

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

Emi N. Ferderber Musaalo <sup>1</sup>, C. P. Holliday, JD, MD <sup>2</sup>, N. P. Holliday, MD <sup>2</sup>, Catera Duhon BS, BSN <sup>2</sup>

<sup>1</sup> University of South Alabama Frederick P. Whiddon College of Medicine, Mobile, Alabama, USA <sup>2</sup> Department of Obstetrics and Gynecology, University of South Alabama Frederick P. Whiddon College of Medicine, Mobile, Alabama, USA

### Background

- Hyperglycemia reclassification testing via a 2-hour oral glucose tolerance test is recommended for postpartum patients who were diagnosed with gestational diabetes mellitus.
- Typically accomplished at a routine outpatient visit between 4 to 12 weeks postpartum or inpatient hospital stay immediately after delivery.
- Fewer than 50% of women with gestational diabetes complete reclassification testing at our institution.
- Few options outside of the ambulatory or inpatient setting are available for postpartum 2-hour oral glucose tolerance test administration.
- Barriers to completion include transportation, health literacy, childcare, insurance, and overall inconvenience.

### Objective

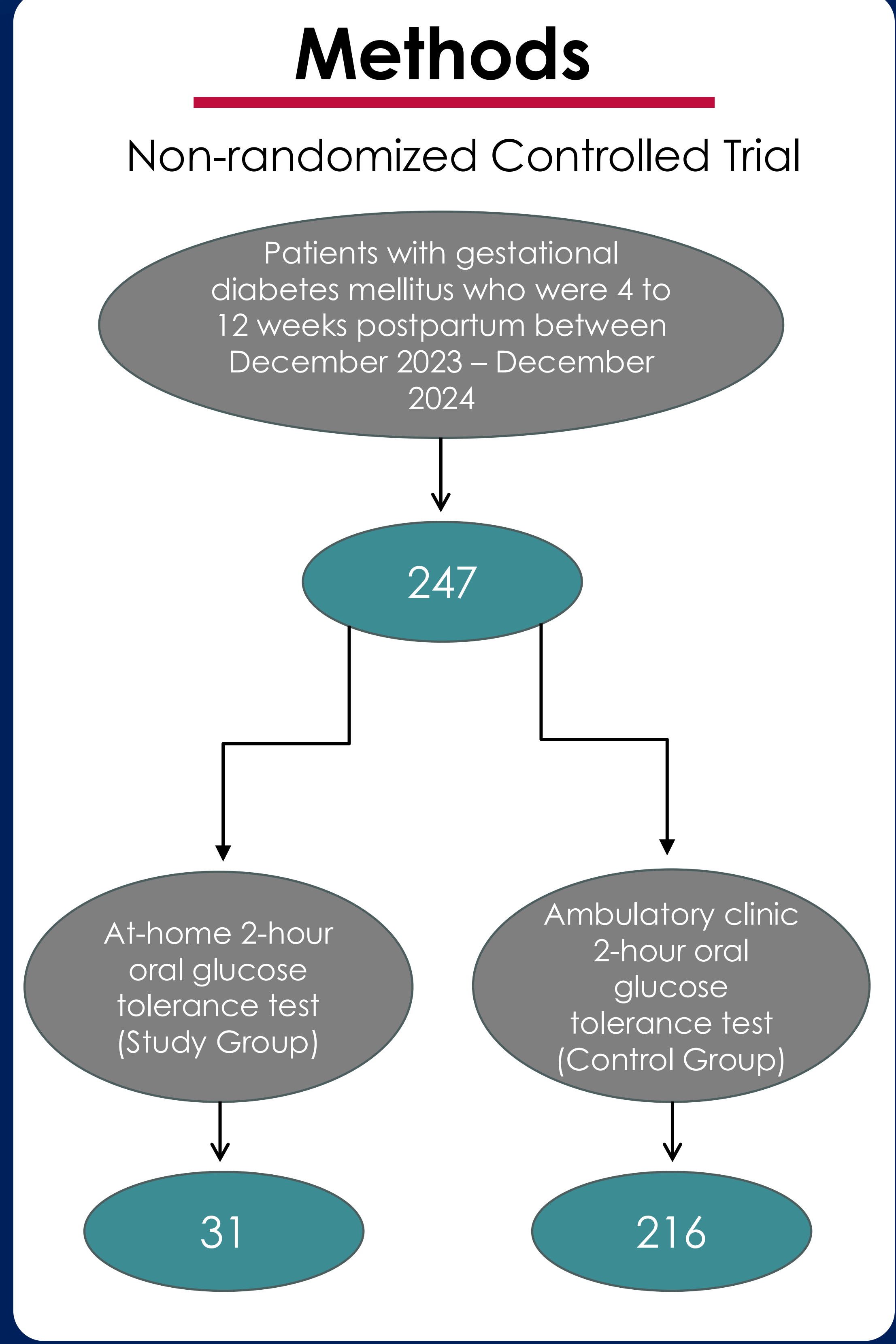
- Evaluate the implementation of an at-home postpartum 2-hour oral glucose tolerance test as a feasible option for postpartum hyperglycemia reclassification testing for patients with gestational diabetes who already have diabetic testing supplies.

### Primary Hypothesis

- Completion rates of the postpartum 2-hour oral glucose tolerance test will improve with home administration of the test in comparison with the standard ambulatory clinic administration.

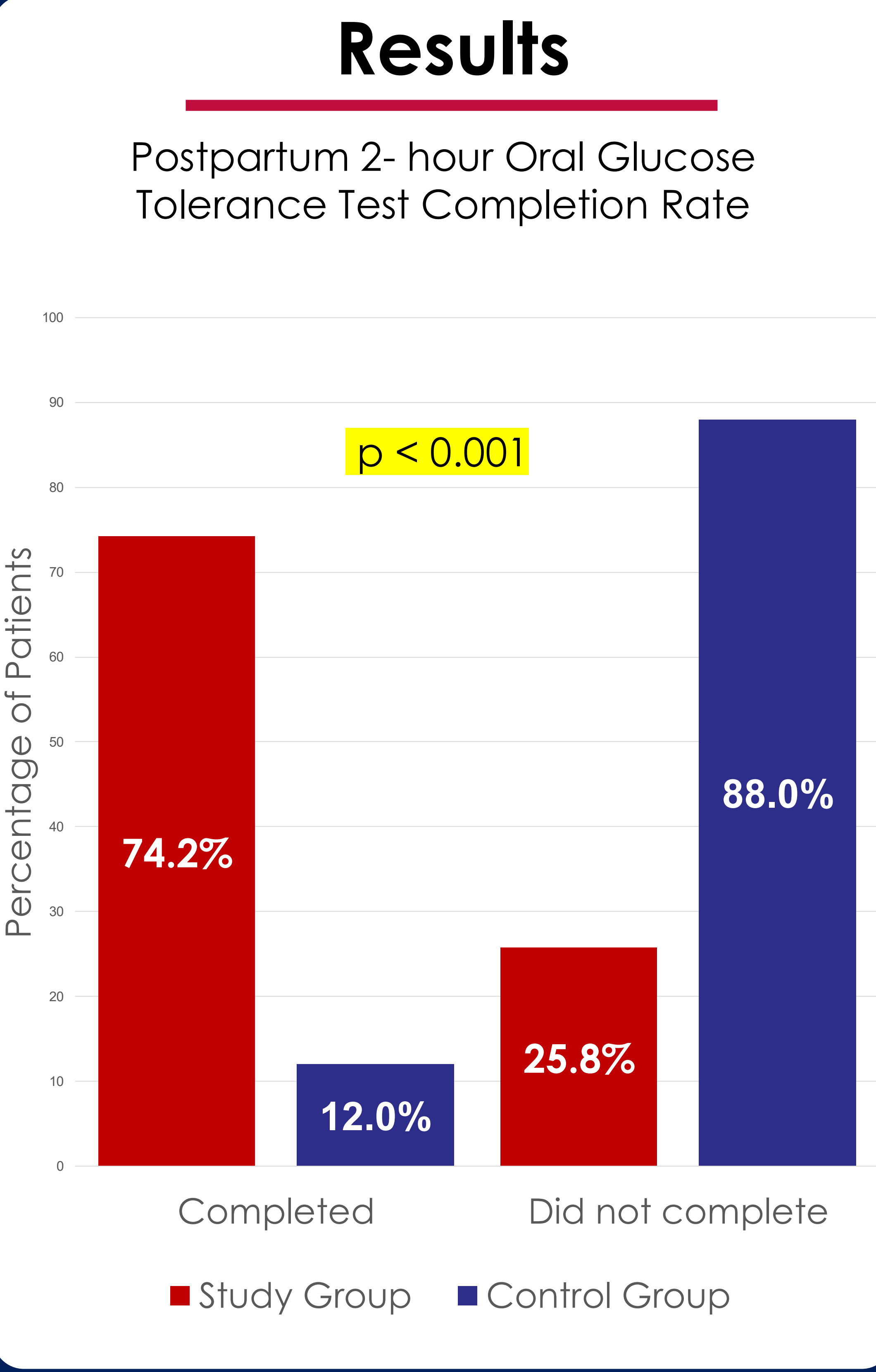
### Patients and Setting

- Single-center study with a tri-state catchment area.
- Patients with gestational diabetes mellitus who received prenatal and postpartum care at this center.
- Patients in possession of a blood glucose monitoring device at home.



### Demographics

| Characteristic            | Study Group N (%) | Control Group N (%) | p-value   |
|---------------------------|-------------------|---------------------|-----------|
| <b>Race</b>               |                   |                     | p = 0.053 |
| Black or African American | 7 (22.6%)         | 73 (33.8%)          |           |
| White                     | 21 (67.7%)        | 97 (44.9%)          |           |
| Other                     | 3 (9.7%)          | 46 (21.3%)          |           |
| <b>Marital Status</b>     |                   |                     | p = 0.142 |
| Single                    | 13 (41.9%)        | 131 (60.6%)         |           |
| Married                   | 16 (51.6%)        | 76 (35.2%)          |           |
| Other                     | 2 (6.5%)          | 9 (4.2%)            |           |
| <b>Insurance</b>          |                   |                     | p = 0.112 |
| Private                   | 18 (58.1%)        | 84 (38.9%)          |           |
| Government                | 12 (38.7%)        | 114 (52.8%)         |           |
| Self-pay                  | 1 (3.2%)          | 18 (8.3%)           |           |



### Conclusions

- The completion rate for the postpartum 2-hour oral glucose tolerance test was significantly higher in the study group choosing the at-home test than in the control group offered the ambulatory clinic test.
- The incompleteness rate for the postpartum 2-hour oral glucose tolerance test was significantly higher in the study group opting for the at-home test than in the control group offered the ambulatory clinic test.
- Because the control group and the study group are comparable with regards to distribution of demographic characteristics as evidenced by a p-value greater than 0.050 across all categorical variables, these findings are consistent among these women across race, marital status, and insurance type.
- These findings highlight the value of offering alternatives to the ambulatory clinic administration of the postpartum 2-hour oral glucose tolerance test to expand the catchment of postpartum hyperglycemia screening.

### Future Directions

- Future research will focus on determining if the increased completion rate of the postpartum 2-hour oral glucose tolerance test seen in women choosing the at-home option is also associated with an increase in follow-up appointment attendance among women with abnormal test results.
- For women who undergo hyperglycemia reclassification testing during delivery hospitalization, is an at-home 2-hour glucose tolerance test a feasible option for patients who remain hyperglycemic during delivery hospitalization and require further postpartum testing?

### References

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