Key Findings for First Nations Health from the MCHP Type 2 Diabetes in Manitoba Report

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Report Overview

- Prevalence and incidence rates
- Demographics
- Healthcare use
- Receipt of care as per Diabetes Canada guidelines
- Diabetes related complications
- Cardiovascular complications
- Type 2 diabetes in children
- Maternal and pregnancy outcomes
- Mental health outcomes

Key Findings Overall

- Population burden of type 2 diabetes is increasing
  - Faster in younger age groups
- Control of type 2 diabetes is poor throughout the population
- Both rates and complications of type 2 diabetes are higher in the First Nation population
- Many people are not receiving care as recommended by Diabetes Canada

Incidence of Type 2 Diabetes

- Crude incidence (2015/16 to 2016/17):
  - First Nation Manitobans was 7.6 per 1,000 person-years
  - All Other Manitobans was 5.7 per 1,000 person years
  - Age- and sex-adjusted incidence is almost 2x (RR 1.97, 1.51-2.56)

- No differences between health regions when stratified by First Nation/All Other Manitobans

Prevalence of Type 2 Diabetes

- Crude prevalence (2015/16 to 2016/17):
  - First Nation Manitobans was 14.7%
  - All Other Manitobans was 8.4%
  - Age- and sex-adjusted prevalence is 3.5x (RR 3.47, 2.56-4.70)

- No differences between health regions when stratified by First Nation/All Other Manitobans

Type 2 diabetes is occurring at a younger age. Screening guidelines need to be updated.

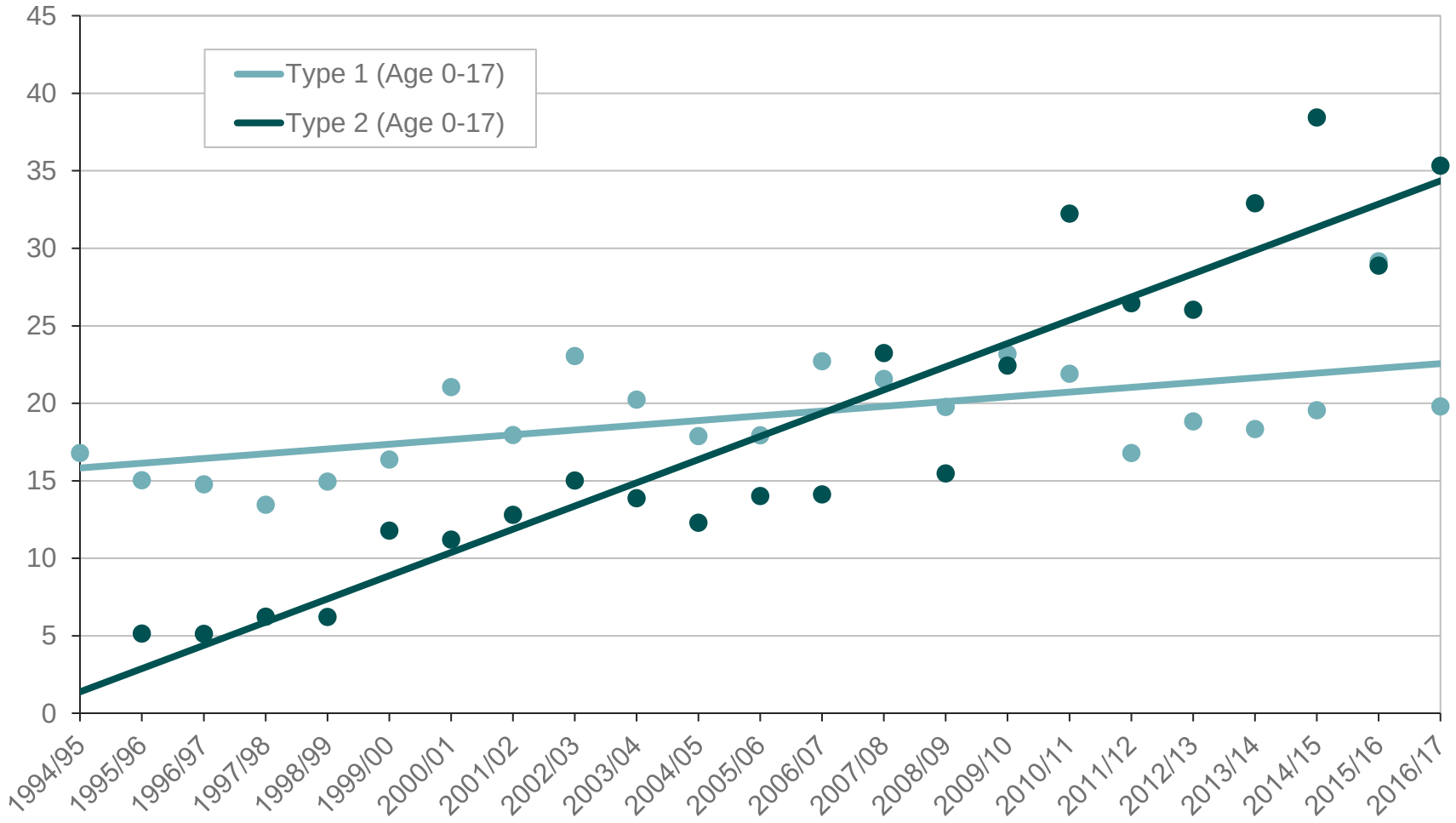
- Type 2 diabetes in adults is being diagnosed at younger ages over time
  - Mean age is decreasing

- Paediatric population with type 2 diabetes is growing
  - Incidence in First Nations children is highest in the world
  - Increased from 110 to 154 per 100,000 over 9 years

- Increasing rates of new type 2 diabetes in youth and young adults who are not registered First Nation
  - Incidence increasing: from 4.9 to 9 per 100,000

Annual Incidence Rate of Type 1 and Type 2 Diabetes in Children in Manitoba

Crude rate per 100,000 person-years at risk, using DER-CA data only, age 0-17, 1994/95-2016/17



Note: Missing values indicate suppressed due to small values.

Receipt of Recommended Care and Control of Type 2 Diabetes

A significant proportion of people living with type 2 diabetes are not achieving recommended control of their glucose levels. Addressing this requires a multifaceted approach.

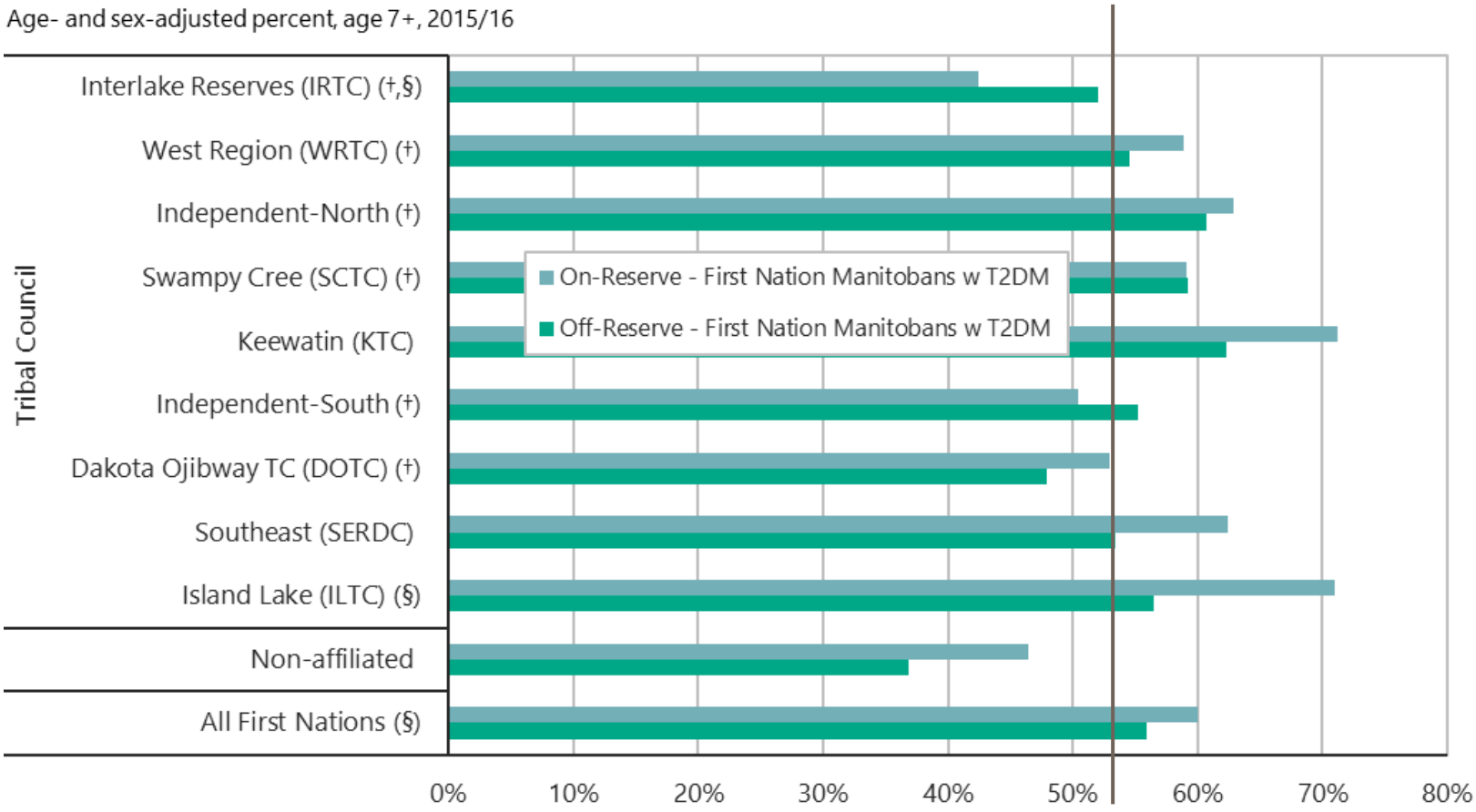
- HbA1c levels are not optimal:
  - 26.6% of the First Nation
  - 40.3% of All Other Manitobans achieve the goal of ≤ 7%

Young adults, especially young male adults, with type 2 diabetes do not have adequate contact with the healthcare system. Alternative strategies and consultation with communities is needed to meet their healthcare needs.

- Physician visits are lower in the younger adult age group, with males having lower rates than females
- 10 to 25% of young adults, based on age group, with type 2 diabetes have no physician visits captured in the last year
- Low contact rates are associated with low rates of recommended screening and higher hospitalization rates
- Non-receipt of care is higher for First Nation than for All Other Manitobans

Figure 6.13: Percent of First Nation Manitobans with Type 2 Diabetes with 1+ Urine ACR Screens in One Year by Tribal Council Area

Age- and sex-adjusted percent, age 7+, 2015/16

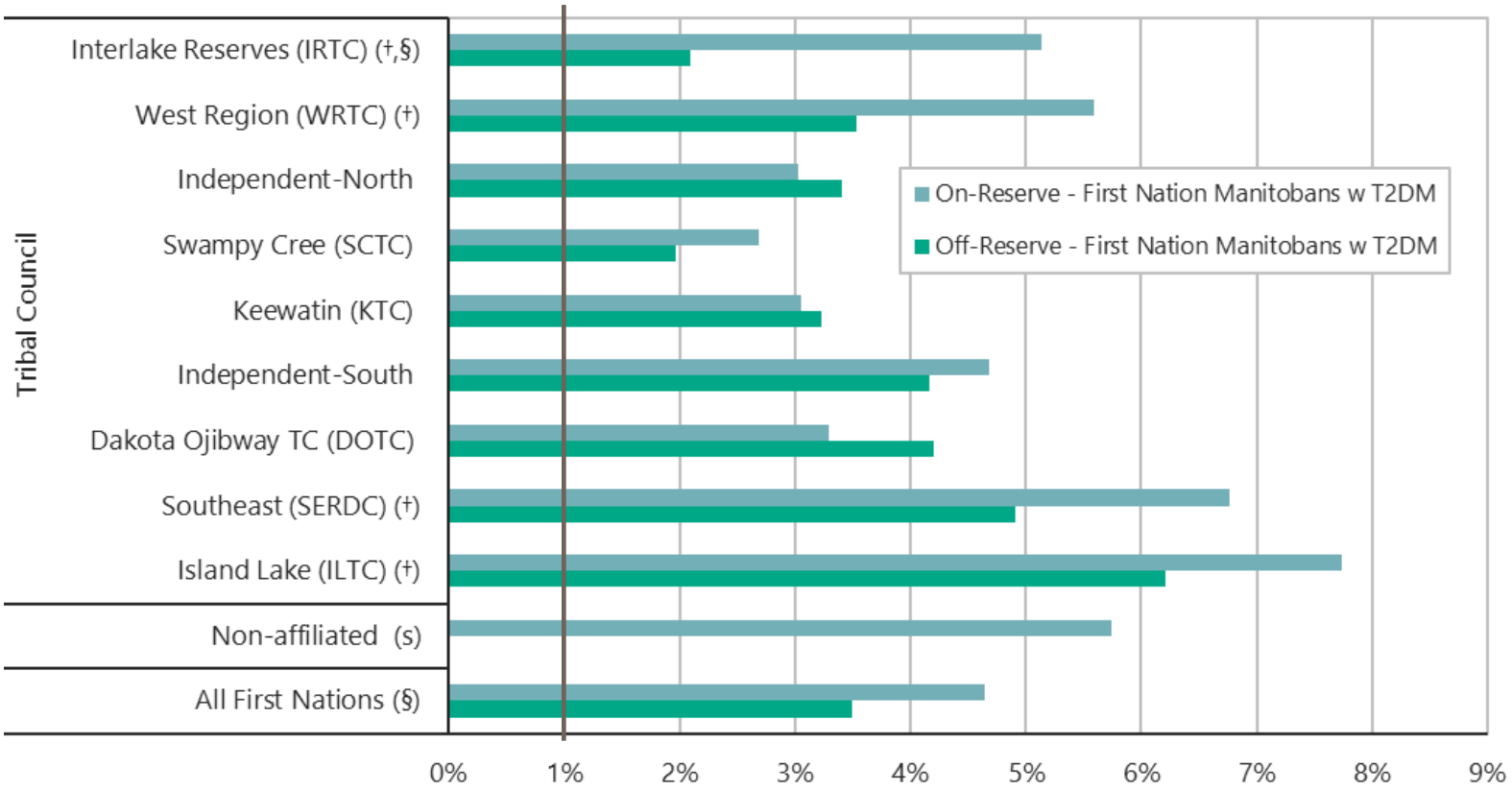


† - The difference between this area's rate and the highest First Nations On-Reserve rate (Keewatin (KTC)) was statistically significant ($p<0.01$).

§ - The difference between this area's First Nations On-Reserve and Off-Reserve rate was statistically significant ($p<0.01$).

Figure 6.8: Percent of First Nation Adult Manitobans with Type 2 Diabetes who had End-Stage Renal Disease by Tribal Council Area

Age- and sex-adjusted percent, age 18+, 1979-2017



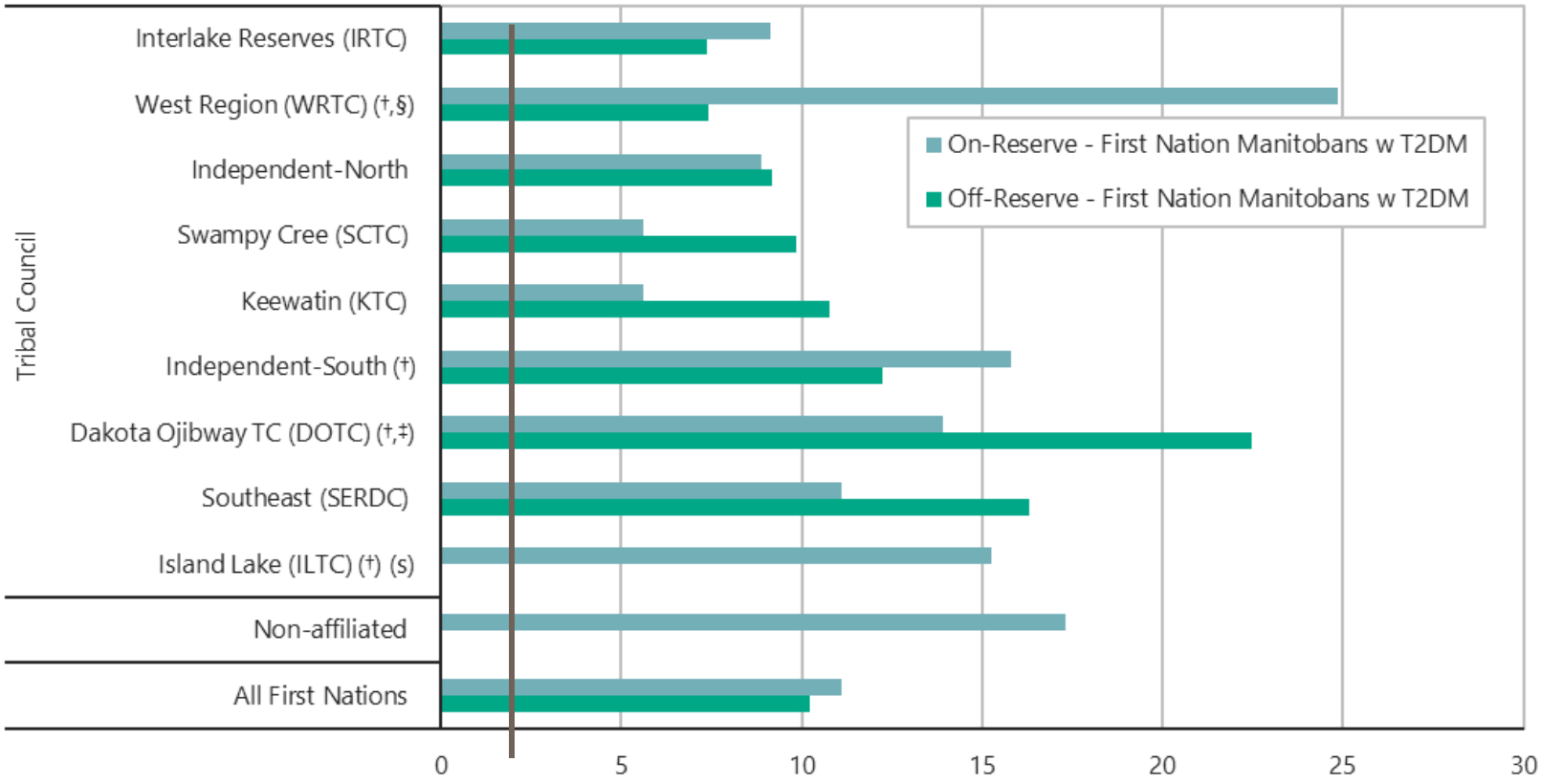
† - The difference between this area's rate and the lowest First Nations On-Reserve rate (Swampy Cree (SCTC)) was statistically significant ($p<0.01$).

§ - The difference between this area's First Nations On-Reserve and Off-Reserve rate was statistically significant ($p<0.01$).

s indicates suppression due to small numbers

Figure 6.16: Rate of Lower Limb Amputations Among First Nation Adult Manitobans with Type 2 Diabetes by Tribal Council Area

Age- and sex-adjusted rate per 1,000 person-years, age 18+, 2011/12-2016/17



† - The difference between this area's rate and the lowest First Nations On-Reserve rate (Keewatin (KTC)) was statistically significant ($p<0.01$).

‡ - The difference between this area's rate and the lowest First Nations Off-Reserve rate (Interlake Reserves (IRTC)) was statistically significant ($p<0.01$).

§ - The difference between this area's First Nations On-Reserve and Off-Reserve rate was statistically significant ($p<0.01$).

s indicates suppression due to small numbers

The adult First Nation population had higher rates of death and complications than all other adult Manitobans.

- Screening tests and primary care attendance were similar, and in some areas higher
- Less discrepancy in diagnosis of earlier stage CV conditions however higher discrepancy in later stage CV conditions
- Outcomes such as cardiovascular complications, end stage kidney disease, mortality and amputations were higher
- These findings support that access to care is only the first step in achieving equitable outcomes for all Manitobans
- Gradient by PMR not seen in the population of people with T2DM

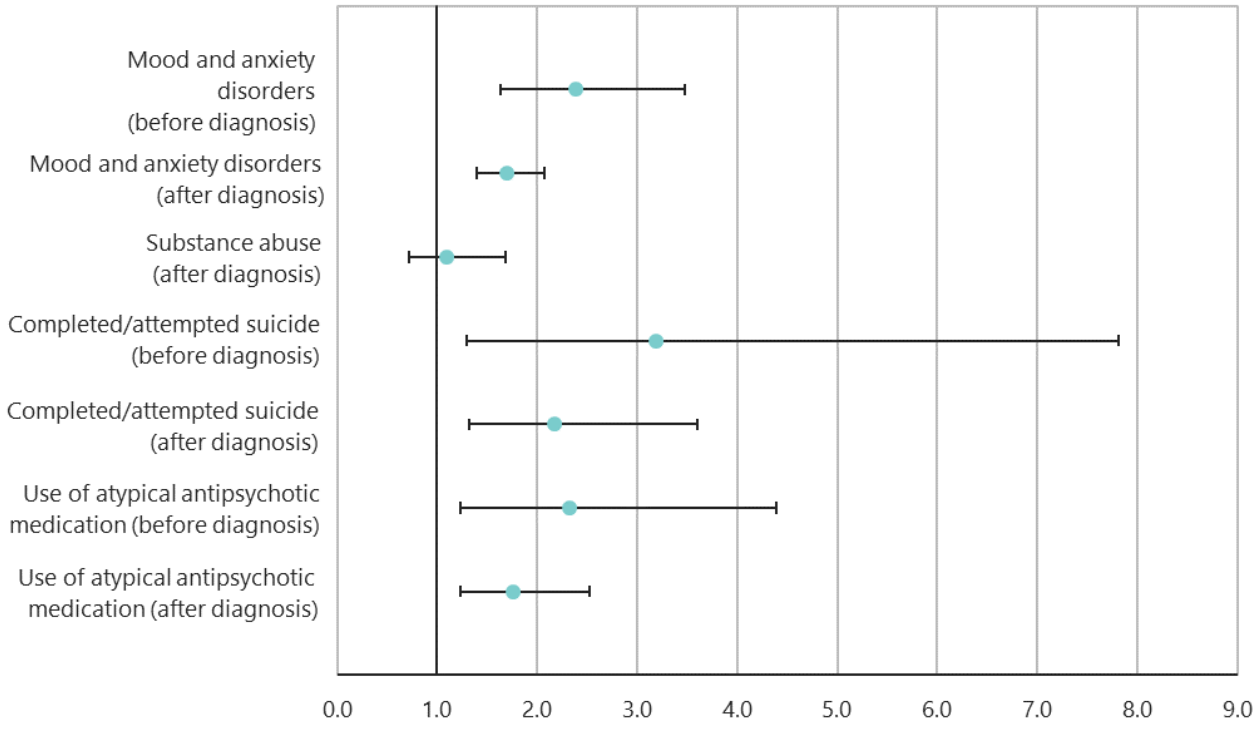
Outcomes in Matched Cohorts for Children, Pregnant Women, and Adults with Type 2 Diabetes

Type 2 diabetes is increasing in Manitoba children and the burden of illness is high. Programs to provide support, care and education to this population that are specific to the psycho-cultural environment of those affected need to be developed.

- First Nation children are disproportionally affected
- Children with type 2 diabetes carry a high burden of illness both before and after diagnosis of diabetes

Children with type 2 diabetes carry a high burden of mental illness likely impacting their ability to be involved in positive self care behaviours

Figure 8.7: Relative Risks of Mental Health Comorbidities Among Children with Type 2 Diabetes Compared to Diabetes-Free Matches



Note: relative risks for substance abuse before diagnosis is suppressed due to small numbers in diabetes-free matches.

Pregnant women with type 2 diabetes utilize significantly more healthcare resources than those without diabetes. Perinatal healthcare planning needs to account for type 2 diabetes and specifically the impact on First Nation women and women living outside of Winnipeg.

- Antenatal hospitalization rates are almost 3 times that of diabetes-free matches
- Infants are almost 4 times as likely to require NICU admission and have a length of stay double that of their matches
- Higher risk of delivering outside of their RHA
- First Nation women already have a higher risk of these complications than All Other Manitoban women and that risk is increased further by type 2 diabetes
- Our current perinatal system is at capacity and expansion of facilities to provide care for these families closer to home is urgently needed.

There is a significant burden of mental health disorders in the population with type 2 diabetes. Screening for and ensuring access to mental healthcare is an integral part of diabetes care.

- Increased risk of suicide attempts and mood and anxiety disorders
- Use of atypical antipsychotic medications is higher both before and after diagnosis
- As per the Diabetes Canada association guidelines, routine screening for mental health disorders is needed

Key Findings Overall

- Population burden of type 2 diabetes is increasing
  - Faster in younger age groups
- Control of type 2 diabetes is poor throughout the population
- Both rates and complications of type 2 diabetes are higher in the First Nation population
- Many people are not receiving care as recommended by Diabetes Canada
- An integrated Provincial Strategy is needed

Thank You / Questions

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