Effect of Metabolic and Bariatric Surgery on Maternal and Fetal Outcomes Among Obese Women

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INTRODUCTION

- Currently, women undergoing metabolic and bariatric surgery (MBS) are recommended to wait 12-24 months before conception.
- These recommendations are based on limited empirical evidence and could potentially increase risk of age-related adverse maternal and fetal outcomes.
- **We aimed to examine the relationship between time to birth post-MBS and adverse maternal, fetal and newborn outcomes.**

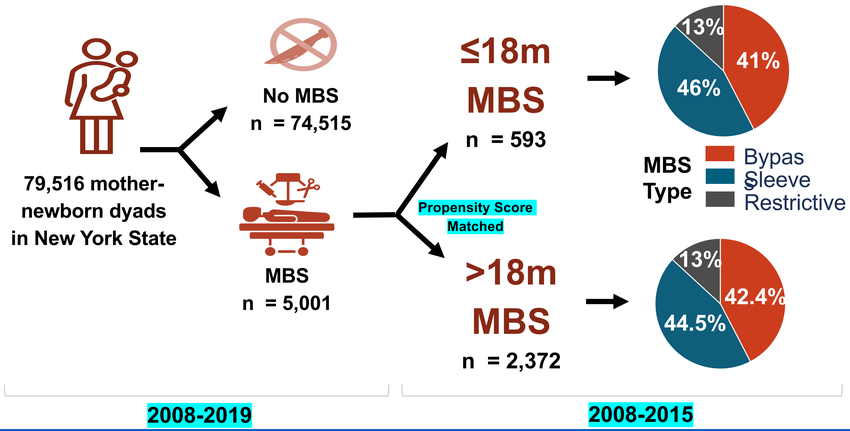
METHODS

- Utilizing 2008-2019 data from New York State's Statewide Planning and Research Cooperative System (SPARCS), we identified 90,960 obese mother-newborn dyads to assess live-birth outcomes and 185,188 dyads to assess non-birth outcomes.
- Exclusion: mothers who had MBS before livebirths during the study period (11,444 dyads).
- Live-birth outcome MBS dyads were categorized into 604 mothers who delivered ≤18 months **(≤18m MBS)** and 3,530 mothers who delivered >18 months **(>18m MBS)** after surgery.
- Non-birth outcome MBS dyads were separately categorized and analyzed due to data limitations.
- Propensity score matching was based on maternal age at delivery, race, insurance status, parity and smoking during pregnancy. Sample sizes were appropriately adjusted to accommodate for PSM.

KEY FINDINGS AND CONCLUSIONS

- Non-birth outcomes including miscarriages, ectopic pregnancies, and stillbirths were less common in women who underwent MBS.
- Cesarean delivery and neonatal mortality were highest among those who underwent gastric bypass in women undergoing MBS.
- There was no significant variation in pregnancy timing depending on type of MBS.

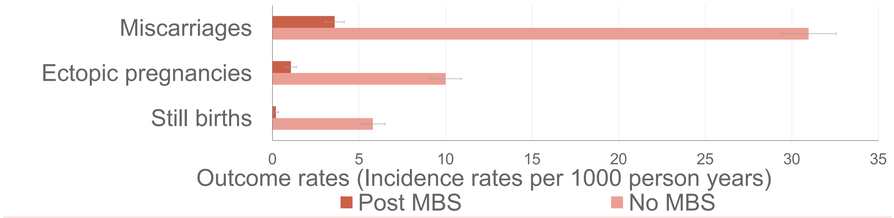
STUDY SAMPLE FOR CHARACTERISTICS



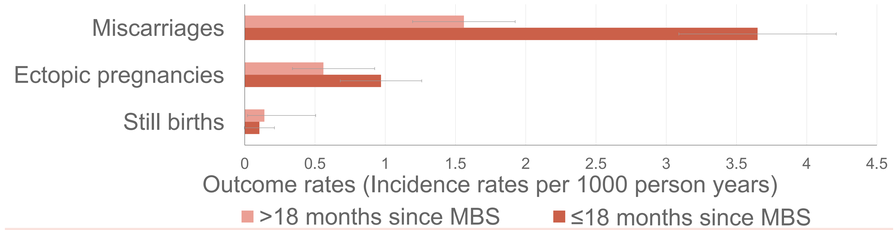
RESULTS

Variable	No MBS (%)	≤18m MBS (%)	>18m MBS (%)
N	74,515	604	3,530
Maternal age (years) [mean (SD)]*	29.0 (6.0)	30.9 (5.4)	32.3 (5.1)
Race*			
White	46	50	52
Black	30	24	20
Other	24	27	29
Insurance*			
Private	27	29	35
Medicaid	54	54	50
Other	18	17	15
Smoking during pregnancy*	9	6	7
Super Obese*	13	23	20

- Compared to No MBS mothers, MBS mothers were older at delivery, more likely to be Non-Hispanic White, had private insurance, super obese, and less likely to smoke during pregnancy.
- Compared to ≤18m MBS mothers, >18m mothers were older at delivery and more likely to have bypass surgery.



Miscarriages, ectopic pregnancies, and stillbirths were more likely among No MBS women compared to women who underwent MBS.



Miscarriages were more likely among MBS women who delivered before or at 18 months following surgery compared to women who delivered after 18 months.

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