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Policy (Mis)Alignment: Addressing Type 2 Diabetes in Aboriginal Communities in Canada

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Abstract

In this article, we employ Bacchi's (1999) What's the Problem approach to policy analysis to examine Health Canada's Aboriginal Diabetes Initiative (ADI) and the ways in which it articulates with existing federal policies that relate to three Aboriginal social determinants of health: colonialism, education, and health care. Focusing our analysis on the Aboriginal population with the highest prevalence of type 2 diabetes, First Nations, we argue that the ADI produces type 2 diabetes as a problem related to First Nations peoples' apparently poor health decision making and lifestyle choices. Such a framing of the problem ignores the ways in which current federal policies are aligned in a way that undermines attempts, like the ADI, to improve First Nations peoples' health. We argue that for rates of type 2 diabetes to decrease in First Nations communities, the federal government needs to re-align policies that affect all of the Aboriginal social determinants of health so that the startling inequities in health that exist between First Nations peoples and non-First Nations peoples, particularly those related to type 2 diabetes, can be addressed in a more effective fashion.

Keywords

type 2 diabetes; First Nations; Aboriginal social determinants of health; policy analysis; Aboriginal Diabetes Initiative

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Policy (Mis)Alignment: Addressing Type 2 Diabetes in First Nations Communities in Canada

Aboriginal peoples' lifestyles have changed drastically in recent decades (Earle, 2011). Rates of type 2 diabetes are increasing in Aboriginal populations in Canada. Health Canada has cited Aboriginal peoples' lifestyle changes, unhealthy habits such as smoking, and poor health decisions as reasons for this increase (cited in Assembly of First Nations [AFN], 2011b). To address this issue, Health Canada implemented the Aboriginal Diabetes Initiative (ADI) in 1999 (Health Canada, 2011c). The ADI focuses on encouraging Aboriginal peoples to adopt healthy lifestyles through culturally relevant interventions in order to reduce existing high rates of type 2 diabetes (Health Canada, 2011c). Despite the hundreds of millions of dollars that have been put into the program since its inception, type 2 diabetes is still rampant among Aboriginal peoples (Health Canada, 2011b). The proportion of the Canadian population living with type 2 diabetes is highest for First Nations individuals living on-reserve, followed by First Nations individuals living off-reserve (Public Health Agency of Canada [PHAC], 2011a); as a result, in this article we focus on First Nations peoples.¹

We argue that the ADI's strategy of encouraging First Nations peoples to address their apparently poor individual health decisions and lifestyles that result in type 2 diabetes is an approach that will be met with limited success. A recent United Nations (UN) General Assembly Resolution recommended that to effectively address non-communicable diseases, countries need to focus on "multi-sectorial public policies that create equitable health programming environments that empower individuals, families and communities to make healthy choices and lead healthy lives" (UN, 2012, p. 6). In addition to this recommendation, the UN (2012) strongly advocated for the alignment and analysis of all sectors and their policies to maximize positive health outcomes.

Using the "What is the Problem" (Bacchi, 1999) approach to policy analysis in concert with UN (2012) recommendations, we argue for the need to re-align federal policies that currently coalesce in ways that are detrimental to First Nations peoples' health. More specifically, we focus on three determinants of Aboriginal peoples' health: colonialism, education, and access to health care services (Frohlich, Ross, & Richmond, 2006). We illustrate the ways in which First Nations people's disproportionately poor health – in this case, rates of type 2 diabetes – is largely produced by a constellation of government policies. The purpose of this examination is not to discredit the ADI's important work; rather, our examination of the ADI is meant to identify this initiative's limitations. Critical examinations of current government programs is essential in order to improve policies and practices so that there is a stronger chance that they can be used to end health inequalities between First Nations and non-First Nations peoples in Canada.

This article is divided into seven sections. First, we provide an overview of type 2 diabetes and describe its prevalence in Aboriginal communities. Next, we summarize Bacchi's (1999) approach to policy analysis and our reasons for employing this approach in analyzing the ADI. We then describe the ADI, the social determinants of health, and the Aboriginal social determinants of health. After analyzing the ADI using the "What's the Problem" approach (Bacchi, 1999), we offer recommendations for the ways

¹ In some cases, data are only available for Aboriginal peoples in general. In these situations, we use such data, but do so with the understanding that it is not ideal.

in which federal policies can be aligned, or rather re-aligned, within the Government of Canada. We believe these measures are crucial to reducing the high rates of type 2 diabetes in First Nations populations and, in turn, to reducing overall health disparities between First Nations and non-First Nations populations in Canada.

Diabetes

Type 1 diabetes is a disease in which the pancreas is unable to produce sufficient insulin due to failure of the β -cells and affects about 5% to 10% of those suffering from diabetes (Canadian Diabetes Association, 2012b). Type 2 diabetes, on the other hand, is a result of insulin resistance, where insulin can no longer transport glucose into the cells (Canadian Diabetes Association, 2012b); it accounts for 90% to 95% of those suffering from diabetes and is generally associated with obesity (Canadian Diabetes Association, 2012b). Type 2 diabetes is often characterized by frequent urination, excessive thirst, unexplained weight change (loss or gain), extreme hunger, sudden vision changes, tingling or numbness in hands or feet, feeling very tired most of the time, irritability, sores that are slow to heal, and increased occurrence of infections (Canadian Diabetes Association, 2012a). The indirect complications of diabetes make it an extremely challenging disease to address and treat. Lower-limb amputations, adult blindness, end stage renal disease, and death from cardiovascular disease are some common complications associated with diabetes (Hanley et al., 2003). The disease can have devastating effects on individuals, families, and communities.

There is a much greater prevalence of type 2 diabetes in Aboriginal populations compared to non-Aboriginal populations in Canada. In addition, the onset of type 2 diabetes occurs in Aboriginal Canadians at a much younger age (Health Canada, 2011b). Type 2 diabetes has become a serious public health problem in Aboriginal populations in Canada. PHAC (2011b) reported that the prevalence of type 2 diabetes among First Nations peoples living on-reserve is 17.2%, among First Nations living off-reserve is 10.3%, among Métis is 7.3%, and for Inuit is 4.3%. It is predicted that the Inuit rate will rise drastically in coming years. The prevalence of type 2 diabetes in First Nations communities in particular is in stark contrast to non-Aboriginal Canadians' prevalence rate of 5% (Health Canada, 2011c), which serves to justify our focus on this population.

High birth weight, hyperlipidemia, abdominal obesity, dietary factors such as consuming excess protein and "junk foods," and lack of physical activity are all examples of genetic, biological, or lifestyle factors that contribute to diabetes (Young, Reading, Elias, & O'Neil, 2000). Other major contributing factors to the increased prevalence of diabetes among First Nations peoples include the rapid environmental and sociocultural changes that First Nations have faced, such as dietary acculturation - substituting modern for traditional food items - and adopting a more sedentary lifestyle (Young et al., 2000).

To address the serious public health issue of type 2 diabetes in Aboriginal populations, Health Canada, in consultation with Aboriginal organizations, developed the ADI with the hope of decreasing the prevalence of diabetes in Aboriginal populations by reducing the risk factors that contribute to diabetes (Health Canada, 2011a).

Policy Analysis

The purpose of policy analysis is to understand the past failures and successes of policies and to plan for future policy development (Walt et al., 2008). Policy analysis helps to explain the “interaction between institutions, interests, and ideas” (Walt et al., 2008, p. 308) and also addresses disparities that exist between populations (Coveney, 2010), such as health disparities between First Nations peoples and non-First Nations peoples, as is the case for type 2 diabetes. For this article, we adopt Bacchi’s (1999) “What’s the Problem” approach to policy analysis. The “What’s the Problem” framework is a poststructuralist approach to policy analysis that focuses on language and discourse and on identifying and reframing how a problem is represented rather than on problematizing an issue and trying to find a solution to the problem (Coveney, 2010). Coveney (2010) identified the strength of Bacchi’s (1999) framework as its ability to be used to address what is silenced and the assumptions, motivations, and the values expressed in the representation of the problem. The approach can be used in attempts to bring out the underlying nature of the problem under study. Below, we summarize the ADI and then analyze the ways in which First Nations’ high rates of diabetes are framed by applying the “What’s the Problem” framework.

The ADI

The ADI was established by Health Canada in 1999 as a part of the Canadian Diabetes Strategy (Health Canada, 2011a). The ADI was a federal response to the drastically increasing prevalence of type 2 diabetes in Aboriginal populations (Health Canada, 2011a). The focus of the initiative is to support First Nations people who live in traditional First Nations communities and Inuit people living in traditional Inuit communities (Health Canada, 2011a).²

There have been three phases of the ADI, which is in effect until 2015. Phase 1 (1999 - 2004), with a budget of \$58 million over five years, focused on: (a) increasing awareness of type 2 diabetes among Aboriginal populations, (b) increasing awareness of the complications that can occur if it goes undiagnosed and untreated, and (c) implementing health promotion and primary prevention strategies (Health Canada, 2011a). Phase 2 (2005 - 2010) saw the budget increased to \$190 million over five years and included four main components: health promotion and primary prevention; screening and treatment; capacity building and training; and research, surveillance, evaluation, and monitoring (Health Canada, 2011a). Currently in Phase 3 (2010 - 2015), the ADI uses health promotion and diabetes prevention activities and services as its main method of delivery. The budget for Phase 3 was increased again to \$275 million over five years (Health Canada, 2011a). There are four main areas of focus for Phase 3:

Initiatives for children, youth, parents, and families; diabetes in pre-pregnancy and pregnancy; community-led food security planning to improve access to healthy foods, including traditional and market foods; and enhanced training for health professionals on clinical practice guidelines and chronic disease management strategies. (Health Canada, 2011a, 3.0 ADI Phase 3 section para. 1)

² Importantly, there is no mention of how they defined what constitutes a “traditional” community.

Phase 3 also focuses on food security, healthy eating habits, physical activity, and diabetes awareness (Health Canada, 2011a).

The guiding principles of the ADI are centred on evidence-based practices, community-based and community-led approaches, culturally appropriate activities, attention to varying levels of community-readiness, partnerships, the increase of communities' capacities to deliver the programs and activities, and the use of innovative approaches to prevent diabetes and support healthy lifestyles (Health Canada, 2011a). Some of the activities that are community-based and deemed culturally appropriate by Health Canada include walking clubs, weight-loss groups, diabetes workshops, fitness classes, community kitchens, community gardens, and healthy school food policies (Health Canada, 2011a). With the implementation of the ADI in 1999 and the Initiative's increased budget since that time, it was expected that the prevalence of diabetes in First Nations populations would decrease (Health Canada, 2011a); however, this has not been the case (Health Canada, 2011b). By using policy analysis to examine the ADI and some of the Aboriginal social determinants of health, we believe that we can foster a stronger understanding of why rates of type 2 diabetes have not decreased in First Nations populations.

What's the Problem? Its Representation

The federally developed ADI represents the problem of high rates of diabetes in Aboriginal populations – more specifically in this case, First Nations, as an issue of personal responsibility and as a community problem (see for example Health Canada, 2011b). Certainly, some personal choices contribute to the prevalence of type 2 diabetes in First Nations communities, as they do in any community (Canadian Diabetes Association, 2012b). First Nations peoples' choices, however, are strongly influenced by federal government policies that fail to address their determinants of health. Below, we outline the general social determinants of health as well as the Aboriginal social determinants of health. We then show the impact that federal policies have had, and continue to have, on the First Nations' social determinants of health and, in turn, on First Nations peoples' health, and particularly on the prevalence of type 2 diabetes.

Social Determinants of Health

The World Health Organization (WHO, 2012) defines the social determinants of health as “the conditions in which people are born, grow, live, work and age, including the health system. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels, which are themselves influenced by policy choice” (para. 1). Social determinants of health reveal health inequities between and within countries since they are affected by the distribution of money, power, and resources (WHO, 2012).

The social determinants of health can be considered as distal, intermediate, and proximal. Proximal social determinants of health reflect those that directly impact physical, mental, emotional, and spiritual health such as health behaviours, physical environments, employment and income, education, and food insecurity (Greenwood & de Leeuw, 2012; Loppie Reading & Wein, 2009). Intermediate determinants of health are typically the origin of the proximal determinants and include health care systems; educational systems; community infrastructure, resources, and capacities; environmental stewardship; and cultural continuity (Greenwood & de Leeuw, 2012; Loppie Reading & Wein, 2009). Distal determinants of health represent political, economic, and social contexts that construct intermediate and

proximal determinants and include colonialism, racism and social exclusion, and self-determination (Greenwood & de Leeuw, 2012; Loppie Reading & Wein, 2009).

The social determinants of health act in a variety of ways to impact individuals; it is rare for an individual to be influenced by just one determinant. All of these determinants interact on different levels to determine an individual's health status as well as the health status of communities or entire cultures of peoples. For example, marginalization, stigmatization, loss of language and culture, and lack of access to culturally appropriate health services are all factors that contribute to poorer health for certain cultures (PHAC, 2003). With regard to specific health issues, such as type 2 diabetes, researchers have investigated the relationship with social determinants of health and have identified that type 2 diabetes is primarily a disease of material and social deprivation (McDermott, 1998; Pilkington et al., 2010). Those living in poverty or with lower incomes disproportionately experience much higher rates of type 2 diabetes (Ross, Gilmour, & Dasgupta, 2010). The poor health status of those with lower incomes is affected by variables such as a lack of adequate housing and limited funds to buy healthier foods (PHAC, 2003), both of which contribute to higher rates of type 2 diabetes. There are also more complex explanations for this trend that suggest that people who have greater control over their life circumstances are likely to have better control over their health statuses (PHAC, 2003).

In response to the major health disparities that exist between Aboriginal and non-Aboriginal peoples in Canada, and the failure of mainstream approaches to the social determinants of health to account for issues pertaining to Aboriginal health, researchers have identified the Aboriginal social determinants of health.

Aboriginal Social Determinants of Health

Specific social determinants of health for Aboriginal people include colonialism, dispossession of land, loss of traditional health practices, discrimination, education systems, access to health care, food insecurity, and lack of adequate housing (Earle, 2011; Loppie Reading & Wein, 2009). Providing an overview of how all of the Aboriginal social determinants of health influence First Nations peoples' rates of type 2 diabetes would prove too lengthy for this article; below, we focus on three factors: colonialism, health care access, and education systems.

Colonialism

The impact of colonialism on First Nations lands and peoples has involved assimilation and systematic disempowerment through laws and acts created to control this population (Royal Commission on Aboriginal Peoples, 1996). The control that First Nations people had over their communities, languages, education, and governance was largely extinguished when the federal government seized control (Royal Commission on Aboriginal Peoples, 1996). Through colonial laws and governments, First Nations peoples were denied rights to self-determination, had their families displaced, and were treated as objects to be controlled by social welfare agencies and corrective institutions (Royal Commission on Aboriginal Peoples, 1996). Children were placed in residential schools and had little, if any, contact with their families and communities, which limited the knowledge the children gained about traditional foods, cultural activities, and life on the land (Loppie Reading & Wein, 2009). Forced disconnection from land-based cultural practices that involved natural sources of food and physical activity contributed to disease and to dependency on the state's health care system (Alfred, 2009). This disconnect from

their families, communities, and cultures is believed to have had a significant impact on the health of First Nations peoples, including a disproportionate burden of type 2 diabetes compared to non-First Nations peoples (Young et al., 2000).

The social hierarchy that places First Nations peoples below non-First Nations peoples has created many gaps and disparities in health between these two populations. Giles, Haas, & Findlay (2005) have argued that among Aboriginal peoples, diabetes is viewed as the result of the loss of traditions, community, culture, and spirituality, all of which are tightly tied to colonialism. As a distal social determinant of health, colonialism has had, and continues to have, an impact on the intermediate (resources and accessibility to health care) and proximal (health behaviours or “choices”) social determinants of health for Aboriginal peoples, which creates disparities.

Colonialism has also affected the health of other Indigenous populations worldwide, such as those in Australia, the United States, and New Zealand; these populations also have a high prevalence of type 2 diabetes in comparison to non-Indigenous populations. For example, type 2 diabetes is much more prevalent in Australian Aboriginal populations in comparison to the Australian non-Aboriginal population (Wang, Hoy, & Si, 2010); American Indian and Alaska Native adults are 2.3 times more likely to be diagnosed with type 2 diabetes in comparison to non-Hispanic whites (Centers for Disease Control and Prevention, 2011); and Maori people of New Zealand are 3 times more likely to develop diabetes in comparison to other New Zealanders (Ministry of Health, 2012). As Lavallée (2011) argued, colonization defines Aboriginal peoples’ health. The WHO (n.d.) further noted that individuals who experience hardships and stressors are at greater risk of developing illnesses, particularly chronic conditions. Colonialism has constructed an inequitable education and health care system and has influenced First Nations’ and other global Indigenous populations’ abilities to make healthy choices; this, in turn, can impact health outcomes such as type 2 diabetes.

Education Systems

Education is directly linked to First Nations individuals’ health status (National Collaborating Centre for Aboriginal Health [NCCAHA], 2009b); thus, it is important to look at the policies surrounding education for First Nations and examine how these policies influence health and the incidence of type 2 diabetes. Higher levels of education are positively correlated with health status (NCCAHA, 2009b). More education provides an individual with more knowledge of how to stay healthy, including when, how, and where to seek medical attention (PHAC, 2003). Low levels of educational attainment in First Nations populations make strong contributions to health disparities, including those related to type 2 diabetes, between non-First Nations and First Nations in Canada.

The Indian Act, enacted in 1876, made it possible for the federal government to have control over education for First Nations children and allowed the federal government to establish, operate, and maintain schools (Indian Act, 1985). Specifically, sections 114 and 115 of the Indian Act articulate the federal government’s responsibility to provide education for First Nations students, including adequate buildings, equipment, teaching, and transportation (Indian Act, 1985). Regardless of these guarantees of education, First Nations individuals have extremely low levels of educational attainment. For example, in 2001, only 5.1% of the First Nations population had earned a university degree, compared to 22% of the non-Aboriginal population. In addition, 48.6% of the First Nations population had not completed high

school, compared to 22.5% of non-First Nations (Health Canada, 2009). In 2006, approximately 60% of First Nations individuals aged 20 to 24 who lived on-reserve had not achieved a high school diploma or certificate (First Nations Education Council [FNEC], 2009). FNEC (2009) has suggested that disproportionately low levels of educational attainment are due to the federal government's underfunding of First Nations education.

The amount of funding allocated to First Nations education is inadequate given the dramatic growth of the number of young First Nations individuals (AFN, 2005); indeed, the First Nations education is systemically underfunded. From 1996 until at least 2008, there was a 2% growth cap placed upon education funding for First Nations communities (FNEC, 2009). The cap did not allow any adaptation to the funding necessitated by a quickly expanding First Nations population. For example, between 2001 and 2006 the First Nations population grew by almost 15% (Human Resources and Skills Development Canada [HRSDC], 2012). The 2% growth cap on education funding created a cumulative shortfall of \$1.54 billion between 1996 and 2008 (FNEC, 2009).

Resources in First Nations schools are not equivalent to those provided to provincial and territorial schools. For example, libraries in First Nations schools, which provide students with the opportunity to learn new information, learn basic research skills, and gain lifelong knowledge, do not receive any funding from the federal government (FNEC, 2009). Also, while Information and Communication Technology (ICT) was introduced into provincial schools in the 1980s, lack of funding resulted in about two-thirds of First Nations school principals stating that they were unable to use ICT in their schools in 2003 (FNEC, 2009). Another example of unequal resources for First Nations schools compared to non-First Nations schools occurs in sports and recreation. There is no funding provided for sports and recreation programs in First Nations schools, whereas all other provincial schools include both sports and health in their education programs (FNEC, 2009).

Policies that make it possible to chronically underfund First Nations education make strong contributions to lower levels of educational attainment among First Nations, which in turn makes strong contributions to First Nations' heightened vulnerability to poor health, including type 2 diabetes. Such inequitable structures of domination persist today and continue to shape the First Nations peoples' health. A lack of access to sport and recreation opportunities is particularly problematic given the important contributions that physical activity make to the reduction in a large number of health problems, including type 2 diabetes (Canadian Diabetes Association, 2012b).

Access to Health Care

During colonization, specific treaties were signed by First Nations peoples and the Crown to recognize First Nations peoples' right to health care and the provision of health care (Health Council of Canada, 2005). The signing of these treaties, as well as other agreements, legally binds the *federal* government, rather than the provincial or territorial governments, to provide health care to First Nations peoples to this day (Health Council of Canada, 2005). Articles 21 and 24 of the 2008 United Nations Declaration on the Rights of Indigenous Peoples, which Canada, a late signatory, signed on November 12th, 2010 (Aboriginal Affairs and Northern Development Canada [AANDC], 2012), also identify Aboriginal peoples' rights to health care (UN, 2008).

Regardless of First Nations peoples' rights to health care, the AFN (2011b) remains concerned that residents of First Nations communities are not receiving adequate health services, which they argue is having devastating effects on First Nations individuals and communities. For example, First Nations peoples also have limited access to screening and treatment services, which leads to later diagnosis of diseases in First Nations peoples compared to non-Aboriginal peoples (NCCAH, 2009a). This problem that has its roots in numerous policies.

First Nations peoples have insured hospital care and primary health care through provincial and territorial governments (Health Canada, 2011d). There are, however, many health services that are not insured by provincial and territorial governments, such as drugs, dental care, vision care, medical supplies, mental health counselling, and medical transportation. These are provided to First Nations people through the federal government's Non-Insured Health Benefits Program (NIHB) (Health Canada, 2011d).

The NIHB program is helpful in trying to improve First Nations peoples' health status, but it remains problematic. Approximately one in five First Nations children have not had any dental care; half of First Nations adults have reported having difficulties accessing the NIHB; and one in five First Nations adults have had difficulties with health care due to treatments not covered by NIHB (AFN, 2011a). Individuals must receive pre-approval for transportation, dental, vision, and other benefits, and there are increasing policy restrictions that make it more difficult for individuals to access the required care (AFN, 2011b). In 2011, the AFN (2011b) reported that the lack of investment by the government into the NIHB program would lead to a \$376 million shortfall for 2012. Also, the budget for the NIHB program will need to be restructured to account for the approximately 45,000 newly registered First Nations individuals due to Indian Act amendments (AFN, 2011b). If there is no change to these financial burdens, First Nations individuals and communities will continue to face barriers in accessing basic health care and will continue to experience a higher prevalence of health problems, such as type 2 diabetes, when compared to non-First Nations populations.

In addition to a lack of funding for health services, many First Nations communities experience a lack of adequate access to health care services (Campbell, 2002). Furthermore, the health care and advice that comes from health services is encased in Western medicine traditions that do not support traditional, holistic medicine practices of First Nations culture, leading to First Nations individuals being reluctant to seek advice and treatment regarding medical conditions (Oliver & Mossialos, 2004). Moreover, there is often a lack of willingness from Western practitioners to accept and respect First Nations knowledge and experience regarding medicine and ways to prevent, diagnose, and treat diseases (Smye & Browne, 2002). Programs that are culturally safe often have greater impact and are more successful than those that are not (Brascoupe & Waters, 2009). Cultural safety provides "a tool or lens for a reflexive process informed by post-colonialism, which alerts us to the importance of historical, social, economic and political structures in the analysis of contemporary health policies" (Smye & Browne, 2002, p. 43). Indeed, if programs are not developed in a culturally safe way, they can further discriminate against First Nations peoples and exacerbate their detachment from the current health system (Barnett & Kendall, 2011). Health care programs and practitioners must be aware of and respect First Nations peoples' history and colonialism's impact on this population.

Access to health services can also be quite challenging for individuals who live on remote reserves; individuals often have to travel great distances and transportation is not fully covered by NIHB. The lack of physical access to care can deter individuals from seeking the required diagnosis and care for their diabetes (Campbell, 2002). Early detection is very important in the treatment of diabetes. In fact, if treated early and effectively, a person with type 2 diabetes can live a healthy, normal lifestyle; however, in order for type 2 diabetes to be treated, there must be health care services within an acceptable distance. With difficulties in accessing health services, early detection can be impeded, resulting in delayed diagnosis and more challenging treatment requirements (Campbell, 2002).

Together, the chronic underfunding of health care, lack of physical access, and absence of wide-spread access to culturally-safe health practices render it difficult for First Nations peoples to seek and receive health care, including the prompt diagnosis and treatment for pre-diabetes and type 2 diabetes, especially for those living on remote reserves.

What's the Problem with the ADI?

The core objectives surrounding the ADI focus on changing the lifestyles and habits of First Nations individuals and communities (Health Canada, 2011a); as a result, the Initiative makes it seem as if the problem lies in First Nations peoples' apparent unwillingness to change or their lack of knowledge of healthy choices. Using Bacchi's (1999) "What's the Problem" approach to analyze the ADI, we argue that current approach taken by the ADI ignores the policies – such as those related to colonialism, education systems, and access to health care - that shape First Nations peoples' health-based decisions and health statuses (Graham, 2004).

For example, the ADI focuses on encouraging First Nations communities to build on their strengths and draw on their traditions and cultures to implement health promotion and diabetes prevention programs. As mentioned above, Giles et al. (2005) have argued that among Aboriginal peoples, diabetes is viewed as the result of the loss of tradition, community, culture, and spirituality; as a result, the approach used in the ADI could potentially be very useful and beneficial. There is, however, a large challenge to taking such an approach: In the past – and some might argue in the present - First Nations communities' traditions and cultural practices, including those pertaining to physical activity, have been actively suppressed and/or marginalized by Eurocentrically-oriented colonial policies (Paraschak, 1998; Pettipas, 1994). There is a certain irony to the current situation: on the one hand, the federal government is advocating for the use of cultural practices and traditions – particularly forms of physical activity – to incite First Nations individuals to change their lifestyle practices to address type 2 diabetes; on the other hand, federal policies continue to play a large role in curtailing traditional physical practices, delegitimizing Elders' knowledge, Westernizing education, failing to support culturally-appropriate health care (Monture-Angus, 2005), and neglecting to provide access to in-school sport and recreation programs. As a result, the very practices for which the ADI apparently advocates are undermined.

Pilkinton et al. (2010) found that health education and lifestyle interventions – the approach that ADI takes - are not sufficient to curb high rates of type 2 diabetes and call for "comprehensive, population-based policy changes" (p. 6). Effectively addressing type 2 diabetes in First Nations communities requires sustained, multi-sectorial, and multi-faceted responses that go beyond the approach employed by the ADI. Below, we make recommendations for the ways in which type 2 diabetes in First Nations

communities could be addressed in a manner that is more consistent with best practices in health interventions.

Recommendations

Policies that pertain to the social determinants of health need to be made based on coordinated, collaborative efforts and evidence-based approaches (Kelly, Morgan, Bonnefoy, Butt, & Bergman, 2007). A program like the ADI, which is intended to improve First Nations peoples' health, is seriously undermined by other federal policies – such as those related to colonialism, education, and access to health care, that contribute to First Nations peoples' disproportionate rates of poor health, in this case type 2 diabetes. Marmot, Friel, Bell, Houweling, and Taylor (2008) have convincingly argued that health equity should be the aim of all social and economic policies, not just those directly related to health, because even if they do not directly pertain to health such policies indirectly exercise a strong influence on it. Policy alignment, as defined by PHAC (2005), includes a comprehensive look at how a new policy or program fits within the existing policy, regulatory, and program environment; specifically, it necessitates an alignment of the policies of departments with similar or overlapping mandates, geographic locations, or key stakeholders. Policy alignment can be achieved by coordinating policy-making and discussions among people who work in the health and non-health sectors and by reaching out to the populations that the policies affect to ensure that appropriate and fair policies are created (Marmot et al., 2008). Currently, federal policies are aligned in such a way as to create a policy environment that is not conducive to diminishing rates of type 2 diabetes in First Nations communities. Policies that are intended to promote First Nations health, for instance by decreasing the prevalence of type 2 diabetes, should be aligned so that they work together to ameliorate the disparities.

Part of aligning policies so that they are better able to reduce health care inequities will require fundamental re-examination of policies themselves. For example, current policies related to health care access and to education systems continue to be rooted in colonial belief systems that justify existing health inequalities as being inevitable and/or based on First Nations peoples' inability to make good decisions. If the Canadian government is in fact serious about addressing health inequities between First Nations and non-First Nations, changes must be made.

In order to benefit from the Canadian health care system, individuals must have physical, political, and social access to the services, which many First Nations peoples are denied. The factors that contribute to this denial of service are related to the intermediate social determinants of health: education systems, health care systems and access, and infrastructure development (Loppie Reading & Wein, 2009). This neglect extends to a current education curriculum that ignores Aboriginal content or learning styles, resulting in lower educational attainment (Loppie Reading & Wein, 2009; NCCAH, 2010).

Policies that encourage First Nations' control over First Nations education are important in increasing levels of educational attainment (FNEC, 2009), which can in turn improve health (Canadian Council on Learning, 2009), especially with respect to rates of type 2 diabetes (Loppie Reading & Wein, 2009). In order for this to occur, however, First Nations need adequate funding for educational infrastructure and development. Thus, changing existing policies that result in the chronic underfunding of First Nations health (AFN, 2011b) and education systems (FNEC, 2009) could play an important role in decreasing the incidence of type 2 diabetes.

It is crucial for the Government of Canada to work with First Nations communities and governments to re-align policies that presently foster the proliferation of diabetes. We recognize that this is a particularly challenging recommendation in light of the current government's recent cuts to the Aboriginal organizations that champion the needs of Aboriginal peoples: for instance, Health Canada removed all funding for the National Aboriginal Health Organization (NAHO), which was forced to close in June, 2012 (NAHO, 2012); the Native Women's Association of Canada (NWAC) suffered severe cuts to their programming (NWAC, 2012); and Pauktuutit: Inuit Women of Canada had all of its funding related to health severed (Pauktuutit, 2012). Such cuts to Aboriginal organizations demonstrate the Canadian government's lack of commitment in seriously addressing Aboriginal health issues, including type 2 diabetes in First Nations communities. As stated above, type 2 diabetes is a significant health issue for Indigenous populations worldwide (Centers for Disease Control and Prevention, 2011; Ministry of Health, 2012; Wang, Hoy, & Si, 2010). As such, while the ADI is a Canadian federal government program, we believe that the aforementioned recommendations could also be applied in international contexts.

Conclusion

While a laudable effort, a program like the ADI has limited reach. We propose that in order to address health disparities between First Nations and non-First Nations peoples, there is need to recognize the systemic factors that contribute to type 2 diabetes in this population. We call for improved collaboration between community members, researchers, and policy makers to reform the disconnected approach that currently exists in type 2 diabetes prevention and treatment. This approach to diabetes prevention is incongruent with existing policies that influence the lives of First Nations peoples. Furthermore, interventions need to work on multiple levels in order to have the greatest impact. Initiatives that exist within an aligned policy environment are more likely to work in synergistic manners to improve the unacceptable health disparities that currently exist for First Nations peoples.

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