

Western Public Health Casebooks

2020

Case 3 : Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

Sacha Bragg
Western University

Harsh Zaran
Diabetes Alliance

Regna Darnell
Western University, rdarnell@uwo.ca

Follow this and additional works at: <https://ir.lib.uwo.ca/westernpublichealthcases>

Recommended Citation

Bragg, S., Zaran, H., & Darnell, R. (2020). Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada in: McKinley, G. & Speechley, M. [eds] Western Public Health Casebook 2020. London, ON: Public Health Casebook Publishing.

This Case is brought to you for free and open access by the Public Health Program at Scholarship@Western. It has been accepted for inclusion in Western Public Health Casebooks by an authorized editor of Scholarship@Western. For more information, please contact wlsadmin@uwo.ca.

CASE 3

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

Sacha Bragg, BA, MPH (Class of 2019)
Harsh Zaran (Program Coordinator, Diabetes Alliance)
Regna Darnell, PhD (Professor, Western University)

Bull Rapids First Nation is an Oji-Cree community located along the shores of James Bay. This community has a population of 1,872 people and is only accessible by air for most of the year. Marie Burningstar is the daughter of the chief of Bull Rapids First Nation. She left her community when she turned 20 to pursue her dream of becoming a nurse. She wanted to be a nurse because she saw the need to have more health care providers in her community and in other Indigenous communities. To become a nurse, she moved to London, Ontario to attend university. It was during her time at university that she became interested in researching diabetes in Indigenous communities. She knew from listening to her father's stories and teachings that life had not always been this way. Prior to colonization, Indigenous communities rarely experienced chronic diseases such as diabetes. In the past, her community was a hunter-gatherer society. They moved with the seasons and were very active in their search for food. They had extensive knowledge of the environment and the food that could be harvested from it. This knowledge is passed down through the different stories and teachings that Elders share with the younger generations.

This hunter-gatherer lifestyle is mostly nonexistent today because many First Nations peoples live on reserves and have no need to hunt or fish to feed themselves, which has created a more sedentary existence for this population. This change in diet has led to an increase in the rates of diabetes and associated comorbidities in this population (Kakekagumick et al., 2013). The supermarket food available to the community is high in calories, fats, and carbohydrates, causing high rates of obesity that have led to even higher rates of type 2 diabetes. Type 2 Diabetes is a chronic disease that is characterized by high blood glucose levels caused by either lack of insulin or the body's inability to use insulin efficiently. There are three different types of diabetes—type 1, type 2, and gestational diabetes.

Marie knew that this is what had happened to her community; now she had to figure out how she was going to help make the changes her community needed to become healthy again.

During her time away at university, Marie had worked as a research assistant on several diabetes projects and was hoping to use this experience to develop an intervention that could help her community manage and prevent type 2 diabetes. She knew it was going to take a lot of work to convince the community to work with an external research organization, but she was determined to make it happen because she truly believed it could help improve the health and well-being of the inhabitants of Bull Rapids First Nation. Many different factors needed to be considered as she created this intervention. She wanted to develop an intervention that was

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

culturally relevant, cost effective, specifically tailored to her community, and managed by the community with as little outside help as possible.

On June 10, 2019, she was woken in the middle of the night by a phone call telling her that her father had to be flown out of the community to a hospital in a neighbouring town. He was experiencing complications due to his diabetes and the community health nurse did not have the resources to deal with it. Marie could not get to the hospital, but she was able to call and speak with a doctor. She was reassured that her father was going to be okay but that they were going to have to focus on controlling his sugar levels through diet, exercise, and medication. The doctor also informed Marie that her father had a large ulcer on his leg that could be troublesome or could lead to amputation if it was not treated properly or monitored closely when he returned home. Marie knew something had to be done to help manage the prevalence of diabetes in her community because it was beginning to affect younger and younger people. What could she do that would have an immediate impact?

BACKGROUND

Type 2 diabetes is a major public health issue in Canada and around the world. In 2017, approximately 2.3 million people 12 years of age and older in Canada reported being diagnosed with diabetes (Statistics Canada, 2017). Type 2 diabetes is a chronic disease caused by the body's inability to produce or use insulin properly. Insulin is a hormone produced by cells in the pancreas that enables the body to absorb sugar from the bloodstream to create energy (Public Health Agency of Canada [PHAC], 2016). If diabetes is left untreated it can cause high blood sugar levels, which can cause damage to blood vessels, nerves, and organs such as the kidneys, eyes, and heart, and can lead to severe health complications and even death (PHAC, 2016). Even though there are three different types of diabetes, they are all described as the body being incapable of maintaining healthy sugar levels; each type may have different causes, complications, and treatments. It is estimated that 90% to 95% of people diagnosed with diabetes have type 2 diabetes and 5% to 10% of people are diagnosed with type 1 diabetes (PHAC, 2016). Gestational diabetes develops during pregnancy and is detected in 3% to 5% of all pregnancies (PHAC, 2016).

Numerous health disparities exist between Indigenous people and other Canadians. The prevalence of type 2 diabetes is an example of this, with Indigenous people having two to five times higher rates of diabetes than non-Indigenous people (Institute of Health Economics, 2018). The PHAC reports that the prevalence of diabetes is approximately 17.2% among Indigenous people living on reserves and 10.3% among Indigenous people living off reserves (PHAC, 2016). The adverse health outcomes and higher rates of chronic disease experienced by Indigenous people can be linked to many factors such as social determinants of health, lifestyle, and historical, political, and social influences (Lavoie et al., 2011). Indigenous people face many barriers that continue to aggravate the problem, including fragmented health care, poor chronic disease care and management, and inadequate disease surveillance (Gracey & King, 2009).

PROXIMAL DETERMINANTS OF HEALTH

The United Nations Human Development Index ranks Canada's Indigenous population 65th in the world for life expectancy, education, and income, whereas the rest of the Canadian population is ranked 12th (United Nations Development Programme, 2018). The proximal health inequities experienced by Indigenous people provide a foundation for deteriorating physical, emotional, mental, and spiritual well-being (Reading & Wien, 2009). Health behaviours, physical environment, and food insecurity are only a few of the proximal determinants of health that affect Indigenous people and communities in Canada. An example of this is the overcrowding that many Indigenous families experience. These families do not have enough space for

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

children to play in or enough space for people to relax in. The lack of space can act as a stressor and can lead to many other negative behaviours (Reading & Wien, 2009).

Health Behaviours

Health behaviours are well-known proximal determinants of health. Unfortunately, some Indigenous people engage in negative health behaviours such as alcohol use, which is linked to increased morbidity and mortality. (First Nations Centre, 2004). Smoking tobacco is another negative health behaviour that many Indigenous people undertake, and this can lead to increased rates of heart disease and lung cancer (Reading & Wien, 2009). A lack of physical activity and loss of traditional diets has also been linked to the prevalence of type 2 diabetes among Indigenous adults and the increasing rates of type 2 diabetes among Indigenous youth (Reading & Wien, 2009). In order to overcome the health disparities experienced by Indigenous people, these negative health behaviours need to be taken into consideration and addressed.

Physical Environment

In determining the health of a community, the physical environment plays a primary role, especially in Indigenous communities because of their connection to the land. The creation of reserves has had a negative impact on the health and well-being of Indigenous people. Many reserves lack access to safe drinking water and suffer from housing shortages that have led to overcrowding, poor quality housing, and unsanitary living conditions. There is also a shortage of affordable housing, with many urban Indigenous people experiencing homelessness (Reading & Wien, 2009). Because the houses on reserves are often overcrowded and not properly ventilated, there are serious problems with mould. Mould has been associated with numerous health issues such as asthma and allergy development in children (Reading & Wien, 2009).

Food Insecurity

Indigenous people who reside in remote rural communities experience substantial food insecurity due to the challenges faced acquiring market and traditional foods. Research has shown that food insecurity in low-income populations is related to being overweight and obese. The relationship between food insecurity and obesity is often due to poor diet (Kirkpatrick & Tarasuk, 2008). Indigenous people may be consuming an acceptable number of calories to meet daily requirements but because they have difficulty accessing healthy foods, they are forced to buy less costly and energy-dense foods that contain more added sugars and fat.

INTERMEDIATE DETERMINANTS OF HEALTH

Intermediate determinants of health can be thought of as the origin of the proximal determinants of health. If we look at the determinants of health as a tree, the proximal determinants would be the roots, the intermediate determinants would be the trunk of the tree, and the distal determinants would be the branches and leaves.

Health Care Systems

To reap the rewards of an advanced health care system, people must have physical, political, and social access to health care and social services, which is not the case for most Indigenous people in Canada. Health care for Indigenous people is managed by the federal government whereas the rest of the Canadian population accesses health care via provincial governments. Indigenous health care is fragmented and not well organized and has limited accountability. In addition, health care services continue to focus largely on communicable diseases. This approach is less helpful for Indigenous people because morbidity and mortality rates in Indigenous communities are typically more related to chronic illnesses and diseases (Reading & Wien, 2009). Access to health care is often limited or even denied to Indigenous people

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

because these systems do not take culture, language, or the social determinants of health into account (Assembly of First Nations, 2006). To have positive health outcomes, people must have access to required services in a suitable amount of time, which is not the case for many isolated Indigenous communities. This leaves many Indigenous people feeling that their health care needs are not being met and unfortunately this is a reality for many Indigenous people in Canada (Reading & Wien, 2009).

Education Systems

Many Indigenous people do not have access to adequate education, which can have an overwhelming influence on income, employment, and living conditions especially over the long term. Educated people often have higher incomes, and this generally improves their proximal determinants of health. They also pass the value of education and learning on to the next generation. Education has been associated with optimal child development and can alleviate some of the effects that inadequate child development can have on adult health (Reading & Wien, 2009). Finally, conventional education systems do not acknowledge the social determinants of health that can create barriers and prevent Indigenous children from receiving the maximum benefit from the education system (Greenwood et al., 2007).

Environmental Stewardship

Indigenous people have traditional ties to the natural environment. It is these ties to the land that were a major reason for the good health experienced by Indigenous people before European contact (Waldram et al., 2006). This is no longer the case. Over the past 500 years, there has been a rapid change from Indigenous people having healthy relationships with the land to now experiencing dispossession and disempowerment. Indigenous communities no longer have access to their traditional territories, and they do not share in the profits from the resources extracted from these territories (Reading & Wien, 2009). Finally, the wildlife, fish, and vegetation on these lands have been severely contaminated, forcing many Indigenous people to give up the traditional diets that once sustained their healthier communities (Reading & Wien, 2009).

DISTAL DETERMINANTS OF HEALTH

The distal determinants of health have a major impact on the health of people because they represent political, economic, and social contexts that construct the intermediate and proximal determinants (Reading & Wien, 2009). History clearly shows that there is a connection between the social inequalities that originated with colonialism and the disease, disability, violence, and early mortality that Indigenous people currently experience today (Reading & Wien, 2009).

Colonialism

Colonialism has had a negative impact on the health and well-being of Indigenous people because it has created a severe and devastating cultural change (Reading & Wien, 2009). The Canadian government developed policies that were intended to eliminate Indigenous people or assimilate them into non-Indigenous culture. An example of this is the residential schools and the trauma that Indigenous students experienced at these institutions. These schools were established in an attempt to “kill the Indian in the child”, as stated by Duncan Campbell Scott, the Minister of Indian Affairs from 1913 -1932. The residential schools are just one of the many attempts the Canadian government has made to assimilate and/or eliminate Indigenous people. Many communities continue to feel the negative effects that these institutions had on the students, their children, and even their grandchildren, and this has affected the long-term health and well-being of many Indigenous communities. The Indian Act is another government assimilation policy. This act outlawed the practicing of Indigenous ceremonies, created the reserve system, and allowed children to be forcibly removed from their homes to attend

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

residential schools. The loss of culture has had an extremely negative effect on the overall health and well-being of Indigenous people.

TRUTH AND RECONCILIATION COMMISSION

The Truth and Reconciliation Commission was created in response to a class action lawsuit filed by former residential school survivors against the federal government and four churches (Truth and Reconciliation Commission of Canada, 2015). At one point, there were 130 residential schools operating throughout Canada except in the provinces of Newfoundland, Prince Edward Island, and New Brunswick (Truth and Reconciliation Commission of Canada, 2015). It is estimated that 150,000 Indigenous children attended these schools. These children were forcibly removed from their communities and families, placed in these institutions, and not allowed to practice their culture or speak their language. Many of the children experienced physical, emotional, and sexual abuse at the hands of teachers, priests, and other students. The creation of the Truth and Reconciliation Commission was part of the settlement agreement. In 2015, the Truth and Reconciliation Commission made 94 calls to action to address the injustices that Indigenous people have experienced because of colonial policies such as the residential school system (Truth and Reconciliation Commission of Canada, 2015).

Racism and Social Exclusion

Unfortunately, many Indigenous people have experienced racism and social exclusion from the time they first contacted Europeans. Racism and social exclusion have created numerous barriers that continue to make it difficult for many Indigenous people to be productive and contribute to the Canadian economy (First Nations Centre, 2004). Indigenous people have been relegated at the bottom of the social hierarchy where they continue to experience harmful intermediate and proximal determinants of health. These determinants of health have decreased the ability of Indigenous people to resist disease and deal with many different types of illness (Reading & Wien, 2009). Research has determined that people facing racial discrimination may experience more negative health outcomes as a result of the stress associated with living in a racially charged atmosphere (Galabuzi, 2004).

MARIE'S IDEA

Marie knew that the problem had become so dire that more than traditional knowledge was needed to address the issue. Traditional knowledge had to be part of the solution but there needed to be something else. While in school, Marie had learned about a concept called *two-eyed seeing*, which was developed in 2004 by Mi'kmaw Elder Albert Marshall. This means to:

Learn to see from your one eye with the best or the strengths in the Indigenous knowledges and ways of knowing ... and learn to see from your other eye with the best or the strengths in the mainstream (Western or Eurocentric) knowledges and ways of knowing ... but most importantly, learn to see with both these eyes together, for the benefit of all (Marshall, Marshall & Bartlett, 2015).

She knew that any intervention would have to incorporate two-eyed seeing to be successful in her community. Marie decided she would conduct a sharing circle. A sharing circle is a part of the oral tradition of Indigenous communities that ensures everyone belongs and everyone is equal. Participants in the sharing circle learn to listen and respect the views of others. Marie thought that this would be the best way to engage her community and solicit everyone's perspective on how to deal with the diabetes epidemic their community was experiencing.

After completing the sharing circle, Marie knows she has to get to work and undertake some comprehensive research to see what can be done to help manage and prevent type 2 diabetes

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

in this population. She knows that she is going to face many challenges, such as getting the community to agree to work with an outside organization, but it is critical that the Bull Rapids First Nation gets help addressing the issue of type 2 diabetes. Another important issue in making this intervention successful is ensuring that any implemented plan includes traditional knowledge. Previous interventions that had not included and integrated traditional knowledge had not been successful. The community wanted their culture and teachings incorporated into any new program or project. Many community members had expressed negative opinions about working with external researchers. They complained about not being included in the research process and not being provided with the results when the research was completed, which made them feel like guinea pigs. Marie knows that overcoming these issues is going to be a challenge, but she is ready to tackle it because the health and well-being of her community is at stake. Later that week as she was sitting in her favourite spot on a cliff overlooking the community, she came across the Diabetes Alliance website. After reading about their vision, mission, and values, she was confident that they might be able to help her address the issue of diabetes in her community. She would definitely be researching the Alliance further. She is hopeful this is the partnership she has been looking for.

DIABETES ALLIANCE

Western University and the Canadian Diabetes Association united in 2008 to form Diabetes Alliance, previously known as The National Diabetes Management. Diabetes Alliance's vision is "to be a global leader in diabetes research by cultivating collaborative partnerships and research excellence through innovation and translation of findings into discoveries". The team emphasizes a unified and collaborative approach to diabetes research that focuses on Indigenous health, hypoglycemia, and clinical trials. Their Indigenous program is based on an award-winning quality improvement strategy that empowers and enables community-centred teams to identify barriers to diabetes care and conduct tests of change that can lead to improvements at the community level (Diabetes Alliance, 2019). Diabetes Alliance has been working with Indigenous communities to prevent, treat, and manage type 2 diabetes by creating quality improvement strategies such as the SOAR program. They have shown that this project is an effective way for Indigenous communities to manage type 2 diabetes. This project has also proven to be scalable to other Indigenous communities.

SOAR: Pathway to Wellness

SOAR is a three-year research project funded by the Canadian Institutes for Health Research (CIHR), AstraZeneca Inc., and the Juvenile Diabetes Research Foundation, now known by the acronym JDRF to ensure inclusivity. The name SOAR pays tribute to the four communities: Sheshatshiu Innu First Nation, Oneida Nation of the Thames, Abegweit First Nation, and Serpent River First Nation. The name and logo of the program were developed by these communities. In November 2017, the program was rebranded SOAR, which is an acronym of the names of the community partners involved in the project, as a continuation of another research project known as FORGE AHEAD. The FORGE AHEAD project was a five-year program (2013 to 2017) which developed and evaluated community-driven, culturally relevant, primary health care models that enhanced chronic disease management and appropriate access to available services in First Nations communities throughout Canada. FORGE AHEAD stands for TransFORmation of IndiGENous PrimARy HEAlthcare Delivery. The program ensured culturally appropriate implementation and integrated knowledge translation by involving stakeholders throughout the entire project (Diabetes Alliance, 2019).

The FORGE AHEAD project incorporated a series of 10 interrelated projects created to foster community-driven initiatives with type 2 diabetes as the action disease. The project included developing community and clinical readiness consultations, quality improvement activities, cost

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

analyses, scale-up toolkits, and a diabetes registry and surveillance system. The core objectives of the project were to assess, enhance, implement, and help manage chronic diseases in First Nations communities (Diabetes Alliance, 2019).

The SOAR project is a community-driven program focused on improving the health and well-being of Indigenous people in Canada who have type 2 diabetes. SOAR researchers work with Indigenous communities to change and strengthen the effectiveness and scalability of a quality improvement program. This quality improvement program offers training, coaching, and tools to support community-led initiatives that improve diabetes care and community member health. This venture benefits from the diverse contributions of its many participants. SOAR aims to build upon its successes and lessons learned to promote sustainability and to build scale-up plans with participating communities. The SOAR team consists of representatives from Abegweit First Nation (PEI), Oneida Nation of the Thames (Ontario), Serpent River First Nation (Ontario), and Sheshatshiu Innu First Nation (Newfoundland) along with researchers, health care providers, and the university research team. The teams work in collaboration with each other to discover how to improve, adapt, implement, and scale up the quality improvement strategy as a health intervention in Indigenous communities. The philosophies of community-based participatory research (Israel et al., 2005) are incorporated in the SOAR project to ensure that Indigenous communities are treated as equal partners during the research process through the planning, implementation, evaluation, and knowledge exchange phases. The research team makes sure that community partners are involved and consulted, and the community partners work with the research team to adapt the diabetes quality improvement strategy by focusing on the community's strengths and needs. The methodologies used for data collection recognize and respect the traditions of knowledge exchange within each community. The SOAR program supports capacity building and is guided by the First Nations Information Governance Centre's Principles of Ownership, Control, Access, and Possession, the CIHR Guidelines for Health Research Involving Aboriginal Peoples, and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, specifically Chapter 9: Research Involving the First Nations, Inuit, and Métis Peoples of Canada.

COMMUNITY SETTING: BULL RAPIDS FIRST NATION

In order to deliver effective health care and properly manage chronic diseases it is essential to recognize the needs of the particular community that is affected. The community has a grocery store, a gas station, two restaurants, and three retail stores. There is one school that only serves students up to grade 10. If children wish to obtain a high school diploma, they must live away from home to attend school in another community. There is also a nursing station that is staffed by a nurse practitioner and a doctor that visits once a month and provides the community with basic health care needs. People who have a medical emergency or serious health issue must be flown to the nearest hospital for treatment; the nursing centre does not have the resources to deal with major health issues or medical crises. If they need to go to the hospital they have to go alone to a strange place because there is no room to include support people such as family members or friends, and this causes further isolation for these patients. Another issue is that many of the people who have been transported to local hospitals experience racism from some nurses and doctors, making them reluctant to seek help unless it is necessary. This makes it hard to provide consistent care to people suffering from type 2 diabetes and other chronic diseases.

Before being colonized by European settlers, the residents of Bull Rapids First Nation were hunter-gatherers that led physically demanding and challenging lives, and consumed diets consisting of wild game, fish, roots, and seasonal berries. Their traditional routines helped keep

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

them healthy. This traditional existence has been eroded by policies implemented by the Canadian government, including the Indian Act and the residential school system. The loss of a traditional diet has been harmful to the health and well-being of Bull Rapids First Nation and other Indigenous communities in Canada. Because of the remoteness of the community, Bull Rapids First Nation continues to face challenges treating, managing, and preventing type 2 diabetes. One of the main issues the community is facing is accessibility to, and cost of, healthy food. This is a major issue in this remote community because of the high food prices and the difficulties transporting fresh food to the local grocery store (Kakekagumick et al., 2013). Access to care is another issue faced by the people of Bull Rapids First Nation. Not only does access to care refer to ease of access, but it also refers to care that is free from discrimination and racism, which has been an issue for residents in the past and continues to be an ongoing issue. The community's inhabitants need health care to be locally available and provided by their own members.

Marie knows a great deal about her community, but she does not yet know their specific needs or strengths, or how the strengths of the community could be used to help create or implement a program for managing, preventing and treating type 2 diabetes. She decides she needs more information and that she has to conduct research within the community to better understand the experiences of people affected by type 2 diabetes. She needs to speak with community members to determine how they cope with the disease, who they seek help from, and whether their experiences with a diabetes diagnosis have been positive or negative.

After listening to community members at the sharing circle, one of the main concerns Marie heard was that the people did not want to work with outside institutions or organizations because of past experiences when they felt like they were test subjects. Marie knew this was going to be a major barrier she would have to overcome because, without outside assistance, there was little chance she could help the way she wanted to. Many people voiced their concerns about the lack of adequate health services and the need for local access to care in the community. Marie knows that for a program or intervention to be successful she would have to address these issues. She also knows that further research is needed, but she was just not sure how to convince her community of this necessity.

RESEARCH PRINCIPLES

In the past, research has been conducted on Indigenous people and not in collaboration with them, which has created a lot of distrust. Many researchers have arrived in these communities, conducted research, and left without discussing the research outcomes or any potentially beneficial findings with the community's members. These actions have had a negative impact on the relationship between Indigenous people and researchers. As a result of these experiences, several ethics guidelines for working with Indigenous people have been created in collaboration with the Assembly of First Nations and the Government of Canada. The three main guidelines discussed in this case are the Ownership, Control, Access, and Possession principles, the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, and the CIHR Guidelines for Health Research Involving Aboriginal People. These guidelines were created to protect Indigenous people and ensure that they own and control the data collected in their communities. These guidelines are used by Diabetes Alliance in their projects involving Indigenous people.

MARIE'S NEXT STEPS

Marie has completed her research and she believes that the SOAR program with Diabetes Alliance would be a good fit for her community. She has contacted the coordinator of the

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

Indigenous team and is scheduled to meet with the team to go over what involvement in the program would entail. After meeting with the Indigenous team, she is excited because she believes this program is exactly what her community needs to help improve its rates of diabetes. She just has to determine how to convince her community to work with Diabetes Alliance after their previous negative experiences with other researchers. She plans to have the Diabetes Alliance team present to the Bull Rapids First Nation council, chief, and Elders, and any other community members interested in listening to what SOAR is and how it can benefit them.

CONCLUSION

Marie does not have to wait long for her community to decide that working with Diabetes Alliance could be beneficial. The community agrees to work with the Alliance because they follow the principles of Ownership, Control, Access, and Possession. The community knows these principles will protect them and give them possession and ownership of all the data collected, which makes them feel more secure about this decision. Now that she has the community's support, Marie can begin planning with Diabetes Alliance to best address the health issues facing Bull Rapids First Nation. She knows that working with Diabetes Alliance is only part of the puzzle. To improve the overall health of Bull Rapids First Nation, she also needs to try to change the food the community accesses and she needs to encourage community members to incorporate traditional diets once again. She knows it is going to be a challenge, but she is up for it.

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

REFERENCES

1. Assembly of First Nations. (2006). First Nations public health: a framework for improving the health of our people and our communities. <https://web.archive.org/web/20070617145120/http://www.afn.ca/cmslib/general/FNPB-IH.pdf>
2. CIHR Guidelines for Health Research Involving Aboriginal People (2007-2010) - CIHR. (2020). Retrieved from <https://cihr-irsc.gc.ca/e/29134.html>
3. Diabetes. (2016). Retrieved from <https://cbpp-pcpe.phac-aspc.gc.ca/chronic-diseases/diabetes/>
4. Diabetes, 2017. (2020). Retrieved 31 May 2020, from <https://www150.statcan.gc.ca/n1/pub/82-625-x/2018001/article/54982-eng.htm>
5. Diabetes Alliance (2019). Diabetes alliance. <https://www.uwo.ca/diabetesalliance/index.html>
6. First Nations Centre. (2004). First Nations and Inuit regional health surveys, 1997: A synthesis of the national and regional reports. https://fnigc.ca/sites/default/files/ENpdf/RHS_1997/rhs_1997_synthesis_report.pdf
7. Galabuzi, G. E. (2004). Social exclusion. In D. Raphael (Ed.), *Social determinants of health: Canadian perspectives* (pp. 235–252). Canadian Scholars' Press Inc.
8. Gracey, M., & King, M. (2009). Indigenous health part 1: determinants and disease patterns. *The Lancet*, 374(9683), 65–75. <https://www.ncbi.nlm.nih.gov/pubmed/19577695>
9. Greenwood, M., de Leeuw, S., & Fraser, T. N. (2007). Aboriginal children and early childhood development and education in Canada: linking the past and the present to the future. *The Canadian Journal of Native Education*, 30(1), 5–18. https://www.academia.edu/27084338/Aboriginal_Children_and_Early_Childhood_Development_and_Education_in_Canada_Linking_the_Past_and_the_Present_to_the_Future
10. Health research involving First Nations, Inuit and Métis children and their communities. (2020). Canadian Paediatric Society. Retrieved from <https://www.cps.ca/en/documents/position/health-research-first-nations-inuit-metis-children>
11. Institute for Healthcare Improvement. (2020). How to improve. Retrieved from <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>
12. Institute of Health Economics. (2018). Diabetes care and management in Indigenous populations in Canada. Summary report of a pan-Canadian policy roundtable November 1, 2017. <https://www.ihe.ca/publications/diabetes-care-and-management-in-indigenous-populations-in-canada-summary-report-of-a-pan-canadian-policy-roundtable>
13. Israel, B. A., Parker, E. A., Rowe, Z., Salvatore, A., Minkler, M., Lopez, J., Butz, A., Mosley, A., Coates, L., Lambert, G., Potito, P. A., Brenner, B., Rivera, M., Romero, H., Thompson, B., Coronado, G., & Halstead, S. (2005). Community-based participatory research: lessons learned from the Centers for Children's Environmental Health and Disease Prevention research. *Environ Health Perspect*, 113(10), 1463–1471. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1281296/>
14. Kakekagumick, K. E., Naqshbandi Hayward, M., Harris, S. B., Saksvig, B., Gittelsohn, J., Manokeesic, G., Starsky, G., & Hanley, A. J. (2013). Sandy Lake health and diabetes project: a community-based intervention targeting type 2 diabetes and its risk factors in a First Nations community. *Frontiers in Endocrinology*, 4, 170. <https://www.frontiersin.org/articles/10.3389/fendo.2013.00170/full>

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

15. Kirkpatrick, S. I., & Tarasuk, V. (2008). Food insecurity in Canada: considerations for monitoring. *Canadian journal of public health = Revue canadienne de sante publique*, 99(4), 324–327. <https://doi.org/10.1007/BF03403765>
16. Lavoie, J., Gervais, L., Toner, J., Bergeron, O., & Thomas, G. (2011). The Aboriginal health legislation and policy framework in Canada. <https://www.cnsa-nccah.ca/docs/context/FS-HealthLegislationPolicy-Lavoie-Gervais-Toner-Bergeron-Thomas-EN.pdf>
17. Marshall, M., Marshall, A., & Bartlett, C. (2015). Two-eyed seeing in medicine. *Determinants of Indigenous peoples' health in Canada: Beyond the social*, 16-24.
18. Reading, C. & Wien, F. (2009). Health inequalities and social determinants of Aboriginal people's health. <https://www.cnsa-nccah.ca/docs/determinants/RPT-HealthInequalities-Reading-Wien-EN.pdf>
19. Rice, K., Te Hiwi, B., Zwarenstein, M., Lavalley, B., Barre, D. E., Harris, S. B., & FORGE AHEAD program team. (2016). Best practices for the prevention and management of diabetes and obesity-related chronic disease among Indigenous peoples in Canada: a review. *Can J Diabetes*, 40(3), 216–225. <https://www.ncbi.nlm.nih.gov/pubmed/27066857>
20. Truth and Reconciliation Commission of Canada. (2015). Calls to action. http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf
21. United Nations Development Programme. (2018). Human development indices and indicators: 2018 statistical update. http://hdr.undp.org/sites/default/files/2018_human_development_statistical_update.pdf
22. Waldram, J. B., Herring, D. A., & Young, T. K. (2006). Aboriginal health in Canada (2nd ed.). Historical, cultural, and epidemiological perspectives

INSTRUCTOR GUIDANCE

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

Sacha Bragg, BA, MPH (Class of 2019)
Harsh Zaran (Program Coordinator, Diabetes Alliance)
Regna Darnell, PhD (Professor, Western University)

BACKGROUND

Marie is a nurse and a member of the Bull Rapids First Nation. She is frustrated that there are no resources to help Indigenous people cope with the issue of chronic diseases such as type 2 diabetes, which is a major health issue in this community. Marie knows something needs to be done, so she undertakes research to determine whether there are any interventions that can help her community prevent, treat, and manage type 2 diabetes. During her research, she discovers Diabetes Alliance and the quality improvement strategy they have developed to empower Indigenous communities to create their own plans to combat diabetes.

The purpose of this case is to give a brief overview of the colonial practices and the proximal, intermediate and distal determinants of health that have caused many of the health issues that occur today in Indigenous communities. It will also provide an opportunity for students to think critically about how chronic diseases can be addressed and what can be done to help improve the situation in Indigenous communities in Canada. This case gives students a chance to explore the concept of traditional knowledge, its importance to Indigenous communities, and how it can and should be incorporated into interventions. After reading this case, students will understand the historical events that have created the current health predicament in these communities. If students understand the issues that have caused the problem, it can help dispel any negative preconceptions that students may have of Indigenous people. This case provides an avenue for Indigenous students to discuss issues that actually impact them, their families and communities.

OBJECTIVES

1. Identify the proximal, intermediate, and distal determinants of health and the vast impact that they have on the health and well-being of Indigenous people and their communities in Canada.
2. Understand the impact that colonialism has had on Indigenous communities and how it has played a role in creating health disparities.
3. Explain the guiding ethical research principles that have been created for working with Indigenous people and why these principles are needed.
4. Examine interventions that can help alleviate health disparities experienced by Indigenous communities.

Coming Together to Promote Change: Best Practices to Prevent, Treat, and Manage Type 2 Diabetes in Indigenous Communities in Canada

DISCUSSION QUESTIONS

1. Why do the social determinants of health play such a large role in determining the health and well-being of Indigenous people and their communities?
2. What is community-based participatory research and why is it an important concept to adopt when working with Indigenous people?

KEYWORDS

Community-based participatory research; two-eyed seeing ; health disparities; health intervention; Indigenous communities; Indigenous people; social determinants of health; type 2 diabetes