimization highlight the unfortunate and vulnerable background of many of the participants in this study. Further, these findings are consistent with previous studies that indicate high rates of experiences with the child welfare system and sex abuse among incarcerated Aboriginal young people (Corrado & Cohen, 2002; Trevethan et al., 2001). As such, these findings demonstrate the need for trauma interventions and to address upstream factors as a means to effective prevention.

Results from our univariate and multivariate regression describe a profile of pain and drug-related vulnerabilities for those recently incarcerated. Twenty-two percent of those incarcerated in the past six months reported currently self-harming, and were 3.6 times more likely to be self-harming than their non-incarcerated counterparts. Deliberate self-harming behaviour is a serious act often described within the complex of behaviours associated with suicide (Proctor, 2005). Although, acts of self-harm have been found to precede suicide (Hawton, Houston & Shepperd, 1999), this behaviour is non-fatal and is more often seen as a way of coping with intense pain and as a cry for help (McAllister, 2003). In an Aboriginal context, self-harm has been considered in broader social and cultural terms as a response to historical conditions and cruelty (Proctor, 2005). Although suicide attempts were not found to be statistically different between groups, it is of considerable note that 43.5% of those who had recently been incarcerated had also attempted suicide.

We found that participants who had been incarcerated were twice as likely to have ever been in juvenile detention. This is concerning considering that 40% of all new admissions to youth custody in BC are Aboriginal (BC Child and Youth Officer, 2006). Further, Corrado and Cohen (2002) found that, among 100 Aboriginal young offenders in custody for serious and/or violent crimes, 55% of male and 43% of female offenders had already accumulated four or more convictions. These finding emphasizes the need to effectively address issues that put young Aboriginal people at risk of re-offending when they first intersect with the justice system, which is often in juvenile detention. Many Aboriginal people cycling through the system have troubled histories of victimization and active substance abuse issues (Corrado & Cohen, 2002; Latimer & Foss, 2004). The

opportunity to engage and assist these young people while they are in juvenile detention, and to provide for them appropriate support for the many challenges they are facing, must be recognized and acted upon. Trauma care that addresses the impacts of physical and sexual abuse and foster care, within a cultural-historical context, is needed. Sharing circles of Aboriginal youth in custody have indicated the importance of traditional Aboriginal programming for healing, and an active desire to know more about Aboriginal culture and history (Latimer & Foss, 2004). Also emphasized was the need for programming that addresses substance abuse, suicide, life skill development, as well as family focused programming. In addition, it is critical that a continuation of support and services is made available for individuals transitioning out of the system.

Cedar Project participants who were incarcerated in the six months previous to enrolment in the study were 2.4 times more likely to be male than female (25% vs. 11%). Although, it is well known that males are at greater risk of incarceration than females, it has been observed that when compared to the non-Aboriginal population, Aboriginal females are incarcerated at proportionately higher rates than males (Hylton, 2002; National Women's Association of Canada, 2007). This is reflected in our data where females were found to be incarcerated at half the rate of men compared to the observed rate of one fifth for the general population (Kong & AuCoin, 2008). The overrepresentation of Aboriginal women in the justice system has been seen as a reflection of the disproportionate vulnerabilities many Aboriginal women face, including high rates of abuse, poverty and discrimination faced both as women and Aboriginal persons (Chartrand & Whitecloud, 2001). In an inquiry by the Aboriginal Justice Implementation Committee (Chartrand & Whitecloud, 2001), it was discovered that

many of the crimes committed by women were done out of economic desperation and in some cases to secure money for their children. In many cases, it is evident that the need for healing, support and protection precedes involvement with the criminal system and that supports for families, especially those in most need, would positively impact rates of incarceration, and in particular, female incarceration.

Participants who were incarcerated in the last six months were over twice as likely to have ever injected drugs than those who were not. Injection drug use has been associated with serious negative outcomes and is considered the main risk factor for HIV and HCV infection among Aboriginal people (Public Health Agency of Canada (PHAC), 2007; PHAC, 2000). In addition, injectors who are incarcerated may be at elevated risk of HIV infection (Tyndall et al., 2003). Among our participants who use injection drugs, those who were incarcerated were twice as likely to report injecting with a used syringe, placing them at higher risk for HIV/HCV infection. Further, among those injectors who were recently incarcerated (n=64), 11% reported injecting while incarcerated. This finding is comparable to other recent studies of older adults who inject drugs (Werb et al., 2008), however it is the first study to our knowledge to report this alarming finding among young Aboriginal people. Further, we found that 57% of those injecting while incarcerated used a syringe that had been used by someone else, enhancing risk for HIV/HCV infection. High rates of injection drug use and needle sharing in prison are a reality world wide, and create strong logic for effective prison- based interventions that ensure inmates have access to clean needles (Jurgens, Ball & Verster, 2009). Despite the success of needle programs in Europe (Jurgens, Ball & Verster, 2009), Canada has yet to implement similar harm reduction strategies, even amidst rising cases of HIV in

Canadians prisons that place many inmates at unnecessary risk of infectious disease (Milloy et al., 2008; Werb et al., 2008).

Cedar Cohort participants who were recently incarcerated were over 2.5 times more likely to have ever spent three nights or more on the street. The relationship between incarceration and homelessness has been observed in the general population (Greenberg & Rosenheck, 2008; Kushel, et al., 2005) as well as the young Aboriginal population (Marshal, et al., 2008). Street entrenched young people are particularly vulnerable to participation in the street economy, including using and dealing drugs and involvement in survival sex work that may place them at greater risk of incarceration and negative health outcomes such as HIV infection (Gwatz, Gostnell, Smolenski, Willis et al., 2009). A similar issue arises when individuals are released from custody and have little support or no place to go. Individuals who are incarcerated and have a history of homelessness, as well as those who are homeless with a history of incarceration, are more likely to experience issues of mental health and substance abuse (Greenberg & Rosenheck, 2008; Kushel, et al., 2005). The availability of stable, safe and affordable housing continues to be a problem in many urban centres including Vancouver and Prince George. However, stable housing as a basic determinant of health (World Health Organization, 1986), must be recognized as fundamental to strategies aimed at supporting young people confronting addiction and issues of mental health (Patterson et al., 2007).

#### Limitations

This study is limited by its nonrandom sampling methodology, which can make attaining a probabilistic sample difficult. However, the use of a variety of recruitment

methods, including snowball sampling, helps mitigate this limitation. Snowball sampling has been shown to draw nonbiased samples in hidden populations as long as referral chains penetrate deep enough into the social network (Magnani, Sabin, Saidel & Heckathorn, 2005). Thus, despite the possibility for some selection bias, we are confident that our sample is representative of Aboriginal young people who use illicit drugs in both cities. Temporal issues also limit this study. Although some variables could be verified to have occurred before or after incarceration (eg. juvenile detention, injection initiation), other variables could not (eg. being on the street for more than three nights, needle borrowing). Due to the cross-sectional nature of the design, in all cases, causation cannot be inferred.

There is a possibility that participants may underreport socially undesirable, illegal, or stigmatizing behaviours. We have attempted to minimize this limitation through repeated emphasis on confidentiality and through the establishment of rapport between participant and Aboriginal interviewer over time. Finally, we acknowledge that our indicators for historical trauma are limited in their ability to capture the extent of historically based trauma among the participants. Still, these measures provide information on specific events directly associated with the colonization of Canada.

In summary, we found an alarming profile among those participants who had been incarcerated in the past six months, including significantly higher rates of self-harm, juvenile detention, and injection drug use than those not recently incarcerated. These results highlight some of the vulnerabilities that a significant number of Aboriginal young people who end up in jail are struggling with, including injection drug use and intense emotional pain. A focus on interventions that include trauma care and injection care

along with harm reduction strategies for injection drug users is urgently needed. In addition, more specific culturally appropriate programming for youth, both in custody and in community, is needed to address underlying issues of trauma and addiction. For those who inject drugs, incarceration was also independently associated with homelessness and needle borrowing, demonstrating an elevated risk of HIV for this group. Efforts that provide stable housing and harm reduction strategies aimed at safe injection practices both in and out of custody must be seen as an important part of addressing the vulnerabilities confronting this high-risk population.

**Table 3.1: Demographic characteristics of 478 Cedar Project participants over 18 years** 

| Variable                                                           | n (%)      |
|--------------------------------------------------------------------|------------|
| Female gender                                                      | 243 (51)   |
| Age at enrolment visit                                             | Years      |
| Median                                                             | 24.5       |
| Range                                                              | 19-30      |
| Straight social/sexual identity                                    | 422 (88.3) |
| Single marital status                                              | 357 (74.7) |
| Completed High School                                              | 77 (16)    |
| Incarcerated in the last six months                                | 85 (17.8)  |
| Local jail                                                         | 15 (17.6)* |
| Provincial Jail                                                    | 64 (75.3)* |
| Federal Prison                                                     | 10 (11.8)* |
| Used drugs in jail in the past six month                           | 33 (38.8)* |
| Smoked                                                             | 30 (35.3)* |
| Injected                                                           | 7 (10.9)+  |
| Both                                                               | 4 (4.7)*   |
| Injected with a used in rig while incarcerated in the last 6       | 4 (57) ф   |
| months                                                             |            |
| Ever in juvenile detention                                         | 192 (40.2) |
| Had one or more parents attend residential school                  | 228 (65.7) |
| Ever taken from biological parents                                 | 301 (63)   |
| Median                                                             | 4          |
| Range                                                              | 1-19       |
| Ever sexually abused                                               | 241 (51.2) |
| Median                                                             | 6          |
| Range                                                              | 1-25       |
| * Percentage of total incarcerated (n=85)                          |            |
| + Percentage injectors who were incarcerated (n=64)                |            |
| φ Percentage of those reporting injection while incarcerated (n=7) |            |

Table 3.2: Comparison of baseline sociodemographics and traumatic/stressful life events between participants who were incarcerated in the past six months (n=85) and those who were not (n=393)

| Variable                        | Incarcerated % | Not Incarcerated % | p value | Odds<br>Ratio | 95% CI     |
|---------------------------------|----------------|--------------------|---------|---------------|------------|
| Baseline interview location     | 62.4           | 46.3               | 0.007   | 1.92          | 1.17, 3.12 |
| Prince George                   | V-1.           |                    |         |               | ,          |
| Male Gender                     | 68.2           | 49.4               | 0.002   | 2.20          | 1.34, 3.62 |
| Median age at baseline          | 25.1           | 24.6               | 0.194   | 1.05          | 0.98, 1.13 |
| (Range)                         | (19-30)        | (19-30)            |         |               | ,          |
| Sexual identity straight        | 91.8           | 87.8               | 0.294   | 1.56          | 0.68, 3.67 |
| At least one parent in          | 67.7           | 65.3               | 0.659   | 1.12          | 0.62, 2.01 |
| residential school              |                |                    |         |               | ,          |
| Marital Status Single           | 75.3           | 74.6               | 0.887   | 1.04          | 0.61, 1.79 |
| Completed high school           | 16.5           | 16                 | 0.920   | 1.03          | 0.55, 1.95 |
| Ever taken from biological      | 64.7           | 62.6               | 0.652   | 1.1           | 0.67, 179  |
| parents                         |                |                    |         |               | ŕ          |
| Age first taken under cohort    | 40.7           | 42.4               | 0.820   | 1.07          | 0.59, 1.96 |
| median (4 years)*               |                |                    |         |               |            |
| Ever sexually abused            | 43.5           | 52.8               | 0.120   | 0.69          | 0.43, 1.1  |
| Age of first sexual abuse       | 48.6           | 41.4               | 0.430   | 1.34          | 0.65, 2.75 |
| below the cohort median (6      |                |                    |         |               |            |
| years)*                         |                |                    |         |               |            |
| Ever on the street $> 3$ nights | 78.8           | 67.5               | 0.040   | 1.79          | 1.02, 3.14 |
| Ever in Juvenile detention      | 57.6           | 36.4               | < 0.001 | 2.38          | 1.48, 3.83 |
| Ever self harmed                | 48.8           | 35.3               | 0.020   | 1.75          | 1.09, 2.81 |
| Currently self-harming          | 22             | 7.2                | 0.007   | 4.57          | 1.8, 11.6  |
| Ever seriously considered       | 54.1           | 50.9               | 0.589   | 1.14          | 0.71, 1.82 |
| suicide                         |                |                    |         |               |            |
| Ever attempt suicide            | 43.5           | 34.7               | 0.125   | 1.45          | 0.90, 2.34 |
| Ever involved in survival       | 38.6           | 47.5               | 0.173   | 1.44          | 0.85, 2.44 |
| sex                             |                |                    |         |               |            |
| Age first involved in           | 57.7           | 38.8               | 0.069   | 0.073         | 0.930, 5   |
| survival sex under cohort       |                |                    |         |               |            |
| median (16 years)*              |                |                    |         |               |            |
| HCV-positive antibody           | 42.5           | 37.9               | 0.442   | 1.21          | 0.74, 1.98 |
| status                          |                |                    |         |               |            |
| HIV-positive antibody           | 7.3            | 9.2                | 0.589   | 0.78          | 0.32, 1.92 |
| status                          |                |                    |         |               |            |
| Ever inject drugs               | 75.3           | 59                 | 0.005   | 2.12          | 1.24, 3.6  |
| *Dichotomized at the cohort r   | nedian         |                    |         |               |            |

Table 3.3: Comparison of sex and drug-related vulnerabilities between participants who were incarcerated in the past six months (n=85) and those who were not (n=393)

| Variable                                                       | Incarcerated % | Not Incarcerated % | p value | Odds<br>Ratio | 95% CI     |
|----------------------------------------------------------------|----------------|--------------------|---------|---------------|------------|
| Number of lifetime sexual partners over 20                     | 57.3           | 51                 | 0.301   | 1.29          | 0.80, 2.08 |
| Ever had an STI                                                | 35.3           | 44.3               | 0.129   | 0.69          | 0.42, 1.12 |
| Inconsistent condom use for insertive sex with regular partner | 84.2           | 84.5               | 0.970   | 0.98          | 0.38, 2.55 |
| Inconsistent condom use for insertive sex with casual partner  | 40.5           | 49.6               | 0.330   | 0.69          | 0.33, 1.45 |
| Regular partner in last six months an injection drug user      | 44.7           | 26.5               | 0.024   | 2.24          | 1.1, 4.58  |
| Had an STI in the last 6 months                                | 7.1            | 8.7                | 0.631   | 0.80          | 0.33, 1.98 |
| Daily or more smoking crystal among users                      | 24             | 23.2               | 0.933   | 1.05          | 0.38, 2.89 |
| Daily or more smoking crack among users                        | 70.5           | 61.5               | 0.137   | 1.5           | 0.88, 2.45 |
| Binge drug smoking                                             | 53.6           | 47                 | 0.277   | 1.3           | 0.81, 2.09 |
| Binge injection drug use last 6 months+                        | 20.3           | 15.5               | 0.361   | 1.39          | 0.69, 2.81 |
| Ever overdose +                                                | 40.6           | 38.8               | 0.790   | 1.08          | 0.61, 1.9  |
| Age of first injection under cohort median (17 years)*+        | 31.2           | 37.7               | 0.346   | 0.75          | 0.42, 1.36 |
| Ever need help injecting +                                     | 65.6           | 52.6               | 0.063   | 1.72          | 0.97, 3.06 |
| Need help injecting in the last 6 months+                      | 37.5           | 27.2               | 0.108   | 1.61          | 0.9, 2.88  |
| Daily or more injection heroin among users+                    | 64.3           | 61.3               | 0.774   | 1.14          | 0.48, 2.7  |
| Daily or more injection cocaine among users+                   | 55.6           | 47.5               | 0.396   | 1.38          | 0.65, 2.92 |
| Daily or more injection speedballs among users+                | 36.4           | 47.2               | 0.512   | 0.64          | 0.17, 2.45 |
| Daily or more injection<br>methamphetamine among<br>users+     | 22.2           | 42.9               | 0.257   | 0.38          | 0.07, 2.10 |
| Daily or more injection opiates among users+                   | 63.4           | 62.2               | 0.889   | 1.05          | 0.51, 2.19 |
| Ever fixed with a used rig+                                    | 48.4           | 29.3               | 0.004   | 2.27          | 1.29, 3.99 |
| Fixed with a used rig last 6 months+                           | 21.9           | 14.7               | 0.165   | 1.63          | 0.81, 3.27 |
| Ever lending used rig to someone else+                         | 50             | 46.2               | 0.795   | 1.17          | 0.34, 3.74 |

<sup>\*</sup>Dichotomized at the cohort median

<sup>+</sup>Includes participants who reported injection drug use only (n=296)

Table 3.4: Final Multivariable logistic regression model of variables associated with incarceration in the last six months among 85 Aboriginal young people who use drugs

| Variable                   | UOR    | 95% CI     | AOR   | 95% CI     |
|----------------------------|--------|------------|-------|------------|
| Currently self-harming     | 4.57*  | 1.8, 11.6  | 3.59* | 1.29, 9.97 |
| Male Gender                | 2.20*  | 1.34, 3.62 | 2.39* | 1.39, 4.10 |
| Location Prince George     | 1.92*  | 1.17, 3.12 | 2.07* | 1.24, 3.47 |
| Ever in Juvenile Detention | 2.38** | 1.48, 3.83 | 2.06* | 1.24, 3.44 |
| Ever inject drugs          | 2.12*  | 1.24, 3.6  | 2.35* | 1.33, 4.17 |

UOR=unadjusted odds ratio; AOR=adjusted odds ratio; 95% CI=95% confidence interval \*p<0.05; \*\*p<0.001

Table 3.5: Final Multivariable logistic regression model of variables associated with incarceration in the last six months among 64 Aboriginal young people who inject drugs

| Variable                  | UOR    | 95% CI     | AOR   | 95% CI     |
|---------------------------|--------|------------|-------|------------|
| Currently self-harming    | 4.63*  | 1.61, 13.3 | 3.75* | 1.2, 11.7  |
| Male Gender               | 2.86** | 1.61, 5.09 | 2.73* | 1.48, 5.03 |
| Location Prince George    | 2.4*   | 1.35, 4.25 | 2.62* | 1.39, 4.93 |
| Ever on street > 3 nights | 2.15*  | 1.06, 4.36 | 2.49* | 1.14, 5.4  |
| Ever borrowed a used rig  | 2.27 * | 1.29, 3.99 | 1.85* | 1.00, 3.42 |

UOR=unadjusted odds ratio; AOR=adjusted odds ratio; 95% CI=95% confidence interval \*p<0.05; \*\*p<0.001

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## CHAPTER 4: GENERAL DISCUSSION AND CONCLUSIONS

#### 4.1 Summary of Key Findings

The purpose of this thesis was to explore the historical factors and health related outcomes among Aboriginal young people who were taken from their biological parents as well as those who had been incarcerated in the six months prior to enrollment in the Cedar Project. We found that 65% of the cohort had been taken from their biological parents. After adjusting for age, gender, and sexual abuse, those who had been taken away from their biological parents were almost twice as likely to have had at least one parent in the residential school system, and were over 1.5 times more likely to have suicidal thoughts and to ever have been homeless. In the sub-analysis of young people who use injection drugs, those who were taken were 3.8 times more likely to have overdosed, twice as likely to have ever borrowed a used needle to inject, 2.5 times as likely to have done so in the last six months, and 1.8 times more likely to have ever self harmed

Of the participants who were over 18, we found that 17.8% had been incarcerated in the past six months. Our multivariable model indicated that those who had been recently incarcerated in the past six months were 3.59 times more likely to be currently self-harming, 2.39 times more likely to be male, 2.35 times more likely to have ever injected drugs, 2.07 times more likely to be from Prince George and 2.06 times more likely to have ever been in juvenile detention. In the sub-analysis of those who inject drugs, participants who were recently incarcerated were 3.75 times more likely to be

currently self-harming, 2.73 times more likely to be male, 2.62 times more likely to be from Prince George, 2.49 times more likely to have ever been homeless, and 1.85 times more likely to have ever borrowed a used syringe. In addition, 11% of injectors who were incarcerated reported injecting while incarcerated, 57% of whom reported doing so with a used syringe.

#### 4.2 Conclusions

The future health of any culture lies in the health of its children. As one prominent Aboriginal leader has proclaimed, "If we believe the children are our future, then the future is now" (Christian & Spittal, 2008, p. 1133). Currently, over one-third of the Aboriginal population is under 15, emphasizing both the need to address the issues confronting these young people, and to seize this opportunity to support positive change by cultivating the inherent strength of Aboriginal families and communities. Unfortunately, the impact of historical trauma has been profound, and the healing journey will take time and commitment. It will begin with an acknowledgement of the inherent right of self-determination among Aboriginal peoples and an earnest and dedicated commitment to the well-being of Aboriginal children and families. Also necessary is a strong commitment to supporting older generations so that they might reconcile the pain they are carrying to prevent further transmission of trauma. As demonstrated in this thesis, particular attention must be placed on the most vulnerable groups, such as those confronting addiction, who have been removed from their families and who have been imprisoned. In these populations we find tragic histories and experiences leading to current realities that depict the many health related vulnerabilities listed above.

In the process of understanding some of the current challenges young Aboriginal people are confronting, this thesis has explored the painful history to which Aboriginal people have been subjected. Harmful policies and practices have been long lasting and systemic, and although the intergenerational impacts of these policies have been described in contemporary Aboriginal scholarship and academic reports (Kirmayer, Brass & Tait, 2000; Wesley-Esquimaux & Smolewski, 2004), the incorporation of this reality into effective public health strategies has been lacking. In Canada, empirical research on the impact of historical trauma, and specifically, the legacy of the residential school system, on health outcomes has been limited (Craib et al., 2008; Pearce et al, 2008). The work presented in this thesis helps build on this paradigm, and aims to elucidate and expose the historical impacts of Canadian child welfare policies past and present, as well as the realities confronting many young people who end up in custody. Work by the Cedar Project is seminal in its focus on high-risk Aboriginal young people in urban settings, and in its response to the desperate conditions that many Aboriginal young people face in terms of vulnerabilities that contribute to a disproportioned burden of illhealth and in particular HIV and HCV.

### 4.3 Relevance of Findings

The present time in Aboriginal history contains two particular extremes. On the one hand, many Aboriginal children are growing up healthy and in touch with their traditional culture. There is a resurgence of children learning traditional languages, and many youth are gaining a voice and speaking out for their causes from a place of empowerment (Fournier & Crey, 1997). An important focus on healing has led to the creation of many agencies devoted to Aboriginal health and as a result, much of the pain

that has been buried has finally been given a forum with which it can be brought into the open and healed. Healing traditions have been central to many Aboriginal led strategies addressing the suffering that has resulted from a legacy of historical trauma and injustices (Kirmayer, Simpson & Cargo, 2003). Politically, Aboriginal leaders continue to fight for their inherent right to self-determination and to find progressive ways to make this a reality. The Federal Government has just recently applicated for the implementation of the residential school system and acknowledged the tremendous impact it has had and continues to have on Aboriginal people. On the other hand however, change has been slow, and many issues remain unaddressed. Disparity in areas of health and social wellbeing persist on a significant and alarming scale (Adelson, 2005). In particular, it is the young people who are now inheriting the effects of centuries of cultural genocide, racism and poverty. Devastating rates of suicide among Aboriginal adolescents, which are 5-6 times higher than the non-Aboriginal population (Kirmayer et al., 2007), indicate the challenges that must still be met. Included in this picture is the vast overrepresentation of Aboriginal children taken from their families and communities into the child welfare system and into custody. How can we possibly support the healthy development of communities and families if a significant number of young people are taken away from these communities and families? Thus, an important part of the relevance of this work is in its use of a post-colonial perspective to gain understanding of why this overrepresentation exists and just how impactful these experiences are in order to advocate for change.

It is well known in the academic world that children who experience child welfare and foster care fare worse in terms of several measurable indicators of health and social

wellbeing than those who don't (Bennett & Sadrehashemi, 2008; Carbone, Sawyer, Searle, & Robinson, 2007), even when compared to children with similar risk profiles (Doyle, 2006; Warbuten & Herztman, 2007). Over the last three decades, attention has been placed on the increasing overrepresentation of Aboriginal children in care and its implication in terms of historical processes and cultural denigration (Bagley, Young & Scully, 1999; Johnson, 1983; Kimelman, 1985; Blackstock, Trocme & Bennet, 2004). In a very real sense, such widespread removal threatens the cultural continuity of many communities. Although some research has described the context within which many of the placements of children in out of home care occur (Blackstock, Trocme & Bennet, 2004), little research has described the correlates of this experience among Aboriginal young people. The first manuscript in this thesis helps to develop knowledge on some of the outcomes associated with child welfare among young Aboriginal people who use drugs. By surveying this particular population, we gain insight into one of the most atrisk groups of Aboriginal young people. Chansonneuve (2002) has described the link between addiction and trauma, and it is likely that drug dependence among this cohort is indicative of the amount of pain many of these young people are carrying (Barlow, 2003).

The two hypotheses explored in the first analysis of this study state that those in the Cedar Project cohort who had been taken from their biological parents would be more likely to have parents who had attended residential school, and would experience more negative outcomes related to mental health, drug use patterns, and injection practices. Our first hypothesis was supported, as a significantly higher proportion of those who were taken reported having at least one parent attend residential school (69.8% vs. 55.7%). Here we are confronted with stark figures that emphasize the multigenerational

link between residential schools and the current overrepresentation of Aboriginal children in the child welfare system. As many Aboriginal scholars have suggested, the pain and cultural denigration suffered in the state run schools can be seen in the conditions within which many families breakdown, leading to high rates of substance use, abuse and neglect (Chansonneauve, 2002; Hylton, 2002). And yet, when facing these challenges, government policy has been to remove the children, without addressing the greater context within which these issues are situated thus perpetuating new generations of broken families. It is imperative the government recognize that although child protection is important the only truly effective and sustainable solution lies in prevention.

Our second hypothesis was that those who had been taken would fare worse in outcomes of mental health, drug use, and injection practices. Our mental health variables included: suicide ideation, suicide attempt, self-harm, ever diagnosed with a mental illness and ever hospitalized for a mental illness. In our univariate analysis, all five of these variables were experienced significantly more among those who had been in the child welfare system (p = <0.05). However, after adjusting for age, gender, and ever experiencing sexual abuse, only suicide ideation remained significant (AOR: 1.58, CI. 95%: 1.04-2.4). This finding speaks to the degree of hopelessness independently associated with the child welfare experience. The loss and grief associated with being removed from family and, in many cases the community, cannot be underestimated. Further, a shocking 70% of those who were in state care had also spent 3 nights or more on the streets, and were 1.5 times more likely to have done so than those who had not been in care. These young people have been taken from their families and left with no place to go, the outcome of which is time spent living on the streets. Street life places

woung people at tremendous risk of drug use, criminal activity, and victimization (Kelly & Caputo, 2007). The failure of the system here could not be clearer. In terms of druguse patterns, we found no significant differences with regards to types of drugs smoked or injected, frequency of use, or bingeing. Although it appears as though drug use patterns were unaffected by participants' experiences with the child welfare system, the seriousness of addiction in the entire cohort, 65% of which had been in the child welfare system, should not be underestimated. Further, among injection drug users, we found significant differences among injection practices, indicating that those who had been taken from their biological parents were more likely to overdose and to have injected with a used syringe. These findings indicate increased health and HIV-related vulnerability among this group.

The connection between historical trauma and HIV vulnerability and infection is at once clear and complex. It is clear when looked at in a mutli-generational context where centuries of colonial policy have been responsible for the disruption of all aspects of Aboriginal life, from the displacement of traditional lands to the suppression of culture, the removal of children and the subsequent breakdown of families and communities (Kirmayer, Brass & Tait, 2000). As a result, communities confront a multitude of challenges compounded by political and economic marginalization by contemporary governing forces, making them vulnerable to several high-risk behaviours. As Barlow (2003) has described, the pain and loss associated with this legacy are made manifest in high rates of psychological trauma, and physical and sexual abuse, from which many turn to alcohol and drugs to escape. High rates of victimization are found among many groups of vulnerable Aboriginal young people, often in association with

drug use. Among the Cedar Project cohort a shocking 48% of participants reported ever experiencing sexual abuse (Pearce et al., 2008). A recent survey of Aboriginal street involved youth aged 12-18, found that 59% had been physically abused and 39% had been sexually abused (Saewyc, 2008). Likewise, high rates of abuse have also been found among Aboriginal youth aged 12-18 in custody (Corrado & Cohen, 2002). Not surprisingly, many street-involved youth have been in custody and vice versa, and both groups have been found to have high rates of substance abuse. The interrelationship between these vulnerable circumstances and risky behaviours creates the complexity through which historical trauma and HIV vulnerability are linked. It is important to isolate experiences associated with historical trauma, such as involvement in the child welfare system, in order to address the impact of such a severe intervention; however, identifying direct causal chains can prove difficult, considering the interrelated vulnerabilities many young people confront.

That the first manuscript found an independent relationship between the residential school system and the child welfare system is powerful and speaks to the present impact of a colonial past. Further, the finding that those who were taken from their biological parents were more likely to engage in HIV-related behaviours is relevant to this area of research, signaling the urgency with which these vulnerabilities must be addressed.

Participant profiles help define the significant pain that underlines their experiences, including high overall levels of drug use, suicidal behaviour and sex abuse. Without healing, it can be expected that unresolved pain will continue to perpetuate and manifest as addiction and abuse, afflicting a disproportioned number of Aboriginal

people and placing them at greater risk of intersecting with the justice system. Here is where the two manuscripts in this thesis connect. The relationship between the child welfare system and the justice system is found within the theoretical model of historical trauma guiding this work, which describes these disparities in terms of an historical legacy of culture suppression, forced institutionalization, and abuse. For this reason, we hypothesized a relationship between residential school and child welfare in the first manuscript and a relationship between the residential school and child welfare systems with recent incarceration in the second manuscript.

The disproportionate number of Aboriginal people in custody compared to the non-Aboriginal population has been a substantial concern among Aboriginal leadership for some time (Hylton, 2002; RCAP, 1996). In 1988, Jackson warned that prison had become a contemporary equivalent to residential schools for Aboriginal young people, who might as well anticipate placement in a custodial institution just as non-Aboriginal people anticipate going to college. The continual institutionalization of Aboriginal people through the last few centuries and the connection between systems of institutionalization has become evident; many of those who end up in foster care had parents who were also in foster care (Bennet & Sadrehashemi, 2008). Likewise, our findings indicate that those who had a parent in the residential school system were more likely to have been taken away from their parents. This has also been observed in incarceration figures where large numbers of Aboriginal offenders in both federal prisons and youth custody had also been in state care as children (Latimer & Foss, 2004; Trevethan et al., 2001). These observations led to the first hypothesis of the second section of this thesis: that those recently incarcerated would be more likely to have a

parent who was in the residential school system, be more likely to have been taken away from biological parents, and be more likely to have been in juvenile detention. Although our results indicated that no significant differences in historical trauma variables were found among those recently incarcerated and those who were not, this does not necessarily dismiss the potential impact of these experiences on the incarceration rates of the participants. With such high rates of historical trauma among all participants (65.7%) with a parent who attended residential school; 63% who had been taken away from their biological parents), it is possible that these variables contributed to different situations or behaviours in different people leading to incarceration in some people but not in others. Further, there are many pathways to incarceration that may be linked to the history of colonization, such as high rates of poverty and discrimination, which would not be captured by these indicators. We did find a relationship between juvenile detention and recent incarceration, indicating the need for more appropriate support for troubled young people. Although government has acknowledged the need for strategies that address Aboriginal people, the rising disparities in both Aboriginal young people and adults in correctional facilities emphasize the urgency for more effective solutions. In particular, interventions should be multi-layered and culturally driven and involve young people who have been through the experience themselves. Focus on several areas is important including addressing issues of trauma, of substance abuse, as well as building a sense of positive Aboriginal identity and life skills. Moreover, support needs to be available for young people exiting the system to prevent the continuation of criminal behaviour and the likelihood of recidivism.

In reference to the second hypothesis of the third chapter of this thesis, we found associations between recent incarceration and HIV and HCV-related vulnerabilities. Among the total sample, those recently incarcerated were more likely to have injected drugs. Among those who injected drugs, those incarcerated were more likely to have injected with a used syringe. Further, 11% of injectors who were incarcerated injected while incarcerated, 57% of whom borrowed a used rig to do so. Clearly there is need for more effective harm reduction strategies, particularly in prisons. Young people who use drugs need access to clean equipment if we are to reduce the transmission of HIV or HCV. Custody must also be seen as an opportunity to provide support for those struggling with addiction or health-related issues. Especially important is the provision of support for those transitioning out of the system.

We found that 83% of injectors who were recently incarcerated had at some point been on the streets for three nights or more, a rate 2.5 times higher than those not recently incarcerated. Such high rates indicate an urgent need for stable and supportive housing for Aboriginal young people who use drugs. Not only is stable housing critical for supporting individuals suffering from addiction (Patterson et al., 2007), but homelessness places injection drug users at greater risk of HIV infection due to risky behaviours that are more common on the streets (Corneil et al., 2004). Further, linking those people transitioning out of custody with stable safe housing will be critical for more effective reintegration into society.

### 4.4 Strengths and Limitations

The Cedar Project cohort is the only cohort in North America composed entirely of Aboriginal young people who use drugs. Thus, this project responds to an important

need to better understand this population. Further, a large Aboriginal-only sample allows for the evaluation of specific factors relevant to Aboriginal people and eliminates any confounding that could be attributed to ethnicity. The research in this thesis provides the first empirical analysis among Aboriginal people focused on exploring the health related vulnerabilities associated with the child welfare system in Canada and adds to the scarcity of information available on young Aboriginal people in Canada who have come into contact with the justice system. As such, this research responds to a large call from Aboriginal leadership to consider the impacts of overrepresentation of Aboriginal young people in the child welfare and justice system.

Among the greatest strengths of this work is its exposure of the dire issues confronting this highly vulnerable population, thus bringing attention to the desperate need to address these issues. In addition, by implementing a post-colonial perspective and including historical factors in this analysis, this work draws explicit attention to the role of Canadian Government in the development of these disparities and thus underlines Canada's responsibility in properly addressing these issues. As a result, future research can build on this historically situated paradigm that emphasizes the multi-generational nature of past policy and its role in explaining the current realities confronting the Aboriginal population. The creation and involvement of the Cedar Project Partnership also adds strength to this research, allowing for Aboriginal representation and improved cultural validity in all areas of this study. This not only ensures that issues relevant to specific communities are being met, but also that the outcomes of this research are used to engage positive action and change.

Several limitations of this research must be noted. As mentioned in the manuscripts, statistical limitations include the inability to attribute causation to the factors highlighted and the associated outcomes. Given the complex nature of many of the interrelated factors explored in the studies, and their role in specific outcomes, these results can only give an incomplete picture of the lives of the participants. In particular, the specific role of historical trauma in the measured outcomes was determined through use of proxy indicators including parental involvement in the residential school system and experience in the child welfare system. Although these measures function to gather information on specific events that are associated with colonization, they cannot fully capture the many ways in which historical processes have affected the current lives of Aboriginal young people. In addition, it is likely that our findings underestimate the pervasive effect that child welfare policy has had on the experience of this population. Although we gathered information on young people whose parents were in residential school, we did not collect information on whether any of the participants had parents who were adopted, in the foster care system, or ever incarcerated. Given the shift in child welfare intervention from residential schools to provincially led adoptions and foster care placements in the 1950s, and the influx of displacement by these means in the 1960s, it is likely that many of the parents of those in the child welfare system were also wards of the state. In a recent series of interviews with families in contact with the child welfare system, 65% had themselves been in government care at some point during their childhood (Bennet & Sadrehashemi, 2008).

In addition, the homogeneity of our sample is important to consider in terms of strengths and limitations. To be included in the study, all participants in the Cedar

Cohort must have smoked or injected illicit drugs, including crystal methamphetamine, crack-cocaine, heroin or cocaine in the month prior to enrolment, thus all participants can be seen as vulnerable for this reason. As a result, they share a variety of other characteristics such as low levels of education, high levels of unemployment, and unstable living. We must accept that the many factors that contribute to drug dependence and the many outcomes that result from it will have different effects on different participants. This can add strength to findings when differences are found because they can seen as population patterns, and be seen as independent of these other high risk factors. However, this can also provide challenges in assessing the impact of specific factors such as child welfare on certain outcomes such as injection drug use because the impact must be found in addition to many other factors that may also be contributing to the outcome. A clear picture in this area of research is not likely, thus, surfacing patterns are important to consider but should not be considered exclusively.

Finally, limitations of the survey instrument in assessing childhood trauma make it difficult to determine the role of other events that may have contributed to particular outcomes other than the experience of sexual abuse. Due to the high-risk profile of the participants and the large number of participants who have been in care, it is likely that many of the participants may have been exposed to other traumas not captured by our survey. Future work should incorporate more detailed information on childhood trauma (e.g. the childhood trauma questionnaire) into similar inquiries.

## 4.5 Further Research and Policy Implications

Since the amendment to Section 88 of the Indian Act in 1951, which gave the provinces jurisdiction over the welfare of Aboriginal children, the provincial

government's response to the challenges confronting many Aboriginal families including poverty, addiction, and abuse has been to remove the children instead of healing the families. The formulation of Directive 20-1 is an implicit indicator of the government's continued focus on breaking families apart as a response to the challenges facing Aboriginal communities and families. Now after more than 50 years, many Aboriginal youth taken from their parents are found among the most vulnerable groups in society, whether drug-dependent, street-involved, or incarcerated (Saewyc, 2008; Trevethan et al., 2001). Moreover, Aboriginal children are being apprehended at higher and higher rates, highlighting the multi-generational cycle of these practices that are clearly not working. Over the last two decades in B.C., several reports have stressed the need for child welfare reform, particularly regarding the Aboriginal population. In 1992, a report based on community consultation titled, Liberating Our Children, Liberating Our Nations, stressed the need for cultural sensitivity, equity in support, and ultimately, self-government. In 2006, the B.C. Child and Youth Review (Hughes, 2006), listed six Aboriginal specific recommendations for change. These recommendations included the need for more Aboriginal representation in the Ministry of Child and Family Development, the need for clearer funding obligations for Aboriginal agencies, and more collaboration between Aboriginal communities and government. In a progress report on the implementation of these recommendation the Representative for Children and Youth noted the lack of progress on some of the most important recommendations reviewed including the transfer of responsibility to capable Aboriginal authorities (Turpel-Lafond, 2008). In addition, a recent report on B.C.'s child welfare system has found the system to be crisis driven, and when evaluated based on the core principles in the Child Family and Community Service

Act, stated that "child protection practices in B.C. violate the guiding and service delivery principles that are set out in law" (Bennet & Sadrehashemi, 2008, p. 2). In particular, the lack of publically funded supportive services prevents any effective move towards prevention in many child welfare cases. For Aboriginal agencies, the lack of capacity for supportive practices is compounded by the limitations within the federal funding scheme dictated by Directive 20-1, which only appoints funding based on children in care and does not provide for the support or strengthening of families in any sustainable way (Durst, 2002; Stueck, 2009).

Positive directions in this area of research will focus on supporting communities and families currently facing issues of addiction and abuse while also addressing structural issues that make way for systemic change. These two directions are, in some ways, distinct but connected. The lack of jurisdiction among Aboriginal communities over the welfare of their children, has been repeatedly challenged by Aboriginal leadership (Union of B.C. Indian Chiefs, 2002). In the current system, Aboriginal families are subject to culturally inappropriate forms of intervention on the part of government led policy and many Aboriginal children end up in non-Aboriginal foster care homes (Hughes, 2006). Family displacement is primarily the result of neglect, which occurs within a context of entrenched poverty and family dysfunction, such as substance misuse, that is related to the colonial experience of Aboriginal communities (Blackstock, Trocme & Bennet, 2004). Supporting and healing families must be part of a greater strategy to improve the socio-cultural environment of Aboriginal communities and recognize the inherent rights of Aboriginal self-determination over the welfare of their children. The creation of First Nation Child and Family Services has been one

response by government to increase the role of Aboriginal people in the decisions that affect their children. However, two fundamental issues with this policy must be urgently corrected for these programs to have significant impact. Firstly, despite the creation of these agencies all decision-making power remains with the province, thus undermining the inherent rights of Aboriginal communities (Union of B.C. Indian Chiefs, 2002). Secondly, the current funding strategy for First Nations Child and Family Services, known as Directive 20-1, must be replaced with a strategy the reflects the needs of children and allows for preventative programming and the strengthening of families. Further research should include a full provincial assessment of First Nations agencies and their perceived needs in supporting Aboriginal youth and families. Ultimately, it is a question of resources and political will both at the national, provincial, and community level to make these changes. Given the historical role played by government, federal and provincial authorities should be held accountable for the necessary support needed to address these prevailing issues. In particular, widespread well funded interventions that are aimed at addressing trauma, and are community based and led, will prove pivotal in the healing of the individuals and communities suffering from a history of trauma.

Thus, further research should be aimed at developing and evaluating programs and interventions that address addiction and trauma and focus on strengthening families and promoting positive cultural identity. Of critical importance is the involvement of Aboriginal communities in all stages of program development and implementation, and the inclusion of young Aboriginal people who have been through the experiences that the interventions are targeting. In particular, these programs must be properly situated within the current child welfare and justice systems. Innovative strategies must be developed in

order to integrate support into these systems so that they become an integral part of the experience. There is a great opportunity to positively impact some the most vulnerable young Aboriginal people through effective intervention for those in custody. There is some promising research that suggests greater knowledge of history and colonization among Aboriginal adoptees has had positive impacts on their sense of identity (Sinclair, 2007). In addition, talking circles with youth in custody also indicates a desire for historical as well as spiritual teachings, in addition to support for substance abuse and suicide prevention (Latimer & Foss, 2004). Interestingly, one study on Aboriginal inmates found a redevelopment of positive Aboriginal culture while offenders were in custody (Trevethan et al., 2001). More research on the impact of Aboriginal programming in custodial facilities is warranted. In addition, barriers that prevent adequate programming must also be indentified and addressed.

Given the high levels of victimization among many Aboriginal young people in custody and in care, research on the presence of post-traumatic stress disorder in this group and how to implement appropriate treatment is needed. There is also a need for indepth qualitative research to gain better understanding of the perspectives of those involved in the child welfare and justice system. Recent research has looked at the experiences of child welfare from the perspective of parents, many of whom were also in care (Bennet & Sadrehashemi, 2008); however, little work has looked at this experience from the perspective of the child or adolescent in care, or the young adult recently in care. A qualitative study, focused on assessing some of the needs of these young people, would help to gain a clearer picture of this experience and how conditions can be improved. This would also be helpful for those young people who have been incarcerated, including

those in juvenile detention. Of particular interest, based on the findings of this thesis, would be a focus on addiction services and harm reduction. Our result show that a startling proportion of Aboriginal young people who inject drugs, inject while incarcerated, the majority of whom do so with used needles. Clean syringes must be provided for these young people as a necessarily public health strategy both in prison and upon exit. Programming that offers stable housing for youth transitioning out of care or out of custody is also fundamental to the support of these troubled young people. Virtually nothing is known about Aboriginal youth aging out of foster care. Research on the general population indicates many challenges faced by those aging out of the system, including higher risks of homelessness, substance use, becoming a single parent, and contact with the criminal justice system (Tweddle, 2007). Pathways out of child welfare and into vulnerable behaviours and environments must be better understood in order to support these young people in reaching more stable ground.

Finally, studies are needed that focus on identifying resilient factors among young Aboriginal people who have had similar experiences, but positive outcomes; for example, those who have been in foster care or incarcerated but are not currently using drugs. Not only might these individuals provide valuable information on factors that helped them avoid negative outcomes, and thus be instrumental in program development and implementation, but they could also be encouraged to serve as role models by relating to youth who are dealing with difficult challenges and helping them access services.

### 4.6 References

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# **APPENDICES**

# **Appendix A: Ethics Approval**





UBC-Providence Health Care Research Institute Office of Research Services 11th Floor Homby Sife - SPH of 1081 Burnard St. Vancouver, BC V6Z 1796 Tel. (604) 806-8567 Fax: (604) 806-8568

### ETHICS CERTIFICATE OF EXPEDITED APPROVAL

| PRINCIPAL INVESTIGATOR:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DEPARTMENT:                                                                                                      | UBC-PHC REB NUMBER:                                            |                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Patricia M. Spittal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | UBC/Medicine, Faculty of/School of Population and Public Health                                                  | H09-00029                                                      |                                                                                                                                  |
| INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                  | •                                                              |                                                                                                                                  |
| Institution Providence Health Care Other locations where the research will be conducted: Prince George Cedar Project 101-1112 6th Ave. Prince George, BC VZL 3M6 Vancou                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | St. Paul's Hospital Liver Cedar Project 45 W. Cordova St. Vancouver, BC V68 1C9                                  | Site                                                           |                                                                                                                                  |
| COINVESTIGATOR(S):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                  |                                                                |                                                                                                                                  |
| Vary P. Teegee Warfen T. Schechber Patricia Janssen Kevin Craib David C. Marsh Eric M. Yoshida Wayne M. Christian Chris H. Sherbock Cotherine P. Baytis AKM Moninuzzaman                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                  |                                                                |                                                                                                                                  |
| SPONSORING AGENCIES:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                  |                                                                |                                                                                                                                  |
| Canadian Institutes of Health Research (CIHR)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                  |                                                                |                                                                                                                                  |
| PROJECT TITLE:<br>The Cedar Project: Exploring The Health Related Correlates of Child Welfare                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | and Incarceration Among Young Aboriginal People in Two Canadian Cities.                                          |                                                                | _                                                                                                                                |
| THE CURRENT UBC-PHC REB APPROVAL FOR THIS STUDY EXPIRES: /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                  |                                                                |                                                                                                                                  |
| The UBC-PHC Research Ethics Board Chair or Associate Chair, has reviewed thuman subjects and hereby grants approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | he above described research project, including associated documentation noted be                                 | low, and finds the research project accepta                    | able on ethical grounds for research involving                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                  |                                                                |                                                                                                                                  |
| DOCUMENTS INCLUDED IN THIS APPROVAL:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                  | APPROVAL DATE:                                                 |                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                  | April 12, 2009                                                 |                                                                                                                                  |
| Document Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                  | April 12, 2009<br>Version                                      | Date                                                                                                                             |
| Document Name Protocol:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                  | April 12, 2009  Version  N/A                                   | July 31, 2006                                                                                                                    |
| Document Name Protocol: CHR Grant Approval Consent Forms: Cedar Project Consent form Life History Consent Optional Blood Bank Consent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                  | April 12, 2009<br>Version                                      |                                                                                                                                  |
| Document Name Protocol: CIHR Grant Approval Consent Forms: Cedar Project Consent form Life History Consent Optional Blood Bank Consent Questionnaire, Questionnaire Cover Letter, Tests: The Cedar Project: Baseline Nurse Questionnaire The Cedar Project: Baseline Norma (puestionnaire)                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                  | April 12, 2009  Version  N/A  N/A  N/A                         | July 31, 2006<br>October 26, 2006<br>October 26, 2006                                                                            |
| Document Name Protocol: CIHR Grant Approval Consent Forms: Cedar Project Consent form Life History Consent Optional Blood Bank Consent Questionnaire, Questionnaire Cover Letter, Tests: The Cedar Project: Baseline Nurse Questionnaire The Cedar Project: Baseline Pemographic Questionnaire Other Documents: Adam Clarkson Thesis Openiow                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                  | April 12, 2009  Version  N/A  N/A  N/A  N/A  N/A  N/A          | July 31, 2006<br>October 26, 2006<br>October 26, 2006<br>October 26, 2006<br>July 3, 2003                                        |
| Document Name Protocol: CIHR Grant Approval Consent Forms: Cedar Project Consent form Life History Consent Optional Blood Bank Consent Questionnaire, Questionnaire Cover Letter, Tests: The Cedar Project: Baseline Nurse Questionnaire The Cedar Project: Baseline Pemographic Questionnaire Other Documents: Adam Clarkson Thesis Openiow                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                  | April 12, 2009  Version  N/A  N/A  N/A  N/A  N/A  N/A          | July 31, 2006<br>October 26, 2006<br>October 26, 2006<br>October 26, 2006<br>July 3, 2003<br>October 16, 2003                    |
| Document Name  Protocol: CIHI Grant Approval Consent Forms: Cadar Project Consent form Like History Consent Optional Blood Bank Consent Questionnaire, Questionnaire Cover Letter, Tests; The Cedar Project Baseline Nurse Questionnaire The Cedar Project Baseline Demographic Questionnaire Other Documents: Adam Clarkson Thesis Overview Other: Other Documents: CERTIFICATION:  1. The membership of the UBC-PHC REB complies with the membership 2. The UBC-PHC REB carries out its functions in a manner fully consisten                                                                                                                                                                                                                                   | amed on this Certificate of Approval including any associated consent form a                                     | April 12, 2009  Wersion  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/ | July 31, 2006<br>October 26, 2006<br>October 26, 2006<br>October 26, 2006<br>July 3, 2003<br>October 16, 2003<br>January 5, 2009 |
| Document Name Protocol: CIHK Grant Approval Consent Forms; Cadar Project Consent form Life History Consent Optional Blood Bank Consent Questionnaire, Questionnaire Cover Letter, Tests; The Cedar Project: Baseline Nurse Questionnaire The Cedar Project: Baseline Demographic Questionnaire Other Documents; Adam Clarkson Thesis Overview Other; Intp://www.cedarproject.ca  CERTIFICATION: 1. The membership of the UBC-PHC REB complies with the membership 2. The UBC-PHC REB carries out its functions in a manner fully consisten 3. The UBC-PHC REB has reviewed and approved the research project in principal investigator named above at the specified research project in principal investigator named above at the specified research site(s). The | it with Good Clinical Practices.<br>amed on this Certificate of Approval including any associated consent form a | April 12, 2009  Wersion  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/ | July 31, 2006<br>October 26, 2006<br>October 26, 2006<br>October 26, 2006<br>July 3, 2003<br>October 16, 2003<br>January 5, 2009 |