Poverty and Health in Canada:

A poverty intervention tool for Nova Scotia

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"I believe that the opposite of poverty is not wealth…

I actually think that the opposite of poverty is *justice*." Bryan Stevenson[1]

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this literature review is to provide background information on the connection between poverty and health in Canada, which groups of people are considered vulnerable, and to look at the current state of poverty in Nova Scotia. The purpose of gathering this information is to support the implementation of a clinical poverty intervention tool in the province. This review was prepared for the Nova Scotia office of the Canadian Centre for Policy Alternatives.

1.2 Methods

Information for this literature review was retrieved by searching the following databases: University of Victoria's library database, Web of Science, CINAHL with Full Text, PsycINFO, Health Source, Google Scholar, Google search engine, Statistics Canada and CANSIM, and other Canadian government websites. Terms used for the searches include: social determinants of health, poverty, poor, health, illness, income, disease/chronic disease, stress, poverty intervention tool (Ontario, Manitoba), clinical intervention, evaluation, implementation, primary care, connection, link, statistics, Statistics Canada, vulnerable groups (children, recent immigrants, people with disabilities, Aboriginal, African Nova Scotian, lone parents, seniors), Nova Scotia, Canada. As per instruction from the Director, this report uses endnotes and the referencing format is as follows: Author First name Last name, *title* (place: publisher, year).

2.0 THE LINK BETWEEN POVERTY AND HEALTH

2.1 Understanding Poverty

Canada does not have an official, government-mandated measure of poverty or definition of poverty.[2] [3] Defining poverty and identifying a way to measure it in Canada has sparked heated debates due to disagreements among poverty analysts, policy-makers, researchers, and advocates on what measures and approaches should be used to determine who is considered to be living in poverty in Canada.[4] While the most visible aspect of poverty is low income, poverty also encompasses a lack of access to sustainable livelihood.[5] It is *generally* agreed that poverty in Canada refers to "the intersection of low income and other dimensions of 'social exclusion', including things such as access to adequate housing, essential goods and services, health and well-being and community participation."[6]

Poverty measurements are generally defined in absolute or relative terms. Absolute poverty refers to the inability to meet basic needs, whereas relative poverty refers to distance away from the community norm or average.[7] [8] In Canada, Statistics Canada publishes three low-income measures, which are used as indicators of poverty tend to include both absolute and relative measures.[9] These three measures include: Low Income Cut-Offs (LICO), Low Income Measures (LIM), and Market Basket Measures (MBM). Each of these measures is also calculated for before- and after-tax.[10]

1. LICOs are released annually by Statistics Canada. This is an estimated threshold based on consumption patterns of Canadian households, which provides a relative measure of low income based on how much income is spent on basic necessities (food, shelter, and clothing). LICOs are calculated on a before- and after-tax basis. The after-tax LICO is the

most established, recognized, and commonly used poverty measure by governments in Canada for estimating low income cut-offs. See Table 1 for Canada's 2012 after-tax LICOs and Table 2 for Canada's 2012 before-tax LICOs.

2. LIM is the most commonly used low income measure for the purpose of international comparisons. It is a relative measure of poverty and is set at 50% of the median family income and is adjusted for by taking into account household needs. Household needs increase as the number of household members increase. LIM is calculated on the basis of market income, as well as before- and after-tax income. See Table 3 for Canada's 2011 after-tax LIM thresholds and Table 4 for before- and after-tax LIM values.
3. MBM is the only absolute measure of low income published regularly by Statistics Canada. It is based on the cost of a basket of goods and services deemed to be essential; such as food, clothing, footwear, shelter, transportation, and additional expenses in reference to a family of two adults and two children. Regional differences in the cost of living are taken into account. The MBM compares these thresholds to disposable income of families to determine low income status. The MBM is calculated for both before- and after-tax. See Table 5 for MBM thresholds in Nova Scotia for a reference family of four. See Table 6 for MBM differences in expenditures for mortgage free owners.[11] [12][13] [14] [15]

2.2 Poverty and Health in Canada

Health Canada reports that income and social status is the most important determinant of health.[16] The Canadian Medical Association has concluded that poverty is the greatest barrier to good health for Canadians.[17] [18] [19] Evidence shows that the lower an individual's socioeconomic status, the worse their health tends to be.[20] An individual's perception of their own health has a linear relationship with their socioeconomic status and income level: the higher their

socioeconomic status and the higher their income level, the healthier people tend to perceive themselves to be. Though Canada provides virtually equal access to health care for all Canadians regardless of their income, these perceptions continue to exist.[21]

Often, chronic poverty is a vicious cycle of deprivation which reduces capability and human development.[22] People living in chronic poverty tend to have fewer assets, less resilience, and few opportunities to break out of the poverty cycle. The longer the amount of time that people spend in poverty, the less likely they are to escape it.[23] Statistics Canada reports that 3 million Canadians, or 8.8% of the Canadian population, lived in low income in 2011 according to the after-tax LICO.[24]

Reports have revealed that those in the lower income groups show an increased likelihood of suffering from a variety of diseases, and are more likely to die from illness or injury at every stage of the life cycle.[25] Low income can affect health in different ways and at all stages of the life cycle. Income level has implications for life expectancy, infant mortality, mental health conditions, time spent in hospital and usage of health services, and chronic conditions.[26] People living in poverty suffer from actual material deprivations which directly contribute to poor health, such as poor diet, inadequate housing, and poor sanitary conditions. Some studies have argued that poverty does not result from poor health, but is a precursor to it.[27]

It is estimated that in Canada approximately 22% of premature life lost is attributable to income differences.[28] Though it is difficult to correctly quantify the cost of poverty to Canada, it is estimated to cost $72 to $86 billion dollars annually; roughly $2000 from each individual in Canada per year.[29] In Ontario alone, economist Nathan Laurie estimated that just by raising the income of people in the lowest income quintile to the step above would save $2.8 billion in

health care costs for the province.[30] Investing in a poverty reduction strategy would generate a significant economic return.[31]

3.0 THE ROOTS OF POVERTY IN CANADA

Poverty is complex, and stems from economic, cultural, social, and institutional roots. Causes and effects of poverty are interconnected.[32] Poverty is generated from structural inequalities which distort the distribution of economic and social resources in society.[33] Individual characteristics—such as gender, race, education, and occupation—are related to poverty because of how they interact with the organizational structure of a society.[34]

A jurisdiction's public policies play a key role in determining poverty levels. National ideologies and politics are the primary determinants of poverty rates as well as responses to poverty. Poverty and poverty reduction are political problems and require political solutions.[35] Researchers, social policy advocates, and anti-poverty organizations, have been requesting the Canadian federal government to design and implement a national poverty reduction strategy. Such a strategy would require cooperation from federal, provincial, and territorial governments.[36]

Public policy surrounding employment and working conditions is a predictor of poverty. Nations which exercise worker-friendly labor policies and provide adequate training observe reduced poverty rates. Nations which allocate greater amounts of their gross domestic product to employment training and retraining have lower rates of poverty.[37] Government, employers, and workers can help eradicate poverty and improve health and wellbeing through the means of fair employment and decent working conditions. This can be achieved through implementing fair employment at the policy level which aims to provide a living wage and protection for all workers while also striking a balance between work and life.[38]

It is also recommended that governments and international agencies implement public policies and programs focusing on early life and development. This approach should be extended to all children and families regardless of income levels, and also be implemented in the educational system.[39] Federal and provincial governments are encouraged to invest in early learning and childcare systems to help lift families out of poverty.[40]

Despite the plethora of Canadian information available, federal and provincial governments have been relatively slow to create policies based on research surrounding the social determinants of health or poverty which may reduce overall health disparities.[41] Canadian public policy that considers the social determinants of health and addresses poverty is virtually non-existent. The social determinants of health also receive very little media attention, resulting in limited public awareness of its implications.[42] [43]

The emphasis in Canada has previously focused on approaching the issue of poverty at the individual level, as opposed to addressing it at the public policy level.[44] Programs and policies should understand poverty as a societal issue which exists within the systems that Canada has collectively created. Given that poverty has social and political roots, strategies aimed at reducing the number of people living in poverty must address social policies and consider specific populations, as the individual approach is neither sustainable nor effective in poverty reduction. Creating policies that improve the lives of the most vulnerable subsequently creates a healthier and more resilient society as a whole. Poverty alleviation strategies which aim to provide basic needs to impoverished individuals and families, such as food and shelter, act as a safety net but do not assist in propelling them out of poverty. Poverty prevention strategies focus on helping individuals and families out of poverty, and seek to prevent them from falling into poverty in the long term.[45]

4.0 POVERTY IN NOVA SCOTIA

Recent data from Statistics Canada illustrates that the number of Nova Scotia residents living in poverty is lower than it has been in decades. Based on the after-tax LICO, the percentage of Nova Scotia residents living in low income has dropped to 7.0% in 2011, down from 7.7% in 2010.[46] This is comparable to 8.8% of the Canadian population (see Table 7).[47] Nova Scotia low income rates using LICO have historically been close to that of the national average; however, Nova Scotia's average prevalence rates of poverty tend to be higher than the national average when using different poverty measures. Nova Scotia's low income rates using LIM and MBM are higher than the national average.[48] For example, in 2009 the poverty rate in Nova Scotia was 16.9% according to the after-tax LIM, whereas the poverty rate in Canada was 13.3% using the same measure in the same year (see Table 8).[49]

There are slight variations of poverty rates in different areas of the province. For example, using the before-tax LIM to assess poverty rates among the different health authorities in Nova Scotia, the percent of Nova Scotians living in poverty was 12.9% in 2013. Using the same poverty measure in the same year, Cape Breton District Health Authority had a poverty rate of 14.8%, and Guysborough Antigonish Strait Health Authority had an average of 9.5%.[50] See Table 9 for further details.

Unemployment rates throughout the province also tend to vary greatly. In the fourth quarter of 2012, Nova Scotia had an average unemployment rate of 9.1%. However, significant differences among the regions in Nova Scotia were observed. Differences in unemployment rates in the fourth quarter of 2012 ranged from a high of 15.5% in Cape Breton, to a low of 5.4% in Halifax[51] (See Table 10 for additional differences among regions in Nova Scotia).

Unemployment rates also vary by age and gender. For example, the unemployment rate in the fourth quarter of 2012 ranged from 6.6% among women aged 25 and over, to 21.4% for men aged 15 to 24[52] (See Table 11 for additional differences among gender and age groups in Nova Scotia).

For 2012, the after-tax LICO (which is based on household size and community size) ranged from $12,819 for a single person in a rural area, to $35,681 for a family of five in census metropolitan area like Halifax (see Table 1).[53] Halifax Regional Municipality, having an estimated population of 413,700 in 2012,[54] would fall under the category of a census metropolitan area having a population between 100,000 and 499,999.[55] When comparing Table 12 (2011 data) and Table 1 (2012 data), the annual changes in after-tax low income cut-offs are evident. These yearly changes are also illustrated between Table 13 (2011 data) and Table 2 (2012 data), providing the before-tax low income cut-offs. Despite the trend of annual increases of what constitutes to the poverty line, income earned from welfare has shrunk in Nova Scotia over the last decades.[56]

The MBM also paints a different picture and assesses the poverty line against different figures. The MBM indicates that 11.5% of Nova Scotia residents lived on low incomes in 2010.[57] [58] In 2011, the MBM threshold for rural Nova Scotia was $37,269 for a reference family of two adults and two children. In Halifax, the MBM threshold for Halifax was $36,272 for a reference family of two adults and two children.[59] Refer to Tables 1, 2, 3, 4, 5, 6, 12, and 13 to compare the differences in figures using different poverty measures.

5.0 VULNERABLE GROUPS

Certain groups of people living in Nova Scotia and Canada are deemed to be at risk, more so than other groups. It is argued that poverty has become more stigmatized in recent decades.[60] Examples of these stigmatizing factors which influence poverty include race, age, and marital status. Multiple risks magnify poverty.[61] For example, an unattached senior female would be more likely to be living in poverty than an attached male senior.

5.1 Aboriginal Canadians

Aboriginal people are significantly more likely to experience low income in comparison to the non-Aboriginal population.[62] [63] "Aboriginal people have a higher mortality rate and a lower life expectancy than the Canadian average."[64] The unemployment rate in Aboriginal communities is four times higher than the national average, and average median incomes for Aboriginal people are significantly lower than the non-Aboriginal population. It is estimated that one in four Aboriginal children live in poverty.[65] According to 2001 data approximately 34% of First Nations households live in poverty.[66] Aboriginal Canadians face additional problems which interact with low income, resulting in serious adverse outcomes.[67]

Aboriginal Canadians are subject to high levels of unemployment, scarce economic opportunities, poor housing, low literacy and educational attainment levels, and limited community resources. The lack of affordable housing available to Aboriginal persons has created many situations of overcrowding and homelessness. Houses on reserve are typically inhabited by more people than they were designed to house and also tend to be lacking appropriate ventilation, subject to poor sanitation and waste management, and have unsafe water supplies. These factors result in poor health outcomes for the inhabitants. In addition to inadequate

housing and community resources, poverty limits access to market foods and the ability to hunt, leaving many Aboriginal families to face food insecurity. This is especially common among Aboriginal families living in remote rural and reserve communities.[68]

The average rate of off-reserve Aboriginal persons living in poverty in Canada is 17.3% according to the after-tax LICO (2011 data).[69] Aboriginal women are at a greater risk of living in poverty. The 2006 Canadian Census revealed that based on before-tax incomes, over 36% of Aboriginal women were living in poverty compared to 17% of non-Aboriginal women.[70]

5.2 African Canadians

African Canadians tend to face multiple challenges in regards to economic and social inclusion. In particular, African Nova Scotian women have high prevalence rates of living in poverty. The rates of African Nova Scotian women living in poverty are double that of the Nova Scotian average for women. Though African Nova Scotians are less likely to be unattached, they are more likely to be living in low income if they are unattached compared to Nova Scotia's average. In 2005, it was reported that 57% of unattached African Nova Scotian women lived in poverty.[71]

5.3 Children

Impoverished children have higher incidences of illness and death, low birth weight, hospital stays, accidental injuries, iron deficiencies, asthma, burns, obesity, and are more likely to be subject to family violence and child abuse.[72] [73] Children in low income families are twice as likely to be living in poorly functioning families in comparison to high income families. Differences are also observed among mental health and well-being, as well as academic achievement and school drop-out rates. Compared to children who are not poor, poor children

showed higher incidences of almost any health related problem. Parents earning low incomes were also significantly less likely to rate their children as being in excellent health in comparison to parents who earned higher incomes.[74]

Poor children are also more likely to be poor later in life.[75] Being born into poverty reduces social mobility in adulthood.[76] Childhood exposures to adverse conditions that are associated with living in poverty are important predictors of poor health outcomes during middle and late adulthood. Children who live in poverty are more likely to develop and die from a range of diseases as adults than children who did not live in poverty.[77]

In 2011, the most recent year in which information from Statistics Canada is available, 17.3% of children in Nova Scotia were residing in families with an income below the after-tax LIM. This is comparable to 14.3% of the Canadian population in the same year. Nova Scotia has the fifth highest provincial rate of child poverty in Canada. The MBM reported a poverty rate of 20.7% among Nova Scotia children in 2011. Also in 2011, the after-tax LICO reported a child poverty rate of 8%, comparable to the national average of 8.5% using the same measure in the same year.[78] In Nova Scotia, one in three food bank users are children.[79]

5.4 Lone Parents

Lone parents are over three times more likely to be living in poverty than two-parent families.[80] The Canadian average of lone-parent families living in poverty according to the after-tax LICO is 19.7% (based on 2011 data).[81] Female-headed lone parent families are at the greatest risk of living in poverty (see Table 9). Low income rates among lone parent mothers has decreased considerably, from 53% in the mid-1990's to 23.0% in 2011, but still remains a population at a heightened risk.[82] [83] In 2010, 21.8% (or one in five) children living in lone parent

households were living in poverty. This is comparable to 5.7% of children living in two-parent families living in poverty.[84]

5.5 People with Disabilities

People with disabilities are generally defined as someone who has difficulty hearing, seeing, communicating, talking, walking, suffers from a physical or mental condition, or suffers from a health problem that limits the type of activities they are able to perform.[85] The 2006 Canadian Census revealed that people with disabilities have higher incidences of poverty and low income.[86] According to the after-tax LICO, the national average of people with disabilities living in poverty is 23.5% (2011).[87]

According to Statistics Canada, Nova Scotia has the highest national disability rate in the country. 20% of Nova Scotians currently live with a disability, compared to the Canadian average of 14.3% (2006 data).[88] The percentage of people in Canada with a disability increases with age.[89] A document released by the Disabled Persons Commission in 2008 stated that "an aging population in Nova Scotia and an increased social acceptance of reporting a disability was partly responsible for the increased disability rates in Nova Scotia in 2006."[90] This document also reported that Statistics Canada states approximately 50% of the increase in the disability rate in Nova Scotia from 2001 to 2006 can be explained by the province's aging population. The increase in disability rates in Nova Scotia attributable to age was 1.4% of the 2.9% increase from 2001 to 2006. In 2006, 64.4% individuals in Nova Scotia that were aged 75 years and above were disabled. Also in 2006, 43.1% of individuals in Nova Scotia that were aged between 65-74 years old were disabled.[91]

5.6 Recent Immigrants

Based on the after-tax LICO in 2011, the national rate of poverty among recent immigrants was 16.4%.[92] The majority of these are first generation immigrants and have a native language that is not English or French.[93] Today, recent immigrants tend to have lower rates of employment and labor market participation, resulting in low earning levels and low family income. Though the incidence rates of poverty among recent immigrants in Canada is lower now than it was three decades ago, this group experiences poverty rates at almost double that of the Canadian average.[94]

5.7 Seniors

Some research has indicated that poor seniors are dependent upon government transfers. Poverty among seniors tends to vary on the basis of male versus female and attached versus unattached. Overall 12.28% of Canadian seniors, either attached or unattached, were living in poverty in 2008. The rates for unattached seniors are higher, at 28%, than attached seniors, at 5.6%.[95] Unattached senior women are at the highest risk of living in poverty.[96]

Nova Scotia has the highest national percentage of seniors in Canada. In 2011, 16.5% of Nova Scotia's population were senior citizens, while the national average was 14.4% in the same year.[97] Nova Scotia data from 2006 indicated that 7.9% of people aged 65 and above were participating in work.[98] In 2007, 98% of seniors in Nova Scotia received Old Age Security (OAS), compared to 96% nationally. 93% of seniors in Nova Scotia received Canadian Pension Plan (CPP), compared to 90% nationally.[99] [100]

5.8 Unattached Individuals

In 2011, the Canadian average of unattached individuals living in poverty based on the after-tax LICO is a staggering 27.7%. For unattached individuals under the age of 65, this number jumps to 32.3% using the same poverty measure in the same year (see Table 9 for details).[101] One in every three unattached individuals between the ages of 45 to 64 in Canada experienced low income in 2011.[102] Unattached females are more likely to live in poverty,[103] at 28.3% in 2011, in comparison to unattached males, at 27.2% in the same year.[104] Contributing factors to the high incidence of poverty among unattached working individuals are the high levels of unemployment and the lack of decent entry-level jobs available to this group.[105]

6.0 A CLINICAL POVERTY INTERVENTION TOOL

6.1 Ontario's Model

In November 2012, the Ontario Medical Association was requested "to consider the role of screening for poverty in primary care settings and to provide physicians with relevant resources."[106] Subsequently, the Ontario College of Family Physicians (OCFP) in partnership with Health Providers Against Poverty have begun implementing what is being referred to as a clinical poverty intervention tool.[107]

Dr. Gary Bloch, a family physician who played a large role in implementation of this tool within the province, has been emphasizing the connection between poverty and ill health for quite some time. Dr. Bloch takes the stance that poverty is a medical problem.[108] Dr. Bloch argued that prescribing patients to file their tax returns as a potential source of income was one of the most useful things he could do for his patients.[109] Dr. Bloch and Dr. Julia Morinis, both family physicians, began treating poverty as a disease by screening their patients for poverty and

by "prescribing income."[110] Since, attention has been given to the need for physicians to screen for poverty and treat poverty in the same manner as disease in primary care. This resulted in the development of an evidence-based poverty intervention tool.[111] This tool consists of three ways to address poverty in primary care:

1. Screen: Screen all patients; poverty is not always apparent. Physicians are prompted to ask all patients questions such as:
    - Do you have trouble making ends meet?
    - Do you have trouble feeding your family?
    - Do you have trouble paying for medications?
    - Do you receive the child tax benefit?
    - Do you have legal or immigration challenges?
    - Do you have a safe and clean place to live?[112]
2. Adjust Risk: Factor poverty into clinical decision-making like other risk factors. For example:
    - People of the lowest income quintile have a 17% higher rate of circulatory conditions that the Canadian average.
    - Diabetes is observed among the lowest income quintile over double that of the highest quintile.
    - Infant mortality rates are 60% higher in the lowest income quintile neighborhoods.
    - Lung, oral, and cervical cancer is higher for those living in poverty. Additionally, the cancer survival rate for most cancers is lower for those living in poverty than the Canadian average.

- There is a consistent relationship between mental illness and low socioeconomic status; depression among those living below the poverty line is 58% higher than the Canadian average.
- People living in poverty tend to have higher prevalence rates of asthma, hypertension, COPD arthritis, and are at a higher risk of suffering from multiple chronic conditions.[113]

3. Intervene: Physicians are advised to ask questions that ensure patients are aware of and accessing social programs available to them. This includes reminding patients to fill out tax forms, to apply for income supplements, and to inquire about the receipt of additional benefits which may be available to the patient (such as Disability payments or Child Benefits).[114]

At this time, there is little information surrounding an evaluation component to Ontario's model. It is not clear what impact this tool has had on the population to date.[115]

6.2 Manitoba's Model

Building on the Ontario model and work done by Dr. Gary Bloch, Manitoba followed suit by implementing a similar poverty intervention tool. The tool consists of the same three steps: screen, adjust risk, and intervene.[116] [117] Primary care providers are asked to consider poverty as a determinant of health and to offer information to patients about services available to them.[118] It took Manitoba roughly three months to adopt the tool from Ontario and to implement in the province; yet the tool focuses most on the Winnipeg area. Like Ontario, Manitoba does not incorporate an extensive evaluation component to the tool and there is little information surrounding this. Manitoba, more so than Ontario, did choose to include an evaluation

component into the clinical tool; however no evaluation information or results are available at this time. Reportedly, Manitoba did bring a substantial amount of money into the province simply by reminding people to fill out their taxes.[119]

7.0 IMPLEMENTING A POVERTY INTERVENTION TOOL IN NOVA SCOTIA

The notion of implementing the aforementioned clinical poverty intervention tool in Nova Scotia is currently a topic of discussion. The tool would be similar to those implemented in Ontario and Manitoba, consisting of similar ways for family physicians to address poverty. It would include the three steps: to screen for poverty, adjust risk, and intervene. Like Ontario and Manitoba models, Nova Scotian physicians would use the tool to treat low-income patients. Physicians would ask patients about their finances and direct them to resources for help.[120] Physicians have the ability to influence their patients' incomes, which ultimately influences their health. The goal of using tools and research is to address poverty as a part of routine patient care, and improve the health of patients.[121]

It was agreed that the primary care physicians using the tool should provide community-specific resources to patients. Among stakeholders, there is a great deal of interest in adapting the tool to the context of Nova Scotia. Dr. Monika Dutt, the Medical Officer of Health in Cape Breton, is the chair of this development. Her co-chair is Dr. Christine Saulnier with the Canadian Centre for Policy Alternatives. Additional stakeholders involved with the development of this tool include Nova Scotia's Medical Officer of Health: Dr. Robert Strang, other Medical Officers of Health in Nova Scotia, Doctors Nova Scotia, and representatives from other government departments and community organizations.[122] The next steps include developing a timeline,

working out the logistics of how to implement this tool, and how to include the evaluation component. Conducting a preliminary pilot project is also being considered.[123] [124] [125]

7.1 Benefits of Implementation

Implementing this tool in Nova Scotia has clear benefits. This will help to address poverty in the province by using primary care physicians as liaisons to resources for those in need. Nova Scotia is clearly in need of implementing a poverty reduction strategy. This tool has gained a great deal of interest among stakeholders in the province of Nova Scotia. Many are on board with implementing this clinical intervention tool.

Unlike Ontario or Manitoba, an evaluation component will be included in Nova Scotia's model. Also, primary care physicians in Nova Scotia will be providing patients with community-specific information. This will help to ensure patients are able to access services and will not face additional barriers such as transportation to the capital city: Halifax.

7.2 Considerations

There are many considerations that need to be carefully thought through before this poverty intervention tool is implemented in Nova Scotia. Ethics and any possible ethical concerns which may arise should all be given thorough attention. Additionally, ways of compensating the primary care physicians using this tool should be taken into account. Also in regards to physicians, their role as a physician should be made clear. The purpose is not for physicians to become advocates for patients living in poverty, but instead to understand and treat poverty as an indicator of health.

Additional consideration must also be given to available community resources. Each model of this tool should be community-specific. Patients should be referred to community resources that are available to them. Bearing in mind many community resources and services are already fatigued at this time, adequate services need to be in place and prepared for a possible influx of patients requiring services.

There is a lack of information available surrounding the effectiveness of the proposed poverty intervention tool. At this time, Ontario and Manitoba models do not indicate how useful this tool has been. Though these models may be considering adding an evaluation component of the tool, little information is currently available on effectiveness of the tool. There is also no information available on any feedback from the physician using this tool or from patients that have been screened.

8.0 STRENGTHS AND CHALLENGES

8.1 Strengths

This review of the literature illustrates the link between poverty and health, the role of the government in poverty reduction strategies, and poverty in Nova Scotia. There is a great deal of literature surrounding and supporting the detrimental effects living in poverty has on health. This report mentioned which groups are likely to be living into poverty as well as current prevalence rates. This demonstrates the need for an effective poverty reduction strategy in Nova Scotia, and proposes a viable option of the poverty intervention tool in primary care.

This report included information surrounding the current rates of poverty in Nova Scotia and Canada. These statistics were drawn from sources such as Statistics Canada and Nova Scotia's Vital Signs, which are deemed to be reliable sources. Though Canada does not have a

clear definition of poverty or a poverty line, this report describes thresholds of identifying poverty, and current poverty rates based on hose thresholds.

8.2 Challenges

A major challenge of this literature review was finding accurate statistical reports. This is partially because Canada does not have a clear definition of poverty or the poverty line, and uses different ways to measure poverty in the country: after-tax LICO, before-tax LICO, after-tax LIM, before-tax LIM, after-tax MBM, and before-tax MBM. The thresholds for identifying poverty vary greatly dependent upon the measure used. A large challenge in comparing poverty rates and understanding the effectiveness of poverty reduction strategies lies on finding statistics that are reliable and use the same measure. In an absence of this, it is difficult to measure poverty and consequently the effectiveness of poverty intervention strategies.

Additionally, though Statistics Canada tends to be among the most reliable sources for Canadian data, there are occasions when the accuracy of the reported data may be questionable. For example, the Survey on Labour and Income Dynamics produced by Statistics Canada had just a 67.3% cross-sectional response rate in 2011.[126] It is also worth mentioning that this number is the national average, and these are also subject to variance between provinces. For example, Statistics Canada's National Housing Survey in 2011 had a national response rate of 68.6%; however the provincial response rates ranged from a low of 60.4% in Prince Edward Island to a high of 83.9% in Northwest Territories.[127]

9.0 IMPLICATIONS FOR PUBLIC HEALTH

Implementing the aforementioned clinical poverty intervention tool in Nova Scotia is a step in the right direction for public health, as ameliorating poverty should be held a high

priority. Existing evidence illustrates the clear connection between poverty and health, and it is believed that poverty is among the top indicators of ill health.[128] Taking action to reduce poverty has the potential to improve the health status of the population of Nova Scotians. Public health resources and services in Nova Scotia need to be in place and need to be adequately staffed to support this poverty intervention strategy.

Including a feasible evaluation component to this poverty intervention tool will also illustrate the implications this tool has on assisting the province and ameliorating poverty. If this strategy is successful, other provinces will be able to follow suit and implement a similar tool.

In addition, continued research on the implications poverty has on health and monitoring of poverty levels in Canada is key. Further research should be put into what makes certain groups vulnerable to fall into poverty, and subsequently addressed. Implementing poverty reduction strategies, such as the tool proposed, has clear benefits on health, as well as health care expenditures. Public health professionals should be actively involved in evaluating the effectiveness of poverty reduction strategies and creating policies and programs based on effectiveness.

To understand poverty in Canada, a clear definition and measurement should be agreed upon. Statistics generated should also be reliable and accurate. This report touched on many different areas of poverty, health, groups that are most vulnerable to be living in poverty, and the prevalence rates of poverty. It would be beneficial to delve further into each of these areas. Furthermore, this report focused on poverty; however income inequality is also a related issue which was not discussed. Income inequality and disproportionate distribution of wealth affects the health of all Canadians through a weakened social infrastructure.[129] Income inequality has

been on the rise in Canada over the past 20 years.[130] Similar to poverty, this is an avenue of concern for public health professionals.

10.0 APPENDIX

Table 1: Low Income Cut-Offs (1992 base) after-tax 2012; in $.

	Rural areas	**>30,000 inhabitants**	**Between 30,000 and 99,999 inhabitants**	**Between 100,000 and 499,999 inhabitants**	**500,000 inhabitants or more**
1 person	12,819	14,671	16,366	16,573	19,597
2 persons	15,602	17,857	19,920	20,170	23,850
3 persons	19,429	22,233	24,804	25,117	29,699
4 persons	24,237	27,739	30,945	31,335	37,052
5 persons	27,600	31,587	35,238	35,681	42,191
6 persons	30,609	35,031	39,080	39,571	46,791
7 persons or more	33,618	38,475	42,921	43,461	51,391

Source: Statistics Canada, 2013.[131]

Table 2: Low Income Cut-Offs (1992 base) before-tax 2012; in $.

	Rural areas	**>30,000 inhabitants**	**Between 30,000 and 99,999 inhabitants**	**Between 100,000 and 499,999 inhabitants**	**500,000 inhabitants or more**
1 person	16,279	18,520	20,240	20,366	23,647
2 persons	20,266	23,055	25,196	25,353	29,440
3 persons	24,914	28,343	30,976	31,168	36,193
4 persons	30,250	24,414	37,610	37,843	43,942
5 persons	34,308	39,031	42,656	42,920	49,839
6 persons	38,695	44,021	48,109	48,408	56,209
7 persons or more	43,080	49,010	53,562	53,894	62,581

Source: Statistics Canada, 2013.[132]

Table 3: 2011 After-Tax Low Income Measures Thresholds.

Household Size	AT-LIM Threshold
1 person	$ 19,930
2 persons	$ 28,185
3 persons	$ 34,520
4 persons	$ 39,860
5 persons	$ 44,565
6 persons	$ 48,818
7 persons	$ 52,730
8 persons	$ 56,371
9 persons	$ 59,790
10 persons	$ 63,024

Source: Lesley Frank, 2013.[133]

Table 4: Low Income Measures by Income concept for household size of four persons.

Year	Before tax	After tax
2011	$ 45,440	$ 39,860
2010	$ 43,544	$ 38,322
2009	$ 42,500	$ 37,562
2008	$ 42,596	$ 37,336
2007	$ 40,630	$ 35,512

Source: Statistics Canada, 2013.[134]

Table 5: MBM thresholds, disposable income for reference family of two adults and two children (Nova Scotia); in $.

Nova Scotia: Region	2008	2007	2006
Rural	29,655	27,980	27,054
Less than 30,000	31,637	29,991	29,073
30,000 to 9,999	28,798	27,187	26,464
Halifax	30,062	28,756	28,092
Cape Breton	28,123	26,673	25,975

Note: To convert to other family sizes, divide these values by 2 (the square root of the reference family size of four persons) and then multiply by the square root of the desired family size.
Source: Statistics Canada, 2010.[135]

Table 6: MBM 'mortgage-free owners' difference in expenditures', which is added to their disposable income, for reference family of two adults and two children (Nova Scotia); in $.

Nova Scotia	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rural	3,725	3,738	3,814	3,812	3,751	3,624	3,672	3,780	3,804
Less than 30,000	3,171	3,089	3,076	2,971	2,869	2,689	2,719	2,818	2,825
30,000-99,999	3,844	3,819	3,863	3,825	3,751	3,608	3,653	3,762	3,785
Halifax	4,459	4,451	4,511	4,471	4,355	4,160	4,204	4,327	4,350
Cape Breton	3,202	3,127	3,121	3,024	2,926	2,751	2,783	2,882	2,891

Source: Statistics Canada, 2013.[136]

Table 7: Persons in low income after tax (in percent, 2011); Canadian Averages.

Persons	2011 (Prevalence in percent)
All persons	8.8
Under 18 years of age	8.5
18 to 64	9.7
65 and over	5.2
Males (total)	8.7
Males: Under 18 years of age	8.4
Males: 18 to 64	9.7
Males: 65 and over	3.8
Females (total)	8.9
Females: Under 18 years of age	8.6
Females: 18 to 64	9.6
Females: 65 and over	6.4
Persons in economic families	5.5
Males (total)	5.2
Females (total)	5.7
In two-parent families	5.9
In female lone-parent families	23.0
Unattached Individuals	27.7
Males (total)	27.2
Females (total)	28.3
Persons under 65 years of age	32.3
Males under 65 years of age	29.9
Females under 65 years of age	36.0

Source: Statistics Canada, 2013.[137]

Table 8: Snapshot of Poverty: 2009

Measure	Nova Scotia	Canada	Nova Scotia's Trend Since 2000
LICO, After-Tax	8.0%	9.6%	Rate has decreased
LIM, After-Tax	16.9%	13.3%	Rate has increased
MBM, After-Tax	13.1%	10.6%	Rate has decreased

Source: Nova Scotia's Vital Signs, 2011.[138]

Table 9: Low income rates by district health authority in Nova Scotia; before-tax LIM.

District	Average
Nova Scotia Average	12.9%
Males	11.8%
Females	13.9%
Annapolis Valley District Health Authority	12.6%
Males	11.6%
Females	13.5%
Cape Breton District Health Authority	14.8%
Males	13.1%
Females	16.3%
Capital Health District Authority (HRM)	13.8%
Males	12.9%
Females	14.6%
Colchester East Hants-Cumberland	10.8%
Males	9.9%
Females	11.7%
Colchester East Hants Health Authority	10.1%
Males	9.6%
Females	10.6%
Cumberland Health Authority	12.4%
Males	10.7%
Females	14.0%
Guysborough Antigonish Strait Health Authority	9.5%
Males	8.3%
Females	10.7%
Pictou County-Guysborough Antigonish Strait	10.0%
Males	8.6%
Females	11.4%
Pictou County Health Authority	10.5%
Males	8.9%
Females	11.9%
South Shore-South West Nova Scotia	12.2%
Males	11.0%
Females	13.3%
South Shore District Health Authority	10.9%
Males	9.7%
Females	12.0%
South West Nova District Health Authority	13.5%
Males	12.3%
Females	14.6%

Source: Statistics Canada, 2013.[139]

Table 10: Unemployment Rate: Nova Scotia by Region (2012, 4th Quarter). 3 Month Moving Averages; Seasonally Unadjusted Data.

Region	Unemployment Rate
Nova Scotia	8.6%
Cape Breton	15.5%
North Shore	11.3%
Annapolis Valley	7.6%
Southern	12.3%
Halifax	5.4%

Source: Employment and Social Development Canada, 2013.[140]

Table 11: Nova Scotia Unemployment Rates, by Gender and Age (2012, 4th Quarter). Seasonally Adjusted Data.

Total	9.1%
25 years and over	7.5%
Men – 25 years and older	8.3%
Women – 25 years and over	6.6%
15 to 24 years	17.9%
Men – 15 to 24 years	21.4%
Women – 15 to 24 years	14.7%

Source: Employment and Social Development Canada, 2013.[141]

Table 12: Low Income Cut-Offs (1992 base) after-tax 2011.

	Rural areas	**>30,000 inhabitants**	**Between 30,000 and 99,999 inhabitants**	**Between 100,000 and 499,999 inhabitants**	**500,000 inhabitants or more**
1 person	12,629	14,454	16,125	16,328	19,307
2 persons	15,371	17,592	19,625	19,872	23,498
3 persons	19,141	21,905	24,437	24,745	29,260
4 persons	23,879	27,329	30,487	30,871	36,504
5 persons	27,192	31,120	34,717	35,154	41,567
6 persons	30,156	34,513	38,502	38,986	46,099
7 persons or more	33,121	37,906	42,286	42,819	50,631

Source: Statistics Canada, 2013.[142]

Table 13: Low Income Cut-Offs (1992 base) before-tax 2011.

	Rural areas	**>30,000 inhabitants**	**Between 30,000 and 99,999 inhabitants**	**Between 100,000 and 499,999 inhabitants**	**500,000 inhabitants or more**
1 person	16,038	18,246	19,941	20,065	23,298
2 persons	19,966	22,714	24,824	24,978	29,004
3 persons	24,545	27,924	30,517	30,707	35,657
4 persons	29,802	33,905	37,053	37,283	43,292
5 persons	33,800	38,454	42,025	42,285	49,102
6 persons	38,122	43,370	47,398	47,692	55,378
7 persons or more	42,433	48,285	52,770	53,097	61,656

Source: Statistics Canada, 2013.[143]

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