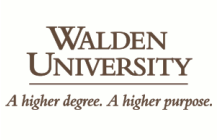

2018

Chronic Disease and Injury Prevention Programming for Canada's Indigenous Population

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This is to certify that the doctoral study by

Nicole Blackman

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2018

Abstract

Chronic Disease and Injury Prevention Programming for Canada's Indigenous Population

by

Nicole Blackman

MN, University of Toronto, 2009

BScN, Ryerson University, 2007

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2018

Abstract

Local public health units in the province of Ontario, Canada, are often the primary source of health promotion and health education resources, but many do not provide programming specific to the Indigenous population. As of January 2018, modernization of the Ontario Public Health Standards requires public health units to work with the Indigenous population in providing culturally appropriate programs and services. The practice question guiding the capstone project was to determine what chronic disease and injury prevention programs exist that are culturally appropriate for the Indigenous population. The purpose of this project was to do an environmental scan and compile an inventory of existing health promotion programming that is culturally appropriate to the Indigenous population. In total, 72 Indigenous-specific programs were identified from the 26 organizations that were included in the environmental scan. Of the 26 organizations, 3 were public health units, 7 were Aboriginal health access centers, 7 were Indigenous friendship centers, 5 were Indigenous health organizations, and 4 were non-Indigenous organizations with an Indigenous component. Results from the capstone project will inform public health units of available, culturally appropriate programs that can be adapted to their local context, thereby addressing a significant gap in the current public health system. This doctoral project aligns with the design of a new model of care in the Ontario public health system and has the potential to address a gap in practice at both the local and provincial level by providing culturally appropriate guidance in the effective delivery of CDIP programming specific to the Indigenous population. This positive social change would impact the health status of this underserved population.

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Dedication

I would like to dedicate this scholarly project and my entire academic journey to my family. To my strong and beautiful daughters, Avery, Dakota, and Shayla, I hope from my journey you learn that you can achieve anything and that hard work pays off. My hope is that you do not follow in my footsteps but take the path next to me and go further than I could have ever dreamt possible. To my beautiful and patient husband, Steve, you have been my rock for nearly a decade. You have held my hand through this entire journey and encouraged me at times when I felt defeated. As my academic endeavours finally come to an end, I cherish the path you and I will continue as we walk through life together with our amazing daughters. Finally, my mother Marlene, I dedicate my academic journey and entire success to you. If it were not for the patience, support and unconditional love you gave me my entire life I would not be the strong, independent woman I am today.

Chi Meewetch (thank you very much) to my family; my loves, my life, my everything!

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In addition to my advisor, I would like to acknowledge Dr. Barbara Neidz and Dr. Allison Terry for your support as I continued along the DNP path. I would like to thank Dr. Neidz for your insightful perspectives and encouragement throughout the process. Without the much-appreciated support of the entire committee, successful completion of the DNP program would not have been possible.

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Section 1: Nature of the Project

Introduction

The Canadian public health system faces significant challenges with preventing chronic diseases such as cardiovascular, cancer, chronic respiratory, and diabetes, which result in 65% of deaths in the country each year (Public Health Agency of Canada [PHAC], 2017). It is estimated that treatment for chronic diseases costs the Canadian economy $190 billion annually, representing 67% of all direct health care costs with $68 billion attributable to treatment and lost productivity (Elmslie, 2014). With the proportion of Canadians living with chronic diseases increasing by 14% each year and 4 out of 5 being at risk, health expenditures to treat are rising faster than the economic growth (Elmslie, 2014).

Risk factors for chronic diseases are nonmodifiable (i.e., age, gender, genetic make-up) and modifiable (i.e., behavioral), with behavioral risk factors considered to be within the control of the individual to change. For example, 80% of heart disease, diabetes, and respiratory diseases, as well as 40% of cancers, are preventable by eliminating the four common risk factors of tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol (Elmslie, 2014). However, there are also societal and economic risk factors for chronic diseases that are in many cases beyond an individual's ability to change, such as social determinants of health (SDOH), which shape how people are born, grow, work, live, and age (Cockerham, Hamby, & Oates, 2017). Researchers have found that SDOH such as low income, education, and unemployment cause a wide range of health outcomes and are direct causes for several chronic diseases

including cardiovascular, Type 2 diabetes, stroke, cancers, chronic respiratory, kidney disease, and others (Braveman & Gottlieb, 2014; Cockerham et al., 2017). Moreover, the relationship between SDOH and chronic diseases is cyclical, as for example, poverty creates conditions for increased tobacco use and/or exposure, poor nutrition, low physical activity, poor indoor air quality, and decreased access to health care; yet at the same time, chronic disease creates poverty through low productivity, increased risk of disability and premature death, as well as increased household expenditures (Elmslie, 2014).

PHAC places a focus on prevention rather than treatment and aims to keep people healthy, safe, and productive by supporting conditions for healthy aging and the prevention or delaying of chronic diseases (Elmslie, 2014). The actions taken to create this social change include investing in research to better understand chronic diseases and the role of SDOH over the life course, as well as collaborating with partners to promote healthy aging and prevent chronic disease among high-risk groups, such as the Indigenous population (Elmslie, 2014).

Background

In 2011, the Indigenous population[1] represented 4.3% of the Canadian population, with a total of 1,400,685 individuals reporting an Indigenous identity (Statistics Canada, 2016). Ontario has the largest number of Indigenous people, with 301,425 representing 21.5% of the total Indigenous population. There are over 600 recognized First Nation

[1] The term Indigenous, also referred to as Aboriginal, refers to the original peoples of North America and their descendants. The Canadian Constitution recognizes three groups of Indigenous peoples: First Nations, Inuit, and Métis (Indigenous and Northern Affairs Canada, 2017).

bands, not including the Métis and Inuit groups, which are dispersed widely throughout the country.

The health of the Indigenous population is impacted significantly by a history of colonization and assimilation policies such as the Indian Act, residential schools, sixties scoop, forced sterilization, and more (MacDonald & Steenbeck, 2015). Moreover, the health of this population is strongly determined by inequalities in the distribution of the underlying determinants of health, with Indigeneity itself identified as one of the 14 SDOH (Mikkonen & Raphael, 2010). The Indigenous population is linked to a colonial legacy that has resulted in low socioeconomic status and levels of education, as well as high rates of chronic diseases, substance misuse, and suicide (Greenwood & de Leeuw, 2012). These issues have been linked to intergenerational trauma resulting from historical events and extensive loss of language and culture (Greenwood & de Leeuw, 2012).

Problem Statement

The public health system in Canada plays a significant role in preventing and controlling chronic diseases, infectious diseases, and injuries, as well as improving the health of Canadians (PHAC, 2017). Local public health units in the province of Ontario are often the primary source of health promotion and health education resources for most Ontarians, but many do not provide programming specific to the Indigenous population (Wilk & Cooke, 2015). Indigenous health has traditionally been the responsibility of the federal government; however, as of January 2018, modernization of the Ontario Public Health Standards requires public health units to work with the Indigenous population in

providing culturally appropriate programs and services (Ministry of Health and Long-Term Care [MOHLTC], 2017).

Current health promotion practice involves most Indigenous programming occurring through various organizations such as Aboriginal Health Access Centres, the Ontario Federation of Indigenous Friendship Centres, Indigenous health organizations, and a handful of non-Indigenous community health centers. It is recognized that while many Indigenous people access programs provided by Indigenous organizations, they are not the only points of services used. Rather, health promotion efforts at schools, municipal planning and recreation facilities, as well as service organizations such as Boys' and Girls' Clubs, could impact the health of local Indigenous people (Wilks & Cooke, 2015). However, it is important for public health units to understand that risk factors for the general population may not be the same for the Indigenous population and therefore require culturally-specific approaches (Wilk & Cooke, 2015). The National Aboriginal Health Organization (NAHO; 2002) published a review of key issues of concern and recommendations for strategies to improve population health, health promotion, disease prevention, and health protection services and programs for Indigenous peoples. They found that most of health promotion programs and services for this specific population are based on Western approaches with few modifications for cultural purposes (NAHO, 2002). This is despite that fact that 80% of respondents to the First Nations and Inuit Regional Health Survey thought traditional ways would promote wellness and most were in favor of a holistic wellness model (NAHO, 2002).

Given the significant impact of chronic diseases and injuries on the health of the Indigenous population and gap in current public health practice, greater emphasis on culturally-specific health promotion programming is required. A compiled inventory of existing chronic disease and injury prevention (CDIP) programs will provide decision-makers with knowledge about current services and facilitate planning for future programming.

Purpose

There is a gap in public health practice with regards to providing culturally appropriate health promotion programming; this was the focus of the capstone project. Compiling an inventory of existing CDIP programming that is culturally appropriate to the Indigenous population was the purpose of this project. Results from the capstone project will inform public health units of available, culturally appropriate programs that can be adapted to their local context, thereby addressing a significant gap in the current public health system. The practice question guiding the capstone project was as follows: What CDIP programs exist that are culturally appropriate for the Indigenous population? This doctoral project aligns with the design of a new model of care in the Ontario public health system and has the potential to address a gap in practice at both the local and provincial level by providing culturally appropriate guidance in the effective delivery of CDIP programming specific to the Indigenous population.

Nature of the Doctoral Project

The nature of this quality improvement project was to gather and summarize evidence that reflects the current state of Indigenous-specific CDIP health promotion

programming within the province of Ontario. Through a scoping review and environmental scan, an inventory of existing programs among public health units, Indigenous and non-Indigenous organizations were developed to provide a snapshot of current health promotion efforts targeting the Indigenous population. The information collected and summarized will enable public health units to guide their work towards working within the Indigenous population, thereby meeting the requirements set forth by the modernized Ontario Public Health Standards.

Significance

Through this comprehensive understanding of what CDIP programs currently exist for the Indigenous population, public health units will be supported with program planning. Thus, the goal of the DNP project was to develop a culturally appropriate health practice. Additionally, the inventory of services will inform future work in the development of a toolkit for public health units to provide effective and sustainable programming specific to the Indigenous population, which is currently nonexistent. A provincial perspective would be considered in the future development of a toolkit; as such, contents would be applicable to any of the 36 public health units in Ontario. The outcome could result in a consistent approach to health promotion programming that is culturally appropriate and relevant to the Indigenous population of Canada, ultimately improving the health of the population and decreasing rates of chronic diseases and injuries.

Summary

Researchers have demonstrated that the Indigenous population of Canada is at a higher risk for several chronic diseases as compared to other Canadians, in which causes are complicated and multifactorial (Wilks & Cooke, 2015). The relationships between health behaviors and socioeconomic factors are different between Indigenous and non-Indigenous populations, due to a history of colonization and assimilation policies that continue to affect the population today (Wilks & Cooke, 2015). Given the role of public health, this section of the healthcare system is in an opportune position to expand their scope of services to reach the Indigenous population through areas with identified gaps, such as schools, municipal planning, and recreation departments, as well as service organizations including YMCA/YWCA or Boys' and Girls' Clubs (Wilk & Cooke, 2015). However, as traditionally Indigenous-specific programming has not been done through public health, there is a not only a scarcity of existing programs to adapt from within the public health system but also a knowledge gap among practitioners on both the history of the Indigenous population and how best to work with them to meet their health needs (Allan & Smylie, 2015).

The capstone project involved conducting a scoping review of available literature and environmental scan of public health units and various Indigenous and non-Indigenous health organizations, which resulted in an inventory of existing Indigenous-specific CDIP programs. The inventory of programs could be used in a subsequent project that involves developing a toolkit to guide public health units across the province with implementing and evaluating Indigenous programs applicable to their local context,

thereby better meeting the needs of the Indigenous population and ultimately resulting in a decreased rate of chronic diseases and equivalency of health equity with members of the general population.

Section 2: Background and Context

Introduction

The purpose this project was to gain a comprehensive picture of existing CDIP programs that target the Indigenous population through the development of an inventory of programs at a provincial level. In reviewing the programs developed and implemented by public health units in Ontario, as well as Indigenous and non-Indigenous health organizations, it was important to determine whether they involved the target population in the design process, as researchers have shown this approach to be effective in public health interventions (see Morton et al., 2017). In this section, I present evidence supporting the need for conducting an environmental scan as well as the theoretical models that guided the work. Additionally, I discuss the relevance of the DNP project to nursing practice and provide specifics on the local background and context, with an emphasis on Indigenous history and how it affects the health of the population today. Finally, I address the role of the DNP student.

Environmental Scan

There has been an increasing interest in environmental scans in public health practice, as they are now recognized as a valuable assessment and data collection tool by federal funding agencies and other health-related organizations (Wilburn, Vanderpool, & Knight, 2016). Environmental scans originated in the business world as a tool for retrieving and organizing data to facilitate with strategic planning and decision-making (Graham, Evitts, & Thomas-MacLean, 2008). Within the arena of public health, environmental scans have been used to collect, organize, and analyze information to

guide the direction of new public health activity, raise awareness of health disparities, or initiate a project or funding opportunity (Wilburn et al., 2016). A range of health topics have been explored through environmental scans including chronic disease self-management, cancer care, mental health, injury prevention, Indigenous health, nutrition, and knowledge transfer (Graham et al., 2008; Wilburn et al., 2016).

As Rowel et al. (2005) posited, the realities of the 21st century with regards to new technologies and diversity in sources of information have forced public health to reconsider traditional approaches to knowledge generation. It has been recognized that in a health environment that experiences challenges such as scarcity of resources, innovative approaches to public health research and practice is needed to maximize existing resources, ensure timely responses to health crises, and build on established knowledge (Rowel et al., 2005). Environmental scans incorporate nontraditional methods in searching for evidence that include exploring the Internet and directly contacting or surveying other programs, organizations, or experts (Canadian Partnership Against Cancer, 2012). It is recognized that environmental scans are particularly useful for topics that are not well-informed by the evidence (Canadian Partnership Against Cancer, 2012). This is particularly well suited for the area of Indigenous health where the fragmented nature of health service delivery caused by jurisdictional issues has created complexity and confusion, resulting in a patchwork of policies and programs for the Indigenous population (Lavoie, 2013).

An advantage to an environmental scan approach is the allowance for organizations to account for diverse types of knowledge, which includes codified (data

from statistics, policy documents, or clinical reviews) and tacit knowledge (data from interviews or focus groups; Graham et al., 2008). There are multiple strategies for information collection that include, but are not limited to, focus groups, in-depth interviews, surveys, literature assessments, chart reviews, personal communication, and policy analyses (Wilburn et al., 2016). The goal of environmental scans is to use the information attained to design health programs that meet the needs of the target population. Intrinsically, they are designed to help the process of planning for the future by guiding health organizations and projects, thereby leading to evidence-based solutions for health care issues (Graham et al., 2008).

A noted limitation of environmental scans is the inconsistent approach to conducting them, resulting in ambiguity of the process (Graham et al., 2008; Wilburn et al., 2016). To address this limitation, Wilburn et al. (2016) outlined a 7-step process they used when conducting their environmental scan for the federally funded HPV vaccination project. The intent of outlining these steps was so others could apply the methodology in the context of public health practice and research (Wilburn et al., 2016).

Concepts, Models, and Theories

The use of theory in planning and delivering programs facilitates in gaining a better understanding of the problem being addressed and the needs of the target population, thereby achieving a better fit between program and problem (Nutbeam, Harris, & Wise, 2010). The social ecological model explicitly outlines multilevel factors that guide research and practice by focusing on the problem and different levels of influence on health behaviors (Nutbeam et al., 2010). For example, if a public health unit

is looking to change sedentary behaviors of youth, they must consider influencing factors at multiple levels, such as individual and community (built environment); does the youth live in a safe neighborhood with access to sidewalks and parks that would enable a more physically active lifestyle? Applying the social ecological model when reviewing the data collected for the inventory of services enabled identification of the levels targeted by existing CDIP programs and provided a broader picture of health promotion efforts targeting the Indigenous population (see Nuss et al., 2016).

Furthermore, as the intent of the DNP capstone project was to generate an inventory of existing CDIP programs that are culturally appropriate for the Indigenous population, it was imperative that a theoretical framework be applied to assess the identified programs for cultural relevancy. As such, the ways tried and true: Aboriginal framework (WTT framework) was used to identify and systematically assess Indigenous CDIP programs using the criteria provided.

Social Ecological Model

From an ecological perspective, individual and broader levels of external influences are integrated into a single framework, demonstrating causation of behavior to be widely distributed (Sallis, Owen, & Fisher, 2008). Social ecological models facilitate in understanding how people interact with their environments and how these interactions influence health behaviors. In the 1970s, psychologist Bronfenbrenner developed the ecological theory of human development, which focused on understanding multiple levels of influence on behavior (Bronfenbrenner, 1993).

Over time, the theory has been advanced to explain highly complex relationships among individuals, society, organizations, environments, and personal/population health (Plescia, Herrick, & LaTonya, 2008). The primary premise underlying all social ecological models is that behaviors impacting health do not occur in a vacuum; rather, they are multifaceted and part of larger system of social influences (Plescia et al., 2008). Current social ecological models propose that an individual's health is shaped by multiple levels of influences, including

- Intrapersonal – characteristics of the individual, including knowledge, attitudes, behavior, self-concept, skills, and developmental history.
- Interpersonal – formal and informal social networks and social support systems, including family, work groups, and friendship networks.
- Institutional – social institutions with organizational characteristics and formal (or informal) rules and regulations for operations.
- Community – relationships among organizations, institutions, and information networks within defined boundaries.
    - Includes location in the community, built environment, and community leaders.
    - Public policy – local, national, and global laws and policies.

Willows et al. (2012) developed a social ecological model to understand obesity among Indigenous children (see Figure 1). The model consists of the common levels of intrapersonal (titled Individual), interpersonal, community, institution (titled Built Environment) and public policy (titled Society). In addition, a sixth level, which focuses

on historical factors is incorporated. A history of colonization practices and assimilation polices has created a crisis in which opportunities for Indigenous people to live healthy, self-sufficient lives have been extremely constrained (Willow et al., 2012).

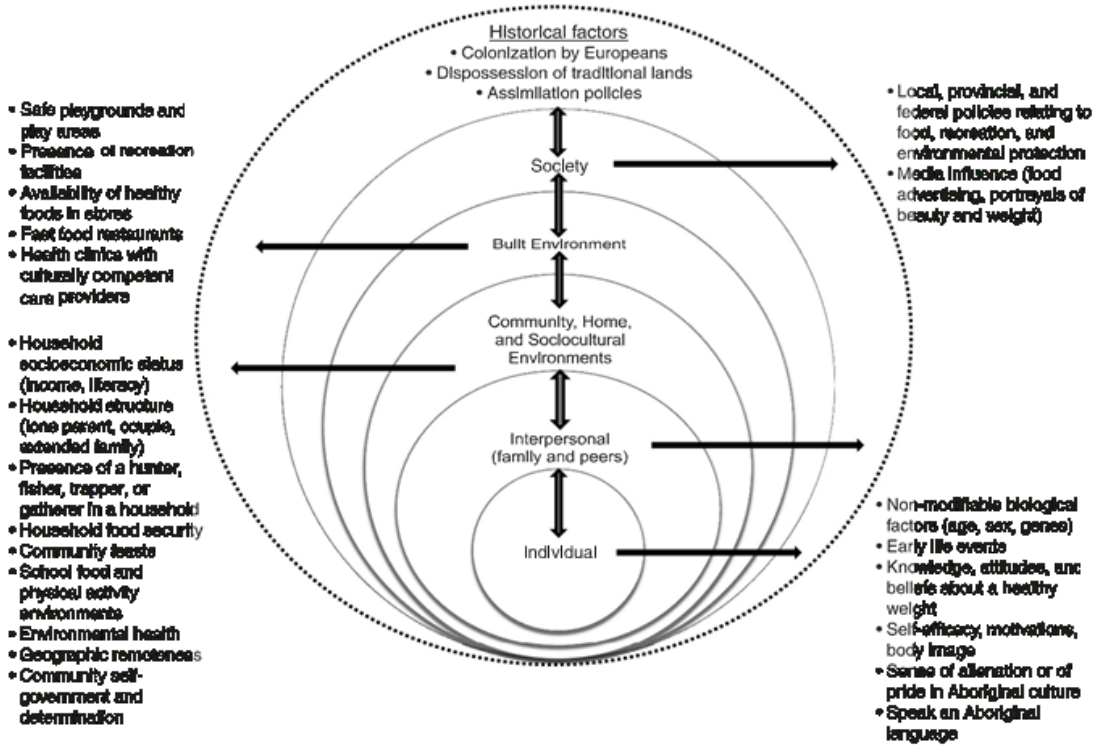

Figure 1. From "A Socioecological Framework to Understand Weight-Related Issues in Aboriginal Children in Canada," by N. Willows, A. Hanley, and T. Delormier, 2012, *Applied Physiology, Nutrition, and Metabolism, 38*(1), p. 5. Copyright 2012 by NRC Research Press. Reprinted with Permission.

The stacked Venn design in Figure 1 demonstrates overlapping relationships among the levels of influence, while the bidirectional arrows indicate the interrelationships among the processes originating from the different levels that influence health behavior. In relation to the capstone project, the levels of influences were used to align the identified CDIP programs with the appropriate public health component. For example, programs that were geared towards changing a person's knowledge, attitude, or

behavior were categorized as individual. CDIP programs that incorporated the support of family, peers, teachers, coaches, and public health nurses were classified as interpersonal, whereas programs in the school environment, local community centers, libraries, or community settings were categorized as community. Built environment included programs that targeted safe playgrounds or public spaces, recreation facilities, or health centers while the society level encompassed programs targeting healthy public policies or use of social media. Finally, programs addressing calls to action from the 2015 Truth and Reconciliation report were included in the historical component.

Ways Tried and True: Aboriginal Framework

The WTT framework was developed through input of an expert working group, Indigenous community-based health practitioners, and researchers (total of 82), as well as a review of the literature. Work on the framework initiated as it is well documented that health disparities exist between Indigenous and non-Indigenous populations, yet information on how best to address these inequities and improve the health of Indigenous people is difficult to find (PHAC, 2015). PHAC has a Canadian Best Practice Portal that in 2013 included 374 health promotion and prevention interventions, however only 6% (23) of those were either Indigenous-specific interventions or adaptions from mainstream interventions used within an Indigenous context (PHAC, 2015). Challenges that prevented inclusion of Indigenous programs on the portal focused primarily on what constitutes best practice in Indigenous settings. At the time it was known that excellent health promotion programs were occurring in Indigenous communities, though due to differing perspectives of ‘best practices’ the programs were not meeting the portal’s

evaluation criteria (PHAC, 2015). For example, Western approaches to research tend to value systematic methods that are replicated and tested by others, whereas Indigenous research values methods that involve communities (PHAC, 2015). It is noted that the most common challenges with best practice from an Indigenous perspective is the replication component, implying that a specific intervention will work in all settings. Conversely, Indigenous practice calls for solutions that are strongly based on context (PHAC, 2015). Another significant difference between Western and Indigenous perspectives of best practice is process. How research is conducted, or a program is implemented, is central in an Indigenous context, as it is expected that they are strongly rooted in community (PHAC, 2015).

Based on these perspectives, it was decided that Indigenous programs would be exempt from the portal criteria due to differences in research and evaluation values, lack of evaluation data, and beliefs of what constitutes best practice (PHAC, 2015). As such, criteria were developed to determine what would be considered Indigenous best practice. To date, there are 41 Indigenous programs on the portal; yet many are from Australia and the U.S. as well as developed and implemented by university settings. A gap is still noted with regards to Ontario-based programs that are implemented by Indigenous organizations such as Aboriginal health access centers, friendships centers, or Indigenous organizations. It is hypothesized that these programs exist but are not published on the portal.

The WTT framework includes a rubric (Appendix A) for public health interventions that outlines criteria to be used when assessing a program for cultural relevancy, these include the following:

1. Community leadership and involvement – degree to which Indigenous people were involved in the planning, implementation, and evaluation of the program.
2. Wholistic approach – degree to which a program addresses multiple issues from a wholistic approach including dimensions in wellness (mind), environment (i.e. school, home, community…), target group (i.e. children, youth, Elders…), and involvement of cross sector departments (i.e. education, health, justice…).
3. Integration of Indigenous cultural knowledge – degree to which the program addresses and incorporates the values, culture, shared experiences, and principles of the community.
4. Building on community strengths and needs – degree to which the program recognizes community capacity and readiness.
5. Partnership and collaboration – degree to which the program is supported by other organizations or institutions.
6. Effectiveness – degree to which the program has achieved successful outcomes.

The assessment tool also includes a ranking system (1-4) for each criterion, with higher numbers indicating greater cultural relevancy. A guideline for implementing the WTT criteria and assessment rubric was made available for those assessing health promotion programs (PHAC, 2015).

Literature Review Specific to the Project and Population

Historical Context

To fully comprehend the multifaceted issues experienced by Canada's Indigenous population, it is important to understand historical events and how those events impact the health of the population today. The negative relationship between Canada and the Indigenous population began with the conception of the Indian Act in 1876. This federal law provided the Department of Indian Affairs with exclusive authority to govern all matters pertaining to the Indigenous population and make sweeping policy decisions such as determining who was an Indian, how money to reserves was controlled, and promotion of civilization among the population (Coates, 2008). There was a process of disenfranchisement within the Indian Act, in which removal of Indian status would occur if an Indigenous person wanted to attend university, become a doctor or lawyer, marry a non-Indigenous person, or vote (Coates, 2008). Under the terms of the Indian Act, Indigenous people had significantly fewer rights than other Canadians and in fact were not given the right to vote without relinquishing their status until the 1960s (Coates, 2008).

At the time the Indian Act was implemented, the federal government considered Indigenous people to be uncivilized, believing it was necessary to remove their children from their homes, families, and communities, to educate and domestic them to European ways (MacDonald & Steenbeek, 2015). Established by the federal government in 1863, the residential school system became an official policy towards the assimilation of Indigenous people in Canada (MacDonald & Steenbeek, 2015). In the residential schools,

which were run by Catholic and Anglican churches, many children experienced physical, sexual, and emotional abuse, as well as severe neglect to the point of death in numerous cases (Macaulay, 2009). According to the Missing Children and Unmarked Burials Project by the Truth and Reconciliation Commission (TRC) of Canada (2015), over 6,000 children died in residential schools. In fact, in 1914 a departmental official reported that 50% of the children who passed through the schools did not live to benefit from the education they received, yet nothing was done (TRC, 2015). It is well documented that children in residential schools were punished for not speaking English through beatings, being chained to their beds, or being denied food (MacDonald & Steenbeek, 2015). To survive residential schools, children would steal food, run away, attempt to fight back, or commit suicide (MacDonald & Steenbeek, 2015). The last residential school closed in 1996 but the effects continue to be felt throughout generations and contribute to current social problems inflicting the population (TRC, 2015).

Another assimilation policy set forth by the federal government was the mass removal of Indigenous children from their homes and placed in foster care, which occurred between the 1960s to late 1980s in a phenomenon known as the sixties scoop (Johnsone, 1983; Smillie-Adjarkwa, 2009). During this phenomenon, the Department of Indian Affairs reported that over 11,000 Status First Nation children were removed from their homes; however, according to Assembly of First Nations ([AFN],2017), the numbers are believed to be closer to 16,000. Of the Indigenous children apprehended, 70% were placed in non-Indigenous homes with the additional 30% remaining in foster care (AFN, 2017). Because of being placed in a Euro-centric home, a large portion of the

adopted children report experiencing loss of cultural identity, families, histories, and Indian status (AFN, 2017). The assimilation process formally ended in the late 1980s (AFN, 2017), yet Indigenous children continue to be drastically over-represented in the child welfare system, with approximately 27,000 children in state care (AFN, 2017).

Another assimilation policy that came into effect in 1920 and continued until 1979 was involuntary surgical sterilization of Indigenous women. Although many provinces considered eugenics (forced sterilization), British Columbia and Alberta were the only two provinces legislating in favor of the Sexual Sterilization Act. Alberta alone sterilized more than 2,800 Indigenous women (Boyer, 2006). The intent of this Act was for the federal government to reduce the Indigenous population to lessen their responsibilities for the population signed under treaties (Arsenault, 2015). The ramifications of the Sexual Sterilization Act on the health of Indigenous women and the stigma of being wrongly institutionalized and sterilized are insurmountable (Boyer, 2006).

Historical events, such as the residential schooling system, 60's scoop, forced sterilization; and contemporary traumas, including current health and social conditions, as well as continued discrimination, may have numerous intergenerational effects (Bombay, Matheson, & Anisman, 2014). Just as there is intergenerational transmission of knowledge and culture, effects of trauma can also be transmitted from parents to their offspring. Intergenerational trauma occurs when the effects of trauma are not resolved in one generation and passes to the next (Wesley-Esquimaux & Smolewski, 2004). Unhealthy lifestyle behaviors, such as substance abuse, can be passed on to children

without the individuals even being aware they are doing it (Wesley-Esquimaux & Smolewski, 2004). Generations of Indigenous people remain afflicted by historical events and encounters with contemporary traumas. Such experiences are thought to directly and indirectly influence SDOH and health behaviors today, particularly regarding mistrust of governmental agencies (AFN, 2017). Additionally, AFN (2017) proclaimed that non-Indigenous do not appreciate the impact historical experiences have on the health of the population today, believing the events are in the past and not something requiring attention now.

Indigenous Health Today

In general, most Canadians enjoy very good health and are living longer than the average life expectancy (PHAC, 2017). However, the health status of the Indigenous population is profoundly different as evident through shorter life expectancy and higher rates of infectious diseases, chronic diseases, and suicide. For example, while the life expectancy for the total Canadian population is 79 years for men and 83 years for women, life expectancy for the Indigenous population is 64 years for men and 73 years for women (Statistics Canada, 2016). Similarly, according to the 2016 Canadian census Indigenous peoples comprised 6% of the total Canadian population and represent 21% of all reported tuberculosis cases (Statistics Canada, 2017). Among Inuit, rates of tuberculosis are nearly 50 times higher than the overall Canadian rate (PHAC, 2017). With regards to diabetes, the disease is considered an epidemic and three to four times more common among Indigenous people, occurring earlier in life, and with more severe comorbidities such as kidney failure, blindness, and amputations (NAHO, 2010; PHAC,

2017). Another area of health where inequities are noted is intentional injuries, which represents the greatest source of potential years of life lost among the Indigenous population, accounting for 26% of deaths among First Nations as compared to 6% of deaths among the general population (PHAC, 2017). Suicide rates among First Nation youth are five to seven times higher than the general population and 11 times higher among Inuit youth, representing the highest suicide rate worldwide (Government of Canada, 2018).

According to Frohlich et al. (2006), the most significant disparities in Canada exist between Indigenous people and the rest of the Canadian population. These inequities are exacerbated by limited opportunities for members of this vulnerable group to develop healthy lifestyles and improve health through adopting or changing health behaviors (Bird & Rieker, 2008).

The Role of Public Health

The focus of public health at both the national and provincial level is to promote health, prevent and control injuries, infectious and chronic diseases, as well as reduce inequities in health (PHAC, 2018; Public Health Ontario, 2017). At a national level, PHAC outlines seven categories of competencies that are considered essential knowledge, skills, and attitudes necessary for public health practice (PHAC, 2018). Diversity and inclusiveness represents one of the seven categories, identifying the need for public health units to address population diversity in planning, implementing, adapting, and evaluating public health programs and policies (PHAC, 2018). Additionally, it is recommended that public health units apply culturally-relevant and

appropriate approaches to influence the health and wellbeing of specific vulnerable populations, which includes Indigenous people (PHAC, 2018). Yet, at a provincial level, where public health programming is designed and implemented, the Indigenous population has not been targeted as this area of health care has traditionally been the role of the federal government (Lavoie, 2011). However, modernization of the Ontario Public Health Standards has embedded health equity within the foundational standards, mandating all 36 public health units across the province to work with the Indigenous population (MOHLTC, 2017). While this mandate commenced January 2018, there are multiple factors that make this a difficult task. From an Indigenous perspective, historical events at the hands of the federal and provincial governments, such as colonization, residential schools, and the Sixties scoop, has left a difficult contextual legacy, as well as an element of mistrust for governmental agencies, such as the health care system (Nesdole, Voigts, Lepnurm, & Roberts, 2014). From a public health perspective, lack of experience working with the population creates a knowledge gap of Indigenous people in general, as well as appropriate approaches to develop, implement, and evaluate culturally-relevant health promotion programs. As such, it is imperative that strategic health planning, programming, and delivery of services are community-driven, culturally appropriate, and in partnership with the Indigenous population (see Nesdole et al., 2014). The ambiguity of Indigenous history among many Canadians and the need for cultural appropriateness and partnership in the health planning and programming, indicates a need for a comprehensive approach to implement and evaluate health promotion programming that would be applicable to any public health unit in Ontario. However, first and

foremost, awareness is needed of existing CDIP programs that specifically target the Indigenous population.

Relevance to Nursing Practice

Despite national statistics demonstrating the disparities in health between the Indigenous population and Canadians in general, limited public health efforts have specifically targeted this population. A history of ambiguity over which level of government and type of health care system is responsible for delivering care to the population has resulted in a gap-in-practice from a public health perspective. With modernization of the Ontario Public Health Standards, public health practitioners are scrambling to develop, implement, and evaluate Indigenous-focused health promotion programming, a population the system traditionally has known little about. As such, nurses and public health practitioners are challenged to not only identify, but also translate culturally appropriate evidence into practice. Indigenous organizations have been developing Indigenous-specific programming for years, public health must now focus on identifying these programs. Nurses and public health professionals must also focus on selecting and implementing the programs contingent on the health needs specific to their local context that target the Indigenous population aimed at enhancing the prevention of chronic diseases and injuries.

Local Background and Context

The practice setting in which the doctoral project was situated is a local public health unit in Ontario; however, the final product of an inventory of Indigenous-specific CDIP programs is applicable to any of the 36 public health units located throughout the

province. Of all provinces, Ontario has the largest Indigenous population with an estimated 300,000 residents representing 2.4% of the total provincial population (Statistics Canada, 2017). According to 2016 census data, 60% of the Indigenous population live off-reserve and in urban settings, constituting the fastest growing segment of Canadian society (Statistics Canada, 2017). Due to limitations in national data collection methods these numbers are thought to be significantly underestimated.

Role of the DNP Student

Non-Indigenous health professionals may contribute to developing mutually beneficial relationships with Indigenous communities, however because of past practices some Indigenous communities are hesitant to work with non-Indigenous people (Nadalin et al., 2013). Past experiences include (a) individuals being forced to participate in studies, (b) absence of consent, (c) collection and use of genetic material for inappropriate purposes, and (d) collection of information about traditional remedies for profit. As an Indigenous woman from Algonquins of Pikwakanagan First Nation, I have an opportunity to be accepted by Indigenous communities as an Indigenous health professional intending to collaborate on improving the health of the population. What I envision for the outcome of this project is the adoption of Indigenous programs across all public health units in Ontario, so that Indigenous people can access preventive health services that are culturally appropriate and free of racism and discrimination. In offering culturally-specific programming, I hope that public health units can show the Indigenous population the desire to collaborate, thereby working to repair the mutual relationship. My role in the DNP project was to champion the development of an inventory of

Indigenous-specific CDIP programs, as well as maintain a strong, working relationship with the project team, members from the local Indigenous community, and representatives from other public health units and Indigenous organizations working towards improving the health of the population.

Summary

A history of colonization practices and assimilation policies has resulted in the Canadian Indigenous population experiencing poorer health than the general population with shorter life expectancies, higher rates of chronic and infectious diseases, and greater risk of dying from suicide or intentional injuries. Modernization of the Ontario Public Health Standards now requires all public health units to work with the Indigenous population in the development, implementation, and evaluation of health promotion programming. However, there is a gap-in-practice with regards to awareness of existing CDIP programs that specifically target the Indigenous population. Applying the social ecological model to structure content and WTT framework to ensure cultural relevancy resulted in an inventory of Indigenous-specific CDIP programs for use by public health units.

In section three, I describe the approach taken in the design of the DNP project, as well as the practice-focused question. As well, I will present details on the sources of evidence and analysis of procedures that were used to address the practice-focused question, in addition to the process for analysis and synthesis of the evidence.

Section 3: Collection and Analysis of Evidence

Introduction

The purpose of this quality improvement project was to develop an inventory of existing Indigenous-specific CDIP health promotion programs through the completion of a scoping review and environmental scan. This approach provided a comprehensive picture of existing CDIP programs that target the Indigenous population of Canada. The social ecological model was used to structure the findings from the scoping review and environmental scan, while the WTT framework was applied to ensure cultural relevancy of identified programs. This process provided an initial inventory of Indigenous-specific CDIP programs for public health units to use when developing their strategic direction with implementing health promotion programming for their local Indigenous population. In this section, I identify the practice-focused question as well as provide detail on the sources of evidence used to address the question. In addition, I address the analysis and synthesis of findings from both the scoping review and environmental scan.

Practice-Focused Question

The scoping review and environmental scan determined the following:

- Question: What CDIP health promotion programs exist that specifically target the Indigenous population of Canada?
- Population: Public health units in Ontario, Indigenous health organizations, and non-Indigenous health centers with an Indigenous focus.
- Intervention: CDIP health promotion programs.

- Outcomes: To develop an inventory of Indigenous-specific CDIP health promotion programs that are culturally relevant.
- Study design: The scoping review and environmental scan consists of data attained from public health units, Indigenous health organizations, and non-Indigenous health centers with an Indigenous focus.

Approval from Walden University's Institutional Review Board was obtained to collect and analyze data from published literature, public websites, and key informant interviews. Walden University's approval number for this study is 01-03-18-0590622.

Sources of Evidence

In considering sources of evidence, a Canadian context was necessary, particularly with regards to the structure of the Canadian health care system. In Canada, health care is publicly-funded; therefore, all data collected through the scoping review and environmental scan are public information, meaning that no information is considered proprietary. Inclusion criteria were as follows:

- Programs provided/funded by departments within the Ontario government (i.e., public health units, Ministry of Children and Youth Services) for the Indigenous population.
- Programs that target CDIP prevention for the Indigenous population.
- Programs developed and/or implemented within the past 10 years (2007 – 2018).

Similarly, programs that were excluded were those that were as follows:

- Previously captured on the PHAC Canadian Best Practices Portal.
- Delivered in provinces/territories outside of Ontario.

- Not with a CDIP focus.
- Designed for the mainstream population only.

Scoping Review

Scoping reviews are exploratory projects that map out available information on a specific topic and are commonly used when there is suspicion that not enough literature in the topic area exists (Canadian Institutes of Health Research, 2010). Scoping reviews are unlike systematic reviews as they broadly survey the literature and do not include a critical appraisal for methodological quality (Agency for Healthcare Research and Quality, n.d.). To complete the scoping review for the DNP project, the framework developed by Arksey and O'Malley (2005) was used and includes the following six steps: (a) identify the research question, (b) identify the relevant studies, (c) determine the study selection, (d) chart the data, (e) collate, summarize, and report the results, and (f) complete consultation.

The first step of identifying the research question was presented as the practice-focused question whereas Step 2 involved identifying relevant studies through a search strategy using the following key terms:

- Aboriginal OR Indigenous OR First Nation OR Métis OR Inuit
- Program OR service OR intervention OR initiative
- Chronic disease OR injury prevention OR health promotion OR health eating OR physical activity OR suicide prevention OR mental health OR health equity OR substance misuse prevention OR tobacco control OR alcohol
- Ontario OR Ontarian

Step 3 involved assessing studies for relevancy to the practice-focused question according to the title, abstract, and keywords. Selections of studies were limited to those that met the inclusion/exclusion criteria. A PRISMA flow chart was used to document the review decision process, indicating the number of results, records excluded with rationale, and final summary of studies selected (Peters et al., 2015). Steps 4 and 5 of the scoping review process involved charting the data and summarizing the results, using the inventory of programs chart (see Table 2). The final step in the scoping review process involves consultation in the form of knowledge translation.

Environmental Scan

An environmental scan examines unpublished literature and publicly available program information (AHRQ, n.d.). Considering a Canadian context, NAHO conducted an environmental scan in 2010 of existing respiratory programs and initiatives that targeted the Indigenous population, which resulted in identification of more than 100 strategies, projects, programs, and initiatives (Wesche, Ryan, & Carry, 2011). With this environmental scan, governmental departments, Indigenous organizations, and relevant networks were identified at the national, provincial, territorial, regional, and local levels. For example, the First Nations and Inuit Health branch focuses on Indigenous programming at a national level whereas the Assembly of First Nations is provincial and the Indigenous Nurses Association of Canada is a relevant network (Wesche et al., 2011). As previously mentioned, PHAC has a Canadian Best Practice Portal that currently includes 41 Indigenous programs on the portal; however, an identified gap was noted with regards to Ontario-based programs that are implemented by Indigenous

organizations such as Aboriginal health access centers, friendships centers, Indigenous health organizations, and non-Indigenous health centers with an Indigenous focus. Therefore, sources of evidence for the DNP project included these specific organizations at a provincial level.

To complete the environmental scan, a 7-step process outlined by Wilburn et al. (2016) was used to guide the DNP project, which includes:

1) Draw on experience to determine leadership and capacity for the project.
2) Establish the focal area and purpose of the environmental scan.
3) Create and adhere to a timeline and set incremental goals.
4) Determine information to be collected for the environmental scan
5) Identify and engage key stakeholders
6) Analyze and synthesize results from the environmental scan into a concise summary report.
7) Disseminate results and conclusions to key stakeholders.

The first step of identifying a lead for the project was completed and outlined in the role of the DNP student section of the project paper. Similarly, Step 2 of establishing a focal area and purpose of the environmental scan was completed and presented in the form of a practice-focused question. Step 3 of the environmental scan process involved creating and adhering to a timeline and setting incremental goals. I acknowledge that certain tasks such as creating interview guides and collecting qualitative data is a timely process. Therefore, a timeline (Figure 2) for completion of the DNP project was

developed to plan activities, optimize the process, and stay on track (see Wilburn et al., 2016).

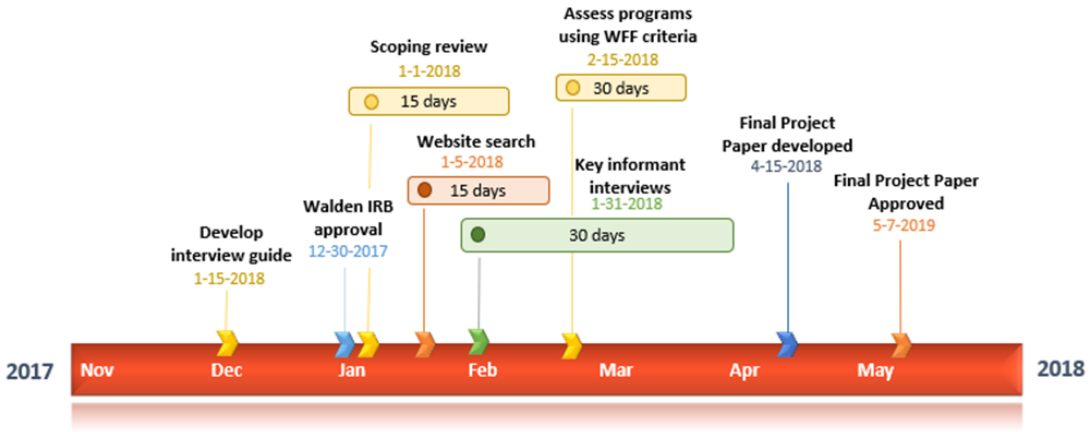

Figure 2. Timeline.

Steps 4 and 5 of the environmental scan process involved determining information that was to be collected as well as creating an iterative list of organizations that held the sought-after information. Similar to the approach taken by NAHO, I used two strategies to complete the environmental scan: (a) conducting a thorough website search of the identified organizations, examining any CDIP health promotion programs that addressed Indigenous health and (b) holding key informant interviews with the identified organizations. In-depth interviews are one strategy for collecting data commonly used with environmental scans to attain tacit (know-how) knowledge that is often accumulated through previous knowledge, experience in local communities, and professional expertise (Kothari et al., 2012). This approach ensured that a complete picture of programs was attained with regards to what worked well, what lessons were learned, and whether the programs were evaluated. Direct contact with the organizations

also helped me identify existing programs that were yet to be uploaded to the public website. However, as the health care system in Canada is publicly-funded, all health promotion efforts are public knowledge.

Analysis and Synthesis

Steps 5 and 6 of the scoping review framework and environmental scan process highlight the importance of analyzing and synthesizing the findings into a concise summary report. For both the scoping review and environmental scan, findings were synthesized and captured in the Inventory of Programs chart (Table 1) indicating the project name, targeted topic area, intended audience, and levels targeted as per the social ecological model. Once programs were identified through the scoping review or environmental scan, they were analyzed for cultural relevancy using the WTT framework criteria. As previously mentioned, the WTT framework is culturally relevant and inclusive, designed to identify and systematically assess Indigenous health promotion programs (PHAC, 2015).

Ethical Considerations

To reiterate, the healthcare system in Canada is publicly-funded, ensuring that no proprietary data was collected during the completion of the DNP project. While a search of public websites indicated whether a government or Indigenous agency implemented Indigenous-specific health programming, for some programs key informant interviews were required to gain a deeper understanding into the process, successes, and lessons learned. As this form of data collection is an element of qualitative research, ethical approaches were considered. For example, each key informant interview began with an

introduction of the DNP student, the purpose of the project, and confidentiality of the information. Interviewees provided informed consent prior to the interview commencing and were made aware that they could withdraw at any time. In addition, the practicum site had ethical oversight of the DNP project to ensure any ethical issues were identified and addressed. There was little to no risk to participants of the key informant interviews, as the intent of the quality improvement project was to gather data from government-funded employees and resources that are public knowledge.

Summary

As of January 2018, public health units in Ontario were required to work with the Indigenous population of Canada to deliver health promotion services. However, with little experience and less awareness of adaptable programming, a gap-in-practice creates concern among public health practitioners with meeting the needs of this population. The first step in providing Indigenous-specific programming is the awareness of what programs currently exist and whether they are culturally relevant. Gathering data through a scoping review and environmental scan facilitated in the development of an inventory of existing CDIP programs that have been implemented within this specific population. Moreover, assessment of the program using the WTT framework ensured the programs included in the inventory were culturally relevant. Once published, public health units across the province will have available to them a list of effective programs that are adaptable to meet the needs of their local Indigenous population, thereby creating social change for the most vulnerable population in Canada.

Section 4: Findings and Recommendations

Introduction

The purpose of this DNP project was to determine what Indigenous-specific programs exist in relation to chronic disease and injury prevention. With changes to the way public health units in Ontario are mandated to work with the Indigenous population, a gap was noted in public health practice with regards to providing culturally appropriate health promotion programming. The Indigenous population is at higher risk for many chronic diseases as compared to the general population, in which causes are associated with a history of colonization and assimilation policies that continue to affect the population today (Wilks & Cooke, 2015). The project question was as follows: What CDIP health promotion programs exist that specifically target the Indigenous population of Canada? Current practice for Indigenous specific health promotion programming is done primarily by Indigenous organizations such as friendship centers and Aboriginal health access centers. While it is recognized that many Indigenous people access these organizations for programming, they are not the only points of services available. Rather, health promotion efforts through partnership with public health units could increase accessibility to Indigenous-specific programming in settings such as schools, municipal planning and recreation facilities, as well as service organizations that include YMCA/YWCA, Girls Inc., and more (Wilks & Cooke, 2015).

Findings and Implications

Scoping Review

The following databases were used to identify relevant studies: AgeLine, CINAHL Plus with Full Text, MEDLINE, Nursing & Allied Health Collection: Comprehensive, PyscINFO, Cochrane Database of Systematic Reviews, and SocINDEX with Full Text. Articles published in peer-reviewed journals from January 1, 2007 and onward were included in the search, which yielded 222 results (see Figure 3).

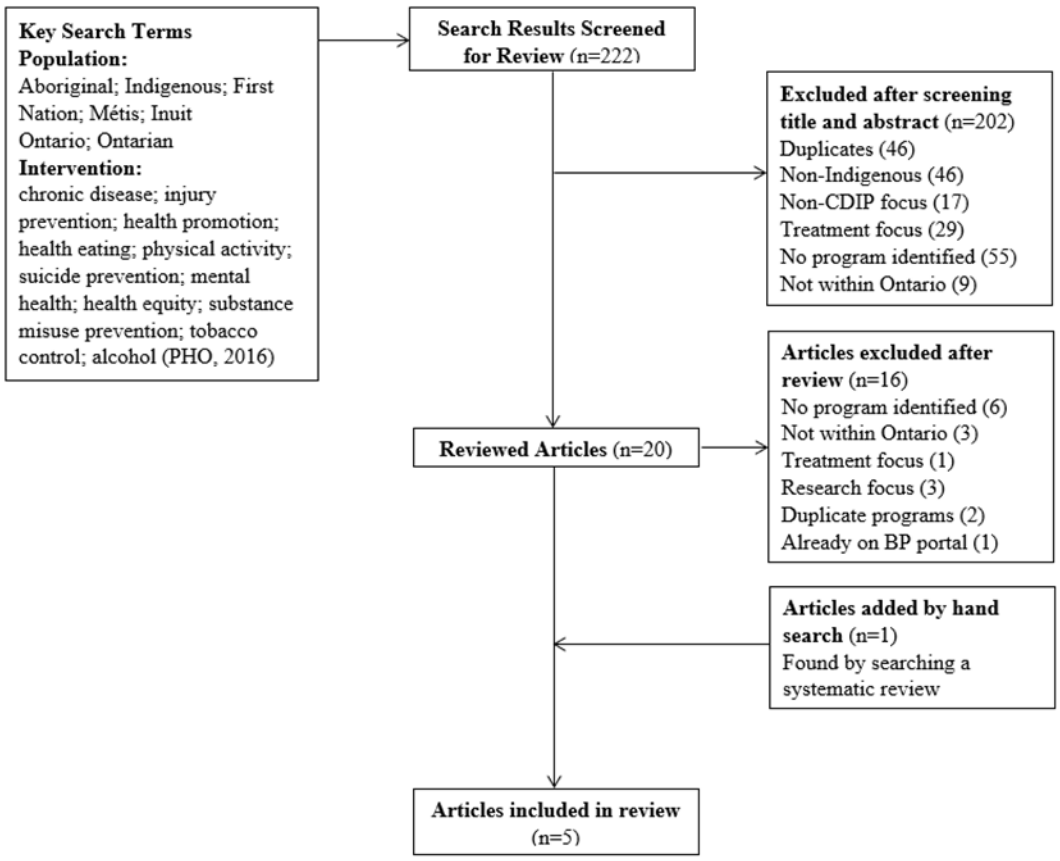

Figure 3. Article selection process.

Of the articles in which the titles, abstracts, and key words were screened, 202 were excluded as they were either duplicates, did not have an Indigenous or CDIP focus,

were delivered outside of Ontario, were treatment focused, or did not identify a program. Twenty articles were selected for review, 16 of which were excluded as there was no program identified, it was not Ontario specific, the focus was on research or treatment rather than prevention or health promotion, or the program was already captured on the Canadian Best Practice portal. One program captured in a systematic review was identified and included, for a total of five selected programs for review.

Environmental Scan

To complete the environmental scan, a thorough website search of public health units in Ontario as well Indigenous and non-Indigenous organizations was conducted that involved searching websites of 82 organizations, 26 of which offered Indigenous-specific CDIP programming. Of the 26 organizations, three were public health units, seven were Aboriginal health access centers, seven were Indigenous friendship centers, five were Indigenous health organizations, and four were non-Indigenous organizations with an Indigenous component. For example, two of the identified organizations were community health centers that offer programming for both the general and Indigenous population. In total, 72 Indigenous-specific programs were identified from the 26 organizations that were included in the environmental scan. Of the 72 programs, 23 were repetitive, being offered in more than one setting, and two were identified as currently existing on the Canadian Best Practice portal. For example, the healthy eating active living program is offered by a several Indigenous organizations whereas the Kizhaay Anishinaabe Niin (I am a Kind Man) program is on the portal.

When searching the public health units, key terms *Aboriginal* and *Indigenous* were entered in the search engine of the organization's public website. If the search received results, the links were reviewed to determine if Indigenous CDIP programming was specifically mentioned. While many of the public health unit websites made mention of the Indigenous population, few identified specific programming; rather, for most the emphasis was on relationship building strategies the organization intended to employ. Of the 36 public health unit websites searched, three indicated Indigenous programming specific to CDIP with five existing programs identified.

Aboriginal health access centers are Indigenous community-led health centers that offer a combination of services including traditional healing, primary care, cultural programs, health promotion programs, community development initiatives, and social support services (Association of Ontario Health Centres, 2018). Established in 1994, there are currently 10 Aboriginal health centers located throughout the province of Ontario, providing Indigenous specific health services. Of the 10 Aboriginal health access centers searched in the environmental scan, seven were found to offer specific CDIP programming, with 14 programs identified.

The Ontario Federation of Indigenous Friendship Centres (OFIFC) was founded in 1971 as community hubs where urban Indigenous people living in towns, cities, and urban settings could access culturally-based programs (OFIFC, 2013). In Ontario, more than 54% of the Indigenous population live in urban communities; the OFIFC is the largest urban service network in Ontario that provides support to the Indigenous peoples through a variety of services, including the areas of justice, health, family support, long-

term care, healing and wellness, and more (OFIFC, 2013). In the area of health, the OFIFC has developed a core set of programs that each of the 28 friendship centers deliver, which includes the Akwe:go Urban Aboriginal Children's program, Wasa-Nabin Urban Aboriginal Youth program, and Urban Aboriginal Healthy Living program. In addition to these core programs, seven friendship centers were found to offer 13 additional programs. For example, one friendship center offers a program called Kids are Recreationally Equal whereas another offers the Ganigohi:yo (The Good Mind) program.

Included in the environmental scan were Indigenous organizations and non-Indigenous health centers with an Indigenous component. The websites of several well-known Indigenous organizations were searched, however only five were found to offer six specific CDIP programs. Many of the Indigenous organizations provide similar services as Aboriginal health access centers, such as primary care, health promotion, mental health and addictions, and more. Yet they do not receive funding in the same manner and are not recognized by the Ministry of Health and Long-Term Care as one of the core access centers (Association of Ontario Health Centres, 2018).

Additional organizations that were included in the environmental scan were non-Indigenous agencies that incorporate an Indigenous component. These agencies are common in communities with a high urban Indigenous population in which the local health center(s) do not receive funding from the province but may receive alternative funding to develop and deliver Indigenous-specific programming. For example, the Ontario Trillium Foundation is an agency of the Government of Ontario and one of the largest granting foundations in Canada (Ontario Trillium Foundation, 2018). Trillium is a

significant supporter of Indigenous-specific community initiatives, providing funding to several health centers across the province to implement programs to the meet the needs of the local Indigenous population. Of the non-Indigenous organizations searched, four were found to offer nine Indigenous-specific CDIP programs.

Forty-seven programs were included in the second step of the environmental scan process, which involved holding key informant interviews with the identified organizations (Wesche et al., 2011). Emails were sent to the 26 organizations, inviting them to participate in key informant interviews, with nine accepting the invitation, enabling deeper understanding of 19 programs. Once interest was identified, representatives from organizations were sent a consent form and copy of the interview questions to review (Appendix B). Through the letter of consent, participants were informed that the telephone interview would last approximately 30 minutes and that they could withdraw from the study at any time. Once interviews were completed, the interview guide that captured participants' responses was emailed to individuals for review as a form of member checking to ensure the information was captured accurately. Several attempts were made to invite representatives from all organizations; however, 17 organizations did not accept the invitation to participate, which represented 28 programs. Nevertheless, a further online search was completed in an attempt to gain greater detail on the how the programs were developed and implemented.

Programs

In total, 52 programs were identified through the scoping review and environmental scan and were reviewed for cultural relevancy using criteria from the

WTT framework. All identified programs were included in the inventory of programs chart (see Table 1), indicating whether they met the criteria (*Yes*), did not meet the criteria (*No*), or it was unable to determine (*UD*). To be considered meeting the WTT criteria and thus culturally relevant, a minimum score of 18 must be achieved (PHAC, 2015). Of the 52 programs assessed, 30 met the WTT framework criteria, one did not, and 21 were unable to determine. Commonalities amongst each of the programs delivered through the various organizations was delivery at a community level with all the programs implemented in various elements of the community, such as community centers, grocery stores, or schools. This is an important consideration, as community-based programs have been shown to be more effective among the Indigenous population than standalone interventions, as they reach a larger proportion and broader spectrum of the population (Kakekagumick et al., 2013; Wilk & Cooke, 2015). Community-based interventions are considered the optimal approach as they allow communities to engage as partners in the development and implementation of CDIP programs and initiatives (Kakekagumick et al., 2013). The most common topic areas were tobacco prevention and cessation, healthy eating and physical activity, mental health and wellbeing, and life skills.

Table 1

Inventory of Programs

Project name	Topic area	Target audience	Level(s) targeted	Meets WTT criteria
Aanjichigewin Health Promotion and Education	Healthy eating Active living Smoking cessation Diabetes prevention	All ages	Individual Community	UD
Aboriginal Diabetes Prevention Program	Healthy eating Physical activity	Adults	Community	UD
Aboriginal Tobacco Program	Tobacco prevention/ cessation	Adults and youth	Community	Yes
After School program	Life skills	Youth (ages 7-18)	Community	UD
Akwe:go: Urban Aboriginal Children's Program	Life skills	Children (ages 7-12)	Individual Community	Yes
Alcohol & Drug Prevention Program	Substance use	All ages	Individual Community	UD
Anishinaabe Community Kitchen Program	Healthy eating	All ages	Community	Yes
Camp Choice – Aboriginal Camp & Outreach program	Life skills	Youth (ages 11-13)	Community	Yes
Child Nutrition Program	Healthy eating	Children and families	Community (child care centers, elementary schools)	Yes
Community Fresh Food Initiative	Healthy eating Food security	All ages	Community	Yes

(table continues)

Project name	Topic area	Target audience	Level(s) targeted	Meets WTT criteria
Exploring Sacred Use of Tobacco	Tobacco prevention	Youth	Community	Yes
Fit Nish	Physical activity	Youth (ages 13-19)	Community	UD
Food Skills for Families	Healthy eating Eating on a budget	All ages	Community	UD
Ganigohi:yo (The Good Mind)	Mental health	Youth (ages 7-17)	Individual Community	UD
Health Outreach	Mental health (family violence)	All ages	Community	UD
Healthier YOU Program	Diabetes prevention Healthy eating Active living Smoking cessation	All ages	Individual Community	Yes
Healthy Eating Active Living (HEAL) Program – Youth	Healthy eating Physical activity	Youth (ages 13-25)	Community (schools)	Yes
Healthy Eating Active Living (HEAL) Program	Healthy eating Physical activity	Adults	Community	Yes
Healthy Kids Program	Healthy eating Physical activity	Child and youth	Community	Yes
Healthy Living Program – Youth	Healthy eating Physical activity	Youth (ages 12-25)	Community	Yes
Indigenous Children's Wellness Program	Mental health (family violence)	Children (ages 7-12)	Individual Community	UD
Kids Are Recreationally Equal (KARE) Program	Physical activity	Child and youth	Community	UD

(table continued)

Project name	Topic area	Target audience	Level(s) targeted	Meets WTT criteria
Kina Awiiya Secondary Program	Life skills	Youth (ages 14-18)	Community (schools)	UD
Life Choice program	Life skills	Youth (ages 12-17)	Community	UD
Little Embers Youth program	Life skills	Youth (ages 7-15)	Community	Yes
Making Aboriginal Kids Walk Away (MAKWA) program	Tobacco prevention	Youth (ages 14-19)	Community	No
Mno Bimadiziwin: Life Skills Coaching	Life skills	All ages	Individual Community	Yes
Movers and Shakers	Healthy eating Physical activity Tobacco prevention	Youth (ages 12 and older)	Community	Yes
Naandwidizwin-Wechihitita (Healing Ourselves – Helping Each Other) program	Life skills Intergenerational trauma	All ages	Individual Community Historical	Yes
New Beginnings	Healthy living Resiliency	Men (all ages)	Individual Community	UD
Ogichidaakwe (Girls Circle) program	Life skills Intergenerational trauma	Youth girls (ages 11-14)	Individual Community Historical	Yes
Okichitaw	Physical activity	Children and Youth (ages 6-25)	Community	Yes
Outdoor Family Fun and Healthy Meal Prep for Families On-the-Go	Healthy eating Physical activity	Youth (ages 12-25)	Community	UD

(table continues)

Project name	Topic area	Target audience	Level(s) targeted	Meets WTT criteria
Prevent Alcohol and Risk-Related Trauma in Youth (PARTY) program	Injury prevention	Youth (grades 7-12)	Community (hospitals/ schools)	UD
Promoting Life Skills for Aboriginal Youth (PLAY) program	Life skills	Children (ages 6-12)	Community	Yes
Quit Smoking Support: Tobacco as Medicine	Smoking cessation	All Ages	Community	UD
Recovering from Loss	Mental health	All ages	Individual Community	UD
RedPath Child and Youth Life Skills Program	Life skills	Youth (ages 7-18)	Community	Yes
Taking Care of Me	Healthy eating Physical activity	All ages	Community	UD
The Fourth R: Uniting Our Nations	Life skills	Youth (ages 13-18)	Community	Yes
The Journey Home: The Wikwemikong Outdoor Adventure Leadership Experience	Mental health	Youth (ages 12-18)	Community	Yes
Urban Aboriginal Healthy Living Program	Healthy eating Physical activity Smoking cessation	All ages	Individual Community	Yes
Waabgon Youth Leadership & Development Initiative	Life skills	All ages	Community	Yes

(table continues)

Project name	Topic area	Target audience	Level(s) targeted	Meets WTT criteria

Wakata'kari:te (I Am Well) Program	Mental health	All ages	Community	UD
Walking the Path	Mental health (resiliency)	All ages	Individual Community	UD
Wasa-Nabin Youth program	Life skills	Youth (ages 13-18)	Individual Community	Yes
Working Hope program	Life skills Intergenerational trauma	Youth (ages 5-21)	Individual Community Historical	Yes
YES Program	Life skills	Youth	Community (schools)	UD
Young Thunderbird Big Drum Circle	Intergenerational trauma	Youth (ages 12-25)	Community Historical	Yes
Youth for Change	Life skills	Youth (ages 12-25)	Community	Yes
Youth Tobacco Prevention Indigenous Partnership	Tobacco prevention	Youth (ages 13-19)	Community (schools)	Yes
Zhiiwapenewin Akino'maagewin: Teaching to Prevent Diabetes (ZATPD) program	Healthy eating Physical activity	All ages	Community	Yes

Tobacco prevention and cessation.

A focus on tobacco prevention and cessation is important in the Indigenous population as tobacco use rates are alarming higher, especially among the youth. While the overall smoking rates among Canadian youth has decreased in the past two decades from 25% to 11%, a similar decline is not seen among the Indigenous youth (Jetty, 2017). Smoking rates are reported to be 31% among Metis youth, 33% among First Nation youth, and 56% among Inuit youth. In Nunavut, the rate rises to 65% (Jetty, 2017). In considering risk factors, Canada's Indigenous youth start smoking at the age of 12, several years earlier than non-Indigenous youth (Jetty, 2017). Other risk factors that are more prevalent among the Indigenous youth are unemployment and poverty with smoking being more prevalent among the poor and unemployed. It is widely documented that Canada's Indigenous population are one of the poorest populations in the nation with an unemployment rate of 13.9% as compared to 8.1% for non-Indigenous people (Jetty, 2017). Moreover, there is a 30% median income gap between Indigenous and non-Indigenous people. However, the primary risk factor of tobacco use among Indigenous youth is the influence of parents and peers and access to tobacco products (Jetty, 2017). Studies have found that a protectant factor against tobacco use is a supportive, smoke-free home environment (Jetty, 2017). Yet, the overall smoking rate is high with rates ranging from 35.8% to 59.8% among the Indigenous groups, as compared to 18% of non-Indigenous people (Minichiello et al., 2016). As such, tobacco use in the home environment is high and there is a normalization of smoking behaviors, increasing the

likeliness that Indigenous youth will be exposed to tobacco use and become smokers themselves (Jetty, 2017).

For the Indigenous population this is particularly problematic as the focus of tobacco has a sacred medicine is lost in the eyes of both the Indigenous and general population. The medicinal and ceremonial use of tobacco, which predates European contact, is offered up and ceremonially burned to create a connection with the spiritual world, with the smoke carrying thoughts, feelings and prayers to the Creator (Jetty, 2017; Indigenous Corporate Training, Inc. 2012). During ceremony little smoke is inhaled, rather it is allowed to drift up to the Creator. Sacred tobacco is grown and dried with no additives. This is much different from commercial tobacco, which includes a high content of addictive and harmful nicotine and toxic additives (Jetty, 2017). Recreational use of tobacco is considered disrespectful of tradition among many First Nation Elders (Jetty, 2017).

While comprehensive tobacco control strategies have demonstrated effectiveness with positive change in reducing tobacco use among the general population, the same reduction in commercial tobacco use among the Indigenous population is not noted (Minichiello et al., 2016). Of the 52 programs identified through the scoping review and environmental scan, three focused primarily on tobacco prevention and cessation, with an additional three included within a broader program. One program identified through the environmental scan that focused exclusively on tobacco prevention and cessation is the Youth Tobacco Prevention Indigenous Partnership, which is a youth-led initiative delivered within the school setting that targets youth aged 13 to 19. This art-based

program is designed to increase awareness among youth, through a peer-led approach, on the difference between sacred and commercial tobacco use. Findings from pre and post surveys demonstrated greater tobacco awareness and increased intent to quit smoking among Indigenous youth.

The Aboriginal Tobacco program is also directed towards increasing tobacco awareness and may have a greater reach as it is implemented at a provincial level. Cancer Care Ontario works collaboratively with 200 Indigenous communities to raise awareness of the dangers of smoking with the goal of reducing the high smoking rates among the population (Cancer Care Ontario, n.d.). The program consists of workshops, activities and frontline training in smoking cessation. The workshops are delivered by Indigenous leads on topics such as (a) Smoking Cessation – Counselling Techniques and Treatment, (b) Prevention – Be Tobacco-Wise, the Risks of Commercial Tobacco, (c) the Dangers of Second and Third Hand Smoke, (d) Living a Good Life, Benefits of Quitting Commercial Tobacco, and (e) Understanding the Addiction – Nicotine Dependence (Cancer Care Ontario, n.d.). In 2016, over 100 workshops were held in Indigenous communities, reaching 6,000 individuals (Cancer Care Ontario, n.d.). Examples of tobacco awareness activities include ultimate Frisbee and little NHL. Cancer Care Ontario (n.d.) partnered with a non-profit organization to bring smoking prevention and cessation programming to Indigenous children and youth through the sport of ultimate Frisbee. In total, 34 ultimate Frisbee events were held in 2014 engaging over 2,400 youth. The Little NHL campaign is a youth-led initiative that focuses on raising tobacco misuse awareness (Cancer Care Ontario, n.d.). Finally, a component of the Aboriginal Tobacco Program involves

providing tobacco cessation training to Indigenous healthcare providers across the province to promote health equity and build capacity of the Indigenous population in supporting individuals wanting to quit smoking (Cancer Care Ontario, n.d.).

Broader programs that incorporate a tobacco prevention and cessation component include the Aanjichigewin Health Promotion and Education, Healthier YOU program, and Urban Aboriginal Healthy Living program. The Urban Aboriginal Healthy Living program is one of the core programs developed by the Ontario Federation of Indigenous Friendship Centres that is implemented by all 28 friendship centers across the province. It creates opportunities for Indigenous people to learn about healthy lifestyles and become smoke-free through interactive workshops, smoking cessation support, and role modelling for smoke-free living (OFIFC, 2013). The intent is to reduce use of commercial tobacco use and create smoke-free environments in the community and home environments. The Government of Ontario (2014) has recognized the value and success of the program, identifying that it reached 10,000 people including 3,800 children and youth since implementation in 2011.

Healthy eating and physical activity.

The Indigenous population has traditionally relied on hunting, fishing, and food sharing as a way of life, resulting in high levels of physical activity and consumption of nutrient-dense foods such as caribou, moose, and deer (Kolahdooz, Sadeghirad, Corriveau, & Sharma, 2017). However, over the past few decades there has been a noted decrease in the traditional lifestyles among the Indigenous population, a lifestyle transition that has resulted in reduced physical activity levels, as well as a decline in

consumption of traditional foods and increased intake of non-nutrient dense foods that are high in fat and sugar (Kolahdooz et al., 2017). As a result, Indigenous people in Canada experience a high prevalence of overweight and obesity that is directly associated with high rates of type 2 diabetes and cardiovascular disease (Anand et al., 2007). Findings from the Canadian Community Health Survey suggest that 26% of the Indigenous population are obese, as compared to 16% of non-Indigenous adults. Moreover, prevalence rates of obesity among Indigenous youth are exceptionally high, with more than 40% of the population being overweight or obese (Government of Ontario, 2014).

With regards to diabetes, prevalence rates range from 17.2% to 7.3% among the Indigenous groups, as compared to 5% among non-Indigenous Canadians (Rice et al., 2016). From a medical perspective, genetic vulnerability does plays a role in the development of diabetes; however, the epidemic proportions of the disease among the Indigenous population are due primarily to nonmedical factors such as sedentary lifestyles and dietary changes (Rice et al., 2016). Indigenous diets in Ontario have been found to be high in protein and fat and low in dietary fiber, which increases the risk of diabetes (Rosecrans et al., 2008). Additional factors that play a role in the high rates of diabetes include high cost and limited availability of healthy foods in remote communities, lack of access to safe and all-weather places for physical activity, and socio-structural barriers that include high rates of poverty, poor infrastructure, and limited employment opportunities in many Indigenous communities (Rice et al., 2016).

Obesity and diabetes prevention programs focus primarily on improving overall health by making changes to nutrition and/or physical activity (Rosecrans et al., 2008).

Of the 52 programs included in the inventory of programs, eleven target healthy eating and/or physical activity. The Ziiwapenewin Akino'maagewin: Teaching to Prevent Diabetes (ZATPD) program is a diabetes prevention strategy mirrored after the best practice Sandy Lake School Diabetes Prevention program (Rosecrans et al., 2008). Different from the Sandy Lake program, it is implemented in a variety of settings that include schools, grocery stores, and within the community. Developers of the program posited that programs focusing on only one setting allow for limited exposure through multiple channels and targets only a select sample of the community (Rosecrans et al., 2008). Whereas, the multi-setting approach taken through the ZATPD program allows for mobilization of program activities throughout the community, employing individual, environmental, and social changes. A criterion within the WTT framework is a holistic approach, in which a component measured is the implementation environments. The highest score attainable within this criterion requires targeting numerous environments (i.e. schools, home, work) and/or participant groups such as children, Elders, families, community members (PHAC, 2015). For the ZATPD program, the intent of working with the multiple settings was to integrate program initiatives within existing activities to increase knowledge, self-efficacy, and attitudes towards healthier behaviors, thereby improving dietary choices and physical activity (Ho et al., 2008). The program consisted of five thematic phases, each lasting six to eight weeks. Health information provided in each phase was consistent in each setting, strengthening the effect of the message delivered. For example, curriculum delivered to students regarding added sugar in beverages was also promoted in the grocery store at the same time as a fun activity, such

as a taste test within the community (Ho et al., 2008). Baseline and nine-month follow-up data demonstrated significant change in knowledge among participants within intervention communities, as well as an increase in frequency of healthy food acquisition (Kakekagumick et al., 2013).

The Healthier YOU program applies a community approach, targeting multiple audiences. For example, healthy eating/physical activity initiatives within in the program include summer day camps for children aged eight to 12, family camps for all ages, and cultural retreats for adults only. The focus of the camps is on health promotion through healthy eating and physical activity, as well as a cultural-based teaching component delivered by Elders. Criterion within the WTT framework includes integration of Indigenous cultural knowledge, which measures the degree to which the program addresses and incorporates the values, culture, shared experiences, and principles of the community (PHAC, 2015). The Healthier YOU program ensures that cultural component is included in all aspects of program delivery.

Finally, the healthy eating active living (HEAL) program is widely delivered by friendship centers, Aboriginal health access centers, as well as many Indigenous and non-Indigenous organizations. It is a weight management program designed to support Indigenous people with making healthy lifestyle choices and achieve their health and wellness goals (Thunder Bay Indigenous Friendship Centre, 2018). The HEAL program, which is offered primarily to adults, assists participants in monitoring daily food intake, physical activity levels, water intake, and weight/measurement changes. It has also been adapted to target children and youth aged seven to 13 by promoting healthy eating, active

living, positive body image, and living a smoke-free life (Anishnawbe Mushkiki, 2018). This adapted HEAL program works in partnership with schools, community hubs, and local organizations to deliver initiatives such as Youth Healing with Crafts, Seven Grandfather Teachings, Healthy Food Choices and Food Safety, as well as a Healing Journey Youth Forum (Anishnawbe Mushkiki, 2018). Moreover, the adapted HEAL program provides children an opportunity to engage with Elders and increase knowledge of traditional and recreational activities. The provincial government recognizes the value and success of the HEAL program and in 2014, invested $4.3 million in its expansion across the province (Government of Ontario, 2014). The Ministry of Aboriginal Affairs posited that the HEAL program empowers Indigenous people by incorporating traditional activities and knowledge to encourage healthy eating and physical activity and is essential to putting Indigenous children and youth on the path to lifelong health (Government of Ontario, 2014).

Mental health and wellness.

The concept of mental health and wellness focuses on both mental and emotional aspects of wellbeing, considering how a person thinks and feels (Government of Canada, 2018). For the Indigenous population of Canada, there are many factors that influence their mental health and wellbeing, but it is the historical determinants such as residential schools and sixties scoop that primarily shape their mental health (Government of Canada, 2018). The Aboriginal Healing Foundation reviewed case files from a sample of residential school survivors, noting that 75% had mental diagnoses such as post-traumatic stress disorder, substance abuse disorder, and major depression (Government of Canada,

2018). Moreover, it is not just the survivors themselves that are suffering because of the colonial legacy, it is also their children, their grandchildren, and their great-grandchildren. Those experiencing intergenerational trauma, when the effects of trauma are not resolved in one generation and passes to the next, report depressive symptoms associated with stressors such as child adversity, adult trauma and perceived discrimination (Boksa, Joober, & Kirmayer, 2015; Wesley-Esquimaux & Smolewski, 2004). Additional challenges experienced include higher drug use and abuse rates, as well as poverty, unemployment, housing and food insecurity, social exclusion, and discrimination, all of which negatively impact mental health and wellbeing (Boksa et al., 2015).

The mental health and wellbeing of Indigenous youth has become a Canadian priority as the suicide rates for this portion of the population are staggeringly high. The suicide rate for First Nation male youth (age 15-24) is 126 per 100,000, as compared to 24 per 100,000 for non-Indigenous male youth (Centre for Suicide Prevention, 2013). Whereas, suicide rates for First Nation female youth is 35 per 100,000, as compared to 5 per 100,000 for non-Indigenous females. As the impact of suicide is often felt by the entire community, there is a greater risk of a contagion effect that leads to a cluster of suicides (Centre for Suicide Prevention, 2013). Many First Nation communities across Canada are put into states of emergencies due to a contagion effect and subsequent cluster of suicides that occur. As such, a single suicide can resonate within a community for months (Centre for Suicide Prevention, 2013). For Indigenous people living off-reserve, the risk of suicide remains; particularly as many Indigenous people face

challenges with cultural identity that are exacerbated by discrimination and racism, as well as difficulty finding culturally appropriate services (Centre for Suicide Prevention, 2013). A consequence for many Indigenous people living in urban areas is possible homelessness, with Indigenous people overrepresenting the urban homeless population (Centre for Suicide Prevention, 2013).

Notable risk factors that place an individual at risk for suicide include: (a) depression and other mental illnesses, (b) alcohol and drug dependency, (c) hopelessness, (d) low-self-esteem, (e) sexual abuse and violence, (f) parental loss, and (g) homelessness (Centre for Suicide Prevention, 2013). As such, many programs focus on developing resiliency as a strategy for mental health promotion. Three of the four identified programs focusing on mental health target children and youth. For example, the Indigenous Children's Wellness program is designed specifically for youth aged seven to 12 who are victims of violence, as well as the parent/caregiver supporting the child's return to optimal levels of understanding and functioning as healthy individuals and families (Timmins Native Friendship Centre, 2012). It is recognized that the effects of exposure to family violence on children may result in social and academic challenges, fears and worries about their own safety, as well as the safety of the siblings and non-offending parent (Timmins Native Friendship Centre, 2012). They may also have somatic complaints, intrusive thoughts, and compromising coping skills and attachment. Moreover, they may be at risk to be violent themselves or remain in violent relationships (Timmins Native Friendship Centre, 2012). The Indigenous Children's Wellness program

encompasses a holistic approach by providing a series of parenting and community-based programming that is related to the impact of violence.

Resiliency from such experiences and negative upbringing is a significant component highlighted in programs that focus on mental health and wellness, particularly among children and youth. For example, in development of the Outdoor Adventure Leadership Experience (OALE), it was recognized that developing resiliency and sense of identity is particularly important for mental health promotion among Indigenous youth (Ritchie et al., 2014). The program was developed in partnership between Laurentian University and local Indigenous community leaders. It consists of a ten-day intensive program involving a wilderness canoe expedition through traditional territory of the local Indigenous land (Ritchie et al., 2014). The medicine wheel was used to guide the development of the OALE program, incorporating the four dimensions of health: physical (body), mental (mind), emotional (heart), and spiritual (spirit). Balance between the four dimensions helps many Indigenous people embrace life as an interconnected experience (Ritchie et al., 2014). The WTT framework acknowledges this holistic approach as a cornerstone to Indigenous programming with criteria measuring the degree in which a program addresses each dimension of health. To attain the highest score within this criterion, a program must use a holistic approach, such as a medicine wheel model, and target different environments and/or participant groups (PHAC, 2015). Another important aspect incorporated within the OALE program is the outdoor and land-based programming that is prevalent in many Indigenous communities and considered a culturally appropriate health promotion modality for Indigenous programming (Ritchie et

al., 2014). Growing evidence suggests that outdoor adventure and wilderness programs have potential as mental health interventions for children and youth (Ritchie et al., 2014). Within the OALE program, participants are assigned day leadership responsibilities, as well as participate in group discussion and talking circles each evening. An evaluation of the program to assess changes in resiliency as the primary outcome measure showed a statistically significant increase in resilience scores from baseline (one day pre-intervention) to one-month post-intervention (Ritchie et al., 2014).

Life skills.

Possessing life skills is essential to meet the challenges experienced with everyday life. Developing life skills helps individuals find new ways of thinking and problem-solving, as well as building confidence with communicating individually and in group settings (MacMillian English, 2016). Having life skills helps individuals recognize the impacts of their actions and teaches them to take responsibility rather than blame others. For the Indigenous population, a colonial legacy has resulted in significant health inequities, which exposes Indigenous youth to many challenges that negatively influence their development (Arellano, Halsall, Forneris, & Gauget, 2018). It is recognized that certain programming may not be able to decrease poverty or food insecurity in Indigenous communities but can provide individuals with the tools needed to overcome adversity and live healthy lives.

The literature suggests that while there are several youth programs available for the general Canadian population with regards to life skills, few are accessible to Indigenous youth (Arellano et al., 2018). However, findings from the environmental scan

determined that many of the identified programs focus on building life skills. Of the 52 programs, 17 aim towards providing Indigenous people with the support, tools, and healthy activities necessary to foster their inherent ability to make healthy choices (Timmins Native Friendship Centre, 2012). With the implementation of life skills programming, researchers suggest that a strengths-based approach is applied as it considers the contextual influences in an individual's life that may be used as a benefit to promote positive social development (Arellano et al., 2018).

Different elements have been used in strengthening life skills. For example, the Promoting Life Skills for Aboriginal Youth (PLAY) program uses sports to promote development, as the developers have found it to be a useful vehicle for youth programming (Arellano et al., 2018). Sports has been identified as a popular extracurricular activity for children and youth and can be used to reach a wide audience, as well as provide an opportunity to enhance development of both physical and psychosocial skills (Arellano et al., 2018). The PLAY program, which was initially implemented in 2010 among two Indigenous communities in northern Canada, has now expanded to 88 Indigenous rural and urban communities across the country, 57 within the province of Ontario (Arellano et al., 2018). The intent of the PLAY program is to support youth with building a variety of life skills and become leaders within their communities. Local needs of the communities are considered with the implementation of one of six core components: after-school program, youth leadership, sport for development, diabetes prevention. A cultural component is also available for communities wishing to include it, accompanied by an Indigenous Knowledge Guide that was developed by an advisory

committee of Elders and community leaders (Arellano et al., 2018). An evaluation of the program identified program flexibility with selection of the components as related to community needs as a strength supporting implementation and sustainability of the program at the community level.

A strength-based program within the school setting that has demonstrated effectiveness is the Fourth R: Uniting Our Nation program that is designed to promote healthy relationships and cultural connectedness to ensure success with transition from elementary to secondary school (Crooks et al., 2015). This program was developed in partnership with multiple First Nation communities and includes several initiatives. For example, the elementary mentoring initiative is an 18-week, school-based program for grade seven and eight students in which content is based on medicine wheel life cycles with teachings on creating positive attitudes and atmospheres, bullying, healthy eating, Indigenous representations in the media, and more (Crooks et al., 2015). Other initiatives include (a) a two-day grade eight transition conference, in which Elders share cultural knowledge and guidance on navigating identity issues, (b) a peer mentoring program for secondary students, and (c) a three-day cultural leadership camp that is an intensive, outdoor initiative designed to help First Nation youth develop leadership and healthy relationship skills through cultural activities (Crooks et al., 2015). A component of the leadership camp involves Elders and community leaders sharing traditional knowledge and contemporary teachings on hunting, land conservation, team building, and healthy living strategies (Crooks et al., 2015). A longitudinal evaluation was conducted among 82 students who participated in the Fourth R program, with 85% of respondents indicating

that they had become more successful at school because of the program (Crooks et al., 2015). Participants also reported increased confidence and leadership skills with students feeling more confident in voicing their opinions and getting involved in school activities (Crooks et al., 2015). Moreover, 81% of youth reported that participation in the Fourth R program promoted their sense of identity and cultural connectedness at school. This element is essential as evidence suggests that the school environment plays a significant role in the success of Indigenous students, especially the attitudes, cultural sensitivity, and inclusiveness of teachers (Crooks et al., 2015).

Two of the core programs developed by the Ontario Federation of Indigenous Friendship Centres focus on developing life skills among Indigenous children and youth. The Akwe:go Urban Aboriginal Children's program is designed to improve the quality of life for urban Indigenous children ages seven to 12, through delivery of traditional cultural teaching and supports to encourage healthy lifestyle choices (OFIFC, 2013). The program focuses on enhancing the skills, knowledge, and attitudes of Indigenous children that demonstrates positive personal choices and awareness of consequences from negative behaviors (OFIFC, 2013). Primary areas of focus within the Akwe:go program include peer pressure, self-esteem and victimization issues, as well as the health impacts of poverty, diabetes, and obesity (OFIFC, 2013). A second core program is the Wasa-Nabin: Urban Aboriginal Youth program, which targets at-risk youth aged 13 to 18. This program teaches youth goal-setting and provides them with knowledge and skills to promote leadership and make healthy choices (OFIFC, 2013).

Another essential element included in many of the life skills programs is the role that a history of colonization and the effects of intergenerational trauma has on the health of the Indigenous population today. Of the 17 programs focusing on life skills, three incorporated elements of healing and intergenerational trauma. The Naandwidizwin-Wechihitita (Healing Ourselves – Helping Each Other) program is a community-based initiative that targets all ages using a holistic approach to the immediate, ongoing, and long-term healing process for residential school survivors and their families (Toronto Council Fire Native Cultural Centre, 2018). The program uses a medicine wheel model to create balance among the physical, mental, emotional, and spiritual wellbeing by reclaiming Indigenous identity, healing past traumas, reconciling with the Church, and acquiring life skills to build healthier futures (Toronto Council Fire Native Cultural Centre, 2018). Components of this program include connecting with an Elder, participating in healing circles, and activities that increase awareness of self and others. The program is meant to offer self-love and empowerment to each participant.

The Working Hope program is based on the four core Indigenous values of Belonging, Mastery, Interdependence, and Generosity, which is believed to promote resiliency among Indigenous children and youth (Wabano Centre for Aboriginal Health, n.d.). For children and youth aged five to 21, belonging emphasizes significance and cultural pride re-establishment, intending to regain a sense of belonging while addressing the issues of intergenerational trauma and addictions. Life skills are taught through the value of mastery with the goal of providing youth the life skills needed to make healthy choices (Wabano Centre for Aboriginal Health, n.d.). Additionally, youth are taught the

importance of life and the harmful effects of drugs and alcohol. The value of generosity is led through cultural teachings by an Elder in addition to participation with camps, sweat lodges, and other cultural practices.

The Ogichidaakew (Girls' Circle) program is the third program that incorporates an intergenerational trauma component. This 16-week program is designed for girls aged 11 to 14 who are moving into womanhood. The content of the program follows the medicine wheel model with four weeks of programming targeting each direction. The first four weeks of the program are positioned in the eastern direction, focusing on identity, culture, and spirituality, incorporating self-esteem exercises and traditional teachings. The following four weeks focus on the southern direction, with girls learning about building positive, healthy relationships with self and others. Core activities highlight communication and conflict resolution. The western direction is the focus of the next four weeks, emphasizing emotions and feelings with activities including making masks and having the girls talk about them and how they see themselves, creating feeling cards, collages, and vision boards. The final four weeks centers around the northern direction of physical health and nutrition with activities focusing on physical care and activities such as yoga and mindfulness, as well as nutrition. Feedback from girls participating in the program report the most positive impacts are in the western and eastern directions with increased understanding and awareness of feelings, increased self-esteem and pride in native identity, as well as increased hope for the future and connection with spiritual self.

Recommendations

With the inventory of Indigenous-specific CDIP programs now developed and readily available for public health units to use, the primary recommendation is that health units first engage with their local Indigenous communities to determine what their needs are. Once identified, the inventory of programs can be used as a resource for the health unit and Indigenous communities to determine which would be most appropriate for implementation. The modernization of Ontario Public Health Standards highlights the importance of engaging Indigenous communities in a way that is meaningful for them (MOHLTC, 2017). For the Indigenous population, the foundation of meaningful engagement is trust. A colonial history has resulted in a deep mistrust for governmental agencies among many Indigenous communities and may view collaboration with health units as a threat to their self-determination and autonomy (Wilk & Cooke, 2015). As such, it is important when engaging with an Indigenous community that a health unit does not enter the collaboration with a pre-set notion of what health area will be focused on and how. Rather, it is essential that the direction of programming is identified by the Indigenous community based on their needs from their perspective. Early engagement with the Indigenous population at the stage of idea conception will enhance the relationship, promote trust, improve buy-in, and facilitate in identifying any potential barriers to implementation, while simultaneously outlining mitigating strategies (Government of Canada, 2018). When using the inventory of programs and engaging the Indigenous communities it is recommended that health units be mindful that it is not their

place to lead, rather they are there to collaborate with the local Indigenous community and provide support where needed.

Strengths and Limitations

A primary strength of this DNP capstone project is its applicability and relevance to the intended audience of public health units in Ontario. With modernization of the Ontario Public Health Standards now in place, the completed scholarly product provides a comprehensive snapshot of existing Indigenous-specific health promotion programs with an emphasis on chronic disease and injury prevention. Another strength of the project is the accessibility to many Indigenous organizations through key informant interviews that allowed assessment of how the programs were designed, as well as to determine the degree of Indigenous involvement and incorporation of cultural values, perspectives, and teachings. The project revealed valuable information for public health units and other organizations implementing Indigenous programs, with regards to what programs worked well, were well-received by Indigenous communities, and shown to be effective with creating positive individual and social change.

A limitation of the project is that key informant interviews were not able to be completed among many of the organizations that were identified in the environmental scan. While a deeper website search allowed for assessment of a few programs for cultural relevancy using the WTT framework criteria, many were categorized as 'undetermined' on the inventory of programs chart. However, given that the organizations that did not participate in the key informant interview process are Indigenous-led, it is likely that the programs meet most of the criterion outlined.

Particularly with regards to being community-based, building on the strengths of the Indigenous population, and integrating Indigenous cultural knowledge. Recommendation for further research is to share findings with these organizations as a second introduction and invitation to provide additional information.

Section 5: Dissemination Plan

The final steps of the scoping review and environmental scan process is to disseminate the findings and recommendations. As such, the scholarly product of this project is a PowerPoint presentation explaining the process for development and the findings to be disseminated to the senior management team of the practicum site. Additionally, the inventory of programs will be made available to key stakeholders and organizations that participated in the key informant interviews. Next steps will involve seeking collaboration with Public Health Ontario to use the findings from the DNP project and the work being done currently in the area of evaluation of Indigenous programs, to develop a comprehensive toolkit for use by the 36 public health units across Ontario with implementing and evaluating Indigenous programming.

To disseminate the results from the DNP project to broader audiences, a publication abstract will be submitted to the Canadian Journal of Public Health, which is a peer-reviewed journal published on a bi-monthly basis that aims to advance public health research and practice in Canada and around the world, contributing to the improvement of population health and reducing health inequalities (Canadian Journal of Public Health, 2017). The journal publishes articles on quantitative and qualitative research, systematic reviews, innovations in policy and practice, as well as special sections such as dental public health, Indigenous public health, and more. The Canadian Journal of Public Health has a 5-year impact factor of 1.794, ranking 56th (of 321) among Canadian journals (Scimago Lab, 2017). With regards to presenting information, a presentation abstract will be submitted to the Ontario Public Health Association to

present at the annual fall forum, as well as to Public Health Ontario which offers regular webinars of various subjects that are available for all public health units and community health agencies to attend.

Analysis of Self

Reflecting on the process to complete the DNP capstone project, I've assessed my growth as a professional and as an Indigenous woman. As a professional working in the public health sector of the Canadian health care system, I have gained insight into the programs and services that best support the Indigenous population from their perspective. The data collection and analysis process strengthened my resolve to ensure programs designed and implemented are Indigenous led, determined by what they identify their needs to be. I appreciate that it is not the role of public health practitioners to enter a community and inform them of their health needs and how they are going to address them. The DNP capstone project fostered my growth as a future DNP-prepared nurse in many of the AACN essential competencies. For example, through active participation on several Indigenous committees, boards, and advisory groups, I have worked to influence policy makers to improve health care delivery and outcomes at both the local and provincial levels (DNP Essential V). As well, in the development of the inventory of programs, I conducted a comprehensive and systematic assessment of current health promotion programs within Canada that incorporate diverse and culturally sensitive approaches to care (DNP Essential VIII). Additionally, I applied analytic methods to assess existing literature and additional evidence to determine best practice with regards to health promotion among the Indigenous population (DNP Essential III). Finally, I

applied theoretical and research-based knowledge in the development of a comprehensive approach to implementing culturally appropriate health promotion programs specifically targeting the Indigenous population (DNP Essentials I, III, and VIII).

As an Indigenous woman the DNP capstone project made a significant impact on how I view myself as a leader, change agent, and advocate for the Indigenous population. I have focused on Indigenous health for the past 14 years. I believe it is important to advocate that even though public health units are now mandated to work with the Indigenous population, it must come from a place of trust and mutual respect, not simply to meet provincial requirements. The Indigenous population is a strong and resilient group who has survived 150 years of colonization, assimilation, and systemic racism. As Indigenous peoples, we are the experts in what our needs are and how they need to be met. It is essential that governmental agencies, such as the public health system, listens to the voices of Indigenous people and allows them to engage as leaders to improve the health of their population. For this, as an Indigenous woman I will advocate.

Summary

Starting January 2018 systems were put in place by the provincial government, requiring public health units in Ontario to engage the Indigenous population in the implementation of culturally appropriate health promotion programming. As this is a new area of focus for most public health units there are significant questions and concerns with moving forward. The goal of the DNP capstone project was to develop an inventory of existing chronic disease and injury prevention programs that specifically target the Indigenous population. To do so, the project entailed completing a scoping review and

environmental scan of public health units, Indigenous organizations, and non-Indigenous organizations with an Indigenous component. A significant number of programs were identified, many that met the Aboriginal WTT criteria, deeming them culturally relevant. The newly developed inventory of Indigenous-specific programs is now ready for dissemination to public health units and other organizations offering Indigenous programming. However, the essential message of this DNP capstone project is that the programs implemented must be Indigenous-led and in collaboration with local Indigenous communities, based on the needs identified by the communities themselves.

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Appendix A: Ways Tried and True: Aboriginal Assessment Rubric

CRITERIA	DEFINITION	1	2	3	4	MORE INFO REQUIRED
Criteria #1: **Community-based**	The degree to which First Nations, Inuit, Métis stakeholders (community members, service providers, community leaders, Elders) are involved in the planning, design, delivery, adaptation and evaluation of an intervention.	The idea for the intervention comes from outside of the community and is implemented with limited community[3] involvement (involves the community without formal structures such as a project committee).	Adaptation of a mainstream approach to an Aboriginal context, with structures (committees, preplanned community engagement meetings) involving the community in the adaptation.	The intervention is based on a need identified by the community and is led by community members, but rooting of the intervention within the systems of the community has not yet taken hold.	The intervention is based on a need identified by the community and a strong community process is established. For example, action taken from within the community to address the need and ownership of the intervention (e.g., design through to evaluation) is deeply-rooted within the systems of the community.	
Rationale/ Examples						

CRITERIA	DEFINITION	1	2	3	4	MORE INFO REQUIRED
Criteria #2: **Wholistic**	The degree to which an intervention addresses multiple issues from a wholistic approach on each of the following (4) dimensions: (1) **Wellness:** mind (knowledge development, awareness, skills), body (physical activity, nutrition), emotion (relationships, healing), spirit (mental wellness, confidence, self-esteem, coping) [e.g., medicine wheel model may be used] (2) **Implementation environments** (e.g., school, community, home, workplace, businesses) (3) **Nature of target group** (e.g., children, youth, Elders, families, community members or leaders, organizations) (4) **Involvement of cross sector departments** (e.g., education, health, governance, justice, social services)	The intervention is one dimensional (one target group, one activity, one partner) and has not engaged a wholistic perspective.	The intervention addresses a few dimensions but remains limited in terms of targeted implementation environment, view of wellness, involvement of community partners and participants.	The intervention is multi-dimensional has targeted multiple implementation environments, participant groups, departments in the community and is based on a wholistic view of health.	The intervention is wholistic, targeting numerous environments (school, home, work), and/or participant groups (children, Elders, families, community leaders), community departments and implements a wholistic view of health.	
Rationale/ Examples						
Criteria #3: **Integration of Indigenous Cultural Knowledge**	The degree to which the intervention formally addresses and incorporates the values, culture, shared experiences and principles of the community or group in which it operates.	Values, knowledge, culture and community perspectives play an informal role in the intervention (e.g., an articulated theory, process or structure has not been identified).	Indigenous knowledge has been used to adapt a mainstream approach using an articulated theory, process and/or structure; however not within a community participatory process.	Articulated structures (committees, focus groups, processes) are in place to ensure that Indigenous knowledge is applied to the intervention within a participatory process.	The values, culture, and perspectives of the community are integrated into and continue to inform all aspects of the intervention, from planning through to implementation.	
Rationale/ Examples						

CRITERIA	DEFINITION	1	2	3	4	MORE INFO REQUIRED
Criteria #4: **Building on Community Strengths and Needs**	The degree to which an intervention recognizes community capacity or readiness (identifying strengths and weaknesses within the implementation environment) at the outset, and builds-in mechanisms to leverage strengths and fill gaps through the implementation process.	Intervention shows informal acknowledgement of community strengths and needs (gaps). Capacity may be being built, but not among First Nations, Inuit or Métis peoples within the community.	Intervention design formally acknowledges and builds on strengths of First Nations, Inuit or Métis peoples. Members of these groups within the community are building limited skills and/or resources as a result of the intervention.	Intervention design acknowledges and builds on strengths of the community and attempts to fill gaps in community expertise, resources, services (e.g., the community staff, members are building extensive skills, resources as a result of the intervention).	The intervention contributes to a growing and evolving community and is an example and inspiration for others (e.g., intervention team has expanded program based on initial success; other First Nations, Inuit or Métis peoples are using the intervention as a model).	
Rationale/ Examples						
Criteria #5: **Partnership and Collaboration**	The degree to which the intervention is supported by other organizations or institutions within and/or external to community (federal, provincial, municipal government, NGOs, institutions). The emphasis is on collaborative approaches to addressing needs/issues. ***Funders are only counted as partners if they provide more than funding to the relationship.*	There are no collaborative relationships or partnerships associated with the intervention.	The intervention utilizes a collaborative approach which defines a strategy for involving partners or collaborators; however, there have been substantial challenges in implementing the plans or involving partners.	The intervention involves active partners and/or collaborators who are guided by a collaborative strategy; however, there is room for improvement in deepening the partnerships/ collaborative relationships (e.g., a few challenges have been identified with partnerships).	The intervention involves active partners and/or collaborators who are guided by a collaborative strategy, and these partnerships and/or collaborations are recognized (i.e., by the community) for their contribution to addressing needs/ issues (e.g., the identification of project champions may be an indication of the quality of relationships).	
Rationale/ Examples						

CRITERIA	DEFINITION	1	2	3	4	MORE INFO REQUIRED
Criteria #6: **Effectiveness**	The degree to which an intervention has achieved significant (substantive[6] or statistical) positive intended and/ or unintended outcomes among target groups (e.g., program participants, communities, organizations, and/or partners).	Emerging data suggests positive outcomes among target groups, but reporting is preliminary or limited (i.e., the evidence is based on early stages of implementation and/or evidence is limited or difficult to verify)	Significant achievement (substantive[7] and/or statistical) of knowledge and /or awareness change among the target group(s). Limited partnership, networking and/or development of organizational capacity among the target group(s).	Significant achievement (substantive[8] and/or statistical) of positive outcomes (e.g., attitudes, intentions or values, building partnerships, networks, and developing organizational capacity) among the target group(s). Achievement of some positive behavior change outcomes however, changes may not yet be statistically or substantively significant among the target group(s).	Significant achievement (substantive[9] and/or statistical) of positive behavior change outcomes (e.g., personal or professional practice change, organizational/ systems, and/or policy change) among target group(s).	
Rationale/ Examples *Include examples of all outcome types*						

Appendix B: Key Informant Interview Guide

Organization:	**Date:**

Thank you for taking the time to discuss current programming your organization offers the Indigenous population with regards to chronic disease and injury prevention. Your input will help in the development of an inventory of existing Indigenous-specific programs that will be made available for use by public health units and additional organizations working with this population.

Questions:

1. What programs/initiatives do you currently provide for the Indigenous population?
   (If more than one program/initiative is identified, the following questions will be asked for each program/initiative).

2. What is the topic area that the program/initiative focuses on (i.e. healthy eating)?

3. Who are the target audience for the program/initiative (i.e. early childhood, children, youth)?

4. How was the program/initiative initiated?

5. What was the degree to which Indigenous stakeholders (i.e. community members, service providers, community leaders, Elders) involved in the planning, design, delivery, adaption and/or evaluation of the program/initiative?

6. Which of the following four dimensions does the program/initiative address and how?
   a) Wellness: mind (knowledge development, awareness, skills), body (physical activity, nutrition), emotion (relationships, healing), spirit (mental wellness, confidence, self-esteem, coping). Is the medicine wheel model used?
   b) Implementation environments (i.e. school, community, home, workplace, businesses)
   c) Nature of the target audience (i.e. children, youth, Elders, families, community members or leaders, organizations)
   d) Involvement of cross sector departments (i.e. education, health, governance, justice, social services)

7. To what degree were the values, culture and perspectives of the Indigenous community used to inform the design and implementation of the program/initiative (i.e. participatory approach)?

8. With implementation of the program/initiative, to what degree are community strengths incorporated and/or gaps are filled (i.e. other Indigenous groups are using the program/initiative)?

9. What level of support and/or involvement was received from internal/external partners with the design and/or implementation of the program/initiative?

10. What were the intended outcomes of the program/initiative?

11. What were the achieved outcomes of the program/initiative?

12. What were some learnings that you felt either helped or hindered the design and/or implementation of the program/initiative?

13. Do you have any other comments you would like to share?

Appendix C: Permissions

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