Indigenous Access to Bariatric Care

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Financial Disclosures

(over past 24 months)

	Speaker	Advisory	Research	Consultant
AbbVie				
Allergan				
Janssen				
Lupin Pharma				
Mylan				
Olympus				
Pendopharm				
Pentax Medical				
Pfizer				
Shire				
Takeda				

CanMEDS Roles Covered: Hardy - “Canadian Obesity Weekend 2022”

X	**Medical Expert** (as *Medical Experts*, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills, and professional values in their provision of high-quality and safe patient-centered care. *Medical Expert* is the central physician Role in the CanMEDS Framework and defines the physician’s clinical scope of practice.)
X	**Communicator** (as Communicators, physicians form relationships with patients and their families that facilitate the gathering and sharing of essential information for effective health care.)
	Collaborator (as *Collaborators*, physicians work effectively with other health care professionals to provide safe, high-quality, patient-centred care.)
	Leader (as *Leaders*, physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.)
X	**Health Advocate** (as *Health Advocates*, physicians contribute their expertise and influence as they work with communities or patient populations to improve health. They work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilization of resources to effect change.)
	Scholar (as *Scholars*, physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and by teaching others, evaluating evidence, and contributing to scholarship.)
X	**Professional** (as *Professionals,* physicians are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, physician-led regulation, and maintenance of personal health.)

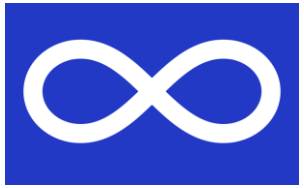
TRADITIONAL TERRITORIES ACKNOWLEDGEMENT

The University of Manitoba campuses are located on original lands of Anishinaabeg, Cree, Oji-Cree, Dakota, and Dene peoples, and on the homeland of the Métis Nation.

We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.

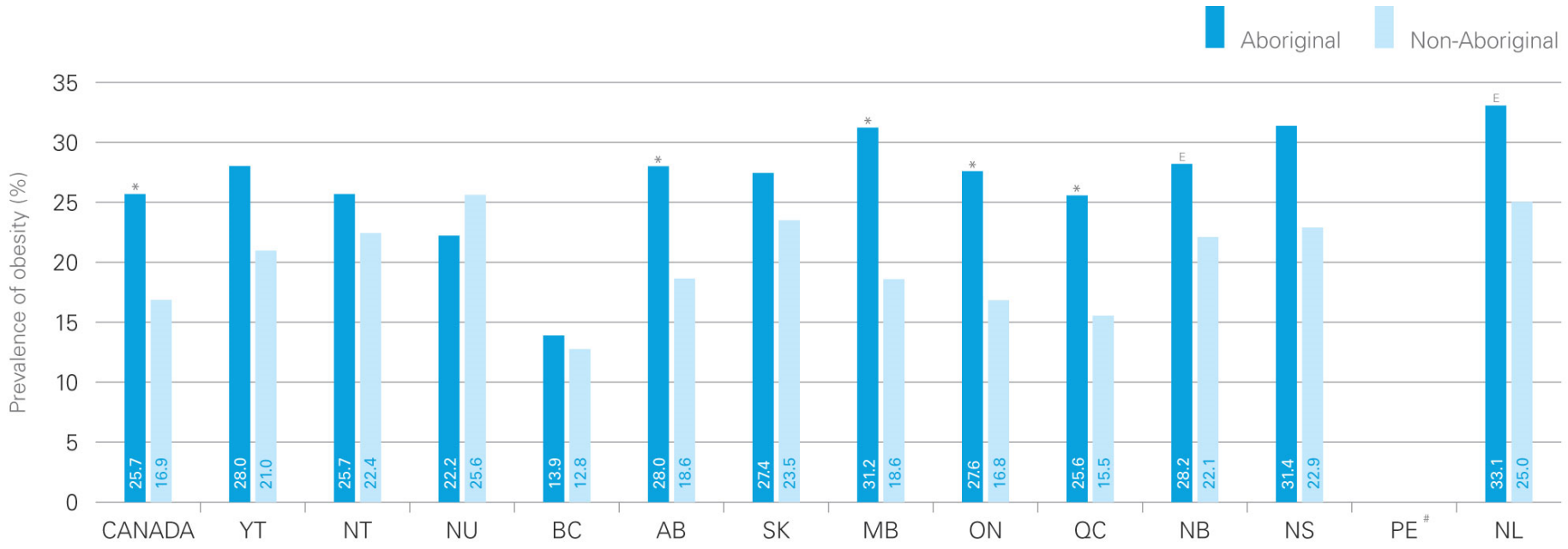
Obesity in Indigenous Populations

	Obesity Rate (%)
First Nations On Reserve	30-51%
First Nations Off Reserve	21-42%
Inuit	28-49%
Métis	24%



Journal of Obesity Volume 2019, Article ID 9741090, 20 pages https://doi.org/10.1155/2019/9741090

Obesity in Indigenous Populations



NOTES: * Statistically different from non-Aboriginal people at p<0.05. [E] High sampling variability, interpret with caution.
[#] Prince Edward Island was excluded from the analysis because of the small sample.
SOURCE: Analysis of the 2007/08 Canadian Community Health Survey, Statistics Canada.

Indigenous Health

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Intergenerational Trauma

Graphic adapted from FCSS Calgary Aboriginal Research Brief #6, 2014

Food Security

"exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life"

Food Sovereignty

"is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems"

https://foodmattersmanitoba.ca/food-security/

Federal Agricultural Organization of the United States (FAO). (2009). Declaration of the World Summit on Food Security. World Summit on Food Security Rome, Italy: 16-18 November 2009.

La Via Campesina. International Peasants Movement. www.viacampesina.org

Indigenous Food Sovereignty

"As Indigenous People we understand that food is a gift and that we have a sacred responsibility to nurture healthy, interdependent relationships with the land, water, plants and animals that provide us with our food. This also means, having the ability to respond to our own needs for safe, healthy, culturally relevant Indigenous foods with the ability to make decisions over the amount and quality of food we hunt, fish, gather, grow and eat. These rights are asserted on a daily basis for the benefit of present and future generations."

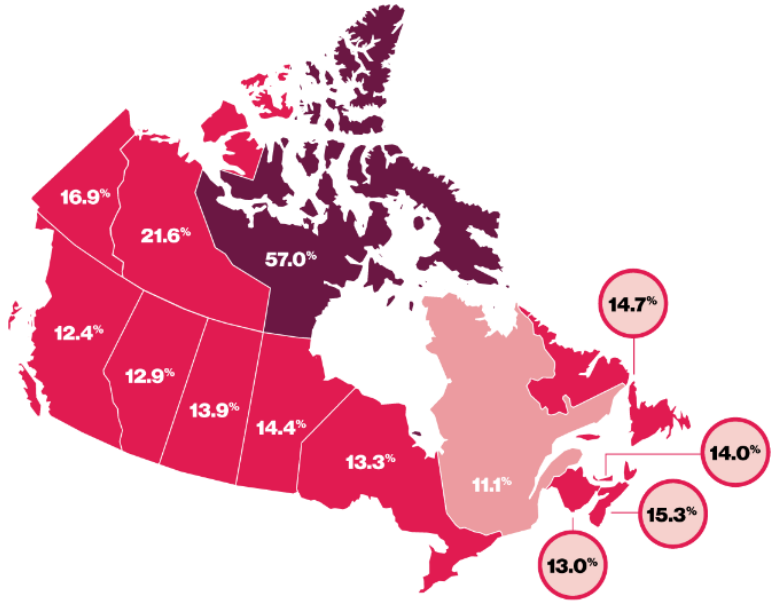
First Nations Health Council. (2009). Healthy Food Guidelines for First Nations Communities. First Nations Health Council, British Columbia.

Indigenous Food Security

- In Manitoban, 60% of Northern residents living on-reserve and over 1 in 5 children experience Household Food Insecurity

- 2011 Canadian Community Health Survey (CCHS) suggest off-reserve Indigenous food insecurity (27%) is more than **double** that of all Canadian households

- International Polar Year Inuit Health Survey (2007-2008) indicates Nunavut has the **highest rate** of food insecurity for any Indigenous population living in a developed country



Data Source: Statistics Canada, Canadian Community Health Survey (CCHS), 2017-18

Indigenous Themes Around Food

Respecting all living things and only take what is needed

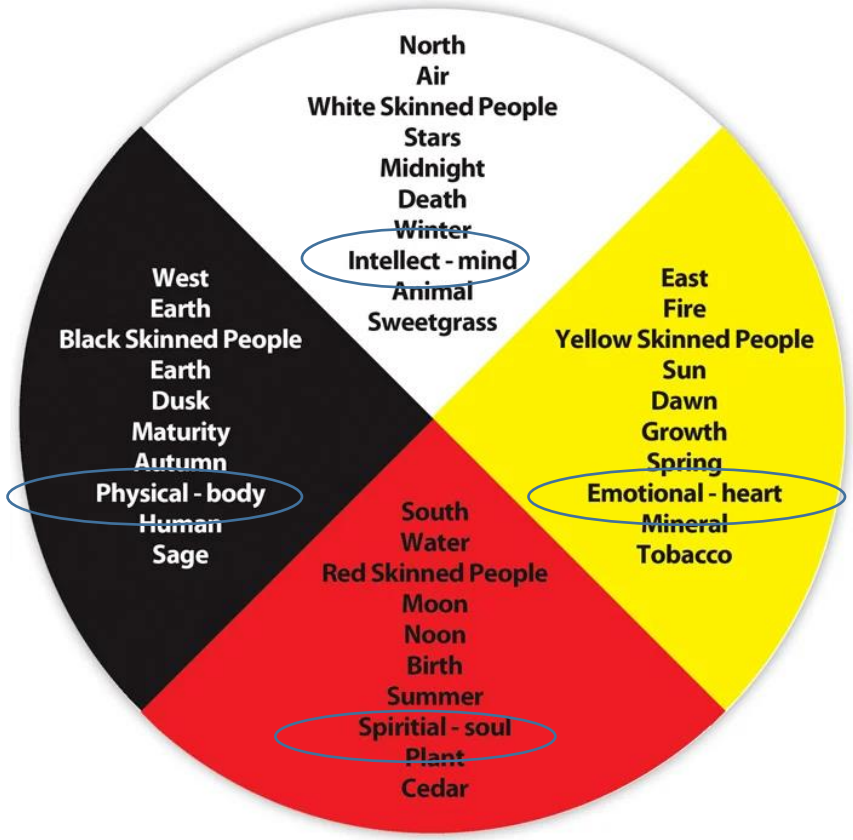
Plants and animals are so much more than just food

Traditional foods are nutrient dense and also provide spiritual benefits

https://www.pearson.com/ca/en/higher-education/higher-education-blog/2021/06/teaching-about-indigenous-food-security.html

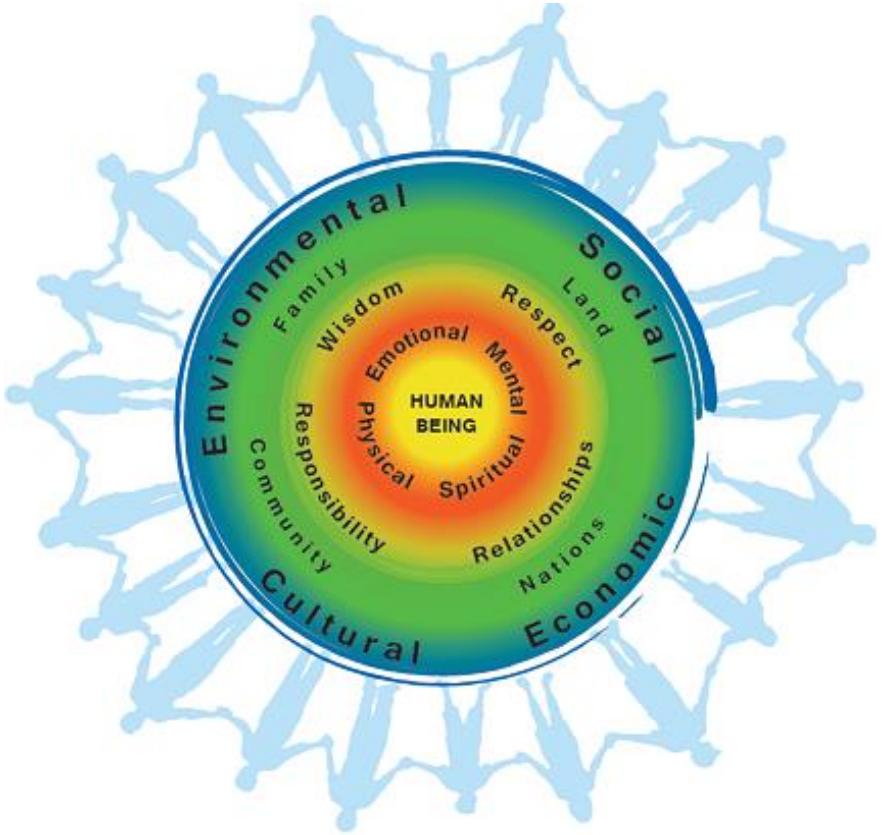
Mi'kmaw Dietitian Melissa Hardy

Traditional Medicine Wheel

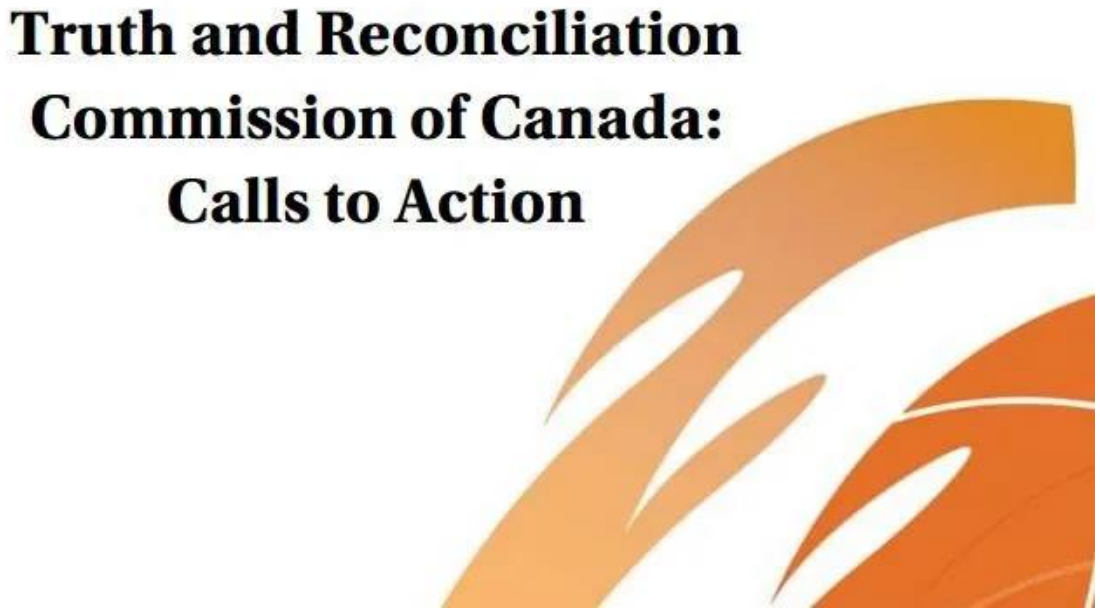


https://www.ictinc.ca/blog/what-is-an-indigenous-medicine-wheel

Indigenous Perspective of Health and Wellness



https://www.fnha.ca/wellness/wellness-for-first-nations/first-nations-perspective-on-health-and-wellness

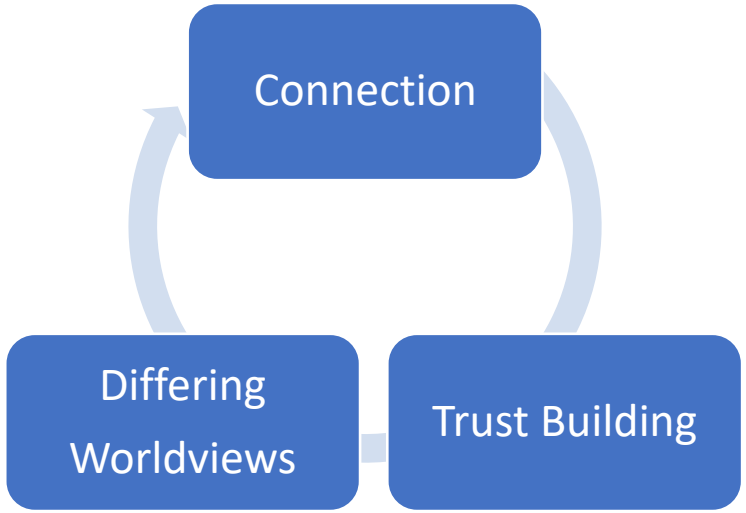


Address chronic diseases

Traditional healing practices

What can we do as health practitioners?

Understand	Understand the patient's social reality
Reflect on	Reflect on personal assumptions, perception and attitudes
Validate	Validate the patient's experience of inequity



https://www.phsd.ca/resources/research-statistics/research-evaluation/reports-knowledge-products/relationship-building-first-nations-public-health-exploring-principles-practices-engagement-improve-community-health-review-literature/

Experiences and Outcomes of Indigenous Patients Undergoing Bariatric Surgery: A Mixed Methods Scoping Review

Zmudzinski, Marta. BSc(H), MD[1]., Daeninck, Felicia[3]., Linton, Janice. BA, MLS[3]., Fowler-Woods, Melinda. BScN, DC, MD[2]., Fowler-Woods, Amanda. MSc[3]., Shingoose, Geraldine. BSw[2]., Vergis, Ashley. MMed, MD, FRCSC, FACS[1]., Hardy, Krista. MSc, MD, FRCSC, FACS[1].

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ONGOMIIZWIN – HEALTH SERVICES

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Research Question

What are the experiences and outcomes of Indigenous people undergoing bariatric surgery?

Methods

- Convergent design mixed-methods scoping review
- PRISMA-ScR guidelines were followed
- Indigenous Health Librarian

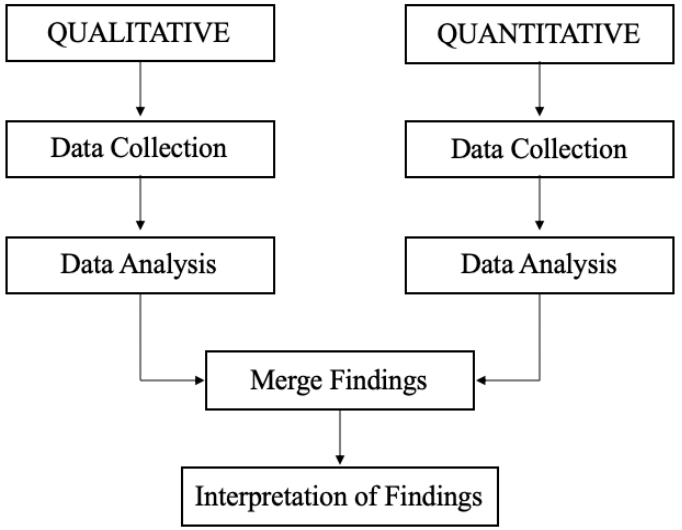


Figure 1: Flow diagram of convergent mixed methods study design.

Methods[1,2]

- Quantitative studies → GRADE approach

Table 1: GRADE levels of evidence

Methodology	Quality rating
Randomized trials; double-upgraded observational studies	High
Downgraded randomized trials; upgraded observational studies	Moderate
Double-downgraded randomized trials; observational studies	Low
Triple-downgraded randomized trials; downgraded observational studies; case series or reports	Very Low

- Qualitative studies → Critical Appraisal Skills Programme (CASP)

Inclusion & Exclusion Criteria

- Inclusion
  - English language
  - Studies from Canada, USA, Australia (Aus), New Zealand (NZ)

- Exclusion
  - Papers that grouped Indigenous people with other ethnic groups/minorities
  - Did not focus on Indigenous patients

Results

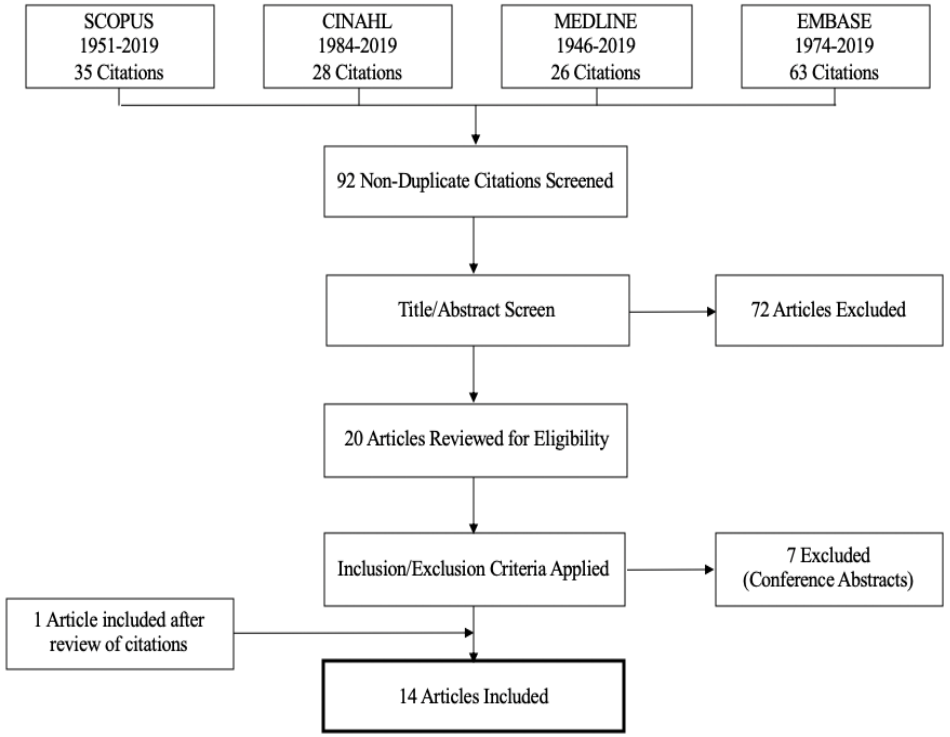


Figure 2: Selection process of papers for review

Quantitative Results

Table 2: Summary of data extracted from quantitative studies

First Author, Year, Title	Study Design	Sample	Outcomes	Results and Major Findings	Limitations & GRADE
Wallace, 2010, Racial, Socioeconomic, and Rural-Urban Disparities in Obesity-Related Bariatric Surgery	Retrospective Cohort	Patients in their database who had BMI > 40 2006 (N = 88,605)	Association between patient characteristics and undergoing bariatric surgery	Native Americans were half as likely to receive surgery. Rural, non-white, male, low income, >40yo, Charlson score >0 patients with no private insurance were 99 times less likely to receive surgery than those with opposite characteristics.	Non-experimental design. Ethnicity is self-reported. Limited to BMI > 40. Included patients based on billing codes. Limitations with multivariate analysis assumptions. GRADE: Low
Lam, 2013, Prescription Drug Cost Reduction in Native Hawaiians After LRYG*	Retrospective Cohort	Native Hawaiian patients who underwent LRYG* with ≥ 1 year follow up 2004 - 2009 (N = 50)	EWL, Changes in number of prescription medications, Prescription drug cost changes	Average EWL was 61%. Post-operatively there was a 67% reduction in number of prescription medications with a 74% reduction in cost of prescription medications	Non-experimental design. Ethnicity is self-reported. Medication documentation could have errors. Supplements not included. GRADE: Low
O'Brien, 2015, The Effect of Weight Loss on Indigenous Australians with Diabetes: a study of Feasibility, Acceptability and Effectiveness of LAGB*	Prospective Cohort Study (compared to previous non-Indigenous RCT)	Indigenous Australians who underwent LAGB*, 18-65yo, BMI>30, T2DM. 2009 - 2010 (N = 30)	Weight loss, Remission of T2DM, Quality of life (SF-36)	Indigenous patients had significant weight loss, remission of T2DM, and increased quality of life. Compared to RCT population, Indigenous patients had similar T2DM remission at 2yrs, increased weight loss.	Small sample size, SF-36 Quality of life survey not validated in Australia's Indigenous population GRADE: Low
Treacy, 2015, Is Gastric Banding Appropriate in Indigenous Or Remote-Dwelling Persons?	Prospective Cohort	All patients who underwent private LAGB* by one surgeon 1998 - 2014 (N = 559)	Time to 50% excess weight loss (EWL); Post-operative complications	No significant difference between metropolitan Indigenous and non-Indigenous groups or between non-Indigenous metropolitan and remote-dwelling groups	Non-experimental design, ethnicity is self-reported, one surgeon/clinic, public sector not captured GRADE: Very Low
Rahiri, 2017, Ethnic disparities in rates of publicly funded bariatric surgery in New Zealand	Retrospective Cohort	Patients who underwent publicly funded bariatric surgery 2009 - 2014 (N = 2109)	Rates of surgery by ethnicity	The number of publicly funded bariatric procedures is 3 times lower in Maori and 5 times lower in Pacific Islanders than in New Zealand Europeans	Non-experimental design, ethnicity is self-reported, database may have errors GRADE: Very Low
Rahiri, 2018, A narrative review of bariatric surgery in Indigenous peoples	Narrative Review (Database Searches)	Bariatric surgery in Indigenous peoples. (N = 6)	Pre-operative, peri-operative and post-operative outcomes	Indigenous patients had poorer access, successful weight loss, and remission of obesity-related comorbidities. Indigenous people had equivocally more weight loss	Limited number of studies in this area. Confounding data. GRADE: Low
Taylor, 2018, Attrition after Acceptance onto a Publicly Funded Bariatric Surgery Program	Retrospective Cross-Sectional	Patients accepted for publicly funded bariatric surgery 2007 - 2016 (N = 704)	Attrition; Reasons for attrition	Predictors of attrition: Male, Maori, Pacific Islander, Smoker, Younger. Reasons for attrition: disengagement highest in Pacific Islanders	Non-experimental design, ethnicity self-identified GRADE: Low
Amirian, 2019, Racial Disparity in 30-Day Outcomes of Metabolic and Bariatric Surgery	Retrospective Cohort	All patients who underwent LRYGB* or LSG* 2016 (N = 106,932)	Post-operative complications, re-admissions, re-operations	Native Hawaiian/Pacific Islanders had higher rates of SSI, American Indian/Alaska Native had increased odds of intervention within 30 days.	Non-experimental design, ethnicity reporting unclear, database may have errors and does not include all important factors. GRADE: Low
Lovrics, 2019, Metabolic outcomes after bariatric surgery for Indigenous patients in Ontario	Retrospective Cohort	All patients who underwent bariatric surgery in Ontario, Canada 2010 - 2018 (N = 16,629)	Access to bariatric treatment, Post-operative outcomes (change in BMI and obesity-related comorbidities)	Similar levels of preoperative evaluation between groups. Lower rates of follow up in Indigenous patients. Similar post-operative outcomes between groups.	Non-experimental design, ethnicity is self-reported, database may have errors, short follow-up period GRADE: Low
Shilton, 2019, Pre-operative Bariatric Clinic Attendance Is a Predictor of Post-operative Clinic Attendance and Weight Loss Outcomes	Retrospective Cohort	All patients who underwent bariatric surgery at their center. 2013 - 2016 (N = 184)	Excess weight loss, Total weight loss, Clinic attendance (pre- and post-operative)	Pre-op clinic non-attendance is correlated with post-op non-attendance and worse weight loss. 50% or more missed post-op appointments is correlated with less weight loss. Māori and Pacific people had poorer clinic attendance, similar weight loss.	Non-experimental design. Clinic practice of discharging patients that miss >2 pre-op appointments may under-estimate the effect between pre- and post-op clinic attendance. Small sample size GRADE: Low

Quantitative Results - Access

- Fewer bariatric surgeries[3-5]
- Higher rates of attrition[6] and lower rates of clinic attendance[7]
- Higher perceived disengagement[6]

Rural, non-white, male, low income, >40yo, without private insurance, and a CCI >0 is *99 times less likely* to undergo bariatric surgery than a counterpart with the opposite characteristics[3]

Quantitative Results - Outcomes

- Significant weight loss outcomes[4,8-11]
- Significant comorbidity resolution[4,9]
- Low complication rates[11,12]
- Significant decrease in amount and cost of prescription medications[8]

Qualitative Results

Table 3: Summary of data extracted from qualitative studies

First Author, Year, Title	Methods	Sample	Analysis	Main Themes	Conclusions	Limitations
Rahiri, 2018, Media portrayal of Māori and bariatric surgery in Aotearoa/New Zealand	Electronic search of two databases and two New Zealand news media websites	All articles relating to Māori people and bariatric surgery (N = 31)	Williamson's level of reporting scale; Inductive thematic analysis	Attitudes towards bariatric surgery, Access to bariatric surgery, Framing of Māori, Māori advocacy, Complexity of obesity and weight loss	The attitude towards bariatric surgery is largely positive however obesity is framed in a negative way - self-inflicted, result of laziness, etc.	Williamson's scale cannot determine bias against Māori, Searched only 2 sources
Rahiri, 2019, Exploring motivation for bariatric surgery among Indigenous Māori women	Semi-structured individual interviews	Māori women who underwent bariatric surgery at their institution 2010 - 2014 (N = 29)	Inductive thematic analysis	Comorbidity alarm bells, A better quality of life, Whānau (family), A lifetime of fattism, Futile attempts at weight loss	Patient motivating factors for pursuing bariatric surgery were largely related to increasing quality of life, futile previous attempts at weight loss, and the desire to be healthy for their family.	Only Māori women accepted for surgery were included in the study
Rahiri, 2019, Enhacing responsiveness to Māori in a publicly funded bariatric service in Aotearoa/New Zealand	Semi-structured individual interviews	Māori patients who had a primary bariatric procedure at their institution 2007 - 2014 (N = 31)	Inductive thematic analysis	Kaupapa Māori standards of health, Bariatric mentors, Bariatric psychologists, Community-integrated support	In order to improve the bariatric pathway for Māori patients the focus should be on inclusion of Māori knowledge and tradition, as well as increased access to psychologists, mentors and Māori based supports	Limited recruitment, primarily female participants
Taylor, 2019, Preoperative bariatric surgery programme barriers facing patients in Auckland, New Zealand as perceived by health sector professionals: a qualitative study	Semi-structured individual interviews	Pacific and non-Pacific health sector professionals who worked with patients in a bariatric program and Pacific health sector workers who work with Pacific patients (N = 21)	Inductive thematic analysis	Confidence negotiating the medical system (emotional safety in clinical setting, relating to non-Pacific health professionals), Appropriate support needed to achieve preoperative goals (cultural considerations, practical support, relating health information).	Pacific patients face many obstacles in accessing bariatric surgery including preop health behavior requirements, health literacy, communication and understanding. Importance must be placed on cultural education of health professionals and increasing non-surgery supports for Pacific patients undergoing surgery.	Majority of participants are non-Pacific, no corroboration from Pacific patients about their experiences

Accessibility

“There is still a huge prejudice against it. The belief that people that have bariatric surgery should be exercising, that they’re lazy and stupid.”[13]

“For every patient funded for the surgery, at least another two, whose health would benefit from the procedure, are referred.”[13]

Accessibility

"When you live in an environment where everyone has a weight issue or where they are big, that doesn't necessarily correlate to you as there is a problem…why are you going to look for a solution?"[14]

"…back in the Islands people don't go to the hospital unless they're really really sick and often they don't come out of the hospital. I mean they do, but in a casket so there is a lot of fear around surgery and hospital services and stuff like that."[14]

Motivators

“ I was following the steps that my siblings were heading and I was quite scared. It frightened me. Am I going to end up like my aunty and my father on dialysis? Was that a normal progression of how my family, my whanau, what I was going to be?”[15]

Motivators

“The threat of developing T2DM appeared to propel patients into considering bariatric surgery… comorbidities inhibiting the quality of life of our Māori women were not limited to physical disease. Mental health illness was debilitating and often created a circuitous loop to social isolation and unemployment.”[15]

Proposed solutions for improving access and outcomes

- Longitudinal relationships with healthcare providers[15,16]
- Increased non-surgeon supports[16]
- Help navigating the system[16]
- Incorporation of Indigenous ways of healing[13-16]

Interpretation of Findings

POORER ACCESS TO BARIATRIC SURGERY

SIMILAR POST-OPERATIVE OUTCOMES

STRONG MOTIVATORS

Recommendations

Research	Further research using a decolonized approach
Build	Build relationships with community
Develop and implement	Develop and implement programs/clinic supports for Indigenous patients in bariatric clinics

Sacred Sharing Circles: Urban Indigenous Experiences with Bariatric Surgery in Manitoba

Marta Whyte, PGY-4

Master of Science in Surgery Candidate

Aims of the study

- Explore the experiences of urban Indigenous patients in Manitoba undergoing bariatric surgery

- Contribute meaningful information to help inform future research and delivery of healthcare for Indigenous bariatric patients

Methods

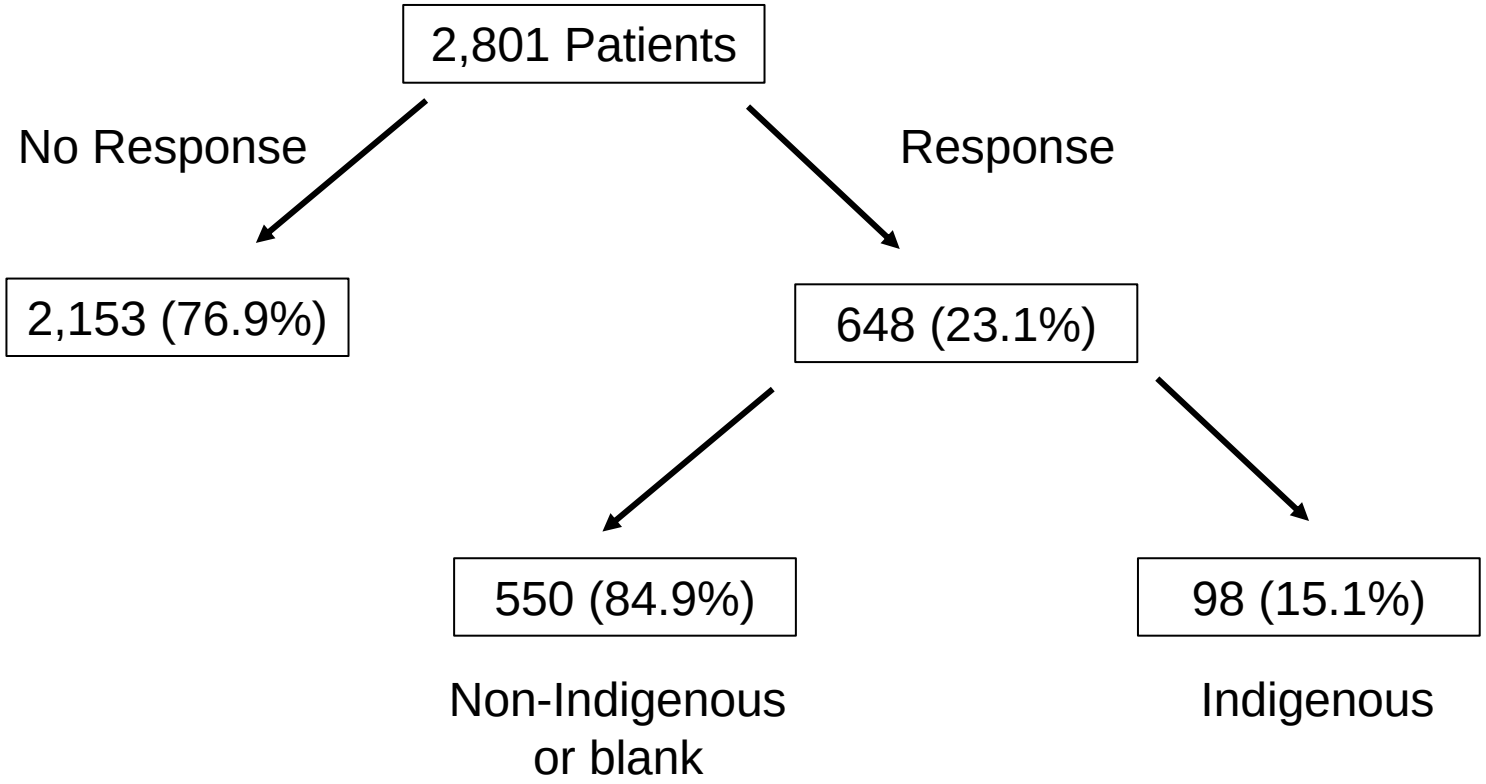
- Indigenous Advisory Committee
  - Conceptualization
  - Teaching – medicines, protocols, ceremony
- Sacred sharing circles and individual interviews
  - Conducted by an Elder

Introduce	Introduce yourself
Speak	Only speak when you are holding the feather or token
Pass	If you do not wish to speak, pass the feather
Honest	You must speak honestly
Listen	Listen to each speaker and Respect what is being said

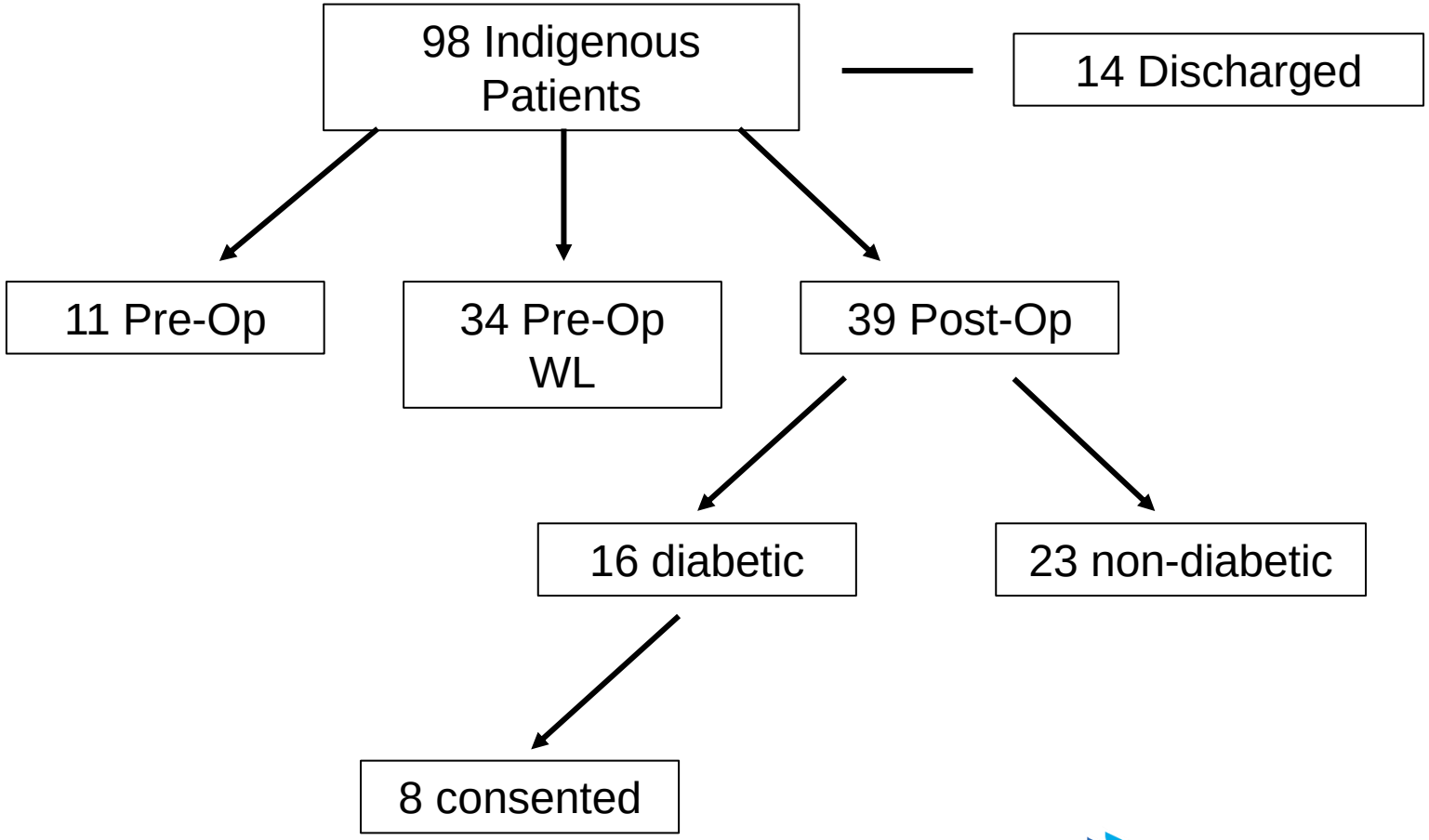
Methods

- Inclusion Criteria
  - Urban Indigenous Manitobans (>18yo)
  - T2DM
  - Had undergone bariatric surgery through CMBS
- Voluntary Permission to Contact Process
- Analysis
  - Inductive thematic analysis

Voluntary Self-Identification Results



Results


98 Indigenous Patients
14 Discharged
11 Pre-Op
34 Pre-Op WL
39 Post-Op
16 diabetic
23 non-diabetic
8 consented

Results

EXPERIENCING HARDSHIP OR CHALLENGES

REFLECTING ON THE IMPORTANCE OF SUPPORTS

UNDERSTANDING RELATIONSHIPS WITH FOOD

HEALING/RECOVERING

Experiencing hardship or challenges

“[Being obese] definitely affected my life, my marriage, did some harm in raising my daughters.”

“It’s a pretty tough place to be. You don’t like yourself. You don’t like who you’re becoming. You don’t like who you are. It’s not good”

“[Obesity] definitely defined me. Probably not to other people, maybe I did it more to myself. I don’t think I felt like I was worthy or deserved some things”

Reflecting on the importance of supports

“[my family is] where I get my strength. I want to be here for [them]”

“Making bannock or Christmas cookies: I can still participate, the kids make it and we’re still there for it. I’m still doing it with my family but in kind of a different way”

“The team has been wonderful, wealth of information, very supportive and prepared you well for everything”

Understanding relationships with food

“We do this. I didn’t get like this by accident. I got like this because I ate”

“[I did use food as a] coping mechanism. I think everybody does to a certain extent.”

“It was tough right after surgery. The most challenging I found was finding out things that at one time I used to love to eat, that I couldn’t anymore.”

“I feel a bit little disconnected because I eat different foods than my family.”

“I still get the cravings but definitely treat them differently now”

Healing & Recovering

“This was a decision I could make to take a little control back for me.”

“I can do fun stuff now that I am smaller, that I couldn’t do when I was bigger”

“I’m sort of coming out of my shell and my marriage has turned around”

“[Bariatric surgery] changed my life in so many ways”

“I have more energy, you know, I do things”

Discussion

- Living with obesity can take a severe mental and physical toll
- Importance of supports for success
- Varied connectedness to Indigenous identity
- Interest in Indigenous peer mentorship, sharing circles and access to an Elder

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Limitations

- Small pool of candidates due to the PTC process
- Excluded non-urban participants
- Covid-19 lockdown halted data collection

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Future Directions

- Virtual sharing circles to assess the health care encounter experience
- In-person sharing circles with participants living on-reserve
- CIHR funded study to develop Indigenous specific bariatric program materials

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Chi-Miigwetch

- Elder Geraldine Shingoose
- Dr. Melinda Fowler-Woods
- Amanda Fowler-Woods
- Dr. Marta Whyte
- Felicia Daeninck
- Janice Linton

University of Manitoba | Rady Faculty of Health Sciences

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Photos

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