

Acceptability of Intramuscular Injection of Tranexamic Acid in Postpartum Hemorrhage Prevention



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Introduction

- Postpartum hemorrhage (PPH) is a leading cause of maternal mortality.
- PPH is defined as >1000mL blood loss in the 24 hours post-birth.
- Tranexamic acid (TXA) is has emerged as an important tool in the prevention of PPH, with the WHO adding intravenous (IV) TXA to their hemorrhage prevention guidelines in 2017.
- TXA can also be administered intramuscularly (IM) in low-resource settings, but little research exists on the attitudes of pregnant patients towards non-IV routes of administration.
- This study was designed to survey patient preferences for administration of TXA as well as other medications to prevent PPH.

Methodology

Study Population:

- 300 pregnant or previously pregnant individuals (>18; mean age 30-34) who visited the GW OBGYN outpatient clinic between April-September 2022.

Data Collection:

- Participants were given an electronic tablet during their routine visit and completed the survey during their pre-visit waiting period.
- Responses were collected via the RedCap platform and took patients on average 3-5 minutes to complete.
- The survey questions collected data on patient demographics and preferences for medication administration before and after birth.
- Categories for types of medication administration included IV, IM, and subcutaneous (SQ).
- The variables analyzed are directly based on survey responses.

Data Analysis:

- Responses were compiled and patient age, education, and ethnicity were further analyzed to look for trends in preferences towards a certain route of administration.

Results

Table 1. Demographics (n=300)

Characteristic	Count (%)
Age Range	
18 - 24	23 (7.7)
25 - 29	49 (16.3)
30 - 34	95 (31.7)
35 - 39	87 (29)
40 - 44	29 (9.7)
45+	17 (5.7)
Race*	
Caucasian	96 (32.1)
African-American	119 (39.8)
Latino or Hispanic	38 (12.7)
Asian	23 (7.7)
Native American	2 (0.7)
Two or More	9 (3)
Other/Unknown	5 (1.7)
Prefer not to say	7 (2.3)
Education Level*	
Some high school	3 (1)
High school	86 (28.8)
Bachelor's degree	78 (26.1)
Master's degree	87 (29.1)
Ph.D. or higher	30 (10)
Trade school	9 (3)
Prefer not to say	6 (2)

Figure 1. Participants' preferred routes to prevent postpartum hemorrhage if injection was given before (figure 1a) and after (figure 1b) birth.

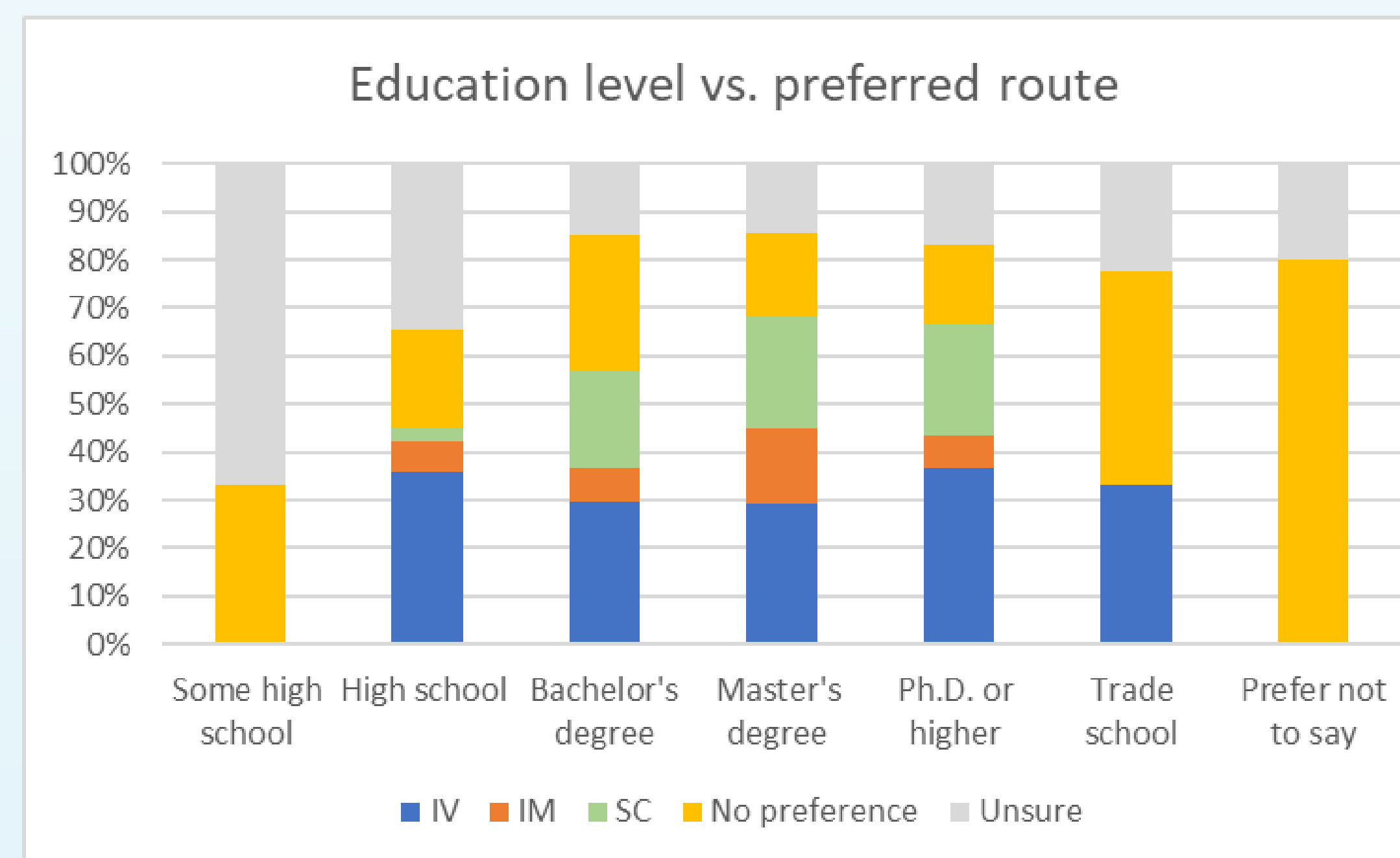
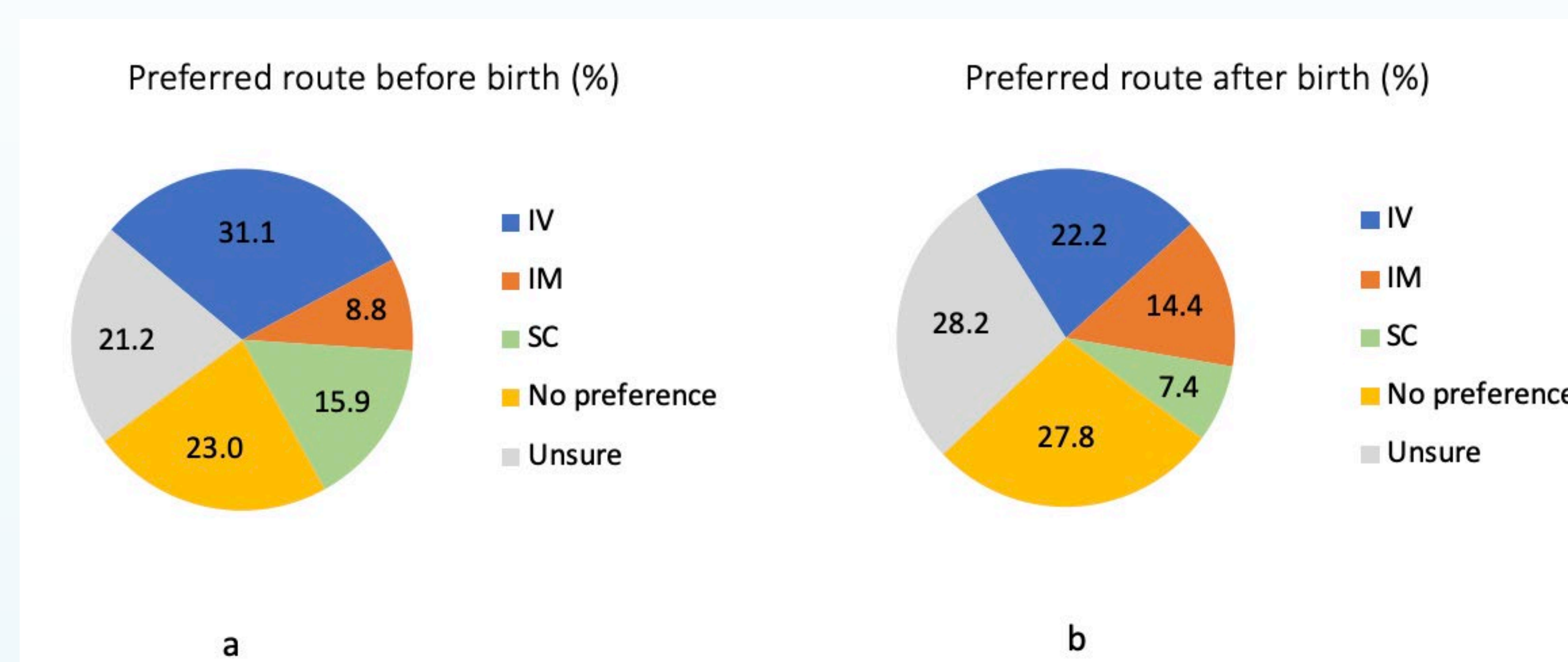


Figure 2. Participants' preferred route of injection to prevent postpartum hemorrhage if injection was administered before birth based on their self-reported education level.

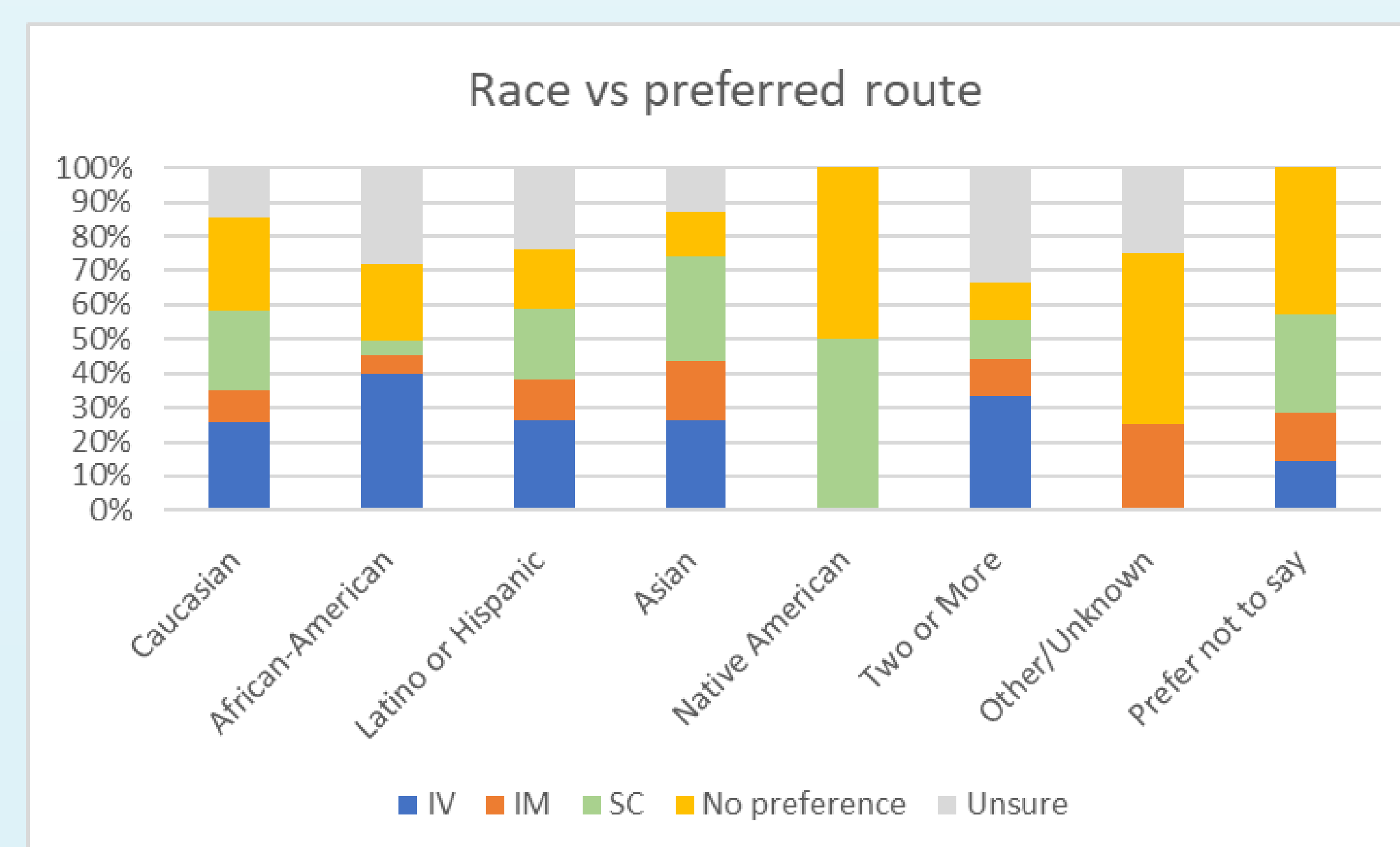


Figure 3. Participants' preferred route of injection to prevent postpartum hemorrhage if injection was administered before birth based on their self-reported race.

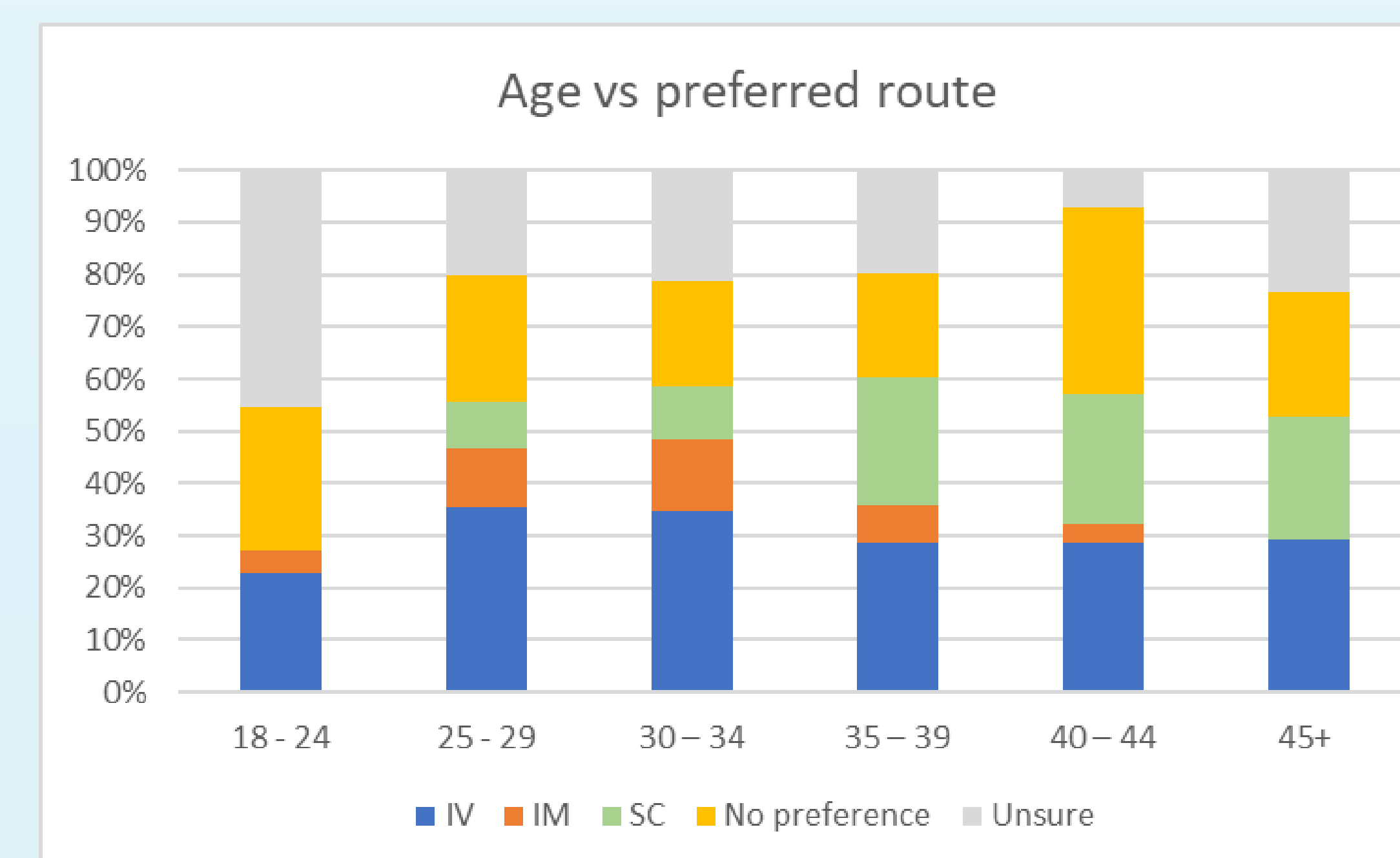


Figure 4. Participants' preferred route of injection to prevent postpartum hemorrhage if injection was administered before birth based on their age.

Discussion

- Our findings showed that there were no strong preferences among pregnant women for IV versus IM administration of TXA for the prevention of PPH.
- Although one third of participants favored IV, half of participants indicated no preference or that they were unsure, suggesting no strong opposition to IM TXA.
- Specifically in low resource settings where IV administration is not available, our findings suggest that most patients would be amenable to IM TXA.
- These results could have an impact on the guidelines for prevention of PPH in low resource settings.
- Further research should include surveying pregnant individuals in low resource areas to confirm generalizability to this population.
- In the future, we also would offer both in-clinic and at-home survey options, since some patients may have felt rushed in the clinic setting or preferred to answer the questions in private.

Conclusion

- While a small majority of survey participants prefer IV route of administration, approximately 68.9% of subjects were unsure, had no preference or preferred non-IV routes.
- These findings suggest that patients could be amendable to IM injection of TXA and other tools to prevent hemorrhage.
- This information is particularly useful in low resource settings where IV is not readily available or in situations where IV access cannot easily be obtained in a high-risk patient.

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