

2022

# Kiiwetinoong Diabetes Initiative Shibogama Regional Diabetes Strategy



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## Executive Summary

The Shibogama First Nations Council Regional Diabetes Strategy (**RDS**) focusses on the collective needs of its members in five communities: Wunnumin Lake, Kingfisher Lake, Wapekeka, Kasabonika Lake, and Wawakapewin First Nations. The RDS utilizes five categories of the Ontario Aboriginal Diabetes Strategy (OADS) including Prevention, Care and Treatment, Education, Research and Coordination. The RDS focusses on self-governance and autonomy so that the community members can determine their own way of care which has been shown to include physical activity, Traditional Plant Medicine knowledge including food acquisition.

The RDS consists of program development that focusses on integrating traditional practices within the current Diabetes care within each community and is intended to be driven by community diabetes workers, health personnel and community members. The focus of the Curative manual is to help community members to leverage the forest as the resource of healing. The purpose is to integrate western and traditional aspects of healing for Diabetes. Gaps in care that have been identified have been filled in part with the assistance of the Sioux Lookout First Nations Health Authority (SLFNHA) as well as through the further integration of traditional medicine and foods within the communities.

The statistics of the communities have indicated that there has been an increase in residents of the Shibogama communities, 599 individuals moved into community during the period of the 2020 pandemic noted in the 2021 census data. There has been an increase in the incidence of diabetes partly due to this increase

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in population, though also likely due to the progression of the disease in youth under 18 specifically in Kasabonika First Nation.

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## Introduction

This **Shibogama Regional Diabetes Strategy (RDS)** consists of Indigenous approaches to the Ontario Aboriginal Diabetes Strategy (OADS) inter-related categories of Prevention, Care and Treatment, Education, Research and Coordination with a lens on our physical place in time with the land. Moving forward, the plan illustrates techniques of Prevention and Educational resources to help decrease the incidence of Type II Diabetes in the youth, the future median populations. A stand-alone Curative Manual accompanies the strategy as well as an educational website (<https://kiiwetinoongdiabetesinitiative.com/>) that can be accessed by anyone to assist in alleviating Diabetes Mellitus with traditional programs aimed at the youth to be taught by the Elder populations.

The purpose of the 5-year strategy plan is to implement a self-sustaining diabetes strategy that can be supported and continued for the healing and growing of the next generations. The strategy is focused upon two distinct aspects. One of **Nishnawbe Aski Nations Health Transformation** to begin the creation of a new and effective collaborative health care model that immediately implements community healing, and two of self determination and autonomy, where community driven healing programs are utilized for the benefit of those that use this strategy.

Currently the strategy plan is completed year two 2021-2022 and is entering year three. In year three the focus is on **coordination** of programming between service providers and community workers, nurses and educators. With the new website, access to the strategy and associated educational information, the

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implementation of Health Transformations health care model for diabetes can be best implemented. The goal is to compliment western medicine practices with traditional aspects of holistic healing.

The following strategy document uses the OADS resources for the Regional planning of the Shibogama Regional Diabetes Strategy. The initial investigation included Shibogama community consults over the five years of the strategy. Organizational consults of First Nations outside of Shibogama territory such as the Sioux Lookout First Nations Health Authority (SLFNHA), NAN Health Transformation planning, Traditional medicine practices, Statistics Canada, Social Determinants of Health reports (WHO), including the Aboriginal Health Policy of Ontario (AHP for the Ministry of Health and Long Term Care Ontario), Aboriginal Healing and Wellness Strategy and the Diabetes Charter of Canada that focuses on current research and supplement this strategy. The focus of Shibogama's RDS is to promote healing, education and community research through the encouragement and support of Indigenous medicine practices. This focus is based on the requests of community members including the leadership of the Shibogama First Nations Council.

Many of the foods and medicines in the forest of the Shibogama communities can be harvested throughout the year (though there are best times to harvest many plants). The land is a resource that is used for the preparation of medicine, to collect nutritious foods and provide physical activity that decreases insulin resistance. This is the anticipated outcome of the curative program; utilize traditional foods, medicine, and the physical activity of the collection of food and medicine to recover and improve outcomes of Type II Diabetes. This expected

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outcome is supported by the AHP for Ontario that states the healing continuum would incorporate health promotion, prevention, treatment and curative programs and services, and rehabilitation (1999, AHP).

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## Background

Diabetes is a chronic disease which affects the body in one of two ways; inefficient production of insulin and/or challenges with uptake of insulin. Insulin is a hormone in the body that is needed to control the amount of glucose (sugar) in the blood. This condition can develop in individuals affected by the Social Determinants of Health including low-income status, poor diet including a sedentary lifestyle (WHO, Canada). It was reported that only one community member in the Shibogama communities was diagnosed with Type I Diabetes. Most others with Diabetes have Type II which can be remediated in future generations by implementing programs described in this strategy.

Diabetes can lead to further complications in an individual's health which occur secondary to the initial disease. Secondary conditions, consistent with the disease, are foot ulcers and amputations, kidney, eye, cardiovascular and nerve conditions (2018 Punthakee et. al). Depressed individuals also have a 41% higher chance of developing Diabetes mellitus during their lifetime (2015, Yu, M et al.). Diabetes and the secondary symptoms may significantly affect one's quality of life and at times, be fatal. The estimated number of deaths attributed to Diabetes in Canada is one in ten (PHAC 2011).

Elevated risk factors for Diabetes occurs in cases where individuals are of Indigenous, Hispanic, African or Asian descent, individuals who have a family history of Diabetes, are obese or overweight, and those with low incomes and those subject to poverty. These groups have increased risks of developing the disease, as noted by the Social Determinants of Health (WHO).



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The intention of the Shibogama RDS is to assist alleviation of some environmental factors such as nutritional deficiencies including teaching all age groups the benefit of traditional foods and their healing potential, as well as through consistent movement of the body with the activities of harvesting food and medicines.

## Data Sources

The Regional Diabetes Strategy is created through data analyses, 2021 census statistics and requests of the individuals who live and work in Shibogama territory.

Data sources include:

- Community Diabetes workers
- Statistics Canada 2021
- Shibogama community engagement (2020)
- SLFNHA engagement 2019 and SLFNHA website
- NAN Health Transformation report Jan 2018
- Social Determinants of Health (WHO)
- Aboriginal Health Policy of Ontario
- Aboriginal Healing and Wellness Strategy
- Diabetes Charter of Canada
- Land-Based Healing strategies

## Population context

The Shibogama communities include Wapekeka, Wawakapewin, Kasabonika Lake, Kingfisher Lake and Wunnumin Lake First Nations. Shibogama members residing in community combines to 2415 (Statistics Canada). The communities access health services through their respective nursing stations as well as through commute to Meno Ya Win in Sioux Lookout and Thunder Bay for additional care or for emergencies. The Sioux Lookout First Nations Health Authority (SLFNHA) sends a team for Diabetes care quarterly.

Based on the community statistics of the number of individuals who have Type II Diabetes totals to 18.3% of the Shibogama population, the youngest noted to be age 10 in Wunnumin and 3 are children under 18 years of age.

Four of the communities belong to the Shibogama Health Authority; Kingfisher Lake, Wawakapewin, Wapekeka and Wunnumin Lake, Kasabonika implements its own authority for health services in that community.

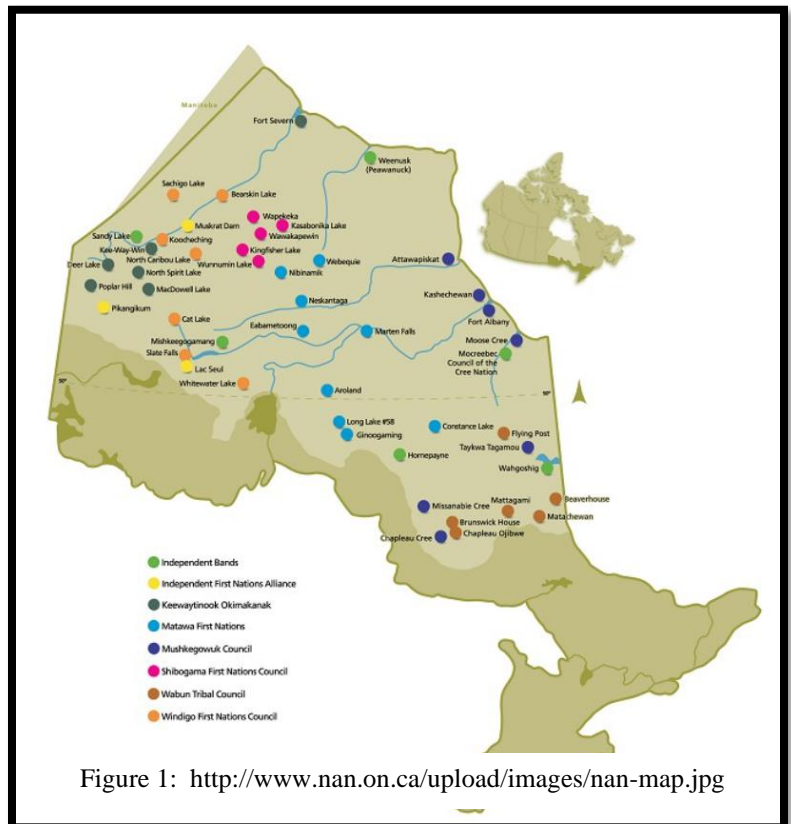


Figure 1: <http://www.nan.on.ca/upload/images/nan-map.jpg>

## Community Statistics

**Table 1** 2018/2019 19.9% Living with Type II

Community stats	Kasabonika	Kingfisher	Wunnumin	Wapekeka	Wawakapewin
Population registered	1183	623	706	489	76
Population in Community	849	511	593	440	22
Median Age	23	25.9	23.1	22.4	-
Average Age	27.4	29.1	26.9	24	45 approx.
Diabetic Patients	134 (12yrs youngest)	79	64	68	5 approx.
Dialysis out of Community	4	2	1	1	?
% of Diabetics in Community	15.8%	15.5%	10.8%	15.5%	22.7%
Services available	Foot care nurse, Dialysis	Chiropody, Dialysis, Foot care nurse	Foot care nurse	Family-Dialysis	N/A

**Table 2** 2021/2022 18.3% Living with Type II

Community stats	Kasabonika	Kingfisher	Wunnumin	Wapekeka	Wawakapewin
Population in Community	1060	511	587	456	16
Median Age	22.4	26	26	23.8	N/A
Average Age	27.1	30.3	29.8	27.4	N/A
Diabetic Patients	207 (10 years youngest)	95 (est.)	96	82	N/A
Dialysis out of Community	3	-	-	-	N/A
Dialysis in Community	1	-	-	-	N/A
% of Diabetics in Community	19.5%	18.6%	16.4%	17.9%	N/A
Services available	SLFNHA health team Family dialysis, Foot care	HC hires Chiropody, Foot care independently	SLFNHA health team	SLFNHA health team	-

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The above Table 1 is from the previous collection of data located in the 2020 Shibogama RDS. Table 2 is from the current numbers collected from community data as well as from Statistics Canada for 2021. Based on the current collected data it appears more individuals have moved back into their communities. The number of Diabetic patients has increased, where in 2019 17.4% of community members have acquired diabetes in comparison to 18.4% in 2022. This also includes an increase of in population of 29.7% as of 2021.

## **Current Diabetes Care**

The current diabetes care such as foot care nurses, Chiropody, education and dialysis training is distinct within each community. Wapekeka, Wunnumin Lake? and Kasabonika receive services from SLFNHA for their diabetes care while Kingfisher Lake hires service providers such as foot care nurses and Chiropodists independently. All communities also have plant medicine practitioners or hire out of community for practitioners. Throughout the seasons every community harvest food, fish can be harvested all year long and caribou travels through the Shibogama territories in the winter. In the fall each community has gatherings to their share harvest.

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## Shibogama Regional Diabetes Strategy

The purpose of Shibogama’s Regional Diabetes Strategy (RDS) promotes education and community research through the encouragement and support of Indigenous medicine practices as well as nutritional practices that includes the activities of hunting and fishing. The Boreal Forest medicines are available throughout the seasons, though best times to collect plants is in the springtime. Other Land-Based healing practices including plant medicine practices compliment Western medicines and are practiced throughout the Shibogama communities. Any of the practices described are the integration of Indigenous knowledges within the framework of *education, prevention, research, coordination and care and treatment* noted by the Ontario Aboriginal Diabetes Strategy (OADS) categories.

Diabetes care in the Shibogama communities varies from urban strategies and requires continued community input from all members and those with the disease. The Diabetes Charter of Canada states that patients with Diabetes have the right to “high-quality care, as well as affordable and adequate access to healthy foods and recreation” (Diabetes Charter Canada). It is challenging to provide sufficient nutrition through local stores in the communities therefore access to increased funding for the land-based practices of hunting, fishing and plant picking is necessary to supplement what the stores have to offer for nutrition.

The current model cannot provide a focus on the Social Determinants of Health, such as the access to consistent health services, education, or cultural

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practices. This document formulates a strategic plan to address the stated needs of the community members, as well as the utilizing the Aboriginal Health Policy and Diabetes Canada clinical guidelines to collaborate needs and recommendations.

The Shibogama RDS is guided by the above stated OADS categories, including the Diabetes Charter of Canada and the Shibogama Health Authority and community input. At the centre is an Advisory group, which will improve coordination with current programs and services provided in part by SLFNHA. This Advisory group is composed of Shibogama Health Directors, front-line Diabetes workers, Land-based and plant medicine practitioners, and members from the communities. The focus of this group will be *Coordination, Care and treatment, Prevention and Research*.

Services, that are related to plant medicines, offered in Shibogama communities will be networked by the Shibogama Advisory group. The group will identify educational opportunities for members, collect data and community statistics, identify service gaps when they arise and conglomerate services between communities when possible. The group will be able to network services between Shibogama communities so that consistency in care is developed and is made available to all members.

The Advisory group leads the Shibogama RDS through the Shibogama Curative program, with the Healing continuum as a guideline for programming focus (Figure 1). At the heart of the healing continuum is the Advisory group that

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serves to coordinate and network services and programs throughout Shibogama territory.

**Figure 1: Shibogama Healing Continuum to guide programming**



It has been suggested that annually, the Advisory group will hold an educational forum for community members though this has been difficult due to the current state of the pandemic. Upgrading the educational forum to a virtual setting, until it is recommended to meet again, will include Diabetes educators, Nurses, Directors including any members of each Shibogama community that chooses. This forum will inform Community Health teams of the needs of communities, identify gaps in services, as well as educate and answer questions about Diabetes education, prevention, care and treatment for members.

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The guiding principle of the Advisory group is firstly to encourage traditional Land-based healing practices to compliment Western medicine, so patients will practice autonomy to guide their bodies to health. Education available and driven by this Strategy is the Shibogama Curative Program *Curative manual* (separate book available to be in Oji-Cree and English). The manual is set up to promote self-governance through education plant medicines, dietary practices that are specific to the Kiiwetinoong district in Ontario.

Health Promotion and Prevention is the educational component of the continuum where the communities will offer educational sessions about Diabetes and pre-diabetes, guided by the Curative Manual, Diabetes educators and physical educators. Active living, self-care opportunities, and healthy eating are discussed in the manual. These educational components serve as a basis for the Shibogama RDS. The formulation of the Curative program *Self-care manual* assists in the rehabilitation of patients with Diabetes and will be offered in both Oji-Cree and English. These documents are now available on the Kiiwetinoong Diabetes Initiative website at <https://kiiwetinoongdiabetesinitiative.com/>.

Within the 5-year plan, the Advisory group will gather all data about patients for statistical reporting and trend observance. Those patients who have chosen complimentary or alternative treatment methods offered in the *Self-care manual*, will contribute to community led research to quantify and qualify the efficacy of the recommendations of the Curative program.



<b>Shibogama Council</b>	<b>Activities or Strategies directed by Advisory group and community forum</b>	<b>How does this activity compliment or enhance existing program</b>	<b>Expected Results- What will be improved?</b>	<b>Projected start and end dates</b>
<b>Shibogama 5-year plan</b>	Self-care manual, translations, Strategy update, implement Curative program	Promotes self-governance and self-determination	Long-term community healing outcomes, youth healing	2019-2020
<b>Year 1</b>	Educational sessions, <b>Health Promotion, website creation</b>  Data Collection- Research, community engagement forum- virtual	Knowledge to teach next generation	-	2020-2021
<b>Year 2</b>	<b>Prevention and Research</b> focus, Nutrition, Education for youth,  Data Collection- Research, Virtual community engagement forum	Mental wellbeing, physical wellbeing, Knowledge delivery of Plant Medicine and education sessions on western medicine-teaching Diabetes workers in community	Limiting depressive states and nutritional deficiencies in youth  Education of community Diabetes workers.  <b>Website creation for access to education</b>	2021-2022
<b>Year 3</b>	<b>Coordination</b> of Shibogama needs, Data Collection- Website promotion, Research, community	-	Educational resources for community workers	2022-2023

	engagement forum			
<b>Year 4</b>	Focus on <b>Care and Treatment</b> , Data Collection- Research, community engagement forum	-	-	2023-2024
<b>Year 5</b>	Presentation of trends and statistics, community gathering and next step planning	Alleviation of funding gaps	Collaboration and Consistency of care in Shibogama Communities.	2024-2025

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## Summary

The Shibogama RDS is a strategy that leverages the forest as a resource for care and treatment of Type II Diabetes. This proposed method is meant to increase the use of traditional methods of harvesting plants and animals to assist in alleviating diabetes the current and future population. This also will help to sustain language and prevent loss of language by use of local practices. This strategy is meant to implement self-autonomy and individuality with the use of educational supports such as the website that houses the Curative manual, the curriculum as well as other educational resources located on the Kiiwetinoong website <https://kiiwetinoongdiabetesinitiative.com/>.

## Conclusion

The documents of the Shibogama RDS, along with the Curative manual and curriculum, are housed on the Kiiwetinoong Diabetes Initiative website for easy access to community members. The purpose of the strategy as stated is to implement traditional methods integrated with the current western model to bring well-being to individuals, whether they have diabetes, prediabetes or do not have the disease. Continued promotion of the strategy is to assist in formulating a new health care model that will alleviate the continued increase in Diabetic patients in the Shibogama communities. With continued promotion of the Strategy, it is expected that the patients will have better access to care and focus on land-based initiatives to help treat current patients and also prevent the incidence of Type II Diabetes in youth populations.

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[https://www.who.int/social\\_determinants/themes/prioritypublichealthconditions/en/](https://www.who.int/social_determinants/themes/prioritypublichealthconditions/en/)
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9. **Diabetes Charter of Canada,** [https://www.diabetes.ca/about-diabetes\\_canada/diabetes-charter](https://www.diabetes.ca/about-diabetes_canada/diabetes-charter)

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## **2021 Census Data:**

### **Kasabonika census 2021**

<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Kasabonika&DGUIDlist=2021A00053560096&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

### **Kingfisher Lake census 2021**

<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Kingfisher%20lake&DGUIDlist=2021A00053560098&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

### **Wapekeka Census 2021**

<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=wapekeka&DGUIDlist=2021A00053560088&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

### **Wawakapewin Census 2021**

<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=wawakapewin&DGUIDlist=2021A00053560100&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

### **Wunnumin Lake Census 2021**

<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=Wunnumin&DGUIDlist=2021A00053560085&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

### **SLFNHA teams**

<https://www.slnha.com/about-2/communities/>