

Background

- Long-acting reversible contraceptives such as intrauterine devices (IUDs) are among the safest, most effective, and longest-lasting forms of contraception, yet only about 12% of patients who use contraception have IUDs.
- There is currently no standard pain control regimen for IUD insertion, despite the fact that multiple interventions have been shown to reduce pain during this procedure including NSAIDs, 10% lidocaine spray, verbal anesthesia, and ultrasound guidance.¹⁻⁴
- Other interventions, including misoprostol and paracervical block, have been inconsistent in improving pain and come with additional side effects.^{5,6}

Objective

- We aimed to investigate the efficacy of standardized, multimodal pain control bundle (oral naproxen, a high-potency topical cervical anesthetic, emotional support person, and ultrasound guidance) on the experience of pain during IUD insertion.
- Secondary outcomes included successful placement achieved during clinical visit, complications within six weeks of placement including expulsion, removal, and malposition, memory of pain experienced during IUD insertion reported in the follow-up survey, whether the patient would have an IUD placed again in the future, and whether they would recommend IUD placement to a friend

Methods

- We enrolled 247 patients who underwent IUD insertion from May 2022 – May 2024. They were surveyed about their experience with IUD placement as well as self-reported complications 4-6 weeks after insertion. We also asked whether they would have an IUD placed in the future or if they would recommend the procedure to a friend.
- Of the 218 eligible for final data analysis, 118 were in the control group and 100 were in the treatment group.
- T- test was used to compare mean pain scores between groups

Results

Table 1: Demographics

Variable	Level	N	No intervention N=118	Treatment N=100	P-Value
Age Mean (SD)		218	30.5 (8.6)	32.0 (8.3)	0.177
BMI Mean (SD)		204	28.6 (6.3)	30.5 (9.2)	0.079
Race N (%)	NON-WHITE	218	15 (12.7)	17 (17.0)	0.373
	WHITE		103 (87.3)	83 (83.0)	
G0 N (%)	Y	218	56 (47.5)	40 (40.0)	0.269
History of Leep and/or D&C N (%)	Y	218	11 (9.3)	13 (13.0)	0.387
	N				
Prior IUD N (%)	Y	212	60 (52.2)	52 (53.6)	0.835
IUD in place currently N (%)	Y	218	26 (22.0)	13 (13.0)	0.083
Type of IUD placed N (%)	KYLEENA	217	25 (21.4)	14 (14.0)	0.031
	LILETTA or MIRENA		78 (66.7)	70 (70.0)	
	PARAGARD		14 (12.0)	16 (16.0)	

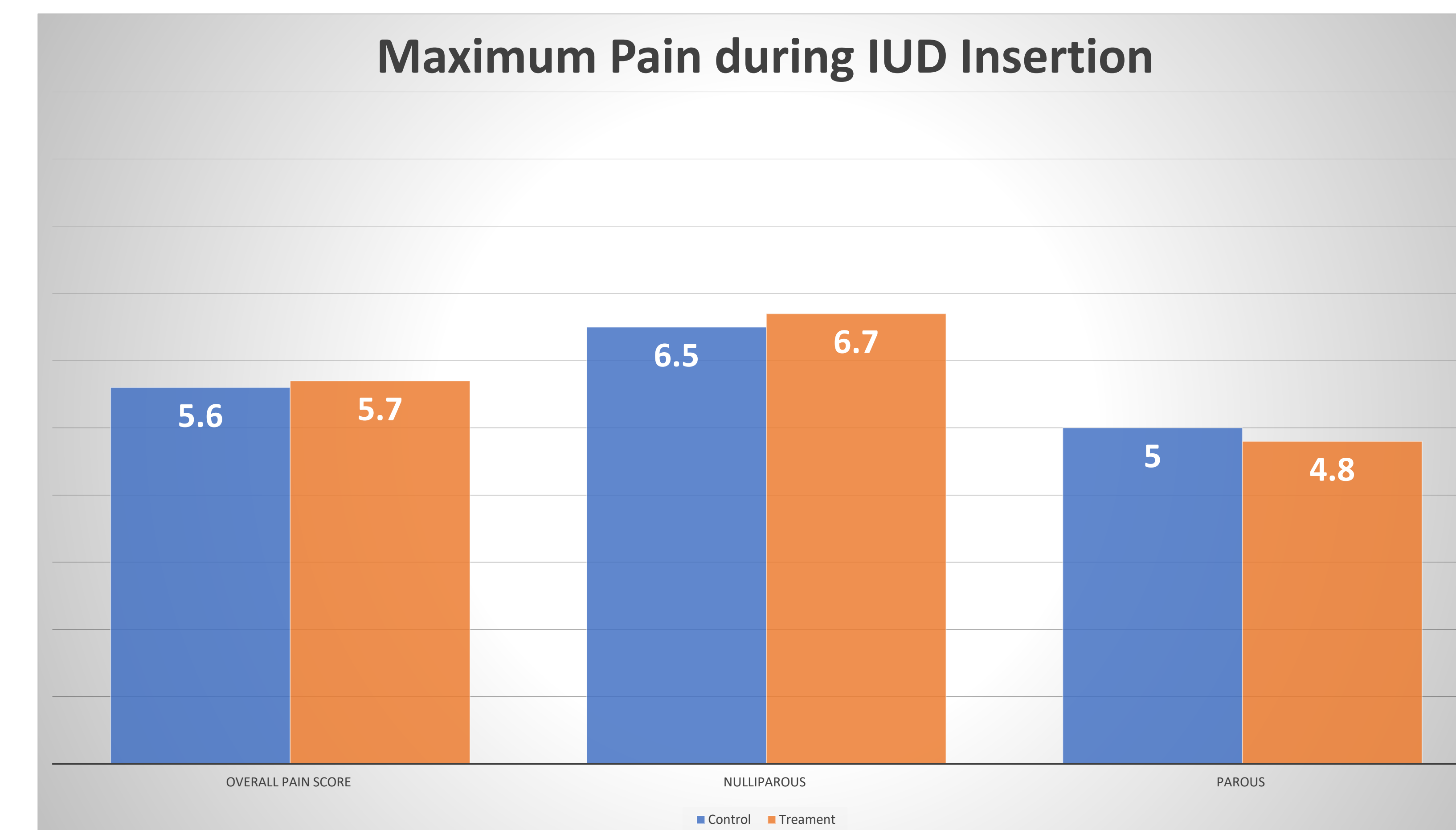


Figure 2: Maximum Pain during IUD insertion was 5.6 for the control group (N=118) and 5.7 for the treatment group (N=100), with a p value of 0.799.

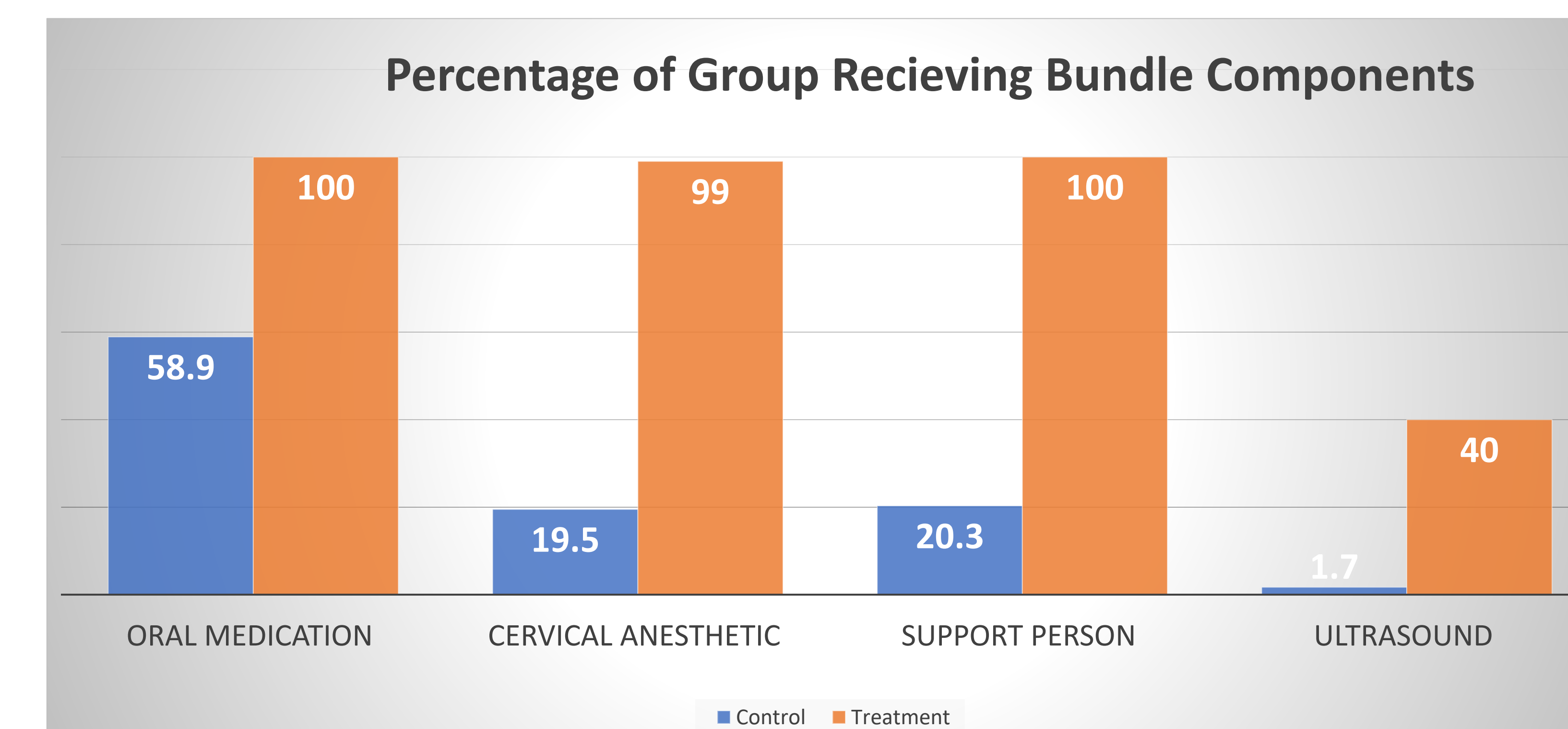


Figure 3: Pain management in the control group varied with 60% receiving some form of oral premedication and only 20% using topical anesthetic. Ultrasound was used in 40% of patients in the treatment group compared to <2% in the standard practice cohort

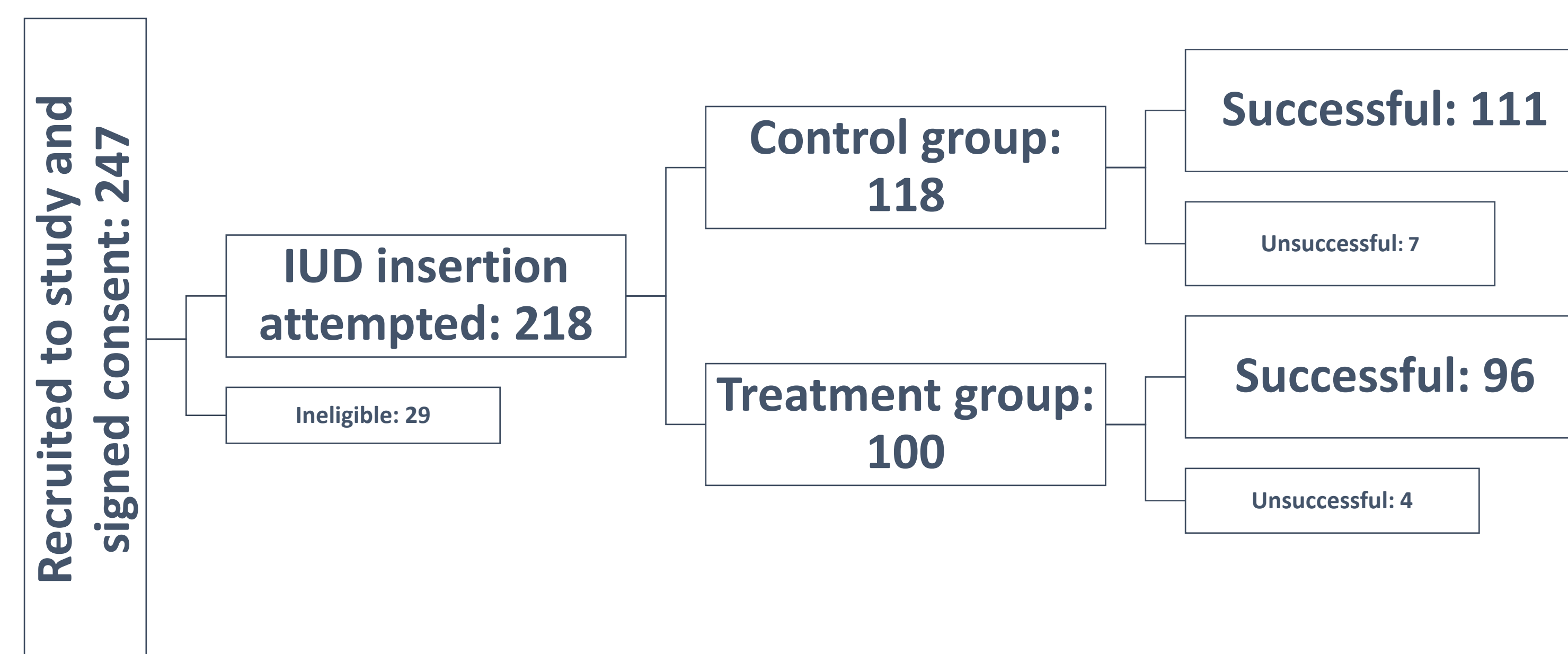


Figure 1: Distribution of participants. After 29 patients were excluded from evaluation 218 patient total remained in our control and treatment groups with a total of 11 unsuccessful IUD placements

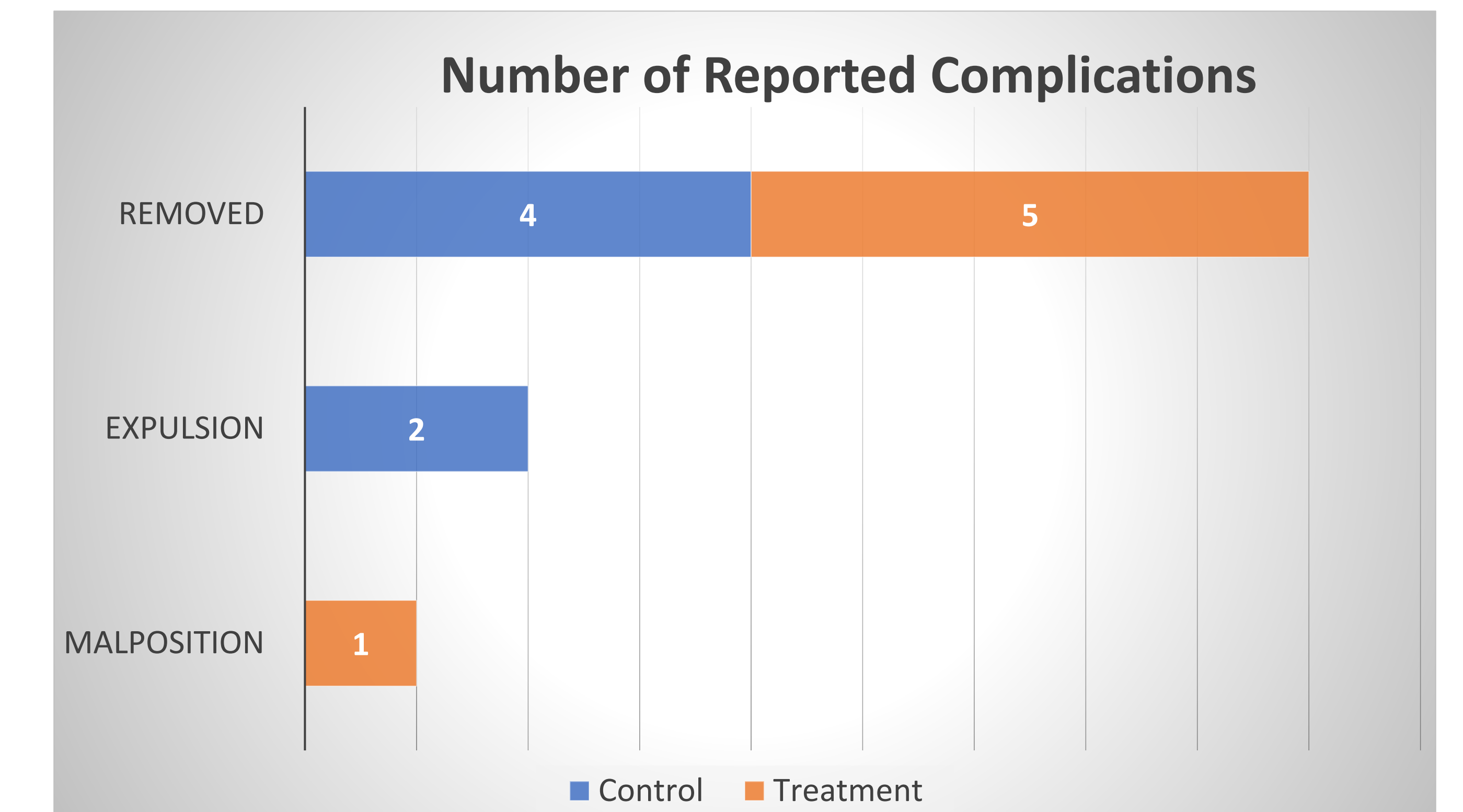


Figure 4: A total of 5% of patients reported complications including malposition, expulsion, or IUD removal

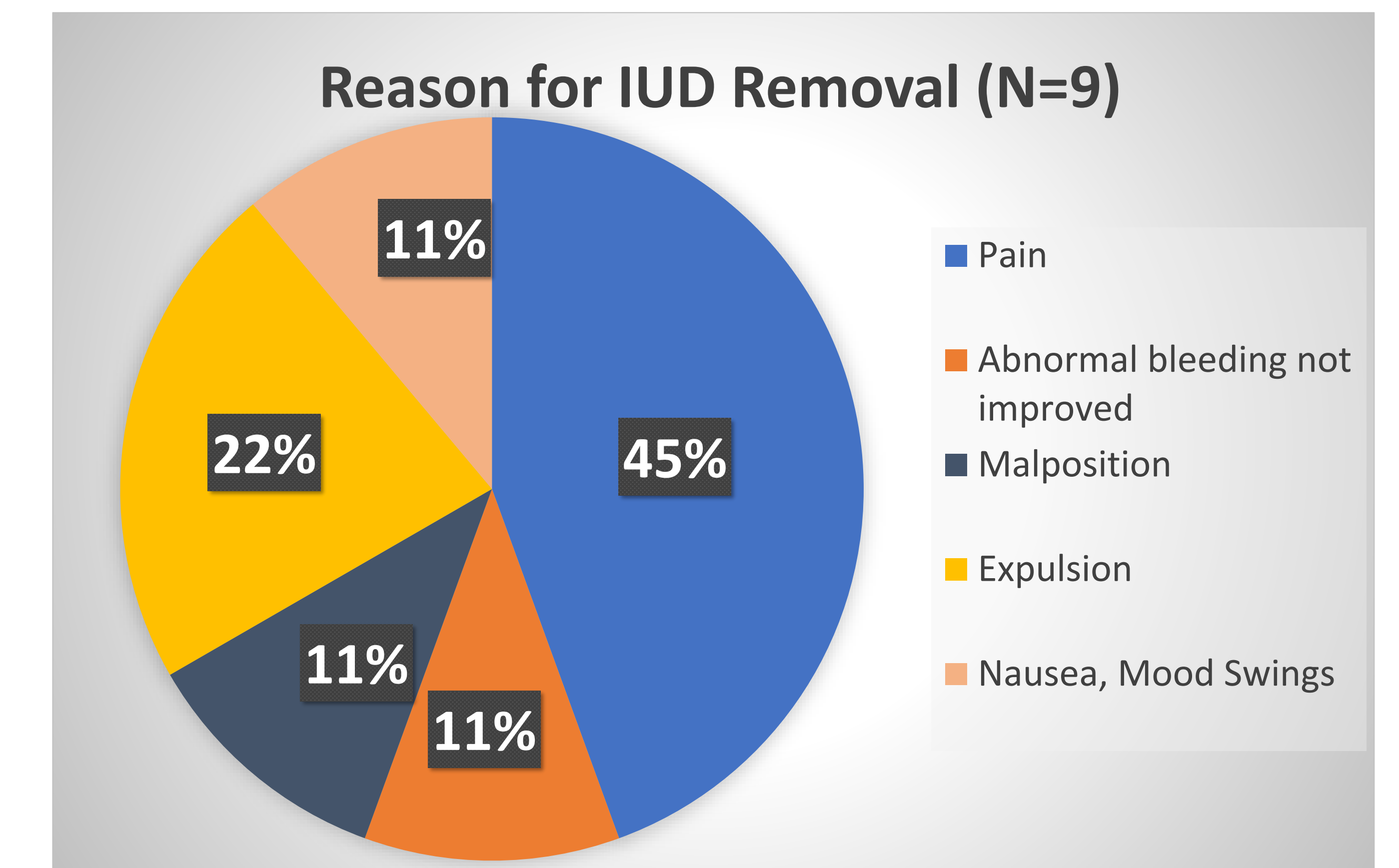


Figure 5: The most common reason for IUD removal in our study was pain at 45%

Conclusions

- There was no significant difference in mean pain score during IUD insertion between the standard practice cohort and the treatment cohort
- Nulliparous participants did have statistically significantly higher pain scores compared to parous women, regardless of the SMARtII pain bundle. This group may benefit from special consideration and future research on pain reduction.
- Complications including expulsion and malposition occurred at a low rate in our study for both cohorts.
- Despite pain, over 70% of women would recommend IUD placement to a friend. This did not vary between groups.

References

