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Project Overview

Allison Lorenz, MPA
Principal Investigator
Ohio Colleges of Medicine
Government Resource Center
Project Overview

- **Project Purpose:** The Ohio GDM Postpartum Care Learning Collaborative seeks to increase knowledge of and improve health outcomes for pregnant women diagnosed with GDM.

- **Specific Aims** include increasing the following:
  - **Prenatal education** on risks and impact of GDM and T2DM
  - Receipt of **postpartum visit** and **T2DM Screen**
Project Partners

**Project Sponsor**: Ohio Department of Health

**Project Team**:

**Ohio Colleges of Medicine Government Resource Center (GRC)**:

- Dushka Crane, PhD: Subject Matter Expert
- Allison Lorenz, MPA: Principal Investigator
- Hilary Rosebrook: Project Manager
- Jenni Chichka, MA: Program Manager
- Rachel Mauk, PhD: Lead Researcher
- Ben Yake: Researcher
Project Partners: Clinical Leadership

• **Dr. Steven Gabbe**, CEO Emeritus of The Ohio State University Wexner Medical Center (OSUMC)

• **Dr. Steven Thung**, Clinical Director of the Obstetrical Service and Director of Labor and Delivery, Director of Diabetes in Pregnancy Program, OSUMC

• **Dr. Mark Landon**, Chair and Professor of Department of Obstetrics and Gynecology at OSUMC

• **Reena Oza-Frank, PhD**, Research Director, Center for Perinatal Research at Nationwide Children’s Hospital
Examining the Impact of Gestational Diabetes

Dr. Stephen Thung, MD
The Ohio State University Wexner Medical Center
Prevalence of GDM in the US

Prevalence Among US Women Age 15-44 Who Delivered in a Hospital

2014 CDC Report indicates
GDM prevalence
approximately 9.2%

The Impact of GDM in Ohio

According to a 2011 report* published by the Ohio Department of Health,

- Approximately 50 percent of women in Ohio were **overweight or obese** when they became pregnant, putting them at an increased risk for developing GDM.
- GDM impacted between 5 and 10 percent of pregnancies in Ohio.
- Approximately 7.6 percent of Medicaid patients in Ohio had GDM.
- The **length of hospital stay** was 3.3 days for patients diagnosed with GDM, and 2.6 days for patients not diagnosed with GDM.
- The **total hospital charges** for patients with GDM was 11% higher than non-GDM patients.

Maternal Metabolism in Late Pregnancy

Reduced insulin sensitivity

- Insulin resistance due to:
  
  • Hormonal changes
    
    • human placental lactogen (hPl), progesterone, prolactin, cortisol, placental tumor necrosis factor α (TNF-α), placental growth hormone
  
  • Increased placental insulin clearance
Why bother to screen: Maternal Risks

- Higher risk for miscarriage
- Development of Preeclampsia, which research shows accounts for approximately 15.9% of US maternal deaths and is a leading cause of perinatal morbidity and death.
- Increased risk of c-section
- Women diagnosed with GDM have an increased likelihood (2 in 3 chance) of developing GDM in subsequent pregnancies.
- 35-60% with type 2 diabetes mellitus especially in first decade postpartum
- Shortened life expectancy


Gestational Diabetes Mellitus
Approaches to Screening and Diagnosis

High Risk: Clinical characteristics consistent with a high risk of GDM (severe obesity, PCOS, history of GDM or delivery of LGA infant, glycosuria, strong family history of type 2 diabetes), test as soon as possible to detect undiagnosed type 2 diabetes. If negative, retest at 24-28 weeks gestation.

Note: fasting ≥126 mg/dL or 2-hour plasma glucose ≥ 200 mg/dL or HbA$_{1c}$ ≥ 6.5% suggests pre-existing diabetes and indicates need for ultrasound screening for anomalies
Effect of GDM on the Fetus

MATERNAL

INSULIN RELEASE

GLUCOSE UTILIZATION

HYPERGLYCEMIA

FETAL

Placenta

BIRTHWEIGHT

HYPERINSULINEMIA

HYPERGLYCEMIA

C-section Birthweight

Pre-Eclampsia

LACTIC ACIDEDEMIA
Diagnosing and Managing GDM: Fetal and Neonatal Risks

- Increased likelihood of pre-term birth, which can result in infection, increased admission to the NICU, and perinatal death
- Trauma from Macrosomia, including shoulder dystocia
- Respiratory Distress
- Hypoglycemia, Hypocalcemia, Hyperbilirubinemia
- Jaundice
- Predisposed to becoming overweight or obese during childhood.
- Higher prevalence of T2DM and prediabetes in adult offspring of mothers diagnosed with GDM


Detection: Two Step Approach

• Screening with a 50g glucose load or in high risk women, a diagnostic OGTT

• 50g oral glucose load, administered between the 24th and 28th week, without regard to time of day or time of last meal, to all pregnant women who have not been identified as having glucose intolerance before the 24th week

• Venous plasma glucose measured one hour later. Value of 130-140 mg/dL or above in venous plasma indicates the need for a full diagnostic glucose tolerance test. 135 mg/dL used at Ohio State
Surveillance of Maternal Diabetes

• Check fasting and 1-hour or 2-hour postprandial glucose levels daily to assess efficacy of diet with self monitoring of capillary blood glucose.

• If fasting capillary value > 95mg/dL and/or 1-hour value > 140 mg/dL or 2-hour value > 120mg/dL, insulin or an oral hypoglycemic drug is required.

• Approximately 10-20% of patients will need this additional therapy.
Treatment with Insulin and Oral Hypoglycemic Drugs

- Insulin may be started at 0.8-1.2 units/kg actual body weight depending on trimester
- 50% of total dose as NPH at breakfast and/or bedtime
- 50% of total dose as rapid acting insulin (lispro or aspart) before meals
- Glyburide may be started at 2.5 mg twice daily; 30-60 minutes before breakfast and dinner.
- Metformin may be started at 500-850mg twice daily.
Glyburide Compared with Insulin for GDM

• 404 women with GDM randomized to insulin or glyburide (Micronase, DiaBeta)
  • Both therapies showed comparable improvement in glucose control
    • 8% of glyburide patients required insulin
  • Hypoglycemia (<40 mg/dL) more frequent with insulin (20% vs. 2%, p=0.03)
  • No differences in maternal complications, cesarean delivery rate, neonatal outcomes

• Conclusion: In women with GDM, glyburide is a clinically effective alternative to insulin therapy

Delivery

• Allow to go to term
• If undelivered at 40 weeks, begin fetal assessment with twice weekly nonstress tests (NST). Delivery is recommended by 41 weeks. Patients who have had a previous stillbirth or have hypertension should be followed with twice weekly NSTs at 32 weeks.
• Clinical estimation of fetal size and ultrasonographic indices should be used to detect fetal macrosomia: Evaluate for cesarean delivery if estimated fetal weight > 4500g
Delivery

• Patients with GDM who require insulin as well as diet to maintain normal glucose levels should be followed with a program of antepartum fetal surveillance identical to that used for women with pre-gestational diabetes, twice weekly NSTs.
• Suboptimally controlled GDM may require delivery before 39 weeks.
• Infant to be observed closely for hypoglycemia, hypocalcemia, hyperbilirubinemia.
• Encourage breastfeeding.
Barriers to Postpartum Screening

• According to women with gestational diabetes mellitus (GDM):
  • Adjustment to new baby.
  • Concerns about postpartum and future health.
  • Negative experiences with medical care and services.

• According to health care providers:
  • Not seeing the patient.
  • The patient being lost to follow-up.
  • Lack of communication/collaboration between healthcare providers.

In Literature

- Stuebe et al., 2009
  - Surveyed OBs, certified nurse midwives, and PCPs (physicians and nurse practitioners) at a health care system in Boston.
    - 207 of 478 responded.
  - Utilized electronic medical records (EMRs) for prenatal care since the mid-1990’s.
    - But independent from primary care EMRs.
    - 45.8% of women diagnosed with GDM (450/772) were documented on the EMR.
  - 54.6% identified lack of communication between providers as a major barrier to follow-up of women with GDM.
    - 40.4% of OBs and certified nurse midwives reported updating the EMR to include GDM diagnosis less than half of the time.
    - 61.5% of PCPs reported receiving information about pregnancy complications less than 25% of the time.
  - PCPs assess for GDM history less, but order an oral glucose tolerance test (OGTT) more.
  - OBs and certified nurse midwives assess for GDM history more, but order OGTT less.

In Literature

• Pierce et al., 2008 – 2009
  • National postal survey in England:
    • 342 of 368 specialists (OBs and diabetologists) in maternity units responded.
    • 915 of 1532 general practitioners (GPs) responded.
  • 18.6% of GPs had difficulties finding out about GDM diagnosis.
    • Of this 18.6% of GPs, 85.6% attributed to lack of communication from the hospital.
  • 89.4% of specialists and 25.5% of GPs indicated that the hospital was responsible for ordering the postpartum test.

Diagnosed with GDM during pregnancy. By OB/GYN.

Screened for diabetes at 6 to 12 weeks after delivery. By OB/GYN? Or PCP? Hospital?

Screened for diabetes every 1 to 3 years. By PCP.
Addressing the Challenge

Hilary Metelko Rosebrook
Project Manager
Ohio Colleges of Medicine
Government Resource Center
How can we change?

- **Patients are not educated** about the impact of GDM on themselves or their baby, and don’t understand the long-term impact of T2DM
  - *Conduct Health and Wellness Education*

- Prenatal provider (OB/Gyn, MFM Specialist) **does not provide ongoing care to women after delivery** and diagnosis often goes unaddressed
  - *Explain importance of Postpartum Visit and T2DM Screen*

- PCP **unaware of GDM diagnosis** or ongoing **recommended postpartum screening**
  - *Provide Care Coordination*
So what can we do?

• Support your patients before **and** after pregnancy

• Implement improvement activities to **PROACTIVELY** address the needs of high-risk moms through:
  • Early Risk Identification
  • Standardization of clinical protocols
  • Education of moms-to-be
  • Coordination of postpartum care
IHI Model for Improvement

- Quality Improvement (QI) Science is an **applied science**:
  - social sciences
  - psychology
  - clinical sciences

- QI Science focuses on **rapid-cycle testing** to determine what strategies and process changes can result in a predetermined goal or improvement.

  - **The Aim**: What are we trying to accomplish?
  - **The Measures**: How will we know a change is an improvement?
  - **The Changes**: What change can we make that will result in improvement?
The Ohio Gestational Diabetes (GDM) Postpartum Care Learning Collaborative

KEY DRIVER DIAGRAM

Revision Date: 11/9/15

SMART AIM

1. By May 2017, increase the postpartum visit rate for women with history of GDM in participating practices by 25%.
2. By May 2017, increase the rate of postpartum T2DM screenings among women with history of GDM in participating practices by 25%.

Global AIM

To increase knowledge of and improve health outcomes for women with history of GDM

KEY DRIVERS

- Standardization/Guidelines
- Awareness of risks and expected benefits of proactive intervention by clinicians
- Awareness of risks and expected benefit of screening by patients
- Access to Maternal Health Services
- Coordination of Care
- Culture of Safety and Improvement

INTERVENTIONS

- Utilize a common set of clinician driven guidelines
- Engage clinicians through GDM collaborative and professional organizations
- Improve office workflow and communication processes

- Enhance knowledge of risk of T2DM among patient population with GDM
- Build awareness of OB/GYN's role and Primary Care Physician's role in subsequent care for women with GDM
- Use Shared Decision Making

- Improve knowledge of GDM and T2DM, breastfeeding, and healthy behaviors
- Inform patients of benefits of screening
- Promote need for regular screening for women with a history of GDM (6-12 weeks postpartum, every 1-3 years after)
- Launch public awareness and education campaign

Interventions – During Pregnancy:
- Promote the use of glucose screening for high risk women during first prenatal appointment, and if negative promote re-screening at 24 weeks gestation for women previously identified with GDM
- Promote glucose screening at 24-28 weeks gestation for all women who are pregnant
- Promote use of 75g glucose tolerance test

Interventions – Postpartum:
- Promote use of 75g glucose tolerance test and increase access to screening post-partum
- Improve access and awareness of alternative interventions (e.g. lifestyle modification), programs (e.g. nutrition counseling) and evidence-based practices (e.g. breastfeeding)
- Improve continuity of care between OB/GYNs and PCPs (e.g., warm handoff)

- Identify referral resources for nutrition and weight management services both during pregnancy and in postpartum period
- Implement follow-up system to increase post-partum visit rates and screening
- Enhance communication between OB/GYN and primary care provider/family physician

- Connect with existing initiatives on safety and use existing approaches as possible
- Utilize patient and provider centered toolkit to promote best practices
- Continuous monitoring of data and discussion of this effort in partner meetings
- Develop incentives for screening during post-partum visits
Structure of the Collaborative

• Participating sites were called to:
  • Form a project team consisting of a Clinical lead, clinical support, and administrative personnel
  • Receive training in the project resources
  • Implement the provider and consumer resources within their practice
  • Participate in on-site QI activities, including PDSAs
  • Participate in monthly technical assistance calls and coaching calls;
    • Including topics like Motivational Interviewing for Shared Decision Making, GDM screening and diagnosis protocols, Care Coordination, Impact of T2DM, Payment Reform, Managing high-risk patients in a PCMH model, and more!
  • Complete data collection, submit data, and engage in rapid cycle data feedback
GDM Provider Toolkit

General Prenatal Resources:
- Prenatal Nutrition and Weight Gain Recommendations
- Prenatal Exercise
- Tobacco Cessation Assistance
- Breastfeeding Benefits
- Reproductive Life Planning
- Text4Baby Resources

GDM Resources:
- GDM Nutrition
- GDM Exercise
- Blood Sugar
- Postpartum Diabetes Screening
- Shared Decision Making

Office Tools:
- Clinical Decision Algorithms for diagnosing GDM and Type 2 diabetes
- Model for Improvement Guideline
- GDM Best Practice Flow Chart
- Sample Co-management Notification Letter
- Sample GDM Blood Sugar Log
Provider Toolkit
GDM Screening & Diagnostic Criteria

Gestational Diabetes Mellitus (GDM) Screening & Diagnostic Criteria

- Does the patient have any of the following risk factors?
  - Previous medical history of GDM
  - Known impaired glucose metabolism
  - Obesity (BMI ≥ 30, calculated as weight in kilograms divided by height in meters squared)
  - Previously delivered a baby weighing >10 lb
  - Has polycystic ovarian syndrome

- Screen GDM during first prenatal visit
- Screen GDM during 24 - 28 weeks gestation
- See back for Two-Step or One-Step Screening Options
Provider Toolkit
Diabetes Screening & Diagnostic Criteria

Ohio Gestational Diabetes Mellitus Postpartum Care Learning Collaborative
Check her risk. Protect her health.

Diabetes Screening & Diagnostic Criteria

Was the woman diagnosed with GDM during pregnancy? No

Screen for GDM at first prenatal visit for next pregnancy
Use: GDM Screening Strategy

Screen for diabetes at 6 to 12 weeks postpartum
Use: 75-g 2-hour OGGT

Notify patient of postpartum diabetes screening result.

Hand-off to PCP for ongoing management and treatment:

Normal
- PCP screens for diabetes every 3 years
  Use: A1c, FPG, 75-g 2-hour OGGT

Prediabetes
- PCP screens for diabetes every year
  Use: A1c, FPG, 75-g 2-hour OGGT

Diabetes
- PCP provides self-management education, referrals to dietician, diabetes educator, etc.

Diagnostic Criteria

<table>
<thead>
<tr>
<th>Screening Test</th>
<th>Diabetes</th>
<th>Prediabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1c</td>
<td>≥ 6.5%</td>
<td>5.7 – 6.4%</td>
</tr>
<tr>
<td>FPG</td>
<td>≥ 126 mg/dL (7.0 mmol/L)</td>
<td>100 – 125 mg/dL (5.6 – 6.9 mmol/L)</td>
</tr>
<tr>
<td>75-g, 2-hour OGGT</td>
<td>≥ 200 mg/dL (11.1 mmol/L)</td>
<td>140 – 199 mg/dL (7.8 – 11.0 mmol/L)</td>
</tr>
<tr>
<td>Random plasma glucose</td>
<td>≥ 200 mg/dL (11.1 mmol/L)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(For patients with classic symptoms of hyperglycemia or hyperglycemic crisis)
Overview

The Model for Improvement is a powerful tool for accelerating improvement. It helps focus teams on models that organizations may already be using, but rather to accelerate improvement.

The model has two parts:
1. Three fundamental questions.
   a. The Plan-Do-Study-Act (PDSA) cycle to test changes in real work settings. The cycle guides the test of a change to determine if the change is an improvement.

Step #1: Form a Project Team

Having the right people on a quality improvement team is essential. Teams can be organized around the organization and the complexity of the improvement effort. An effective team includes a Project Champion, someone in a leadership position who can get buy-in from staff members required for change to occur. The Project Champion may represent the following:
- Clinical leadership
- Technical expertise
- Day-to-Day leadership

Tips:
- Having a Project Champion is crucial.
- The interdisciplinary team may consist of the following:
  - Physician
  - Nurse
  - Midwife
  - Office Manager
  - Office Staff
  - Diabetes Educator
  - Dietitian

Step #2: Set Aims

“What are we trying to accomplish?”

SMART Aims for the Ohio Gestational Diabetes Mellitus Postpartum Care Learning Collaborative

1. Increase the postpartum visit rate among women with a history of GDM in your facility.
2. Increase the postpartum OGTT screening rate among women with a history of GDM in your facility.
GDM Patient Toolkit

Includes the following information:

• GDM Diagnosis
• Monitoring Blood Sugar
• Exercise
• Nutrition and Weight Gain
• Impact of GDM on pregnancy and baby (Text4Baby)
• Postpartum Family Planning
• Breastfeeding
• Postpartum Visit
• Screen for Type 2 Diabetes
Patient GDM Toolkit

Postpartum Diabetes Screening

Get Tested for Diabetes

It's important to be tested for Type 2 Diabetes when your baby is born. It is best to get tested before you leave the hospital. Women who have GDM are 7 times more likely to develop diabetes later in life.

- After pregnancy and in the future:
  - Make sure to ask your health care provider about testing for diabetes after you deliver.
  - Get tested before your postpartum checkup.
  - Continue to eat healthy foods.
  - Breastfeed your baby.
  - Talk about your plans for managing diabetes after pregnancy.
  - Watch your weight. Within 6 months of delivery, you should be back to your weight before pregnancy to lose weight slowly. This can be challenging.
  - Have regular checkups and have your blood sugar checked by your healthcare provider at least every 1 to 3 years.

Getting tested for diabetes, eating healthy, losing weight, and exercising regularly can help you delay or prevent Type 2 diabetes in the future.

You can lower your risk of getting diabetes

Testing for diabetes after pregnancy

Remember to schedule and take your 2-hour blood sugar test 6 to 12 weeks after delivery!

What is pre-diabetes?

Pre-diabetes occurs when your blood sugar is higher than normal but not high enough to have diabetes. You will need to take steps to reduce your risk for diabetes. You will also need to have your blood sugar checked regularly.

- Ask your provider if you have any questions.

Ohio Gestational Diabetes Postpartum Care Learning Collaborative
Check your risk. Protect your family.

Call your provider if you have any questions.

Share your history of GDM with all of your and your baby’s providers. It is important that everyone who cares for you and your family knows your risk for developing Type 2 Diabetes.
Pilot Site Participation

Wave 1
- 12 active sites completed wave 1
- 5 sites continued beyond 1 year
- 70 providers engaged
- 2,300 consumer resources disseminated

Wave 2
- 13 active sites participating in Wave 2
- 177 providers engaged
- 2,500 consumer resources disseminated

*All consumer resources are available in English and Spanish*
Implementing the Ohio GDM Postpartum Care Learning Collaborative - Site Experience

Carolyn Fogarty, RD, LD, CDE
Atrium Medical Center/Diabetes Wellness Center
Diabetes Wellness Center (DWC):

• **Staffing:**
  - 1-FT Diabetes Nurse Educator
  - 1-FT Diabetes Nutrition Educator
  - 1-FT Office Coordinator
  - 1-FT Program Manager
  - 3-PRN Educators

• **Referral Base:**
  - Private Practice OB/GYN
  - Hospital Managed Outpatient Center

• **GDM/Pre-existing Diabetes:**
  - Following 20-25 patients
Education Provided:

• Blood Sugar and ketone monitoring

• Meal Planning-appropriate weight gain

• Referral to endocrinologist if indicate

• Increase risk for the development of Type 2 diabetes

• 2 hr glucose tolerance test 6-12 weeks post-partum
Outcome Measures:

• Birth Weight-average 7# 6 oz.

• Complications at delivery

• Completion rate of post-partum glucose tolerance testing-<1%-25% prior to 2011
Barriers To Completing GTT:

- Lack of order
- If order written - poor compliance of patients scheduling and completing appointment
DWC Initiatives and Completion Rates:

• 2010: Order added to referral
  • 2010- Q-2-2011 Completion Rate: 13-33%
• September 2011: Lab Schedule Access
  • 2011 Q-4 Completion Rate: 50%
• 2012: Diabetes in Pregnancy Task Force
• 2012-2014:
  • Completion Rate: 60%
DWC Initiatives and Completion Rates:

- **2015:**
  - 2015 Completion Rate: 39%

- **February 2016:** Began scheduling GTT during last DWC visit before delivery
  - Patient provided with handout with appointment date/time/location
  - Appointment appears on discharge instructions

**YTD 2016: 51%**
Atrium Initiatives:

- **Diabetes in Pregnancy Task Force results:**
  - Guidelines for early screening
  - Appointment expectations
Coordination of Care:

- Open communication between referring MD practice and DWC
- Discuss issues/concerns with patients
- Same message to patients
- Advantage: Same MD’s provide medical care at the private office and hospital based center
Lessons Learned:

• TEAM Effort Improves Outcomes

• Be willing to change things up:
  • What works today, may not work tomorrow

• Contact Information:

  Carolyn Fogarty, RDN, LD, CDE
  Diabetes Wellness Center of Atrium Medical Center
  cmfogarty@premierhealth.com
  513-727-5476
Data Review

Allison Lorenz, MPA
Principal Investigator
Ohio Colleges of Medicine
Government Resource Center
Data Feedback

Purpose:

• Evaluate and refine interventions
• Measure change
• Identify challenges, opportunities, and improvements

Benefits:

• Timely feedback to bring new knowledge into daily practice
• Opportunity to track challenges and improvements over time as interventions are implemented
• Ability to modify interventions quickly
# Measures

<table>
<thead>
<tr>
<th>Measure and Indicators</th>
<th>Measure Description</th>
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<tbody>
<tr>
<td><strong>Prenatal Diabetes Screen</strong></td>
<td></td>
</tr>
<tr>
<td>Timeliness of Prenatal Diabetes Screen</td>
<td>The percentage of pregnant women that had a GDM screen during the recommended timeframe.</td>
</tr>
<tr>
<td></td>
<td>• Prior to 28 6/7 weeks gestation for women without a history of GDM</td>
</tr>
<tr>
<td></td>
<td>• By second prenatal visit for women at high risk for GDM</td>
</tr>
<tr>
<td><strong>Prenatal Lifestyle Education</strong></td>
<td></td>
</tr>
<tr>
<td>Health and Wellness Education</td>
<td>The percentage of pregnant women diagnosed with GDM who had evidence of prenatal education on benefits and/or risks in all of the following areas:</td>
</tr>
<tr>
<td></td>
<td>• Postpartum family planning</td>
</tr>
<tr>
<td></td>
<td>• Breastfeeding</td>
</tr>
<tr>
<td>Diabetes Education</td>
<td>The percentage of pregnant women diagnosed with GDM who had evidence of prenatal education on benefits and/or risks in all of the following areas:</td>
</tr>
<tr>
<td></td>
<td>• Type 2 Diabetes for mother and baby</td>
</tr>
<tr>
<td></td>
<td>• Diabetes screen during postpartum appointment at 6-12 weeks post-delivery</td>
</tr>
<tr>
<td><strong>Postpartum Care</strong></td>
<td></td>
</tr>
<tr>
<td>Postpartum Care</td>
<td>The percentage of women diagnosed with GDM during the prenatal period who attended at least one postpartum care visit after delivery.</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>The percentage of women who received one or more care coordination strategies to improve the rate of postpartum T2DM screen by 56 days postpartum</td>
</tr>
<tr>
<td>T2DM Postpartum Screen</td>
<td>The percentage of women with GDM during the prenatal period who had an oral glucose tolerance test (OGTT) prior to 12 weeks postpartum (from either OB or PCP).</td>
</tr>
</tbody>
</table>
Wave 1 Data Summary

- Pilot sites demonstrated an increase in women screened for GDM from **86.84%** to an **average of 95.16%** prior to 28 weeks gestation.

- **More than 50%** of women identified at high risk for GDM screened during their first prenatal appointment.

- Of the 195 women with GDM who delivered during the data collection period, **67% returned for their postpartum visit**.

- Of the women who returned for their postpartum visit, the number of women who were recorded as having **received their screen for Type 2 Diabetes increased from 26% to 39%**.

- Pilot sites demonstrated an increase **from a baseline of 60-80% to 100% compliance** for prenatal education related to nutrition and weight gain, exercise, and breastfeeding.

- Aggregate data shows that prenatal education on increased risk of Type 2 Diabetes increased consistently over the 11 month project period from approximately **67% to 100%**.

- Smoking Cessation education was also provided and **increased from 40% to 90.9%**.

- Pilot sites also demonstrated an increase in family planning education from **62.96% to 86.2%** on average.
Timely GDM Screen

<table>
<thead>
<tr>
<th>Month</th>
<th>Percentage</th>
<th>n</th>
<th>Nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>December '15</td>
<td>86%</td>
<td>49</td>
<td>42</td>
</tr>
<tr>
<td>January '16</td>
<td>91%</td>
<td>46</td>
<td>42</td>
</tr>
<tr>
<td>February '16</td>
<td>92%</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>March '16, n=33, N=26</td>
<td>79%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>April '16, n=28, N=23</td>
<td>82%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May '16, n=43, N=37</td>
<td>86%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>June '16, n=28, N=26</td>
<td>93%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July '16, n=28, N=25</td>
<td>89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August '16, n=23, N=23</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prenatal Education: Risk/Impact of T2DM

- December '15: 61% (n=49, Nm=30)
- January '16: 83% (n=46, Nm=38)
- February '16: 86% (n=36, Nm=31)
- March '16: 97% (n=33, N=32)
- April '16: 89% (n=28, N=25)
- May '16: 100% (n=42, N=42)
- June '16: 100% (n=28, N=28)
- July '16: 100% (n=28, N=28)
Prenatal Education: Postpartum T2DM Screen

- December '15: 55% (n=49, Nm=27)
- January '16: 70% (n=46, Nm=32)
- February '16: 81% (n=36, Nm=29)
- March '16: 82% (n=33, N=27)
- April '16: 89% (n=28, N=25)
- May '16: 93% (n=42, N=39)
- June '16: 96% (n=28, N=27)
- July '16: 89% (n=28, N=25)
Care Coordination

- We’ve received a total of **206 postpartum records** containing a delivery date. Of these:
  - 28% were receiving care coordination at **baseline**
  - By the **end of the project**, 43% were receiving care coordination

*Please note that the data is preliminary.*
Postpartum Data

- We’ve received a total of **206 postpartum records** containing a delivery date. Of these:
  - **81%** have had a *postpartum visit*
- Of those who attended a postpartum visit:
  - **27%** received a postpartum *OGTT*

*Please note that the data is preliminary.*
Next Steps

Allison Lorenz, MPA
Principal Investigator
Ohio Colleges of Medicine
Government Resource Center
Wave 3 Overview

• Smaller, **more concentrated cohort** of practices;

• **Deeper investigation** of the changes and strategies that have been identified so far;

• **Individual coaching calls** to train on QI Science and help through barriers and obstacles;

• Continued rapid-cycle **data feedback**.
Protocols

• Three protocols depending on OGTT process:
  • Protocol A: OGTT Providers
  • Protocol B: Sites that refer out for OGTT, but within the same health system
  • Protocol C: Sites that refer out for OGTT in a different health system

• Prenatal measures focus on:
  • Prenatal education
  • Care coordination

• Postpartum measures focus on:
  • Care coordination
  • Postpartum appointment attendance
  • Receipt of postpartum OGTT
Project Assessment

• **Goal**: Provide detailed information to inform decisions about the continuation and improvement, expansion, and potential replication of the collaborative.

• **Population**: Clients served at participating Wave 1, 2, and 3 sites. Data to be analyzed at the site specific and aggregate level.

• **Methodology**:
  - Quality Improvement Data
    - Identified at the site specific level
  - Qualitative Data
    - Collaborative feedback surveys
    - Select focus groups for waves 1-3 participants
  - Quantitative Data
    - Medicaid Claims Data
    - Vital Statistics Data
# Health Data Variables

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<tr>
<td>Variables</td>
<td>• Birth year • County of residence • Maternal Age • GDM screen outcome • Gestational Age at Delivery • Relevant risk • Birth weight • Vaginal Birth vs. C-section • NICU admission • Premature Rupture of Membranes • Preterm Delivery • Placenta Previa • Respiratory Distress • Birth Defect(s)</td>
<td>• Clinic Site • Number of prenatal visits • GDM screen receipt • GDM screen outcome • Delivery Dates • Pregnancy outcome • Number of postpartum visits • T2DM screen • Respiratory distress (baby) • Hypoglycemia (baby) • Preeclampsia • Pre-existing conditions</td>
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Ohio GDM Website

http://OhioGDM.com

PRESENTATIONS

Several educational trainings are available for providers which review project resources, clinical education related to the diagnosis and treatment of GDM and T2DM, and support tools to aid consumer care. The webinars feature subject matter experts (SMEs) who are nationally recognized experts in the fields of maternal-fetal medicine, GDM, consumer education for high-risk populations, care coordination, community awareness, motivational interviewing, and shared-decision making. Each webinar is approximately 30 minutes in length.

Please check this page often for new presentations as they become available.

Identifying and Screening Pregnant Moms-to-Be at High Risk for GDM
Speaker: Dr. Steven Gelbe, The Ohio State University Wexner Medical Center
Dr. Steven Gelbe shares the short and long-term impact of GDM on the mother and infant, and the importance of screening all women. Other topics addressed include methods of screening, identification of high-risk consumers, and best practices for treatment.
• See video here

Obstetrician and Primary Care Provider Communication: Reducing the Barrier
Speaker: Dr. Steven Thung, The Ohio State University Wexner Medical Center
According to research, lack of communication between OBs, Certified Nurse Midwives, and Primary Care Providers can be a barrier for postpartum screening of women diagnosed with GDM. Dr. Steven Thung offers possible solutions and shares strategies from The Ohio State University Wexner Medical Center when transitioning GDM patients to postpartum care.
• See video here

Improving Continuity of Care
Speaker: Reena Oke-Frank, Ph.D., R.D., Nationwide Children's Hospital
Dr. Reena Oke-Frank defines continuity of care and outlines the role of the consumer, provider, and system in creating successful postpartum care. She also shares results of a recent Ohio Department of Health provider survey related to postpartum screening of GDM consumers.
• See video here
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