Exploring community-based approaches to address type 2 diabetes in Indigenous communities in Canada: A case series

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Agenda

1. Introduction - What is diabetes?
   - Star Activity
2. Background - Food security
   - Wellness Tower
3. Research Questions
4. Methods
5. Results
   - Group activity
6. Discussion - Conceptual Framework
7. Conclusion
Introduction

What is diabetes?

Definition by Western healthcare practitioners

Perceptions of diabetes by Indigenous peoples
Introduction

Foundational determinant of health

Economic status

- Connections to the land
- Physical activity
- Nutrition
  - Spiritual and emotional wellness
Biographical disruption of diabetes
Background

- **Food systems**
- **Traditional foods**

Our focus ...

Colonialism

Food insecurity
Background

Availability
Access
Utilization
Stability
Research Questions

1. What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes since 1990?

1. Based on these cases, what common themes have made community-based approaches effective in addressing diabetes?

Focus is on approaches that address food insecurity and systems
RQ = What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?

GOALS

1. Identify community-based approaches that were successful in addressing diabetes in remote Indigenous communities since 1990

1. Present a preliminary conceptual framework that summarizes underlying themes behind these approaches to diabetes management
Why focus on community-based approaches?
Wellness Towers

Each coloured paper represents a different common resource used to address diabetes:

- **Red** = Educational programs
- **Orange** = School gardens
- **Navy blue** = Community gardens
- **Purple** = Access to traditional foods
- **Light blue** = Consultations with healthcare professionals
- **Green** = Youth programming
- **White** = Promotional materials on nutrition

**Objective:** Build the tallest paper tower possible
Methods

★ **Databases:*** PubMed, SCOPUS and Indigenous Peoples North America

★ **Study Designs:** Case-studies, cohort studies, systematic reviews and meta-analyses

★ **Other sources include websites by Indigenous communities, Facebook groups, community posters on social media**

RQ = What **community-based approaches** have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Results

- Kahnawake First Nation
- Sandy Lake First Nation
- Garden Hill First Nation
- Teaching to Prevent Diabetes (ZATPD)
- Diabetes and My Nation

Case Studies
Results - Kahnawake First Nation

**Context:** Mohawk Community in Québec

**Program:** Kahnawake Schools Diabetes Prevention Project (KSDPP)

**Objectives:** Offer school-based programming to reduce diabetes incidence by improving dietary intake and sedentary behaviors in children

**Key Findings:**
- Program increased overall awareness of diabetes in the community
- Participants had a more holistic view of health
- Encouraged the building of local assets and sharing of resources within the community

**RQ** = What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Results - Sandy Lake First Nation

**Context:** Objibwe-Cree Community in Northwestern Ontario

**Program:** Sandy Lake Health and Diabetes Project (SLHDP)

**Objectives:** Community-based intervention targeting mental, physical, emotional and spiritual health through a school-based curriculum, diabetes radio show and Northern Store program

**Key Findings:**
- School-based curriculum: Activities such as taste testing and intergenerational learning increased dietary self-efficacy
- Diabetes radio show: Q&A sessions significantly increased community diabetes knowledge
- Northern Store program: The use of printed labels and taste tests increased selection of low-fat and sugar-free foods in the grocery store

RQ = What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Results - Zhiiwapenewin Akino’maagogewin

**Context:** Seven First Nations communities in Northwestern Ontario

**Program:** Teaching to Prevent Diabetes

**Objectives:** Increase physical activity and improve the diets of community members through a school, store and community approach.

**Key Findings:**
- **School:** Adapted teachings from SLHDP study
- **Store:** Promoted healthier alternatives through artwork, flyers and cooking demonstrations
- **Community:** Mass promotion of health services through posters, local cable, and education workshops to learn about healthier behaviors
- **Overall:** Improvements in diet-related behaviors and T2DM management

**RQ** = What *community-based approaches* have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Results - Diabetes and My Nation

**Context:** First Nations communities in British Columbia

**Program:** Creation of community-based E-health platform to access health information regarding diabetes

**Objectives:** Offer culturally appropriate diabetes prevention and management programming and access to a Mobile and Virtual Diabetes Clinics

**Key Findings:**
- **Adults:** Viewed educational videos created by traditional healers and attended circle sessions for group discussion surrounding diabetes
- **Youth and school-age children:** Learned about diabetes through cultural activities
- **Overall:** Improved diabetes management as evidenced by lowered blood sugar and blood pressure levels among community members

**RQ** = What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Results - Garden Hill First Nation

**Context:** Ojibwe-Cree community located in Northeast Manitoba

**Program:** Peer-mentoring for diabetes prevention

**Objectives:** Offer an after-school peer-mentoring program to build strengths of youth in the community

**Key Findings:**
- Reports of self-efficacy regarding healthy eating knowledge increased after peer-led sessions
- Decrease overall in children’s waist circumference following the implementation of the initiative

**RQ** = What community-based approaches have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
Connection to Food Security

RQ = What *community-based approaches* have Indigenous peoples in remote Canadian settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?
What roles do community stakeholders play?
Revisiting the research questions

1. What **community-based approaches** have Canadian Indigenous peoples in remote settings implemented to effectively address the increasing incidence of diabetes in their setting since 1990?

1. Based on these cases, what **common themes** have made community-based approaches effective in addressing diabetes?
Discussion

Adaptability of Programs

Ownership

Cultural Relevance

Self-efficacy

Disease management