Gestational Diabetes Mellitus (GDM)

GDM is glucose intolerance appearing or first diagnosed during pregnancy. All women should be screened for GDM at 24-28 weeks gestation. On diagnosis, a woman should receive a care plan for controlling her diabetes, including appropriate referrals. Estimates of national GDM prevalence range from 2 to 10 percent[1], while the incidence in Ohio is estimated between 6 to 12 percent[2] and continues to increase.

Health Impact

GDM has significant impacts on the health of both the mother and infant.

Associated maternal birth complications include[3]:

- Cesarean delivery (and associated complications)
- Gestational hypertension
- Pre-eclampsia

Over half of women diagnosed with GDM will develop Type 2 Diabetes Mellitus (T2DM) in the following 10 years. Women with GDM history are also at increased risk for other complications such as metabolic syndrome (insulin resistance, dyslipidemia, and hypertension) and cardiovascular disease.[4]

Additionally, a woman with untreated or undertreated T2DM who enters a new pregnancy is at higher risk for fetal loss or birth defects[5].

When a woman has GDM, excess glucose crosses the placenta causing the fetus to produce more insulin leading to increased birth weight (macrosomia)[6]. The baby is more likely to experience health complications including shoulder dystocia, other birth trauma, and jaundice. The infant faces a life-long risk for metabolic diseases such as T2DM and obesity[2].

Risk Factors

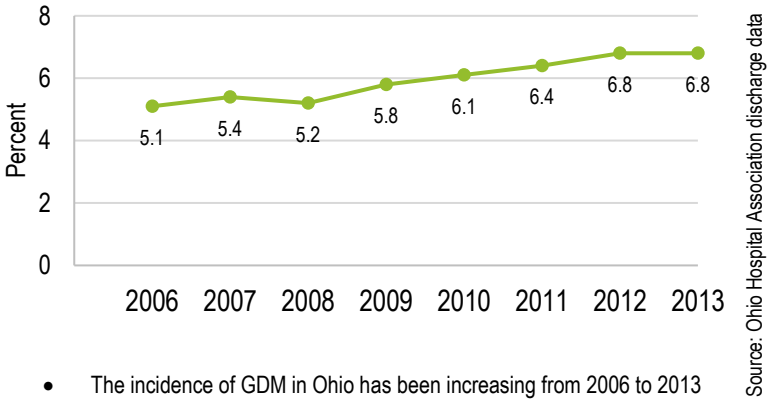
Risk factors for GDM include[3]:

- Personal history of GDM
- Previous delivery of an infant over 8.8 pounds
- Family history of T2DM or GDM
- Overweight or obesity (Body Mass Index (BMI) ≥ 25)

Several studies also show an association between smoking and GDM risk[2].

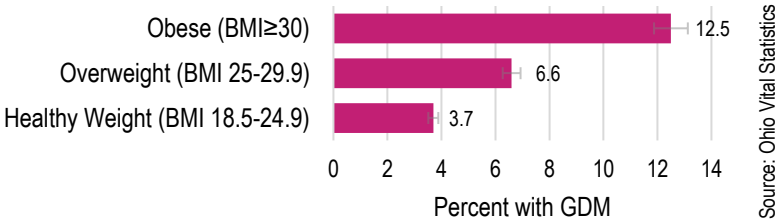
Pregnant women of Hispanic, African, Native American, South/East Asian, and Pacific Islander ancestry have an increased risk for GDM.

Figure 1: Incidence of GDM among Delivery Hospitalizations, by Year, Ohio 2006-13



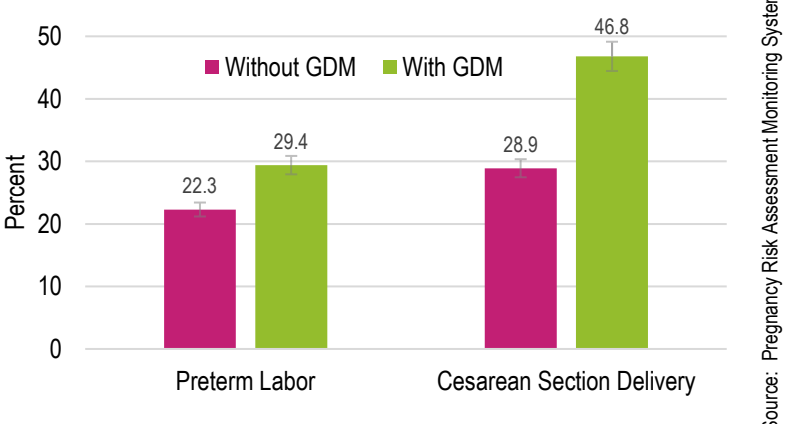
- The incidence of GDM in Ohio has been increasing from 2006 to 2013

Table 1: GDM Incidence among Women with a Live Birth, by Pre Pregnancy Weight Status, Ohio 2012-14



- Obese women have a substantially elevated risk of developing GDM.

Table 2: Incidence of Delivery Outcomes, by GDM Status, Ohio 2009-2010



- Women with GDM are more likely to experience preterm labor or have a Cesarean section delivery, which elevates risk of infection or damage to maternal bowel, bladder, or uterus.

Postpartum Care

After a GDM diagnosis, women should coordinate a postpartum care plan with their health care provider in order to be screened for T2DM[3]:

- Within 6-12 weeks after delivery
- Every 1-3 years thereafter

T2DM can be prevented or delayed by lifestyle modifications including:

- Breastfeeding
- Eating a healthy diet
- Refraining from smoking
- Exercising regularly

Figure 2: Postpartum Blood Glucose Screening Pathway[7, 8]

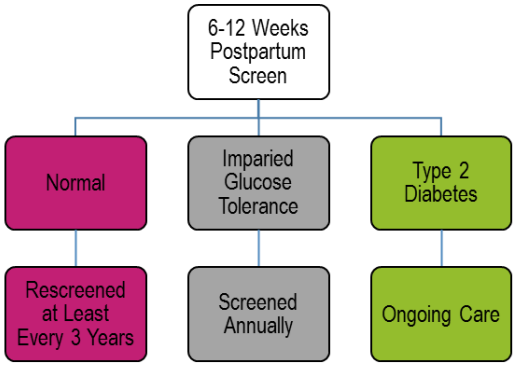
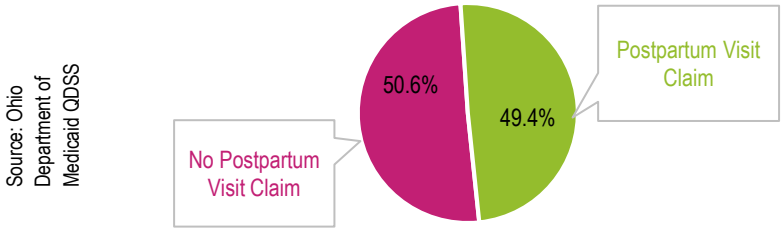


Figure 3: Medicaid Claims for Postpartum Visits by Women with GDM, 2013-14



In Ohio, only half of Medicaid-Insured women with GDM had a postpartum visit claim

What is Being Done to Help Women with GDM in Ohio?

The Ohio GDM Collaborative works to decrease diabetes among women with a GDM history by 1) studying and the epidemiology of GDM in Ohio; 2) raising awareness among women; and 3) improving healthcare practice. In 2014, the group launched the GDM Postpartum Care Learning Collaborative in partnership with the Ohio Colleges of Medicine Government Resource Center (GRC), nationally renowned clinical advisors. The collaborative uses quality improvement methods to increase postpartum visit and T2DM screening rates in women with a GDM history. Secondary objectives are to educate women on T2DM risk and risk reduction methods. As of 2016, 27 clinical sites have participated and more will be engaged in upcoming phases. Consumer toolkits were produced with information on GDM diagnosis and T2DM risk as well as lifestyle modifications including nutrition and breastfeeding. A provider toolkit has resources for educating patients on managing GDM, algorithms for screening and diagnosis, and tools for improving care coordination between providers and improving office work flow. To learn more about the collaborative and access toolkit content, please visit the website at http://ohiogdm.com.

Ohio Gestational Diabetes Postpartum Care Learning Collaborative

*Data Notes: Grey bars within figures represent 95% confidence intervals (CI). The width of the CI gives us an idea of how certain we are about the true prevalence. The 95% CI means that if we were to repeat this study 100 times, 95 of the intervals generated would contain the true estimate.

References:

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