



Implementation of Inpatient 2 Hour Glucose Tolerance Test in the Immediate Postpartum Period

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*This project was intended to be a quality improvement initiative and therefore an IRB was not obtained

BACKGROUND

- Individuals with gestational diabetes mellitus (GDM) have markedly increased lifetime risk of type 2 diabetes mellitus (T2DM)
- Up to 30% women with GDM meet criteria for prediabetes in the early postpartum period (Bauer et al. 2023)
- Completion rates of postpartum glucose tolerance test <50% nationwide and <32% at our institution
- As insulin sensitivity rapidly normalizes after delivery, the immediate postpartum period offers a practical and convenient opportunity for screening (Waters et al. 2015)

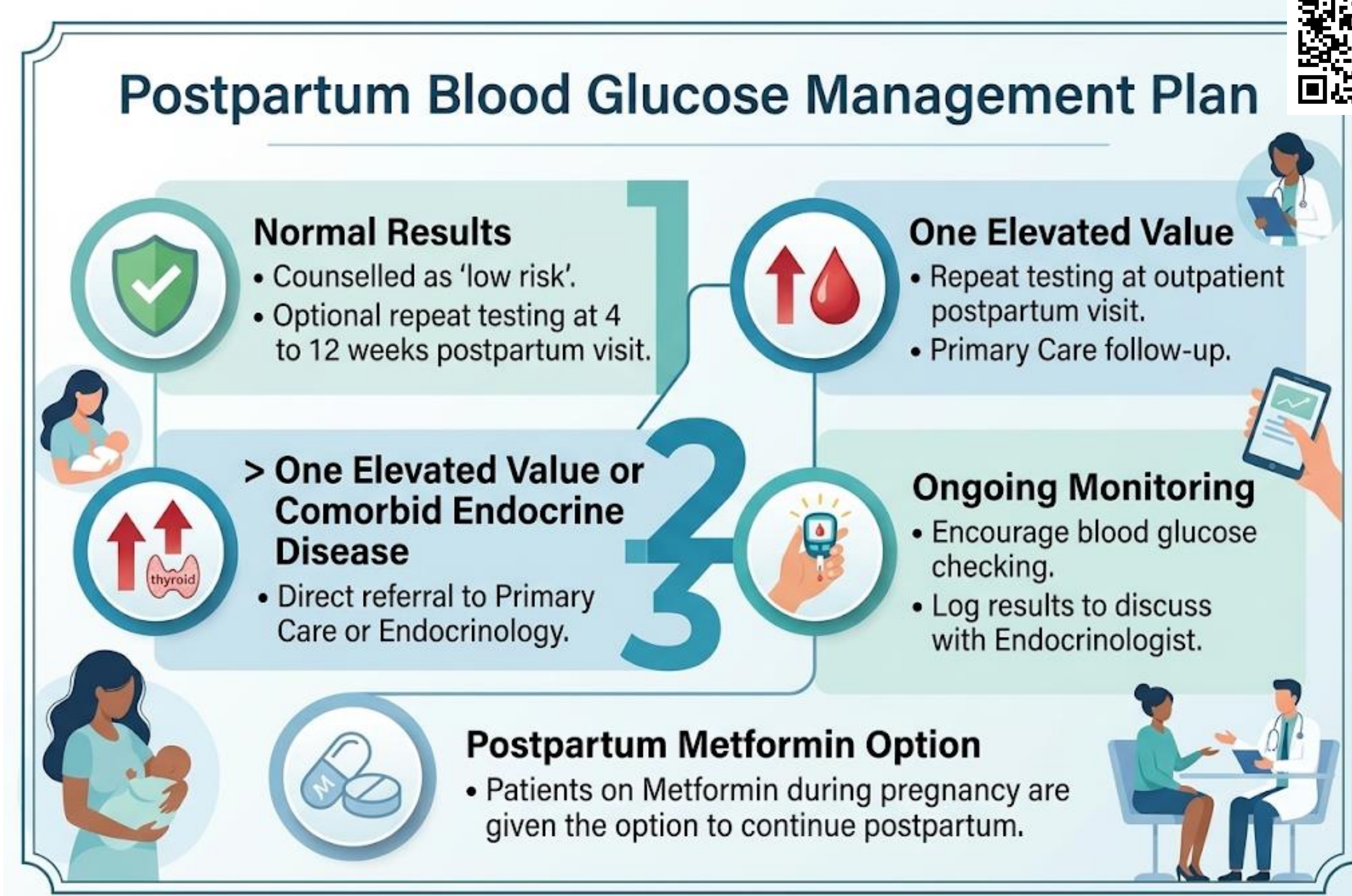
PURPOSE

To develop and implement a standardized inpatient postpartum 2-hour glucose tolerance test (2h GTT) toolkit to improve diabetes screening rates and facilitate timely follow-up care and standardize patient education.

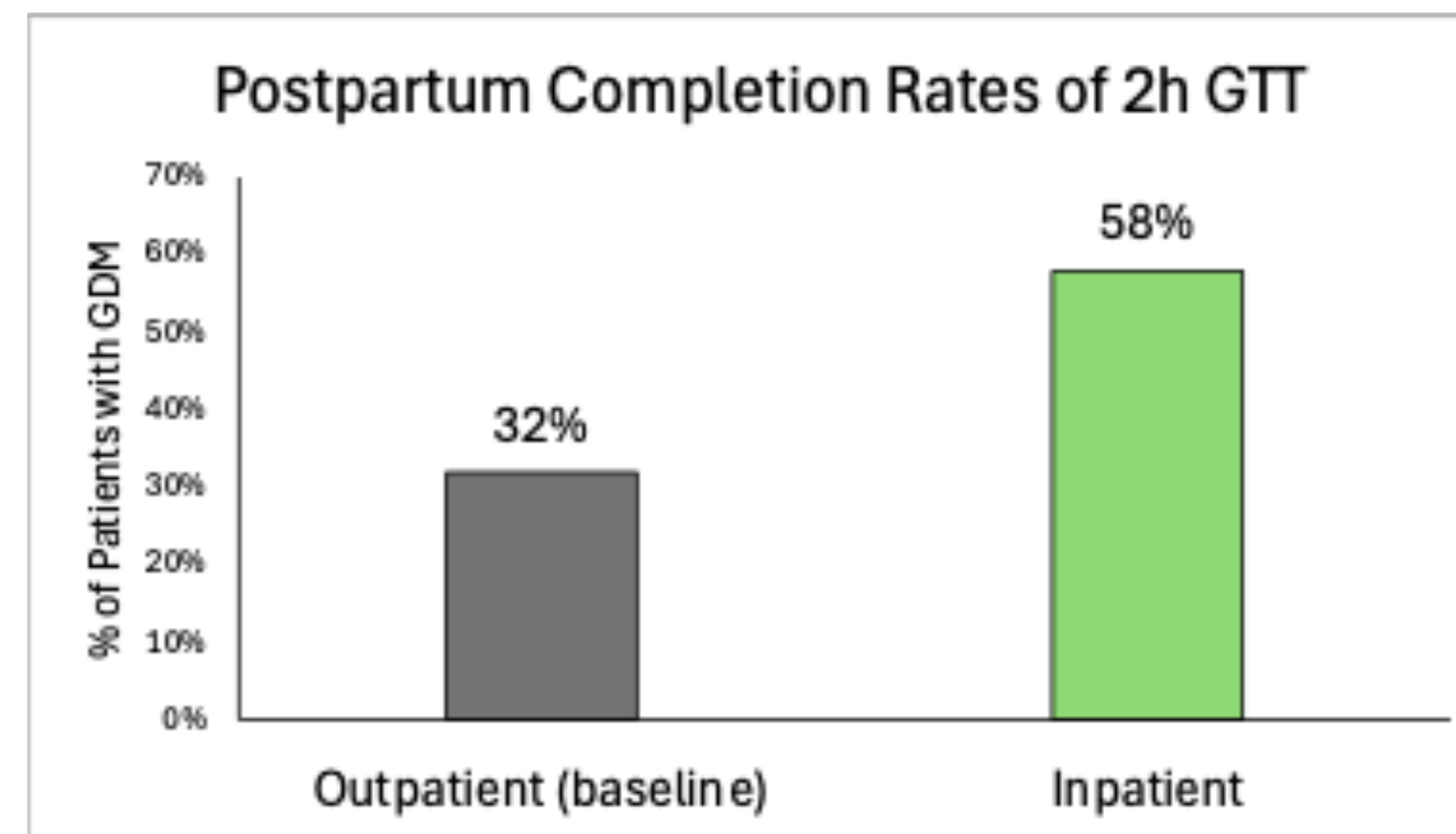
METHODS

We conducted a quality improvement initiative at GW University Hospital's Labor and Delivery and Postpartum Units implementing EMR-integrated 2h GTT toolkit for patients with GDM. The toolkit included a standardized orderset (glucose load, timed laboratory draws, and nursing instructions), patient-centered educational materials, and staff training. A referral algorithm guided outpatient follow up based on results.

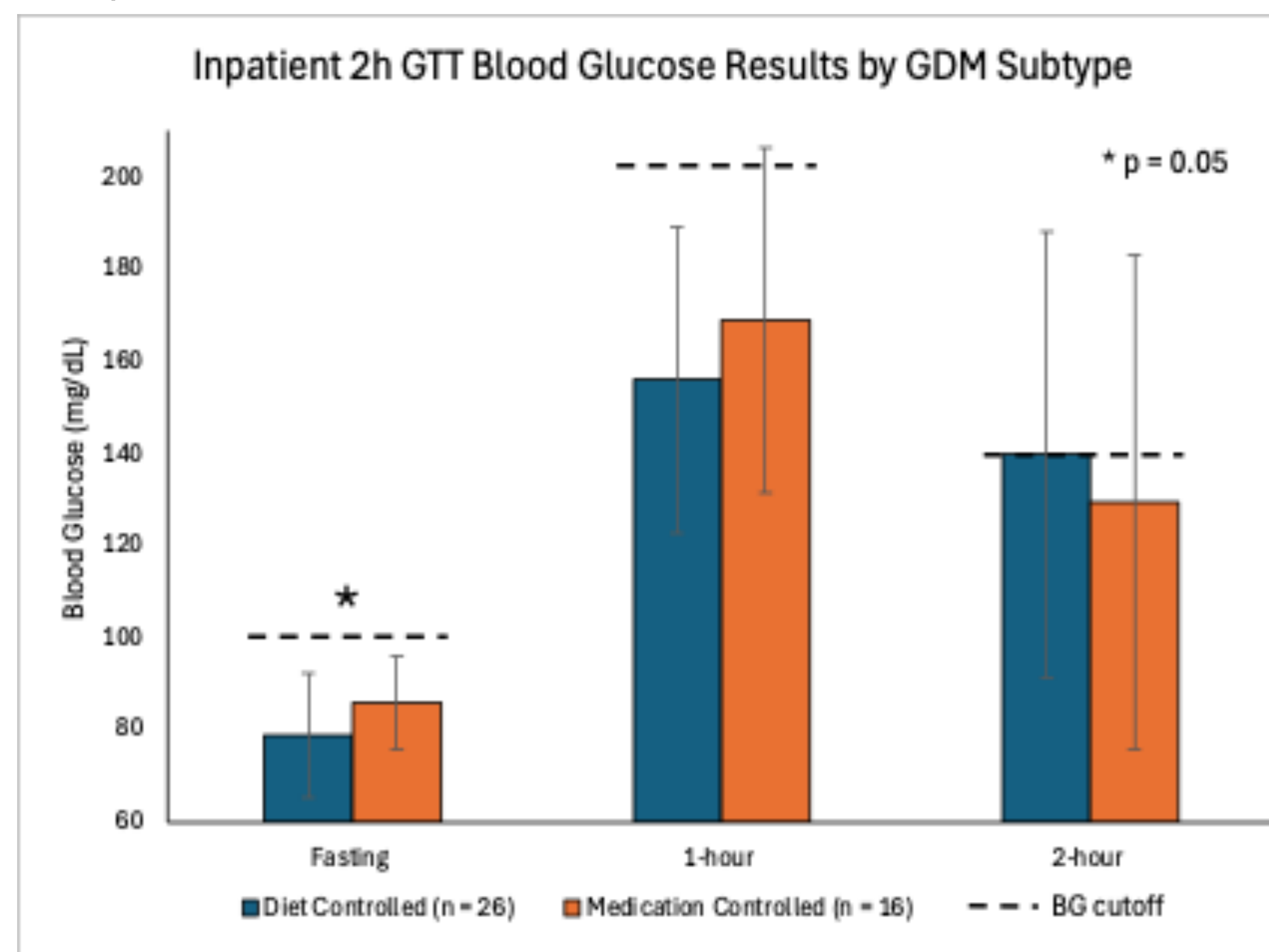
See patient FAQ Sheet here:



RESULTS



From June 2025 to March 2026, 76 of 1,323 deliveries (5.7%) were complicated by GDM. Among eligible patients, 44 (57.9%) completed the inpatient 2h GTT. The majority of patients who accepted inpatient screening were insured by Medicaid (56.8%). Of all patients screened, 20 (45.5%) had at least one abnormal value and were referred to primary care or endocrinology per protocol.



CONCLUSION

Implementation of an inpatient postpartum 2h GTT toolkit is feasible and improves screening uptake. This approach facilitates early identification of patients at high risk for T2DM and supports timely intervention during a critical postpartum period.



KEY TAKEAWAYS

- ✓ Inpatient screening captures women at a high-risk window when they are already engaged in care.
- ✓ Inpatient screening may not completely replace outpatient screening but is an option for patients who are unable to follow up outpatient.
- ✓ EMR integration standardizes care and reduces missed opportunities.
- ✓ Timely results enable appropriate follow up and may improve long-term health outcomes.

Next Steps

- Evaluate primary care and endocrinology follow up rates
- Review data of patients who did not complete inpatient 2h GTT
- Develop nutrition guide and investigate use of Metformin in high risk patients awaiting PCP follow up
- Obtain longitudinal data to determine if inpatient screening reduces progression to T2DM later in life.
- Develop alternatives for patients unable to tolerate the glucose beverage or remain NPO overnight.

REFERENCES

Bauer ST, Cate JJM, Whitesel AI, Combs CA. Society for Maternal-Fetal Medicine Special Statemtn: Quality metric on the rate of postpartum diabetes screening after pregnancies with gestational diabetes mellitus. Am J Obstet Gynecol. 2023 Apr 1;228(4):B2-9.

Waters T, Minium J, Hagiag M, Schnellinger P, Ryan D, Hauguel-deMouzon S, et al. 28: Does maternal insulin sensitivity improve immediately after delivery or do we need to wait until six weeks postpartum? Am J Obstet Gynecol [Internet]. 2015 Jan 1 [cited 2026 Mar 23];212(1):S20–1.

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