

Home administration of a 2-hour oral glucose tolerance test can increase completion rate for postpartum diabetes testing among patients with gestational diabetes mellitus

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Disclosure Statement

I have nothing to disclose.

Background

Hyperglycemia reclassification testing via a two-hour oral glucose tolerance test (2-hour OGTT) is recommended for postpartum patients who were diagnosed with gestational diabetes mellitus. This is typically accomplished at a routine outpatient visit between four to twelve weeks postpartum. Despite the maternal health risks associated with foregoing this test, fewer than 50% of women with gestational diabetes complete it at our institution.

- Transportation
- Child care
- Insurance
- Overall inconvenience

Objective

We hypothesized that completion rates of the postpartum 2-hour OGTT will improve with home administration of the test in comparison with the standard ambulatory clinic administration.

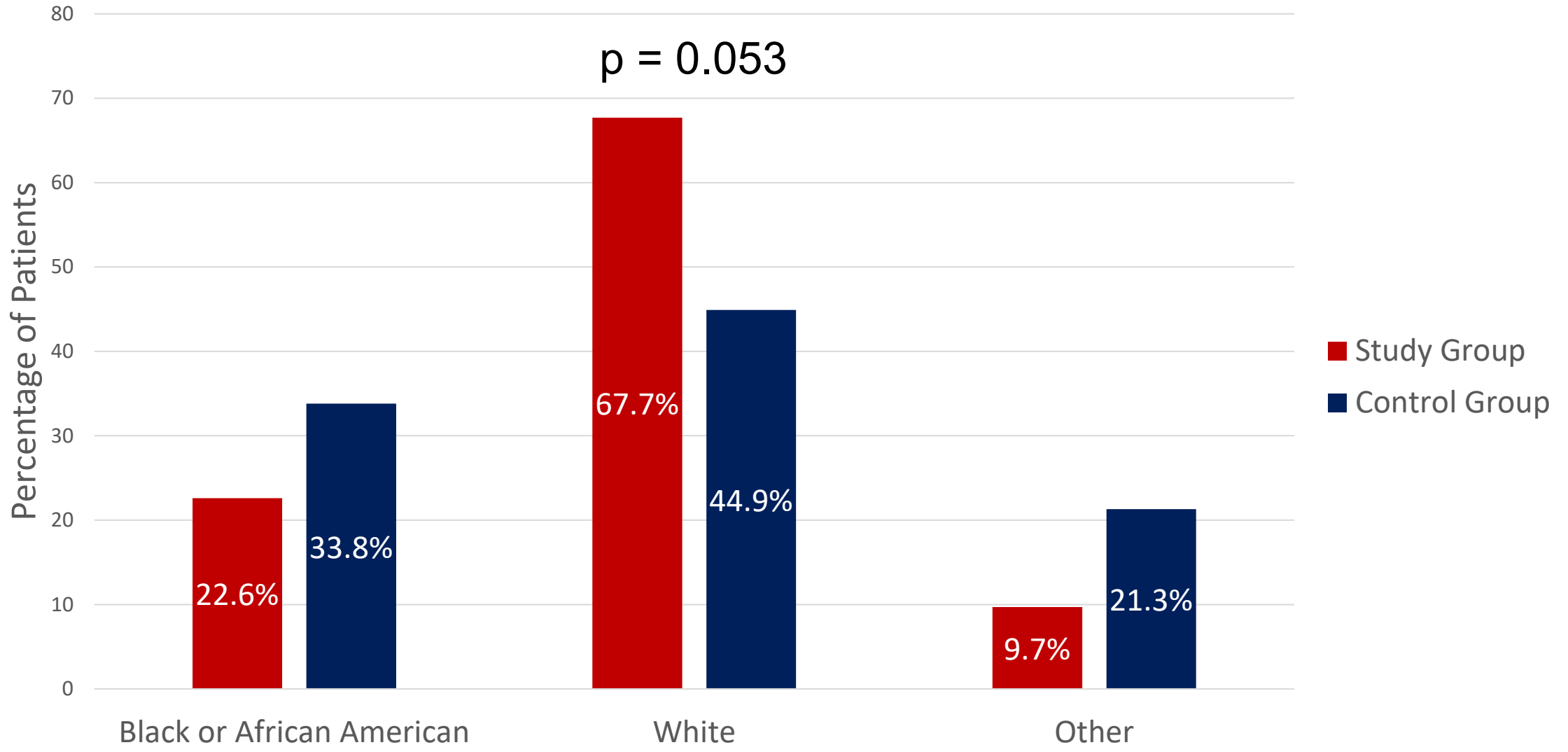
Methods

- **Study design:** Non-randomized, single-center controlled trial
- **Study dates:** December 2023-December 2024
- **Inclusion criteria:** diagnosed with gestational diabetes mellitus; prenatal care, live delivery, and postpartum care with an OB/GYN provider at USA Children's and Women's Hospital in Mobile, Alabama
- **Study group:** 31 patients desired at-home 2-hour OGTT
- **Control group:** 216 patients deferred to ambulatory clinic 2-hour OGTT

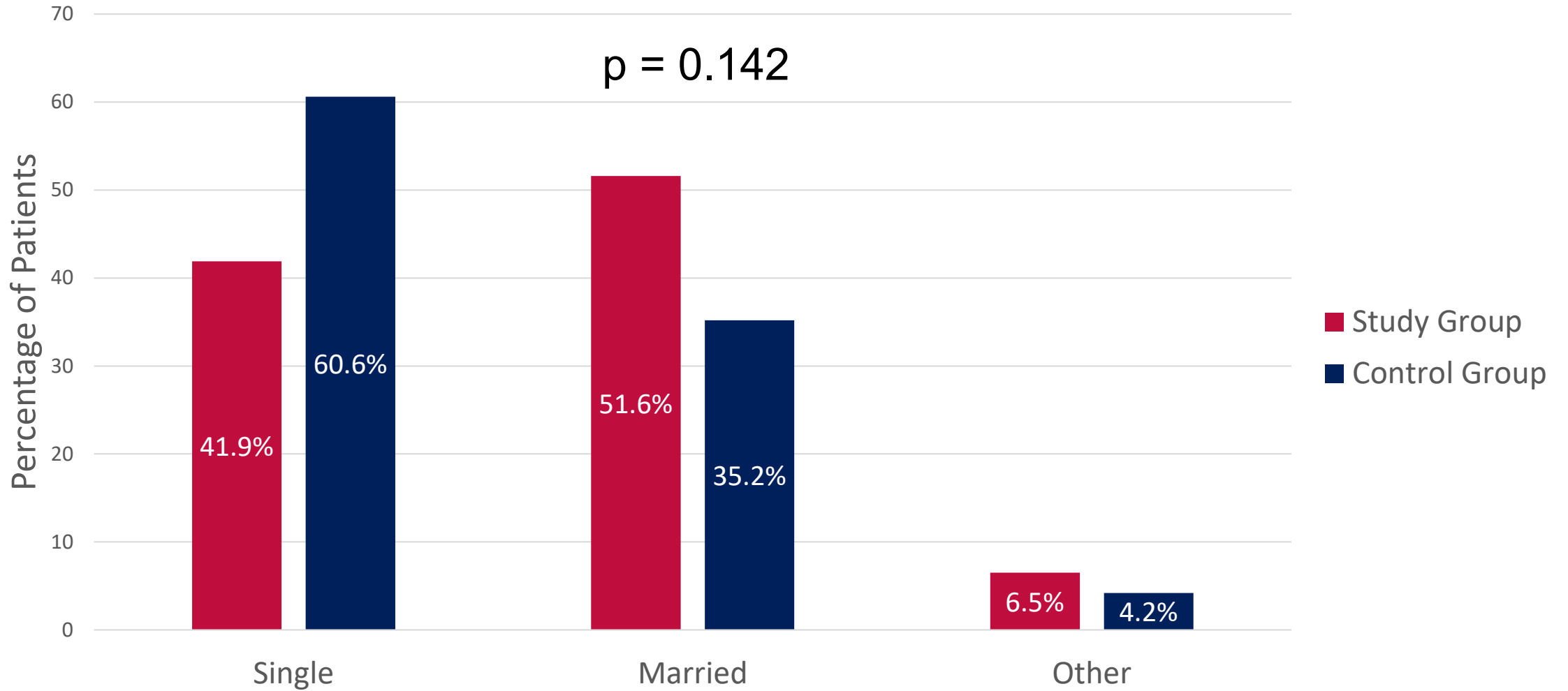
Participants

Statistical analysis of demographic distribution across participant age, gestational diabetes type, race, marital status, and insurance was obtained. There was no significant difference with regards to demographic distribution across these categorical variables.

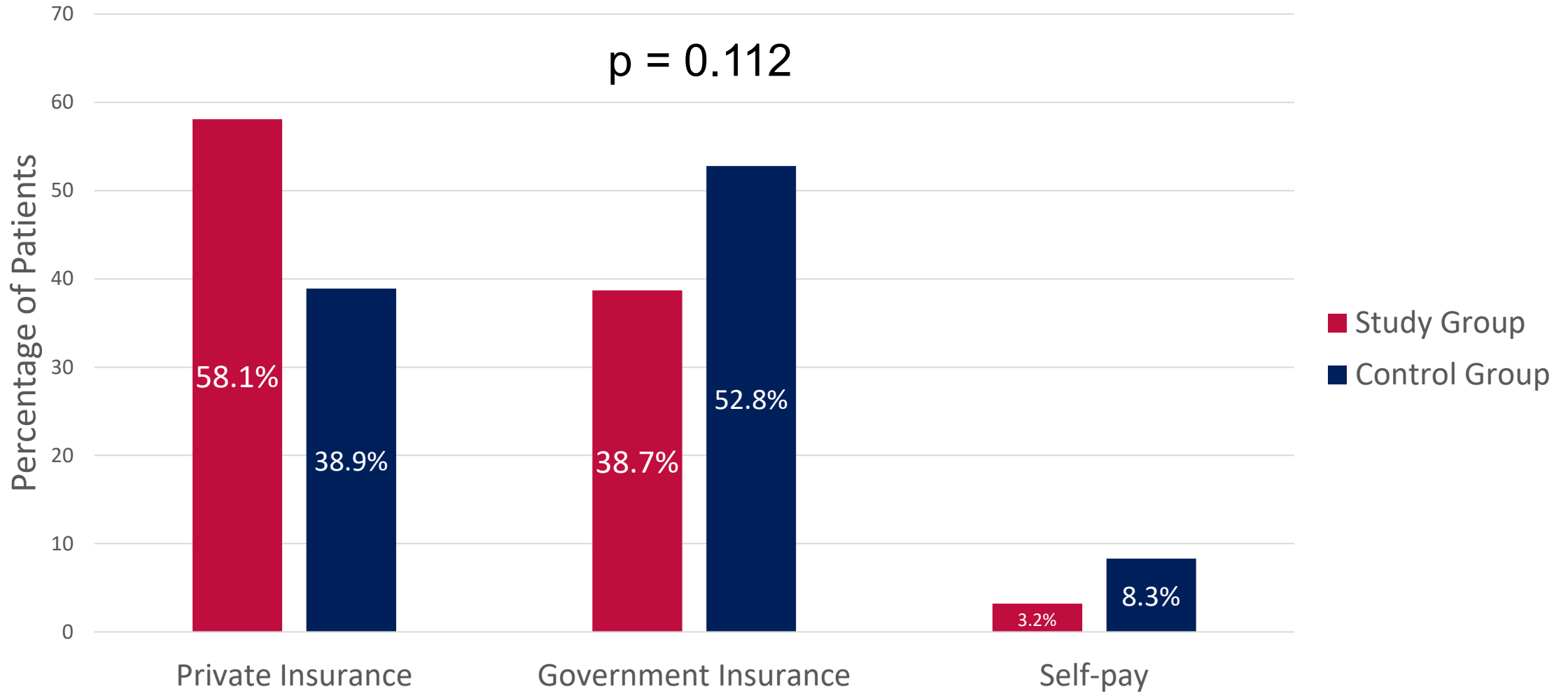
Race



Marital Status



Insurance



Instructions



1.



2.



1.

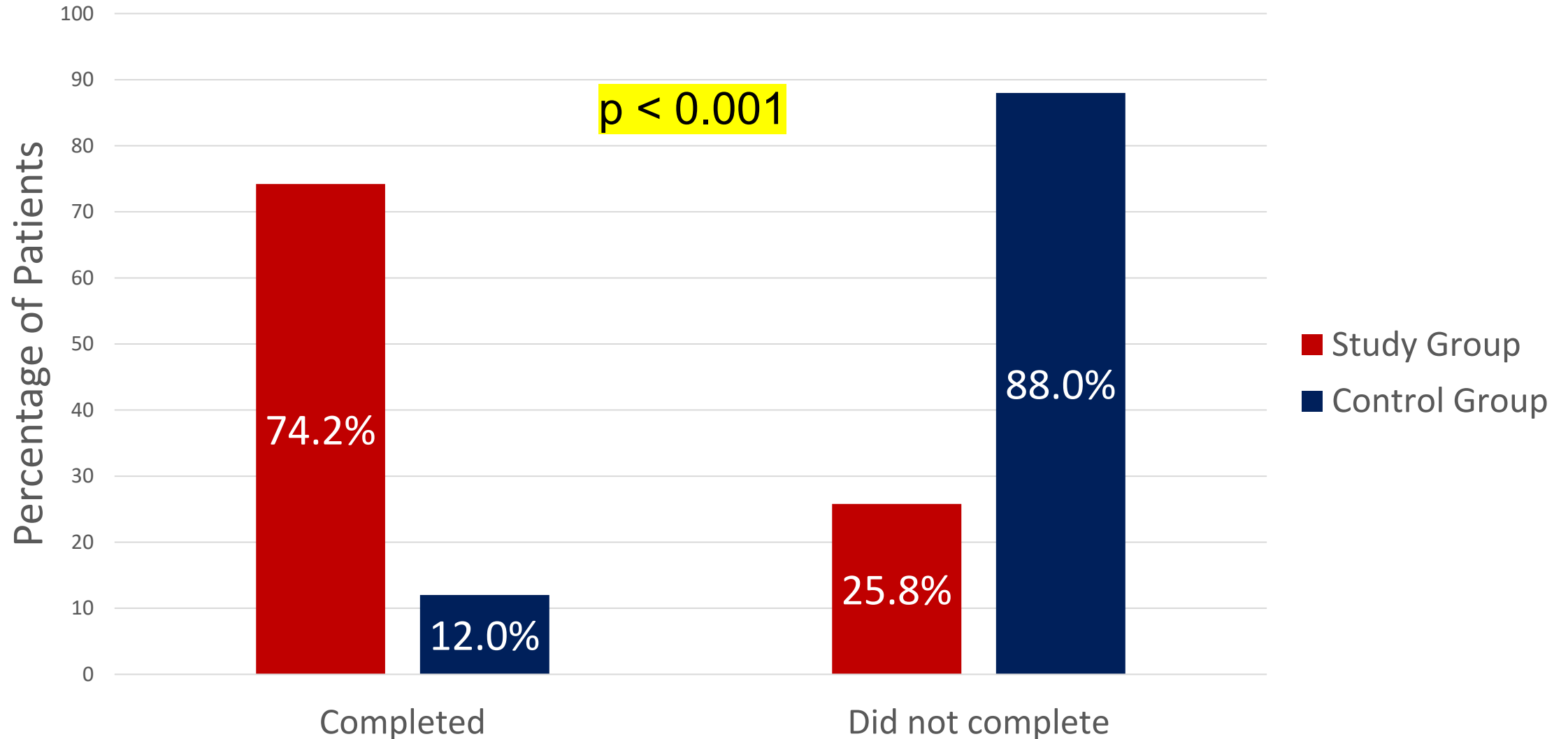


Results

The primary outcome measure was completion of the postpartum 2-hour OGTT. This study compared completion rates of the postpartum 2-hour OGTT between those who enrolled in the at-home test and those who opted for the standard ambulatory clinic administration.

- Completion rate of control group: 74.2% (23/31)
- Completion rate of study group: 12.0% (26/216)
- P-value: $p < 0.001$

2-hour OGTT Completion Rate



Study Comparison

As of May 2024, ACOG recommends offering the 2-hour OGTT to patients during delivery hospitalization as an alternative to the typical ambulatory clinic administration.

The *American Journal of Obstetrics and Gynecology* published an abstract by Ludgin et. al. in January 2024 measuring the completion rates of postpartum 2-hour OGTT in patients opting to undergo the test during inpatient hospitalization after delivery.

Since the completion of our study, the *Annals of Clinical and Laboratory Science* published a full study by Bithi et. al. in July 2025 also measuring inpatient test completion rates.

Study Comparison: Results

- Ludgin et. al.
 - Preferred inpatient over outpatient 2-hour OGTT: 75% (120/161)
 - Inpatient postpartum 2-hour OGTT completion rate: 93%
 - Outpatient postpartum 2-hour OGTT completion rate: 17%
 - P-value < 0.001
- Bithi et. al.
 - Inpatient postpartum 2-hour OGTT completion rate: 93.9% (184/196)

Conclusions

The results of our study support the hypothesis that offering an at-home postpartum 2-hour OGTT to patients diagnosed with gestational diabetes increases the completion rate.

- Addressing barriers to postpartum care: expanding the catchment of screening
- Patient-centered care: offering options that meet needs
- Where do we go from here?
 - Correlations with postpartum appointment attendance
 - Identifying patients with greatest potential benefit

References

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