



# Postpartum Glucose Test Appointment and the Effectiveness of Reminders

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## Background

- Gestational diabetes mellitus (GDM) is a prevalent obstetric metabolic disorder resulting from glucose intolerance during pregnancy.<sup>10</sup>
- Women who develop GDM have a 40-60% chance of developing diabetes up to 10 years after pregnancy.<sup>5</sup>
- Early detection of T2DM allows for early intervention, reducing hyperglycemia and risks of premature mortality.<sup>4</sup>
- Postpartum mothers who are not screened and have impaired glucose tolerance entering into subsequent pregnancies with hyperglycemia can result in poor mother and fetal health.<sup>1</sup>
- The recurrence of GDM is estimated between 30% and 84%.<sup>7</sup>
- The World Health Organization recommends glucose testing six weeks after delivery for women with gestational diabetes mellitus.<sup>4</sup>
- Adherence to postpartum glucose screening is between 30-60% worldwide.<sup>5</sup>
- Increased rates of postpartum glucose screening after receiving education and a reminder phone call.<sup>9</sup>
- Reminder systems are an effective tool for increasing adherence to postpartum glucose screening.<sup>3</sup>



## Literature Review

Authors	Results	Level of Evidence	Quality Rating
Van Ryswyk et al., 2015	Women who received an SMS message reminder for their six-week appointment showed no significance in postpartum mothers' attendance compared to the control 104 (77.6% of 134) versus 103 (76.8% of 134), relative risk (RR) 1.01, 95% confidence interval (CI) 0.89-1.15.	II	B
Domingo et al., 2022	Women received a reminder through their electronic medical records to attend an oral glucose tolerance test (OGTT). Implementation of a reminder system significantly improved postpartum glucose screening from 58.1% adherence to 75% (p=0.01).	IV	C
Kebde et al., 2018	Mobile phone reminders were statistically significant in increasing postpartum mothers to adhere to their appointments in the intervention group compared to the control group (p-value = 0.005), 95% CI 1.51-5.8.	II	B
Nielsen et al., 2020	This systematic review looked at 13 different studies. Overall, ten of the thirteen studies showed that the use of reminders could effectively increase the number of postpartum mothers adhering to their glucose screening test.	V	B
Ouahabi et al., 2018	This study revealed that postpartum mothers are more likely to attend their oral glucose tolerance test when therapeutic education is paired with reminders to increase adherence compared to current practice.	IV	B
Soffer et al., 2016	The study examined the effectiveness of providers discussing the oral glucose tolerance test, showing an educational video, and having a reminder phone call to increase postpartum mothers' screening appointments. There was no statistical significance from the intervention group compared to the control group, mainly due to non-compliance with provider education and educational video completion. However, the women who did attend their glucose screening shared that it was due to the phone call reminder.	IV	B

## The Role of the Clinical Nurse Leader

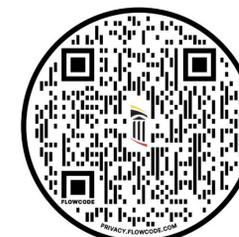
- The Clinical Nurse Leader's (CNL) role is to provide direct clinical leadership at the point of care based on evidence-based literature and targeted toward optimal quality of safety and outcomes.<sup>8</sup>
- The CNL role can identify the problem: postpartum mothers have a low attendance rate for their postpartum glucose screening appointment and review evidence-based literature to present best practiced data.
- The CNL can actively round up interdisciplinary roles to enhance communication by providing more information regarding the risk of developing T2D from gestational diabetes and ways to minimize that risk.
- The CNL can use lateral integration through having providers and nurses educate throughout the patient's pregnancy rather than being educated after delivery.<sup>1</sup>
- CNL's role could implement an additional section during discharge teaching, such as increased T2D education, discussing the reminder system, and confirming contact information.
- The CNL would evaluate the effectiveness of a reminder system for the unit or outpatient clinic to ensure that women are undergoing follow-up and are reporting positive results.
- Based on the collected data, the CNL could use its effectiveness to allow for implementation for other hospital/clinics in need.

## Summary

- Reminder system showed a positive response and/or statistical significance in adherence for postpartum mothers attending their glucose screening appointment.
- Implementation of a reminder system increased attendance to 64-70% adherence compared to the national average of 30-60% compliance.
- A reminder system should be implemented to increase postpartum mothers' attendance.
- Education on the risk of developing type 2 diabetes paired with a reminder system showed a higher compliance rate to attending their postpartum glucose screening

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## References



## Objectives

- The Purpose of this evidence review is to examine the effectiveness of implementing a reminder system to increase postpartum mothers' attendance for glucose testing.
- The six studies used ranged from randomized control trials, observational studies, and systematic reviews
- Observing if reminders show statistical significance in increasing attendance to postpartum glucose appointments compared to current practice

## Methods

**Database:** PubMed

**Keywords:** Post keywords Postpartum, Postnatal, gestational AND Diabetes, Diabetic, Glucose screening, Glucose monitoring, Glucose testing, Glucose reminder AND/OR Appointment, reminders, Appointment alerts, Appointment notifications, Appointment adherence, Missed Appointment, Follow-up appointment, Phone call, Text message, SMS.

**Limitations:** Published in 2015-2022.

**Exclusion Criteria:** Non-relevance to the research question, reminders that were not relevant to postpartum appointments or correct patient population