

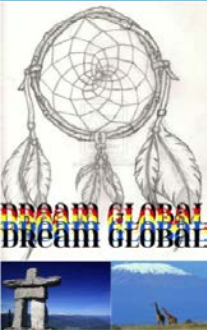


# Perspectives from the NOSM- HSF Chair in Aboriginal and Rural Health Research

Dr. Sheldon Tobe

MD, MSc (HPTE), FRCPC,  
FACP, FASH

NOSM/HSF Chair in Aboriginal  
and Rural Health Research



# Sheldon Tobe Clinical and Research Activities

Time period	Activities
1992 to present	Nephrologist Sunnybrook HSC Toronto
1990's	Dialysis Research
2000 to present	Participated in and Led Canadian Clinical Practice Guidelines groups
2000-2010	DREAM studies in the Battlefords Sask.
2008 to 2014	AHMP with HSF - Ontario
2011 to present	DREAM Global study Canada and Tanzania
2013 to present	HSF Chair Aboriginal and Rural Health Research at NOSM

# Presenter Disclosure

- Relationships with commercial interests related to this talk:
  - Grants/Research Support: none
  - Speakers Bureau/Honoraria: none
  - Consulting Fees: none

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Northern Ontario  
School of Medicine  
École de médecine  
du Nord de l'Ontario  
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*Innovative Education and Research  
for a Healthier North.*

# Transforming health professional education through social accountability: Canada's Northern Ontario School of Medicine

ROGER STRASSER<sup>1</sup>, JOHN C. HOGENBIRK<sup>2</sup>, BRUCE MINORE<sup>3</sup>, DAVID C. MARSH<sup>1</sup>, SUE BERRY<sup>1</sup>, WILLIAM G. MCCREADY<sup>1</sup> & LISA GRAVES<sup>1</sup>

<sup>1</sup>Northern Ontario School of Medicine, Canada, <sup>2</sup>Laurentian University, Canada, <sup>3</sup>Lakehead University, Canada

## Abstract

**Background:** The Northern Ontario School of Medicine (NOSM) has a social accountability mandate to contribute to improving the health of the people and communities of Northern Ontario. NOSM recruits students from Northern Ontario or similar backgrounds and provides Distributed Community Engaged Learning in over 70 clinical and community settings located in the region, a vast underserved rural part of Canada.













**4. Develop a way to answer the question**

#### **4. Develop a way to answer the question (BP lowering)**

- 1. Who should we study?**
- 2. How will we measure it?**
- 3. When will the measurement be taken?**
- 4. How will we lower the BP?**

- 4. Develop a way to answer the question (BP lowering)**
  - 1. Who should we study?**  
**Everyone or certain individuals?**
  - 2. How will we measure it?**  
**Is the method validated? Affordable? Approved?**
  - 3. When will the measurement be taken?**  
**Relationship to other therapy, adherence?**
  - 4. How will we lower the BP?**  
**Is the therapy safe? Effective? Affordable? Approved?**



# The DREAM Story



D.R.E.A.M. 1 -1998 – The Battlefords Saskatchewan  
Community wide screening of hypertension and  
DM

D.R.E.A.M. 2 1999-2000.

Physician BP protocol with Nurse follow up  
visits.

D.R.E.A.M. 3 2001-04. (CIHR grant 2001)

Nurse administered medication algorithm for BP

D.R.E.A.M. Follow-up 2003-05.

Follow up BP 2 years after D.R.E.A.M.

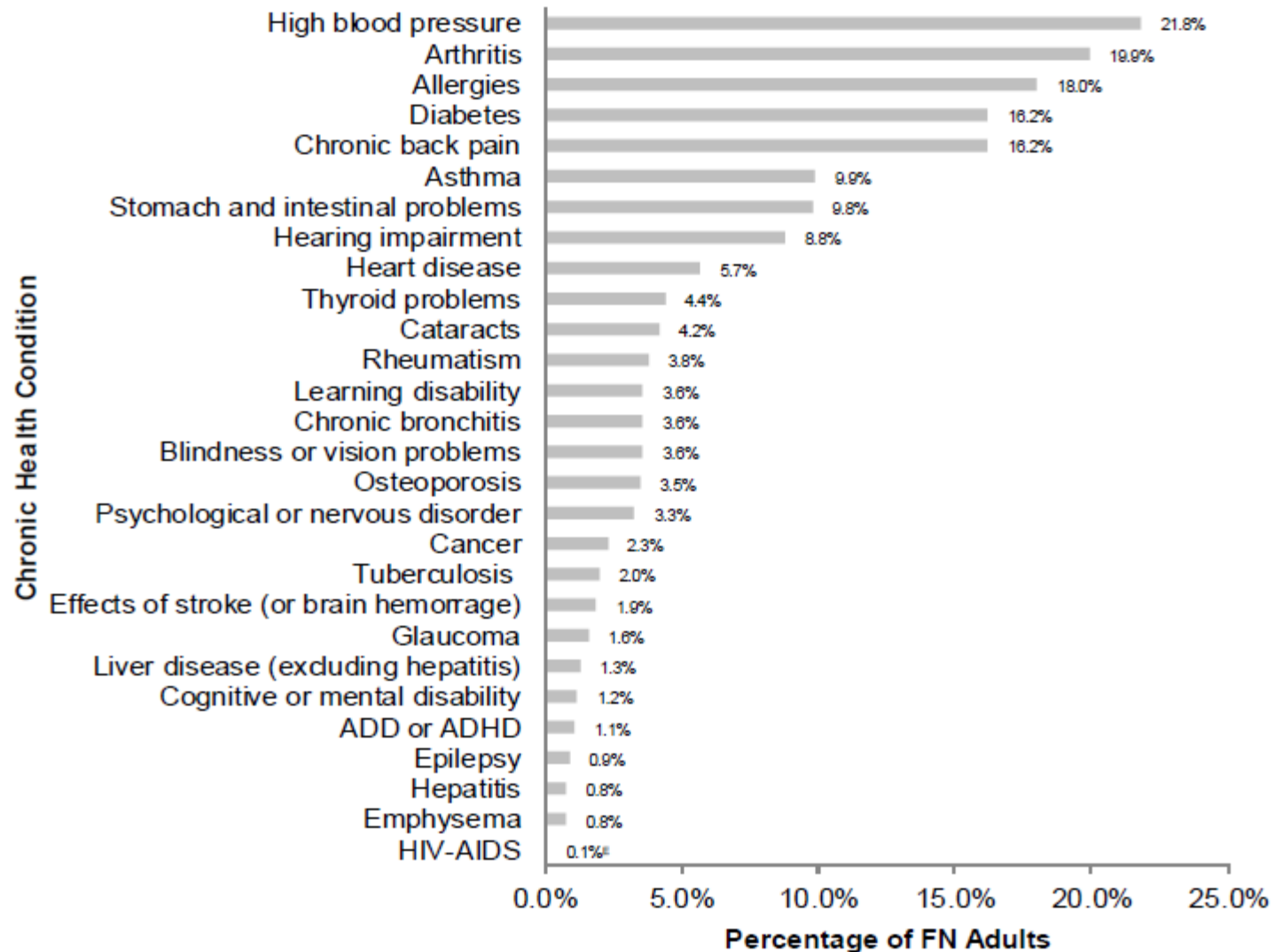
D.R.E.A.M.-Tel 2006-2008

BlueTooth glucometers, insulin initiation in community

DREAM GLOBAL CIHR 2012 + (Grant received 2012)

Chisasibi, Eel River Bar, M'Chigeeng, Wikweminkong.AOK,  
Seshegwaning.

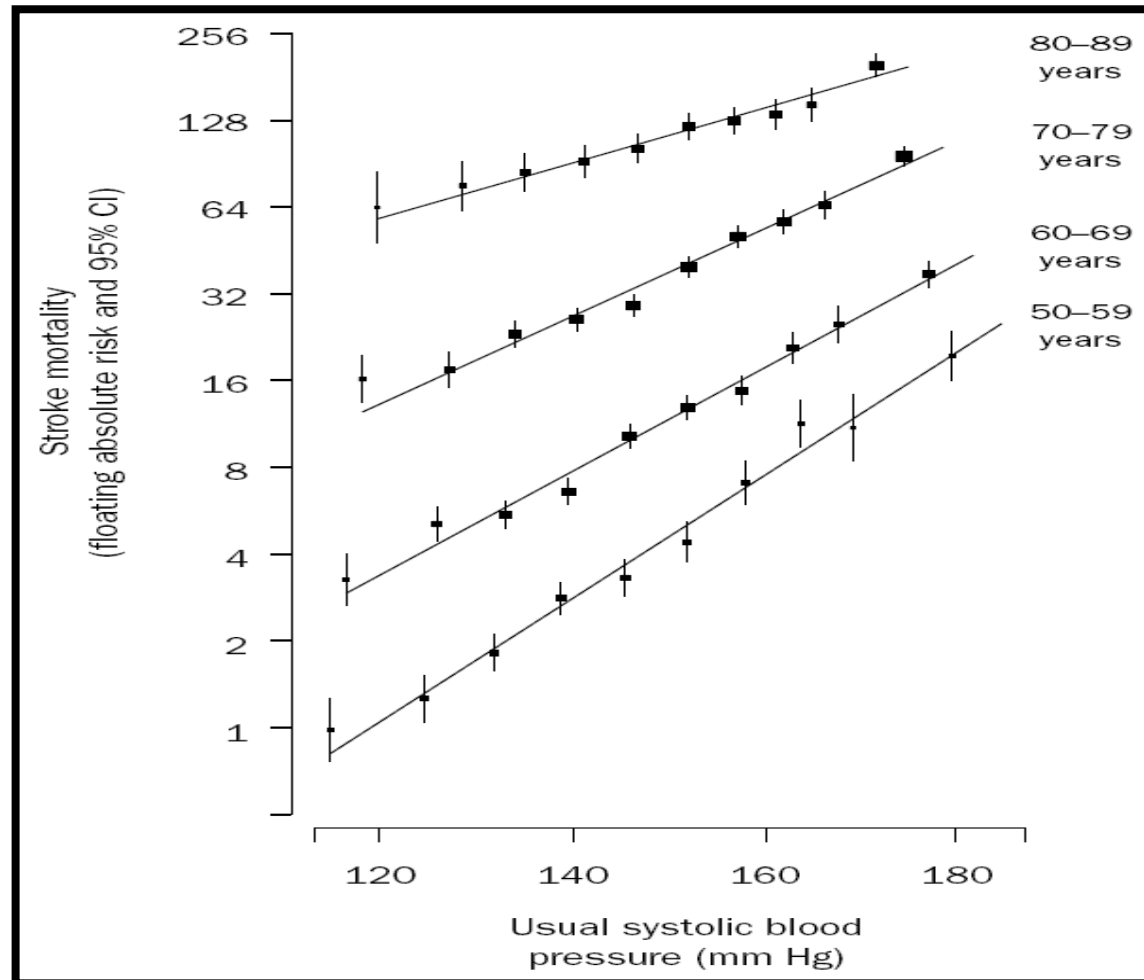
# Demographics of Hypertension



The First Nations Information Governance Centre, First Nations Regional Health Survey (RHS) Phase 2 (2008/10) National Report on Adults, Youth and Children Living in First Nations Communities. (Ottawa: The First Nations Information Governance Centre, June 2012)

# The Burden of Hypertension

## Blood Pressure and Risk of Stroke Mortality



# Benefits of Treating Hypertension

- Younger than 60 (reducing BP 10/5-6 mmHg)
  - reduces the risk of stroke by **42%**
  - reduces the risk of coronary event by **14%**
- Older than 60 (reducing BP 15/6 mmHg)
  - reduces overall mortality by **15%**
  - reduces cardiovascular mortality by **36%**
  - reduces incidence of stroke by **35%**
  - reduces coronary artery disease by **18%**



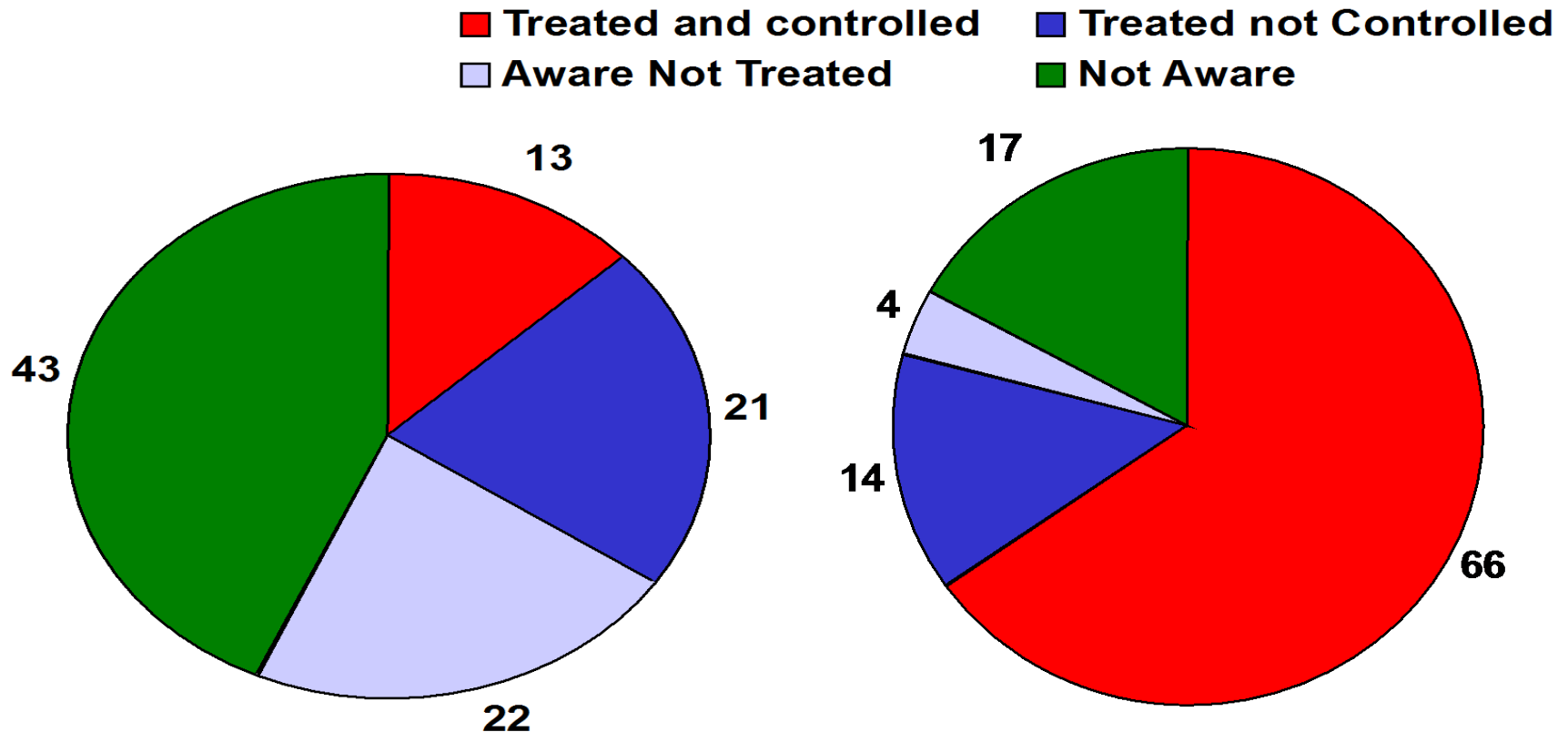
# Canadian Hypertension Education Program (CHEP) Concept development

- Poor hypertension control in Canada relative to United States lead in the late 1990s to extensive discussions on how to improve blood pressure control
- CHEP in 2000 a more rigorous annually updated recommendations program
- An evolving and extensive knowledge dissemination program
- In 2003, a formal outcomes program added

# Changes in Management of Hypertension in Canada

CHHS 1985-1992  
Canada

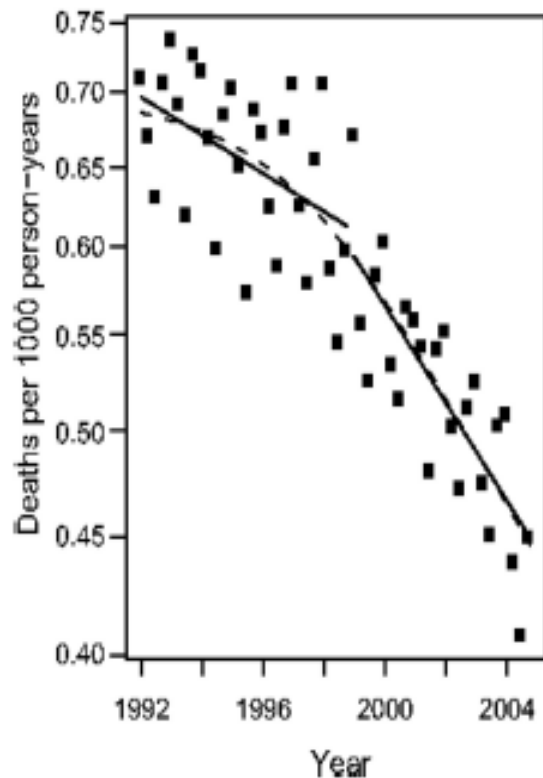
CHMS 2007/8



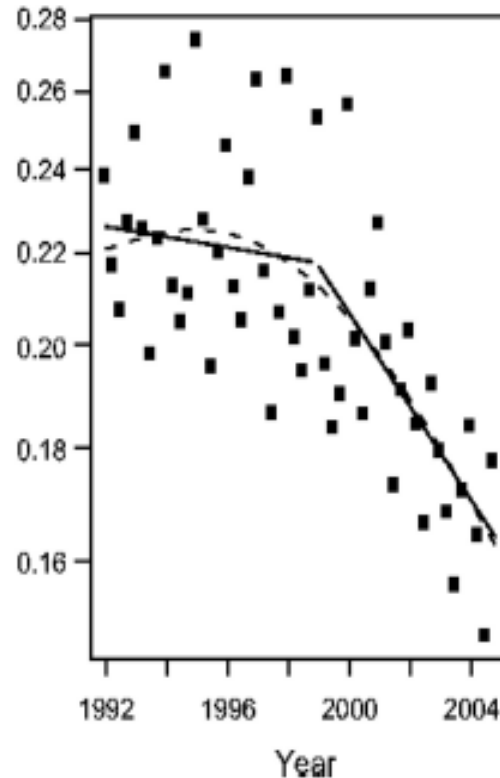
# Improvements in BP control are associated with improvements in outcomes

## DEATH

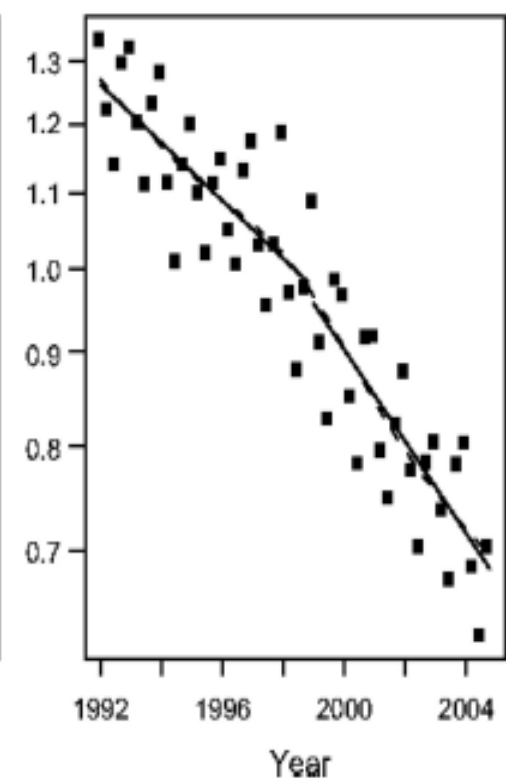
**A Stroke**



**B Heart Failure**



**C Acute Myocardial Infarction**





# IS THE RESEARCHER READY?

- Understanding Canada's colonial history and its impact on Indigenous communities
  - Knowledgeable about the community and its history
- Appreciating the diversity among and within Indigenous communities
- Previous experiences of the researcher working with Indigenous communities
- Willing to work with community stakeholders in deciding the research questions and methodology
- Prepared for lengthy timeframes
- Silence and humour



# *Certificate of Completion*

*This document certifies that*

*has completed the Tri-Council Policy Statement:  
Ethical Conduct for Research Involving Humans  
Course on Research Ethics (TCP5 2: CORE)*



# TCPS 2: CORE

## Module 9: Research Involving First Nations, Inuit & Métis Peoples of Canada



**Panel on Research Ethics**  
[www.pre.ethics.gc.ca](http://www.pre.ethics.gc.ca)

### Acknowledgements

The [Panel on Research Ethics](http://www.pre.ethics.gc.ca) (PRE) would like to thank the Advisory Committee on TCPS 2 Chapter 9: Research Involving First Nations, Inuit & Métis Peoples of Canada. Members of the committee included:

- Judith Bartlett
- Julie Bull
- Heather Castleden
- Joyce Helmer
- Julien Hountin
- John (Cle-alls) Medicine Horse Kelly
- Lucie Levesque
- Debra Martin
- Amy Nahwegahbow
- Cynthia Stirbys
- Debra Webster









# Sandy Lake Health and Diabetes Project: a community-based intervention targeting type 2 diabetes and its risk factors in a First Nations community

**Kara E. Kakagumick<sup>1</sup>, Mariam Naqshbandi Hayward<sup>1</sup>, Stewart B. Harris<sup>1</sup>, Brit Saksvig<sup>2</sup>, Joel Gittelsohn<sup>3</sup>, Gary Manokeesic<sup>4</sup>, Starsky Goodman<sup>4</sup> and Anthony J. Hanley<sup>5\*</sup>**

<sup>1</sup> Centre for Studies in Family Medicine, Department of Family Medicine, Schulich School of Medicine and Dentistry, The University of Western Ontario, London, ON, Canada

<sup>2</sup> Department of Epidemiology and Biostatistics, University of Maryland School of Public Health, College Park, MD, USA

<sup>3</sup> Center for Human Nutrition and Johns Hopkins Global Center of Childhood Obesity, Department of International Health, John Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

<sup>4</sup> Sandy Lake Health and Diabetes Program, Sandy Lake First Nation, ON, Canada

<sup>5</sup> Departments of Nutritional Sciences and Medicine and Dalla Lana School of Public Health, Faculty of Medicine, University of Toronto, Toronto, ON, Canada

gies toward diabetes prevention. The most successful components of the intervention have been the school-based diabetes prevention program, the diabetes radio show, the Northern store initiatives, and diabetes prevention programming within the community. The successes of the SLHDP can be attributed to multi-institutional strategies, adaptability, suitability, and community participation and ownership. Aspects of the SLHDP intervention strategy have





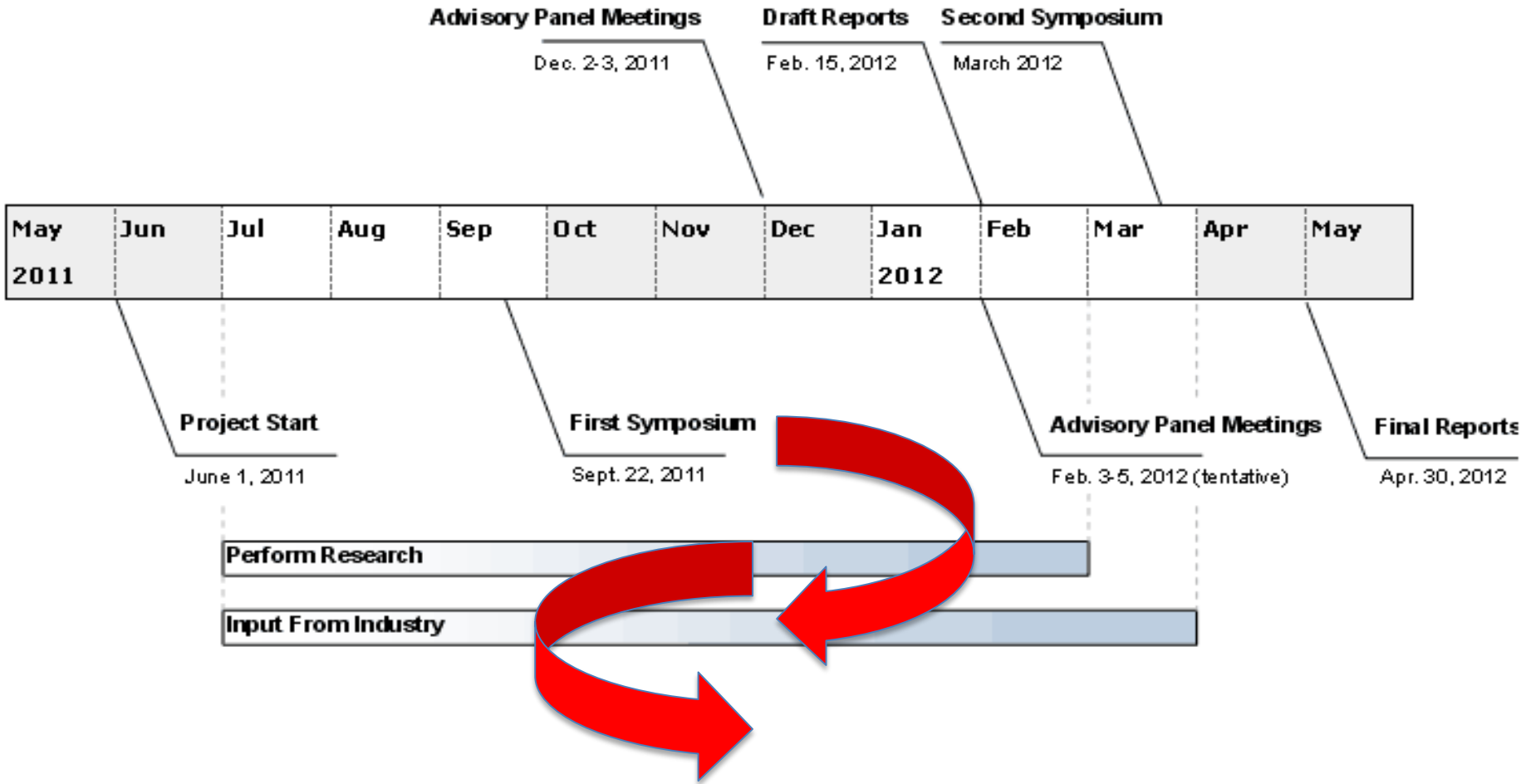




**Company Name**

**Project Title**

Project Schedule



**Company Name**

**Project Title**

Project Schedule

**Advisory Panel Meetings**

Dec. 2-3, 2011

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May 2011	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 2012	Feb	Mar	Apr	May
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**Project Start**

June 1, 2011

**First Symposium**

Sept. 22, 2011

**Advisory Panel Meetings**

Feb. 3-5, 2012 (tentative)

**Final Reports**

Apr. 30, 2012

**Perform Research**

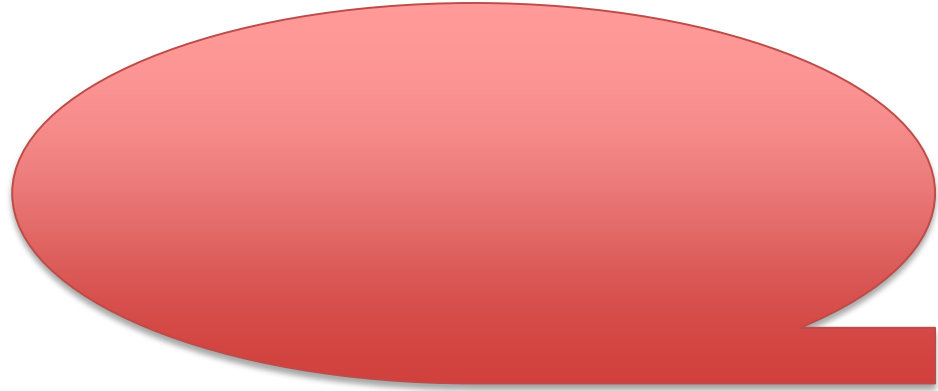
**Input From Industry**

















# ANISHINAABEK VALUES & TRI-COUNCIL POLICY STATEMENT

- The *Guidelines for Ethical Aboriginal Research* are based on Anishinaabek values specifically the Seven Grandfather Teachings: respect, wisdom, love, honesty, humility, truth and bravery.
- Tri-Council Policy Statement:
  - respect for human dignity,
  - respect for free and informed consent,
  - respect for vulnerable persons,
  - respect for privacy and confidentiality,
  - respect for justice and inclusiveness,
  - balancing harms and benefits,
  - minimizing harm and maximizing benefit.

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Truth and  
Reconciliation  
Commission of Canada

# **Truth and Reconciliation Commission of Canada: Calls to Action**









# Barriers to Receiving Care

Why can't someone on reserve get the same level of care for their CDM as my patient at Sunnybrook HSC?

- Geography
- Isolation
- Lack of specialists
- Rapid turnover of primary care MD
- Social Determinants
  - Can't get to MD office, pharmacy
  - MD – patient communication
  - Trust factors
  - Community experiences (ie what happened when neighbor started insulin





R R E A C  
H





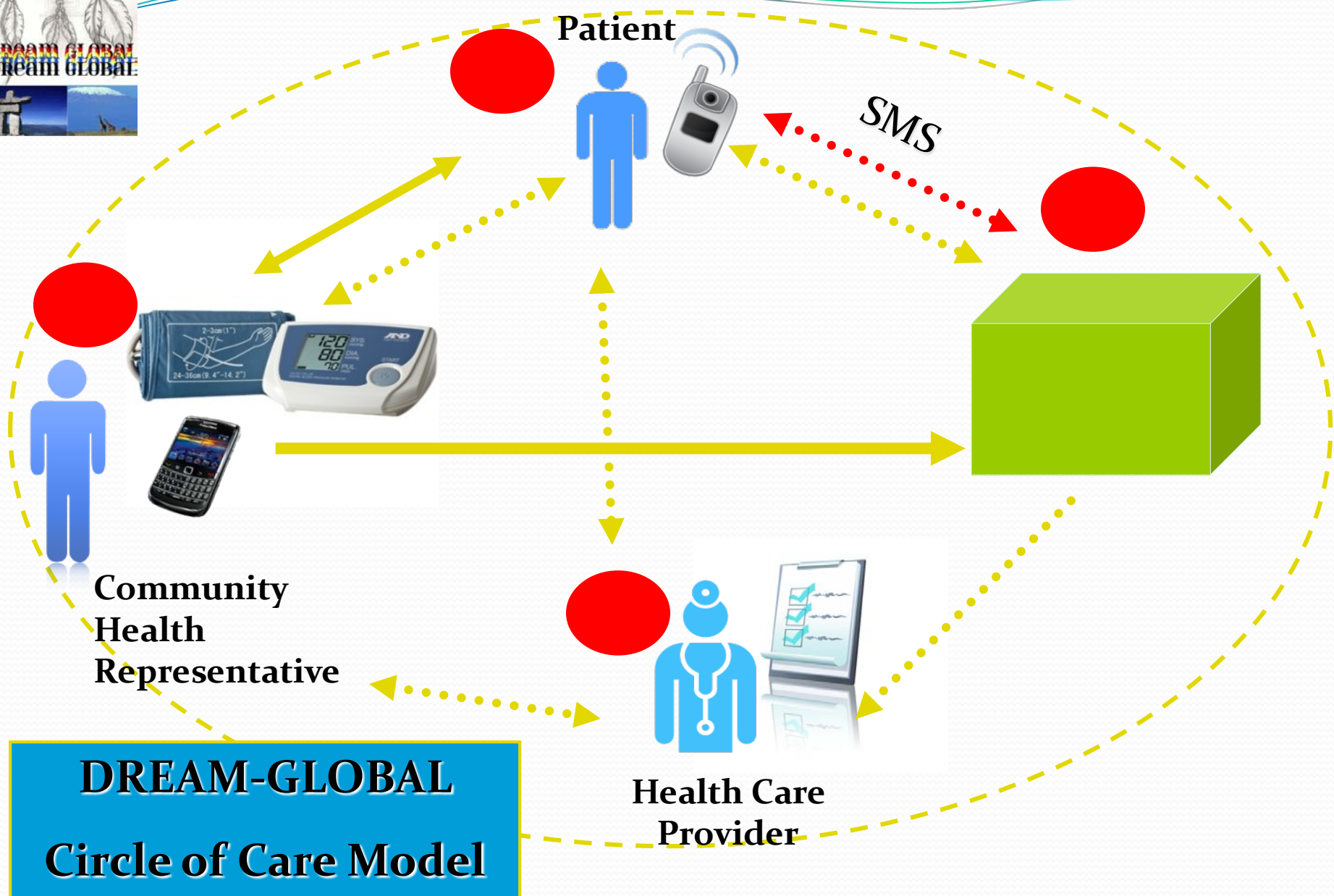
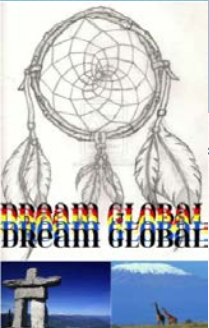


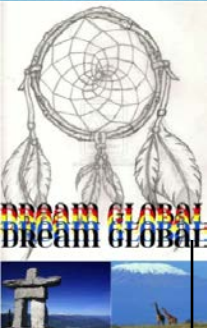
# Dream Global Study

Through working collaboratively with ***First Nations participants*** and ***health care providers***, Dream Global aims to test the use of SMS for better BP control among First Nations. Supporting the existing health care system.

SMS (short messaging service) texts have been used in studies for management of chronic diseases, blood pressure, weight loss, asthma, and HIV in developing countries with a wide range in effectiveness

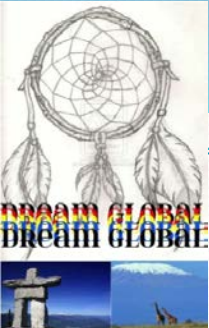






# Post Participation Feedback

1	<p>Were the messages you received clear enough? Did they make sense to you?</p> <p>Were there any that you did not like or did not understand? Which should be improved? Did they fit with the culture in your community?</p>
2	<p>Was the timing and frequency of messages okay for you? Please explain.</p>
3	<p>Can you tell me about your experience with the phone? Did you experience any issues with the phone? For what else did you use the phone? Was the technology easy enough?</p>
4	<p>Did you have any concerns about receiving health messages on your phone?</p>
5	<p>What did you like best about receiving text messages?</p>
6	<p>What did you like least about receiving text messages?</p>
7	<p>Would you recommend participating in this program to a friend or relative with hypertension?</p>



# Post Participation Feedback

1. Were the messages you received clear enough? Did they make sense to you?

Were there any that you did not like or did not understand? Which should be improved? Did they fit with the culture in your community?

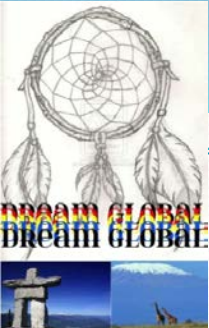
	Participant 1	Participant 2	Participant 3
1	Yes, the messages all made sense to me and they were culturally relevant to our community.	Yes, I liked all of the messages, and I was satisfied that they fitted our community	Yes, They made sense to me. Some were too repetitive though.



# Post Participation Feedback

2. Was the timing and frequency of messages okay for you?  
Please explain

	Participant 1	Participant 2	Participant 3
2	Yes, fine with me	Yes, but I also think more often would have been okay with me.	Yes, It was okay. They got my attention. Some were motivating.

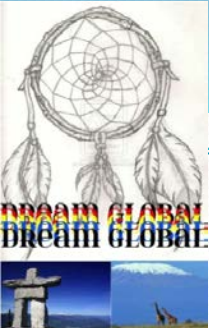


# Post Participation Feedback

3. Can you tell me about your experience with the phone?  
Did you experience any issues with the phone? For what else did you use the phone? Was the technology easy enough?

	Participant 1	Participant 2	Participant 3
3	<b>Flip phone was alright. No problems, but I prefer my own phone. The messages would not come to my personal phone so I used the flip for messages.</b>	<b>I used my personal phone and I had no issues.</b>	<b>I used my own phone and had no difficulty with receiving messages.</b>

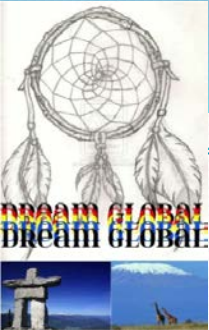




# Post Participation Feedback

4. Did you have any concerns about receiving health messages on your phone?

	Participant 1	Participant 2	Participant 3
4	No privacy concerns getting messages	I also received the messages while I was in the hospital and it was no problem.	No privacy concerns.



# Post Participation Feedback

5. What did you like best about receiving text messages?

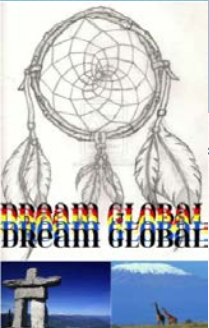
	Participant 1	Participant 2	Participant 3
5	Nothing special	Very informative	I felt like somebody cared about my health. The messages were good reminders and were motivating.



# Post Participation Feedback

6. What did you like least about receiving text messages?

	Participant 1	Participant 2	Participant 3
6	Least, no problems.	No flaws	Some were repetitive and I would have liked some new messages with information I didn't already know.



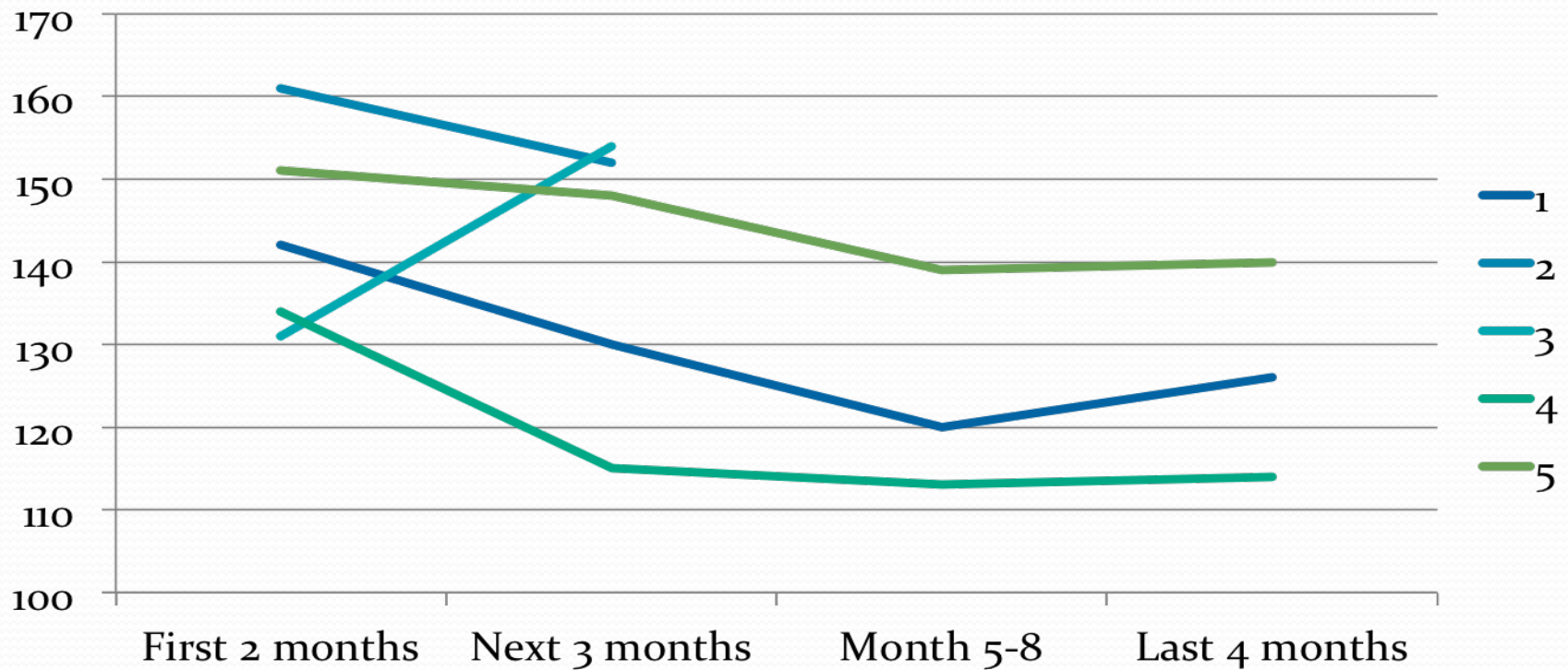
# Post Participation Feedback

7. Would you recommend participating in this program to a friend or relative with hypertension?

	Participant 1	Participant 2	Participant 3
7	Yes, keeps a check on your blood pressure and talks about your health. I didn't see the doctor more often.	Yes, I found them helpful after my heart attack especially with the ideas and support.	Yes, Promotes awareness of good health. Keeps you on track. Enjoyed being a participant. Makes you feel special. Promotes health. Biggest change I made was to stop drinking diet pop everyday. I feel so much better now that I am off it altogether.



# BP – Community C Participants



Blood pressure readings are delivered to the participant's cell phone and to their Health Care Practitioner and DG Server.

Each data point is the average of three readings sent to the server.



## Close Out: Next Steps

Blood pressure awareness posters?

Community interest in sustaining the DREAM GLOBAL platform?

Central Servers: Health Canada

Community Champion?

Text Messages:

- Expand beyond hypertension – Diabetes? Pregnancy well woman health? Mental health?
- Ongoing evaluations?

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graph TD
    JanFeb[Jan/Feb] --> ReviewData[Review Data with student and an Aboriginal rep from COO Data Governance Committee for sensitivities]
    ReviewData --> StudentReview[1. Student does literature review with help of HOSM Librarian. (introduction)  
2. Introduce the data to the community. Create a graphic or table to convey the data. Put data into context (results)]
    StudentReview --> CommunityApproval[With community approval complete discussion. Complete abstract and submit or submit manuscript]
    CommunityApproval --> StartHere[Start Here: Pair Community with Question and Student: HSFO funding]
    StartHere --> BCR[BCR for question and research. Submit ethics]
    BCR --> NotifyChief[Notify Chief's of Ontario Data Governance Committee]
    NotifyChief --> ICE[ICES (Saba Khan/Joelleh) to write methodology section]
    ICE --> JanFeb
  
```

The diagram illustrates a cyclical process for community-based research. The central cycle consists of six months, each represented by a colored box: Jan/Feb (white), March/April (yellow), May/June (orange), July/Aug (red), Sept/Oct (dark red), and Nov/Dec (black). Surrounding this cycle are seven rectangular boxes containing specific tasks or milestones, connected by arrows indicating a clockwise flow. The tasks are: 1. Student does literature review with help of HOSM Librarian. (introduction); 2. Introduce the data to the community. Create a graphic or table to convey the data. Put data into context (results); With community approval complete discussion. Complete abstract and submit or submit manuscript; Start Here: Pair Community with Question and Student: HSFO funding; BCR for question and research. Submit ethics; Notify Chief's of Ontario Data Governance Committee; and ICES (Saba Khan/Joelleh) to write methodology section.

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