Community Health Worker Diabetes Program

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Sioux Lookout
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Contents

Background and Context

First Nations people living in remote, on reserve communities continue to experience barriers to accessing high quality health care including: geographic isolation, limited human and financial resources, high medical staff turnover, and lack of culturally safe care. Globally, Indigenous peoples experience significant health-related disparities, such as higher rates of chronic and infectious disease and lower life expectancy. In Canada, rates of type 2 diabetes are higher among First Nations people compared to among the general population.[1] It has also been documented that First Nations people in Canada experience elevated prevalence of diabetes-associated risk factors, diabetes-related complications, and mortality.[2,3]

The Sioux Lookout First Nations Health Authority (SLFNHA) provides various health services, including primary health care, counselling, and health promotion programming to 33 First Nations communities in the Sioux Lookout Area (SLA) in Northwestern Ontario. The SLA encompasses 385,000 km^2 and has a population of approximately 30,000.[4] The SLA is comprised of 33 Ojibwe, Cree and Oji-Cree communities. Communities range in size from approximately 100 to 3,000 people. Eighty-five percent of the population live in geographically isolated communities, with more than 100 kilometers between the community and the nearest hospital - the Sioux Lookout Meno Ya Win Health Centre. Remote communities are only accessible by plane year-round, and sometimes by ice roads in the winter, weather permitting.

Type 2 diabetes is widely perceived to be a priority health problem among community members and health care providers in the Sioux Lookout Area (SLA)[5]. The prevalence of type 2 diabetes in the First Nations population is 3 to 5 times higher than in the general Canadian population, accompanied by a high burden of diabetes-related complications and mortality[6]. Diabetes prevalence is as high as 45% in some SLA communities[7]. First Nations peoples living with diabetes in the SLA also show higher usage of acute care, emergency departments and day surgery, while often reporting challenges in accessing primary and community-based services for diabetes management and support[5].

In 2014 and in response to the high rates of diabetes and its complications faced by First Nations in the SLA, the Sioux Lookout First Nations Health Authority (SLFNHA) and Dignitas International (DI) partnered to support the development of First Nations-led solutions to address underlying health inequities and to improve community-based diabetes care. Based on the complimentary knowledge and experiences of both organizations, SLFNHA and DI co-designed and implemented a

Community Health Worker (CHW) Diabetes Program in First Nations communities in the SLA.

The goal of the program was to provide CHWs with the support required to better perform in their challenging roles. Using customized training tools, SLFNHA and DI trained and mentored CHWs to bridge the healthcare gaps that often put people living with diabetes at risk of developing serious complications. CHWs completed hands-on training in Treatment Plan Support – an area identified by community health leaders as a key health priority in the SLA. After completion of the required training, CHWs were certified through an observation process and received a certificate in Treatment Plan Support. Quality improvement methods were then utilized to measure performance and foster continual learning and improved practice.

In 2019, DI closed as an organization and transferred the Indigenous Health Partners Program and associated projects/partnerships to the Department of Family and Community Medicine, University of Toronto (U of T). SLFNHA and U of T continue to support the administration of the CHW Diabetes Program and its expansion to SLA communities.

CHW Diabetes Program Vision

The CHW Diabetes Program is built on the vision to:

- Increase the quality and accessibility of community-based prevention, management and care services for high-burden primary health care conditions, such as type 2 diabetes, for First Nations populations living in rural and remote on-reserve communities
- Develop sustainable, locally and culturally appropriate strategies that engage First Nations communities in generating, implementing and evaluating solutions to their own health care
- Build local health services and research capacity to support and contribute to a strong health system for the First Nations communities in the SLA

CHW Diabetes Program Description

KNOWLEDGE SYNTHESIS: Building a Foundation for Knowledge Translation

The CHW Diabetes Program not only focuses on the implementation of a training program for CHWs, but also incorporates several scientific evaluation and evidence-based learning opportunities to support ongoing improvement throughout the program. Knowledge synthesis activities include:

Global Case Study Report – Best Practices with CHW Program Implementation

The purpose of conducting the Global Case Study Report was to identify key determinants of successful CHW programs in various global health implementation contexts and understand best practices with CHW program implementation. The case study methodology included a literature review and site visits to CHW programs in Malawi, Ethiopia, Zambia, Alaska, Minnesota, Brazil and Pakistan.

Based upon the literature review, a case study framework was developed to analyze the global case studies in order to identify best practices. The case study framework was also based on anticipated knowledge user needs and was formulated to address existing gaps in the current CHW literature around pragmatic needs for implementation information and evidence.

Systematic Review – Task-shifting for the Management of Type 2 Diabetes

Task-shifting from physicians to non-physician health workers has been proposed to overcome shortages in the healthcare workforce and to contain costs. Type 2 diabetes is a condition well suited to task-shifting due to the vast amount of understanding on the course of disease, treatment and management, and availability of evidence-based guidelines. In order to help understand task-shifting for the management of type 2 diabetes in high income countries, a review of scientific literature was conducted.

Given the wide heterogeneity of included studies it was not possible to establish in a systematic way the effectiveness of task-shifting for the management of type 2 diabetes, although several studies reported improvement in various outcomes. The review suggests that there is a need for the standardization of measurement and terminology surrounding task-shifting in a health system to allow for the synthesis of current and future research, and to assess the effectiveness of task-shifting interventions.

Diabetes Environmental Scan for the Sioux Lookout Area

The Diabetes Environmental Scan explored perceptions and experiences of patients, community stakeholders and service providers, highlighting facilitators and barriers to optimizing diabetes care. The methodology of the environmental scan included a document and literature review, key informant interviews, direct observation and patient surveys.

Results of the Diabetes Environmental Scan showed that, in general, health services were perceived as good once they had been accessed by patients. However, diabetes care was perceived as fragmented;

all participants - patients, community stakeholders and service providers - expressed much confusion regarding which services were available and how to access them. There was a strong desire from all participants for increased support at the community level, such as increasing the scope and frequency of home visits, and facilitating self-management of diabetes with behaviour change, diet, and lifestyle counselling.

It was noted that CHWs could help to address the current gaps in care that exist beyond the clinic, and support patient success in following treatment plans and achieving health goals. Findings also suggested that future studies and interventions should consider the intersection of mental health and diabetes, and adopt a more holistic approach to care.

KNOWLEDGE APPLICATION: Program Development & Design

Engagement of Community Leadership

To engage SLA community leaders in the early stages of designing the CHW Diabetes Program, findings from the Global Case Studies were shared at a Knowledge Translation and Exchange (KTE) forum. Participants included Tribal and Community Health Directors, as well as partner organizations. After findings were shared, participants identified three competency areas that were used to inform the core design of the program:

1. Support patients in following their treatment plan and monitor their health to reduce traumatic complications of type 2 diabetes (e.g. amputations, vision loss and kidney disease)
2. Support patients to self-manage their diabetes
3. Facilitate community education on diabetes and promotion of healthy lifestyles

It was acknowledged that these and other tasks that could be completed by CHWs were complex and not mutually exclusive. CHWs could coordinate many activities that were already occurring in the community and be a focal point for care. CHWs could also assist in referring patients to traditional healers, coordinate cultural training for medicines, screen for diabetes and aid during trauma-related care.

The recommendations and feedback from this forum were integral in designing the program intervention and tools, as well as the corresponding measurement and evaluation frameworks.

A Customized Training Program for the SLA

To help reduce the number of traumatic complications in high-risk diabetes patients in the SLA, a training program focused on Diabetes Treatment Plan Support was developed.

The CHW Diabetes Program curriculum is designed for CHWs living in remote communities, with a focus on performing specific treatment support tasks, such as monitoring patient anthropometrics, blood pressure and glucose levels, and identifying issues related to foot health and medication use. When an unusual finding is identified, such as a deteriorating wound on the patient's foot, clear guidelines are established for CHWs to make the appropriate referral for intervention.

For sustainable health impacts, CHWs also receive training to help patients create self-management goals in relation to dietary habits, physical activities and resigning from negative health behaviors. In addition to providing knowledge and skills in the clinic al aspects of diabetes, data collection and management is also included in the training. The intent of training on data collection is to help CHWs record findings from patient interactions on customized log sheets. Using the tools provided, CHWs determine the frequency of patient follow-ups, depending on the severity of diabetes. This process ensures timely and appropriate services to their patients.

Although CHWs receive most of their training when they are initially introduced to the CHW Diabetes Program, on-going training and mentorship is provided by the CHW Program Manager(s) during community visits.

QUALITY IMPROVEMENT: Building an Evidence-Base in the SLA

Data Collection

Critical to monitoring client improvement is the development of data, quality indicators and reporting mechanisms. This takes place primarily via a customized diabetes database. The intent of the CHW Diabetes Program database is to monitor health metrics of patients with diabetes, including long-term blood sugar control (A1C levels), blood pressure, low-density lipoprotein cholesterol (LDL), kidney

function (eGFR) as well as the frequency of evidence-based interventions such as eye and foot exams. The data collected is used to inform the program where quality improvement measures are required.

The CHW Diabetes Program is also working with participating communities to implement an electronic medical record system via Mustimuhw Information System. This will allow CHWs to document their patient interactions electronically and enhance patient care.

KNOWLEDGE TRANSLATION AND EXCHANGE: Sharing Information with the SLA

To encourage knowledge translation and exchange (KTE) a web platform was developed. Local KTE forums are also held to review key accomplishments, challenges and lessons learned, as well as disseminate program findings to SLA communities, partners and other local stakeholders.

CHW Connect

CHW Connect (www.chwconnect.ca) was developed to enable SLA communities to access information on how CHW programs in other parts of the world are designed, and to share SLFNHA's experience with implementing a customized program in the SLA.

CHW Connect also aims to provide CHWs with the support they need to perform their challenging roles. The website allows CHWs to access a variety of training tools and diabetes resources, and is comprised of four key components:

1. CHW Program Development: provides information and resources on building a CHW Program based on case studies from around the world, for use by SLA communities and beyond
2. Learning Journey: includes a series of videos describing development of the CHW Diabetes Pilot Program and key milestones, so that others can benefit from the successes and lessons learned
3. Resource Hub: encompasses a repository of relevant materials for CHWs, including the Treatment Plan Support training manual. The training manual consists of a series of easy-to-follow steps, helpful reminders and suggested provider-patient dialogue
4. Additional Resources: to help community members strengthen care for people living with diabetes, including a diabetes glossary with terms in English, Oji-Cree, Ojibwe and Cree

CHW Diabetes Program Expansion

SLFNHA is expanding the CHW Diabetes Program by: 1) strengthening the CHW infrastructure by building the capacity of community-based human resources; 2) enhancing and expanding the CHW training curriculum and on-the-job tools, 3) creating evidence-based learning through data generation and evaluation initiatives to support continuous program improvement and 4) implementing the program across the 33 SLA communities.

To support expansion of the CHW Diabetes Program a strengthened, standardized human resources infrastructure is required at all levels. This includes job profiles and core competencies for CHWs in participating communities, as well as the integration of CHWs into local health teams.

The program continues to focus on achieving the highest possible standard of community-based diabetes care for the SLA through the enhancement and implementation of customized training and on-the-job tools. Building on the existing platform, the CHW Diabetes Program will develop new tools to address additional priorities identified by SLA leadership, including mental wellness through traditional healing support.

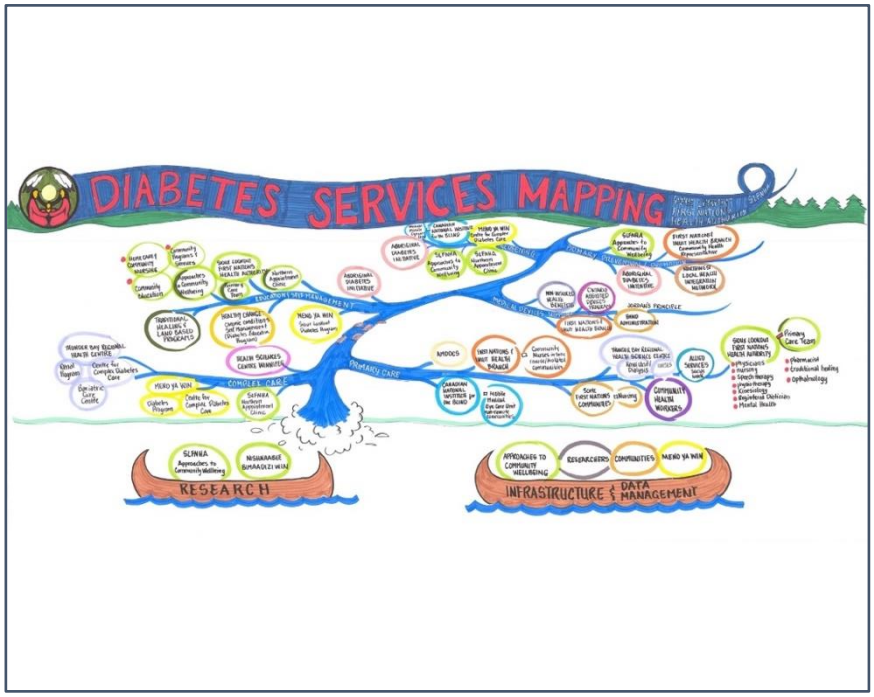
The customized CHW Diabetes Program Database will be enhanced, allowing for improved patient follow-up, enriched clinical team decision-making and the generation of community health data. More patient data management training will also be integrated into the program to support CHW capacity in monitoring patient wellness, as well as creating community health team reports.

In partnership with SLA communities, a holistic evaluation framework for the CHW Diabetes Program continues. Customized KTE strategies are in development and will promote First Nations ownership of healthcare in the SLA, support broad dissemination of program findings, and guide application of the CHW Model to other sectors and regions.

SLFHNA is also examining opportunities to leverage existing internal resources to expand the CHW Diabetes Program by integrating existing public health and primary care initiatives into the CHW Model of Care. The *SLFNHA Regional Diabetes Strategy*[8] will guide the coordination of diabetes services both internal and external to SLFNHA, and create a more holistic approach to diabetes care at the community level.

SLFNHA Regional Diabetes Strategy

Funding for diabetes services in the SLA is provided by a variety of federal, provincial and community-based sources, with each delivering distinct programs based on disparate policies. Based on findings in the *Diabetes Environment Scan for the Sioux Lookout Area*[9], communities and service providers reported that both the governance and coordination of diabetes services is unclear[3]. The patchwork of services also gives rise to providers operating in silos, with limited communication



Development of a Diabetes Services Map was a key component of the Regional Diabetes Strategy and illustrates the available diabetes programs and services across the SLA.

between diabetes service providers.

To support better coordination among SLA services providers and communities in addressing diabetes care, the CHW Diabetes Program led the development of a Regional Diabetes Strategy. SLFHNA is leading on operationalization of the *SLFNHA Regional Diabetes*[8] *Strategy* by: 1) supporting the coordination of services amongst diabetes programs, 2) supporting communities with the transition of new diabetes programs and 3) advocating for increased community resources to support new diabetes programs. CHWs are an integral part of the healthcare system, and the CHW Diabetes Program will continue to support CHWs and local collaborators to achieve quality patient care for the SLA.

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