

July 2014

Fact Sheet

A Look at Gestational Diabetes Mellitus In Alberta

The DON SCN strives to improve the health and well-being of individual Albertans and our communities through a collaborative network that: encourages uptake of best practices, promotes improvements, and champions innovation in nutrition and in the prevention and management of diabetes and obesity across the health system to promote equitable access, quality and sustainability.

DON SCN Fast Facts

- The rates of gestational diabetes mellitus (GDM) have increased from 1999 (3.8%) to 2009 (4.8%).
- GDM is much more common among women 40 years and older (10.6%).
- Rates of C-Section, labour induction, and newborns admitted to a Neonatal Intensive Care Unit (NICU) are all higher among women with GDM compared to women without GDM
- Among women with GDM, the prevalence of C-Section increased from 27.4% in 1999 to 38.0% in 2009.
- Rates of labour induction also increased among women with GDM, from 38.3% in 1999 to 44.2% in 2009.
- Rates of NICU admissions decreased among women with GDM, from 29.6% in 1999 to 20.8% in 2009.

How Has The Prevalence of GDM Changed Over Time In Alberta?

- The rates of GDM have increased from 1999 (3.8%) to 2009 (4.8%). (**Figure 1**)
- Increasing rates of GDM are consistent with findings in other provinces across Canada, including Ontario where rates of GDM have increased from 2.7% in 1996 to 5.6% in 2010 (Feig et al, 2014).

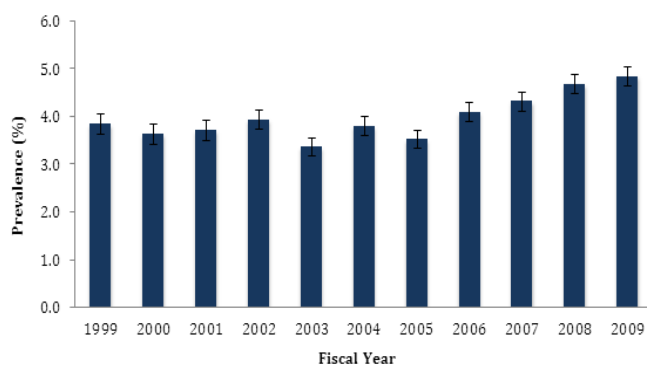


Figure 1. The Prevalence of GDM by Fiscal Year.

How Does the Prevalence of GDM Vary by Age in Alberta?

- There is a clear trend of GDM prevalence increasing with age. (**Figure 2**)
- GDM is much more common among women 40 years and older (10.6%).

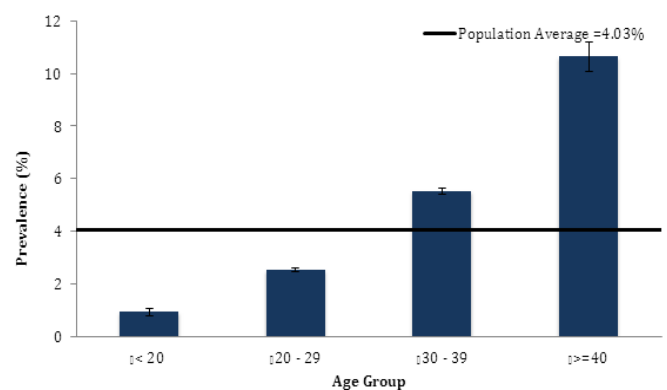


Figure 2. The Prevalence of GDM by Age Groups in Alberta.

How Have Rates of C-Section Changed Over Time in Alberta?

- Rates of C-Section were consistently higher among women with GDM compared to those without GDM in all years. (Figure 3)
- Among women with GDM, rates of C-Section increased steadily from 1999 (27.4%) to 2009 (38.0%).
- Rates of C-Section also increased among women without GDM over the years, from 18.6% in 1999 to 26.0% in 2009.

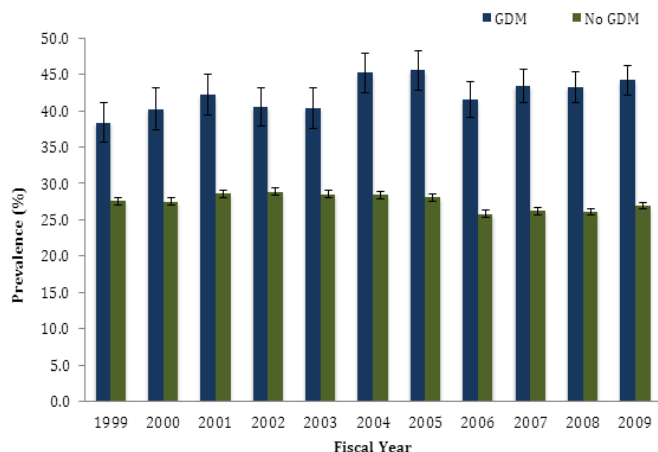


Figure 4. Prevalence of Labour Induction Among Women With and Without GDM By Fiscal Year.

How Have Rates of NICU Admissions Changed Over Time In Alberta?

- Rates of NICU admissions were higher for babies born to women with GDM, compared to those without GDM for all years. (Figure 5)
- Among women with GDM, rates of NICU admissions actually decreased from 29.6% in 2004 to 20.8% in 2009.
- A decrease in the rate of NICU admissions also occurred among women without GDM, from 20.7% in 2004 to 14.6% in 2009.

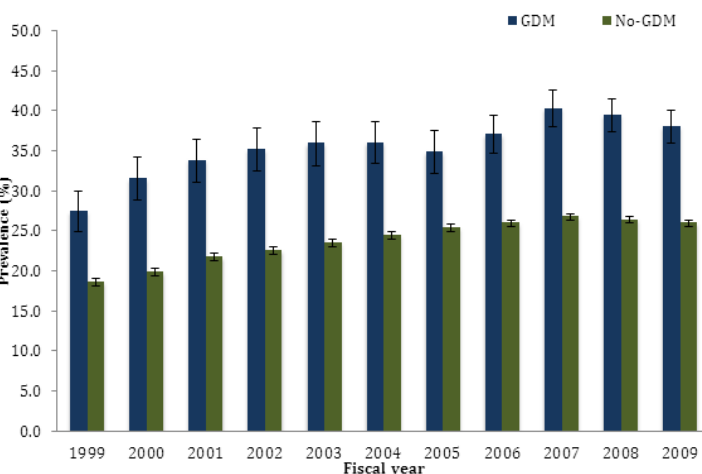


Figure 3. Prevalence of C-Section Among Women With and Without GDM By Fiscal Year.

How Have Rates of Induction Changed Over Time In Alberta?

- Rates of inductions were consistently higher among women with GDM compared to those without GDM for all years. (Figure 4)
- The prevalence of inductions among women with GDM increased from 38.3% in 1999 to 44.2% in 2009.
- Rates of induction remained steady from 1999-2009 in women without GDM.

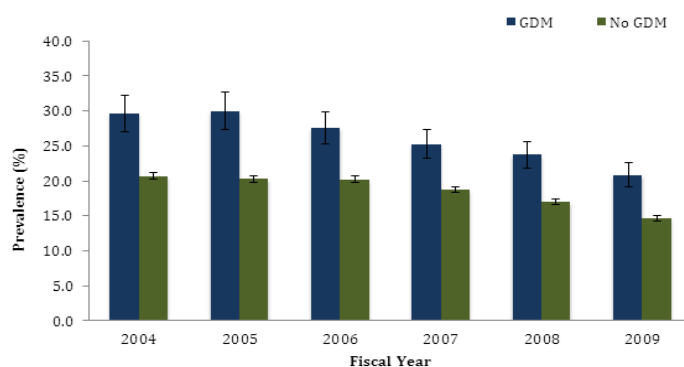


Figure 5. Prevalence of NICU Admissions for Babies Born to Women With and Without GDM by Fiscal Year.

Data Source

We used linked data from the Alberta Perinatal Health Program (APHP) clinical registry and the Alberta Health and Wellness (AHW) administrative databases, including the Discharge Abstract Database where NICU is defined. The APHP captures perinatal data from the provincial delivery record for all hospital and registered midwife attended home births in Alberta. Whereas the PHN of the mother was captured from April 1, 1999 onwards, child PHNs were not captured until April 1, 2004. The AHW databases include data from April 1, 1997 to March 31, 2010. The APHP and AHW data was linked using the mother's Personal Health Number (PHN).

The following exclusions were applied to the data: we excluded records with missing or incorrect maternal PHN, non-singleton deliveries, records with missing or out-of-province maternal residency, records with maternal age <12 or >54 years, out-of-hospital deliveries, and women with pre-existing diabetes mellitus (type 1 or type 2), records with missing or non-Albertan child residency (for NICU admissions), and records with incorrect newborn birthdates (for NICU admissions).

Ontario GDM Statistics from Feig DS, Hwee J, Shah B, Booth GL, Bierman AS & Lipscombe LL. (2014). Trends in Incidence of Diabetes in Pregnancy and Serious Perinatal Outcomes: A Large, Population-Based Study in Ontario, Canada, 1996-2010. *Diabetes Care*. 37: 1590-1596.