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Implementation of Postpartum Oral Glucose Testing Follow-up in Women with Gestational Diabetes

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Abstract

Problem One of the most common medical complications of pregnancy is Gestational Diabetes (GDM). After delivery, guidelines recommend follow-up glucose tolerance testing (OGTT) 4-to 12-weeks postpartum. Despite these recommendations, only 16% to 22% of women complete an OGTT postpartum.

Methods The purpose of this quality improvement (QI) project is to pilot a postpartum outreach follow-up via telephone to reach women diagnosed with GDM; the communication will be sent using the institution's electronic messaging system. Quantitative data were collected prospectively. Data collected included if the patient was contacted and if the patient completed the testing. This project took place in a women's health clinic. This project used a purposive sample of women, aged 18 – 45, diagnosed with GDM.

Results The sample was composed of a total of 24 women in the pre-implementation period and 17 women in the post-implementation period. The pre-implementation period showed seven women (29.2%) completed the OGTT, and 17 (70.8%) did not. In the post-implementation period, six women (35.3%) completed the OGTT, and 11 (64.7%) did not. The postpartum outreach achieved 100% communication from the office to the patient by telephone or electronic message.

Implications for Practice In this QI effort, the piloted change helped engage more patients before their 6-week postpartum office visit. Future recommendations for this QI project include another PDSA cycle of a longer duration to evaluate the quality of care and new knowledge in promoting responsiveness between patient and provider to achieve the goal of increasing completion of the postpartum testing in women with GDM.

Implementation of Postpartum Oral Glucose Testing Follow-up in Women with Gestational Diabetes

One of the most common medical pregnancy complications is Gestational Diabetes (GDM), which affects 3% to 14% of women and ranges as high as 25% in at-risk racial groups (Huynh, et al., 2016; Trout, 2019; Thayer, et al., 2020). GDM is considered a glucose intolerance diagnosed in pregnancy that is not pre-existing diabetes and occurs when there is a hyperglycemic state (Thayer, et al. 2020). In women with GDM, increases in insulin resistance cannot be adequately maintained and a hyperglycemic state can result (Waters, et al., 2020). GDM in pregnancy can create a cascade of risks to both the mother and fetus; large for gestational age, immature fetal lung development, neonatal hypoglycemia, increased amniotic fluid volumes, stillbirth, operative deliveries, and increased risk for pre-eclampsia are just a few of the medical implications (Thayer, et al., 2020; Venkatesh & Landon, 2021).

In modern decades the demographic of women has changed; more women are becoming pregnant over the age of 35 and carrying more co-morbidities into their pregnancy. Risks such as lower activity level, obesity, metabolic syndrome(s), and advanced maternal age have led to a rise in GDM (Vounzoulaki, et al., 2020). Additionally, women with GDM have a seven-fold increase in developing Type 2 Diabetes (T2DM) within 10 years from delivery, and approximately one-half of these women will develop T2DM within 5 to 10 years from the first diagnosed GDM pregnancy (Huynh, et al., 2016; Lim, et al., 2017).

Both the American College of Obstetrics and Gynecology (2018) and the American Diabetes Association (2018) recommend a 50-gram oral glucose tolerance test

(OGTT) 1-hour screening in all pregnant women at 24-to 28-weeks' gestation, or sooner if they have predisposing risk factors for diabetes. A diagnosis of GDM is considered confirmed when a woman has a value of 135mg/dl and above, followed by a 100-gram 3-hour OGTT with two or more abnormal values per the Carpenter-Coustan guidelines (American Diabetes Association, 2018; Paul & Fitzpatrick, 2020). After delivery, both guidelines recommend follow-up OGTT testing 4-to 12-weeks postpartum to identify women who may have diabetes or impaired glucose intolerance.

Despite these recommendations, only 16% to 22% of women complete a repeat glucose tolerance test postpartum (Thayer, et al., 2020; Werner, et al., 2018). Repeat testing is important because the risk of developing T2DM after a GDM pregnancy is lifelong (Bernstein, et al., 2016; Oza-Frank, et al., 2018). Several studies have identified missed opportunities for collaboration among the patient and the obstetrical provider in strengthening the importance of a healthcare continuum for these high-risk and ethnically diverse women (Berstein, et al., 2017; Herrick, et al., 2019; Morton, et al., 2016; Paul & Fitzpatrick, 2020). Common barriers to testing include personal and environmental obstacles to seeking healthcare and managing glucose monitoring, competing priorities, and the idea that GDM "disappears" after birth (Bernstein, et al., 2016; Oza-Frank, et al., 2018). The American College of Obstetrics and Gynecology and the American Diabetes Association both recommend that patients follow up during the postpartum period to complete glucose testing, but do not discuss how providers should initiate that follow-up. Women with gestational diabetes have poor adherence to repeat glucose tolerance testing postpartum, and postpartum rates are low due to a lack of implemented strategies (Paul & Fitzpatrick, 2020; Oza-Frank, et al., 2018). Further complicating matters, providers cite

having to juggle competing priorities over the future risk to the woman's health. Providers also report that clinical staff lack harmonization and may confuse patients with inconsistent advice (Bernstein et al., 2016; McCloskey, et al., 2019; Werner et al., 2019).

The purpose of this proposed quality improvement project is to pilot a postpartum outreach follow-up via telephone to reach women diagnosed with GDM; the communication will be sent using the institution's electronic messaging system. The aim of this project is to reach 50% of the women diagnosed with GDM who are cared for in an outpatient office setting to increase follow-up OGTT test adherence. The measure of interest is identifying the number of women who schedule and complete follow-up testing after office outreach. A study question was developed to guide the literature review: In women with Gestational Diabetes, what is the impact of a postpartum outreach initiative on rates of follow-up 75-gram OGTT testing within 4-to-12-weeks postpartum?

Review of Literature

A systematic literature search was conducted to identify the current evidence and previously documented research findings related to GDM in women and postpartum care follow-up. The literature search was conducted utilizing CINAHL, SCOPUS, and Medline. The key search terms and phrases included *postpartum, diabet*,* and *follow up* with the help of Boolean operators AND. The number of initial publications generated using Medline and CINAHL with the search terms *postpartum* AND *diabet** was 4,594; SCOPUS elicited 4,287. The number of initial publications generated using Medline and CINAHL with the search terms *postpartum* AND *diabet** AND *follow up** was 780; SCOPUS produced 817. Inclusion criteria were studies that contained scholarly and peer-reviewed publications, studies published within the past five years, written in English,

containing all adults greater than or equal to age 19, studies published from Canada, Europe, and the USA, and containing keywords specific to gestational diabetes. Exclusion criteria refined the literature search by dismissing full text online publications, disciplines not related to health and sciences and nursing, publications including other maternal high-risk indicators such as hypertension, and articles greater than six years from publication to keep the most up-to-date information. After employing inclusion and exclusion criteria 62 articles were selected with five applied for this review of the literature.

GDM and T2DM share similar pathologic mechanisms and risk factors which show that GDM has the potential to impact future development of T2DM. Vounzoulaki, et al. (2020) set out to estimate and compare progression rates to T2DM in women with GDM and healthy controls, look at factors that could determine progression to T2DM in women with GDM compared to those with normoglycemic pregnancies, investigate outcomes in ethnically diverse populations, and evaluate the progression over a longer follow-up period. Their systematic review and meta-analysis pulled data from Medline and Embase sources between January 2000 and December 2019 and ultimately 20 studies were assessed. Of the 1.3 million women in those studies, 67, 956 had GDM in their pregnancy. It was found the pooled relative risk (RR 9.51) for T2DM was almost 10 times higher in women with previous GDM than in healthy controls, and every study reviewed showed the risk for T2DM was greater in women with GDM. The authors felt their systematic review offered several strengths; they collected a substantial number of recently published studies assessing a large total number of individuals, and the follow-up range was from one to 25 years. The review also showcased the most up-to-date

results and recommendations for screening in contemporary populations. However, they did cite that lack of family history could play a determinate in progression rates to T2DM. The authors also noted not all publications reported the ethnicity of participants-or provided little to no information-so groups had to be combined into larger ethnic categories. Additionally, not all studies posted how long after delivery women followed up, so the authors were not able to calculate incidence rate ratios consistently across studies. However, with the suggestion that women with GDM have a 10-fold increase in the development of T2DM, the promotion of postpartum screening is key and urgently needed.

Morton Eggleston, et al. (2016) initiated a retrospective cohort design to assess patterns and predictors of postpartum diabetes screening in commercially insured women with gestational diabetes. The authors examined commercial insurance claims from 2000-2012 in all 50 U.S. states, in addition to Puerto Rico. The sample size included 447,556 women, 32,253 (7.2%) of which were diagnosed with GDM. The women ranged in age from 15 to 44. The primary outcome was to identify any glycemic screening from within 12 weeks post-delivery to up to one-year postpartum. The secondary outcome identified the type of screening test used and the timing of when the screening was performed. Findings showed, that in the collective sample of women diagnosed with GDM between 2000-2012, only 23.9% received any screening within the first year postpartum. Of those women, only 41.9% had the recommended testing ordered. This study also identified that the likelihood of receiving any screening and the type of screening was associated with race/ethnicity, geography, and clinical factors. From a geographical perspective, those that resided in the West were more likely to receive the 75-gram OGTT at zero to 12

weeks postpartum (36%). Among women screening in the Northeast (19%) and South (18%), women were least likely to receive a 75-gram OGTT. When comparing race/ethnicity it was found that Asian women were most likely to receive any screening (18%), compared to white women (12%). Black women (21%) were most likely to receive hemoglobin A1c (HgbA1c), compared with white women (11%) at 12 weeks to one year. In the data collected, lower education and poverty were both associated with higher odds of receiving an FBS only. Women who had been treated with anti-glycemic medication, followed by a nutritionist, or seen by an endocrinologist were more likely to get any screening. A considerable strength of this retrospective study was the study sample represented a large segment of women with commercial insurance and a wide range of clinical settings. However, women who carry Medicaid insurance may not be generalizable to this data, and the claims data does not show ordered tests, only completed tests. The authors discuss whether changes can occur at the level of the health system or population and recommended a quality improvement initiative needs to be addressed focusing on effective means of postpartum screening that are feasible for both women and providers.

The prevalence of GDM in women has more than doubled among non-white women and those with low income (Venkatesh & Landon, 2021). Recently, race/ethnicity and socio-economic variables in women with GDM have been studied regarding their possible effect on the completion of glucose testing. In one retrospective design, Herrick, et al. (2019) sought to leverage data from electronic medical records (EMR) and administrative claims to better assess postpartum diabetes screening rates among low-income women. The sample included 1, 078 women located in Missouri with linked

electronic health Medicaid records from January 2010 until October 2015. The primary outcome measure was to identify what type of postpartum serum testing was completed within 12 to one year postpartum. The secondary aim was to identify which testing was completed within 12 weeks, after 12 weeks, and then up to one year postpartum. Over half of the sample of women were an ethnic minority, and 40.6% of those women were Black. Of the 1,078 women, only 9.7% received either fasting blood sugar or OGTT by 12 weeks postpartum. Only 18.9% of these women received some form of serum screening by one year postpartum. After 12 weeks the most common testing was a HgbA1c. Sixty-nine percent lived in a metropolitan area and 18.9% of the study population did not have a healthy food retailer nearby. Almost three-fourths (72.1%) of women had at least one co-morbidity, and 69.5% lived near public transport. To the author's knowledge, this was the first-time data from a statewide EMR in federally qualified health clinics looked at a more complete picture of healthcare, and racial/ethnic diversity more than one-year post delivery. What could not be assessed was how often testing was ordered by providers as it could only assess billed or completed lab tests, and the data could not differentiate which staff did postpartum education. The authors concluded that increased screening and documentation at any point within the first year postpartum is necessary due to the lifelong risk for T2DM. Health system and societal factors associated with screening can inform better interventions to close the gap of missed screening opportunities.

A GDM diagnosis is more than just a medical condition, it affects the very fabric of how a woman views her lifestyle choices, the health of her pregnancy, and beyond. Therefore, qualitative studies have offered an intimate perspective on how women and

providers view postpartum discussions and follow-ups. A consistent theme that emerged overall was multi-faceted; communication issues, personal and environmental issues, and quality of healthcare were barriers to GDM follow-up (Bernstein, et al., 2016; McCloskey et al., 2019).

Women worried about needing to fast for the testing, having to have another appointment, childcare, and transportation. These women also felt additional support staff should help explain the follow-up process, why it is important, and assist with motivation in completing the testing. Both Bernstein, et al. (2016) and McCloskey, et al. (2019) qualitative studies found women felt they would attend their postpartum visits had the importance of follow-up testing been emphasized during the immediate postpartum period. Providers are equally frustrated and reported finding the need to balance risk over reassurance and juggling competing clinical priorities in the postpartum period difficult to wholly address. Additionally, clinical teams often lack coordination and confuse patients with inconsistent advice. Both qualitative studies provide insight into a woman and provider's point of view and incorporate the human experience inside the clinical experience. Innovative changes can open communication and bridge the chasm between competing priorities of women and providers.

Postpartum glucose testing is vital to improving the long-term health of women with GDM. Based on the evidence reviewed, improvements in collaboration and communication are key to closing the gap of poor adherence to repeat glucose tolerance testing postpartum. These studies help drive the idea that a postpartum patient outreach initiative could prove successful in increasing the completion of postpartum glucose testing. The Iowa Model of Evidenced-Based Practice helps serve as a framework

template to initiate a piloted change to communicate with women regarding the completion of glucose testing postpartum. The model provides a multi-disciplinarian approach to addressing the barriers within the healthcare continuum and improving compliance for postpartum follow-up glucose testing. This proposed quality improvement pilot builds on recommendations and suggestions from providers and patients experiencing firsthand the effects of incongruencies with postpartum completion of testing in women with GDM. Emphasizing education of risk, implementation of effective communication that reaches the patient most efficiently, and standardizing protocols can ensure improved testing compliance. Interventions, such as phone and electronic messaging reminder systems, can work towards early risk identification in this population of women.

Methods

Design

This quality improvement (QI) project utilized a descriptive observational design. Quantitative data were collected prospectively. Data collected included if the patient was contacted by office RN staff, if patient contact occurred, and if the patient completed the testing

Setting

This project took place in a women's health clinic staffed by five physicians and one nurse practitioner. The clinic serves approximately 2,600 patients in the suburban areas of 2 counties in a Midwestern state. The offices are part of a not-for-profit healthcare organization with approximately 40,000 plus employees in one suburban county area.

Sample

This project used a purposive sample of women, aged 18 – 45, diagnosed with GDM who received obstetrical care in this women's health clinic office, and who were delivered of live infants from October 1, 2021, through January 31, 2022. Women with pre-existing Type 1 Diabetes and Type 2 Diabetes diagnosed before pregnancy were excluded. The desired sample size for the proposed project is 20 patients.

Approval Processes

Institutional Review Board (IRB) approval was sought and obtained from the participating clinic’s healthcare institution IRB and determined not to be human subjects A research. Approval for this proposed project was obtained from the University of Missouri- St. Louis IRB before implementation.

Data Collection/Analysis

After IRB approval, de-identified (first letter last name, first letter first name, and numeric month of delivery) pre- and post-practice change data were collected via chart review for patients meeting inclusion criteria. Demographic variables of age, gender, race/ethnicity, and zip code were also collected. Additional clinical data collected included the actual due date and the gestational age at the time of delivery. Additionally, data consisting of call initiation, contact, and ordered testing were also collected. Once testing was completed, the PI abstracted the data into time sequences (at 4-to 6-weeks postpartum; 6-to 8-weeks postpartum; 8-to 10 weeks postpartum; 10-to 12-weeks postpartum) and if diabetes was detected. The data was analyzed using SPSS version 26.0.

Procedure

Transition to postpartum patient outreach versus current practice without outreach is a QI project selected by the healthcare organization and led by the DNP candidate. Before implementation, office registered nurses (RN) and the office manager received education identifying the issue and the proposed practice change through a PowerPoint presentation delivered by the DNP candidate. The proposed change was reviewed and accepted by the team of stakeholders consisting of the office physicians, nurse practitioner, manager, and office RNs. Afterward, each RN was educated on the Excel spreadsheet to track patient outreach and one RN was selected to receive delivery notes sent by the delivering provider. Beginning October 1, 2021, during a designated day of the week, one RN called delivered GDM patients to initiate postpartum outreach. A patient outreach encounter was utilized in the EMR to initiate this telephone call which

created a documentation note. Using the designated script, the RN discussed the rationale for completion of the fasting 2-hour 75gm OGTT and ordered the test under the patient's primary obstetrical provider. If contact was not made on attempt one, the RN sent a secure electronic message via the patient's EMR discussing the need for testing and ordering the lab. Office RNs received a report twice weekly that included outstanding patient outreach and lab orders that were not completed. This report acted as a double check to help facilitate patient outreach callbacks.

Results

Sample demographics

The sample was composed of a total of 24 women in the pre-implementation period and 17 women in the post-implementation period. The mean age in the pre-implementation group was 31.96, and the mean age in the post-implementation group was 32.35. All women studied identified as female. The most predominant racial/ethnicity in the pre-implementation group was Caucasian (83.3%), followed by Asian (16.7%). In the post-implementation group, the most predominant race/ethnicity was Caucasian (70.6%) followed by Asian (11.8%), Other (11.8%), and African American (5.9%). Both data sets had the highest number of women residing in Saint Charles County (Tables 1 and 2).

The average gestational age of delivery in the pre-implementation group was 37.0 to 39.6 weeks gestation (79.2%). The average gestational age of delivery in the post-implementation group was 37.0 to 39.6 weeks gestation (88.2%) (Table 3).

A retrospective chart review of 24 women (n=24) who were diagnosed with GDM and delivered from October 1, 2020, to January 31, 2021, showed seven women (29.2%)

completed the fasting 2-hour 75gm OGTT, and 17 (70.8%) did not complete the testing. Of those that did complete the testing, the majority completed the screening at 8 to 10 weeks postpartum. None of the women who completed the 75gm OGTT had a diagnosis of impaired glucose screening (Figure 1 and table 4).

A retrospective chart review of 17 women (n=17) who were diagnosed with GDM and delivered from October 1, 2021, to January 31, 2022, showed six women (35.3%) completed the fasting 2-hour 75gm OGTT, and 11 (64.7%) did not complete the testing. Of those that did complete the testing, the majority completed the screening at 4 to 6 weeks postpartum.

Of the 17 women in the post-implementation sample, one was reported as having impaired glucose screening within the selected timeframe. The RN was able to connect with eight (47.1%) of the women by a direct telephone conversation, while 9 (52.9%) did not connect. Electronic messages were sent out to 9 (52.9%) patients (Table 5).

An independent samples t-test was run to determine if there were differences in the completion of the postpartum OGTT between the pre and post-groups. Results showed no statistically significant differences between the two groups. (M=3.96, SD=1.706) (pre) and (M=4.18, SD=1.551), post; t(39) =-.419, p= .678, ns (Table 6).

Discussion

Implementation of this QI effort accomplished the purpose of piloting a postpartum outreach follow-up via telephone to reach 50% of women diagnosed with GDM who are cared for in an outpatient office setting to increase follow-up fasting 2-hour 75mg OGTT test adherence. Of the women contacted during the QI timeframe, 100% communication from the office to the patient by telephone or electronic message

was achieved. Of those women who did not connect with a telephone call, 100% did view the electronic message sent by the RNs, achieving the stated aim of reaching 50% of the patient population.

Data collected show most women resided in the Saint Charles County area and were predominately Caucasian. While telephone and electronic message communication did reach all the identified patient populations, the completion of postpartum glucose screening did not increase significantly in the post-implementation group. During the identification of when postpartum glucose screening was completed, data showed that women in the post-implementation group, who were called at four weeks from the date of delivery, completed the 75gm OGTT, and followed up in the office earlier in the weeks postpartum.

The project also highlighted the large capacity of the health care institution's EMR to gather this type of data. This specific type of report had never been pulled from the EMR before this QI project, so running this report again in the future with more variables for data collection can be done easily, particularly for future PDSA cycles.

Limitations to this QI project include possible postpartum testing after delivery and before discharge home. This information might be more helpful in knowing the physiologic process of how quickly blood glucose decreases after delivery. Other limitations include gathering more demographic data about the sample. Some of these variables could include the median income of the most populated zip code, along with racial/ethnic demographics. Additionally, the inclusion of data identifying the insurance coverage of the patient population may increase understanding of the demographics of the sample.

While not part of the data collected in the QI project, patient comments were documented by the RNs in response to their ability to do or barriers to completing the 75mg OGTT follow-up test. Barriers to completion included a patient stating she was being left alone with her infant during the early postpartum period and did not have anyone to take her to the lab to complete the test. One patient had a bad experience during the testing as she needed to breastfeed during the testing and felt that the staff did not understand or want to allow this accommodation.

Other comments included a woman with normal fasting and post-prandial readings and therefore declined to follow up. One other woman had documented insulin resistance in the pre-gestational period and opted for a discussion on bariatric surgery postpartum. Her follow-up serology was more in line with that plan of care. Hence not all patients may need the postpartum testing and therefore may need to be screened more thoroughly before communication with them.

Lastly, limitations also included inclement weather office closings that affected postpartum visits needing to be rescheduled or to be done virtually. During the collection period timeframe, the office also had RN staff turnover which might have prevented initial telephone contact with patients.

Conclusion

Involving patients in their health screening and plan of care is an important part of the patient and provider relationship. In this QI effort, implementation of communication that reaches the patient most efficiently and standardizing protocols helped engage more patients before their 6-week postpartum office visit. Future recommendations for this QI project include another PDSA cycle of a longer duration to evaluate the quality of care

and new knowledge more thoroughly in promoting responsiveness between patient and provider to achieve the goal of increasing completion of the 75mg OGTT during the postpartum period in women with GDM.

Doctor of Nursing prepared advanced practice nurses have the esteemed distinction of not only engaging in patient-minded care but also applying innovative and evidence-based research findings to their practice. This program allowed me to think conceptually and enhance my knowledge in both complex practice, interdisciplinary team promotion, and leadership roles. Using the skills required of the program, I was able to develop a project steeped in evidence-based practice, with an emphasis on quality improvement and informatics.

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Table 1

Demographic Characteristics of Pre-Implementation Sample

Characteristics	N	%	M	SD
Age	24		31.96	4.630
Gender				
Female	24	100%		
Race/Ethnicity				
Asian	4	16.7%		
Caucasian	20	83.3%		
Zip code				
63304	2	8.3%		
63366	2	8.3%		
63368	2	8.3%		
63376	2	8.3%		
63385	2	8.3%		
63390	2	8.3%		

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0

Table 2

Demographic Characteristics of Post-Implementation Sample

Characteristics	N	%	M	SD
Age	17		32.35	4.256
Gender				
Female	17	100%		
Race/Ethnicity				
Asian	2	11.8%		
African American	1	5.9%		
Caucasian	12	70.6%		
Other	2	11.8%		
Zip code				
63368	5	29.4%		

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0

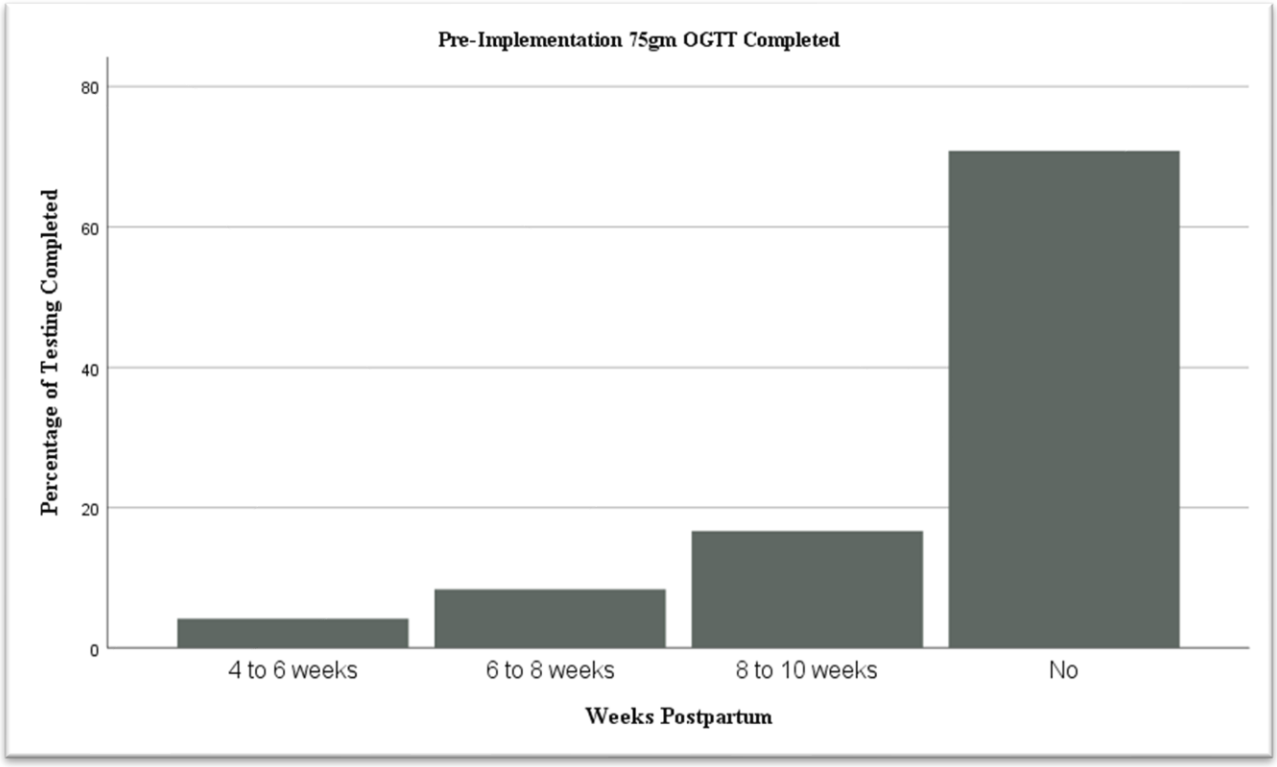
Table 3

Gestational Age at Time of Delivery

Gestational Age Group 1	N	%
34.0-36.6	4	16.7%
37.0-39.6	19	79.2%
40.0-42.0	1	4.2%
Gestational Age Group 2		
34.0-36.6	1	5.9%
37.0-39.6	15	88.2%
40.0-42.0	1	5.9%

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0

Figure 1



Note: Percentage figures were collected during the period of October 1, 2020, to January 31, 2021

Table 4

Impaired Glucose Screening

Impaired Glucose Group 1	N	%
No	7	29.2%
Not performed	17	70.8%
Impaired Glucose Group 2		
Yes	1	5.9%
No	5	29.4%
Not performed	11	64.7%

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0

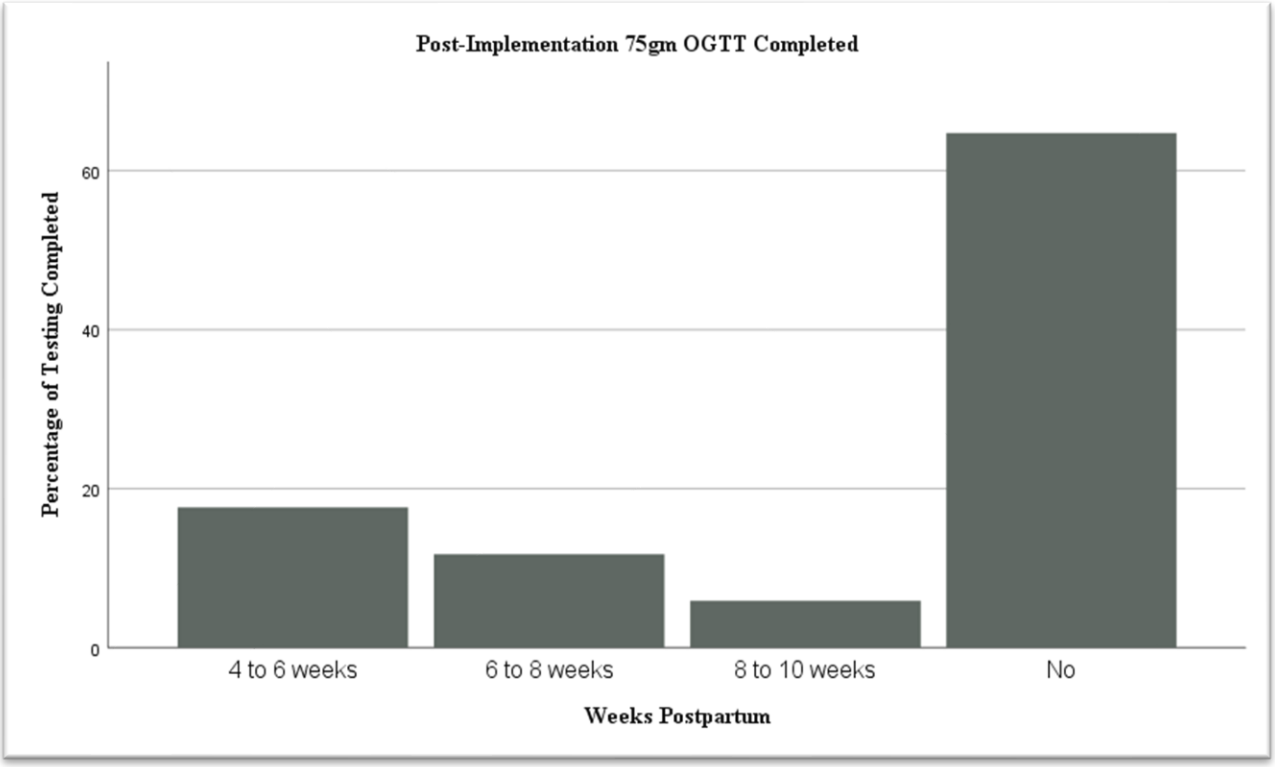
Table 5

Patient Outreach for Education on 75gm OGTT

Patient Contact	N	%
Telephone		
Yes	8	47.1%
No	9	52.9%
Electronic Message		
Yes	9	52.9%
No	8	47.1%

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0

Figure 2



Note: Percentage figures were collected during the period of October 1, 2021, to January 31, 2022

Table 6

Sample size of pre-and-post-implementation groups

Group	N	Mean	SD
2020-2021	24	3.96	1.706
2021-2022	17	4.18	1.551

Independent Samples Test

	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	95% CI Lower	95% CI Upper
Equal variances assumed	.692	.410	-.419	39	.678	-.218	-1.272	.836
Equal variances not assumed			-.426	36.524	.673	-.218	-1.257	.821

Note: Output obtained using IBM SPSS Statistics for Windows, version 26.0