

## Background

- Gestational carrier (GC) pregnancy has been associated with increased risk of postpartum hemorrhage (PPH) at delivery.<sup>1</sup>
- PPH is one of the leading causes of maternal morbidity and mortality in the United States.

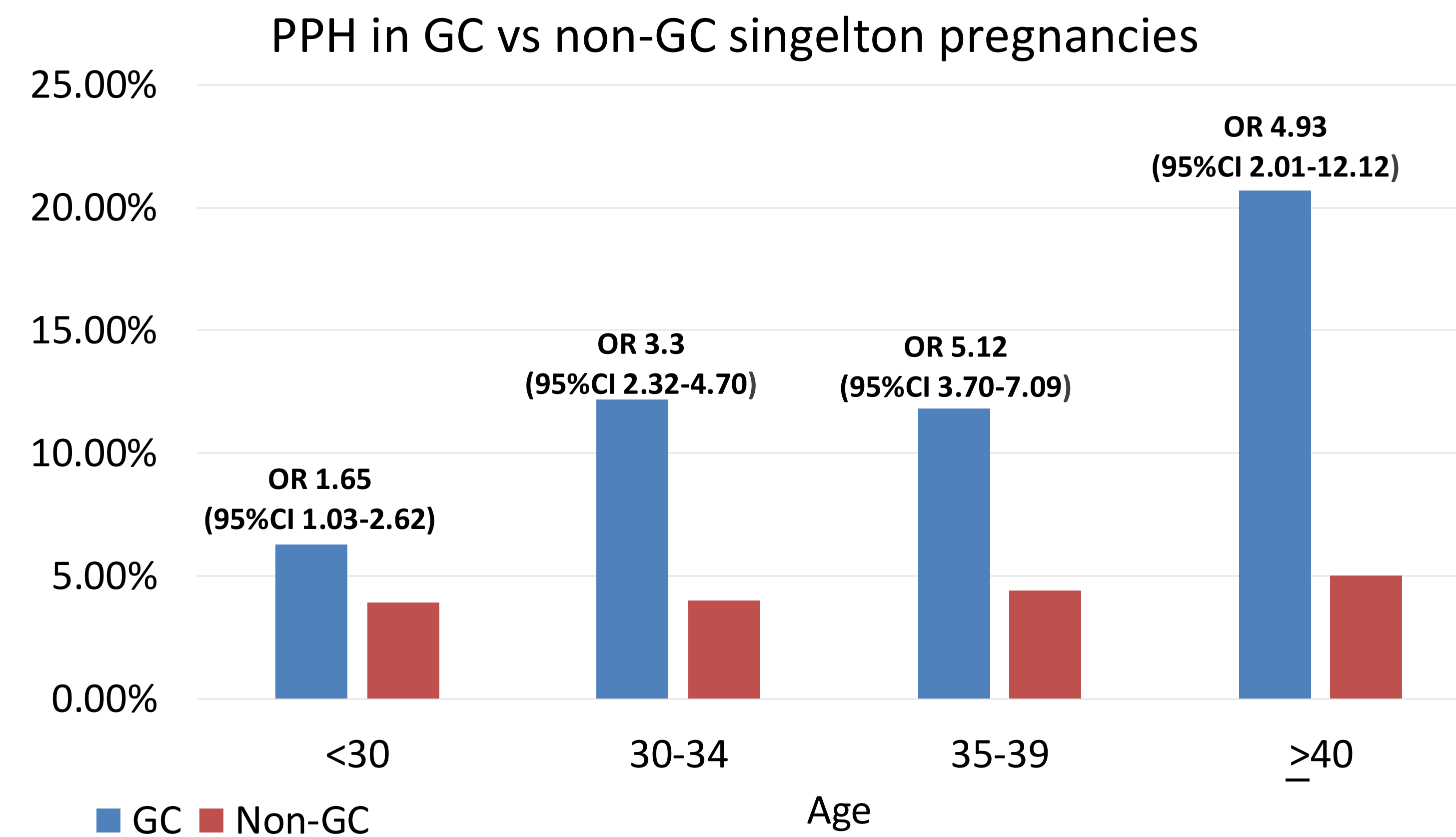
## Objective

- Assess the age-specific interaction of the association between GC pregnancy and PPH

## Methods

- **STUDY DESIGN:** The Healthcare Cost and Utilization Project's National Inpatient Sample was retrospectively queried.
- **STUDY POPULATION:** 14,312,619 hospital deliveries from 1/2017-12/2020. The exposure was a diagnosis of gestational carrier (n=1965)
- **PRIMARY OUTCOME:** Postpartum hemorrhage rate
- **STATISTICAL ANALYSIS:** Inverse probability of treatment weighting cohort was created with pre-pregnancy factors to mitigate the differences between the GC and non-GC groups. The association of GC and PPH was assessed per Age strata (<30, 30-34, 35-39, and ≥40 years) and executed according to the extent of gestation (singleton or multifetal gestations).

## Results



- The rate of PPH was 12.3% in GC pregnancies and 4.1% in non-GC pregnancies
- In the singleton cohort, odds of PPH among GC compared to non-GC pregnancies was elevated in all age-groups and increased with age
- In the multifetal gestation cohort, odds of PPH at hospital delivery among GC compared to non-GC was only elevated in the youngest age group: <30 years, 21.4% vs 9.0%, OR 2.75 (95% CI 1.45-5.22)

## Conclusions

- PPH is increased in GC pregnancies and varies based on patient age and extent of gestation.
- Given a **5x higher odds of PPH** in singleton GC pregnancies for the 35-39 and ≥40 age groups, further investigation into the safest age range (21-45 years) of GCs is warranted.<sup>2</sup>

## References

1. Matsuzaki, S., et al., *Obstetric Characteristics and Outcomes of Gestational Carrier Pregnancies*. JAMA Network Open, 2024. 7(7): e2422634.
2. *Recommendations for practices using gestational carriers: a committee opinion*. Fertility and Sterility, 2022. 118(1): p. 65-74.