

A comparison of neuraxial labor analgesia utilization rates before and during the COVID-19 pandemic: a single-center retrospective study

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Introduction

- Patients who delivery vaginally often receive neuraxial labor analgesia
- The effect of the COVID-19 pandemic on neuraxial labor analgesia utilization is unknown
- We hypothesized that neuraxial labor analgesia utilization would be lower during the COVID-19 pandemic

Methods

- We used handwritten labor and delivery logs to identify subjects who delivered vaginally from July 1, 2019 to December 31, 2019 and from July 1, 2020 to December 31, 2020
- A study investigator entered data from the electronic medical record (Epic) into REDCap

Results

Table 1. Demographic and clinical data for pre and intra COVID cohorts

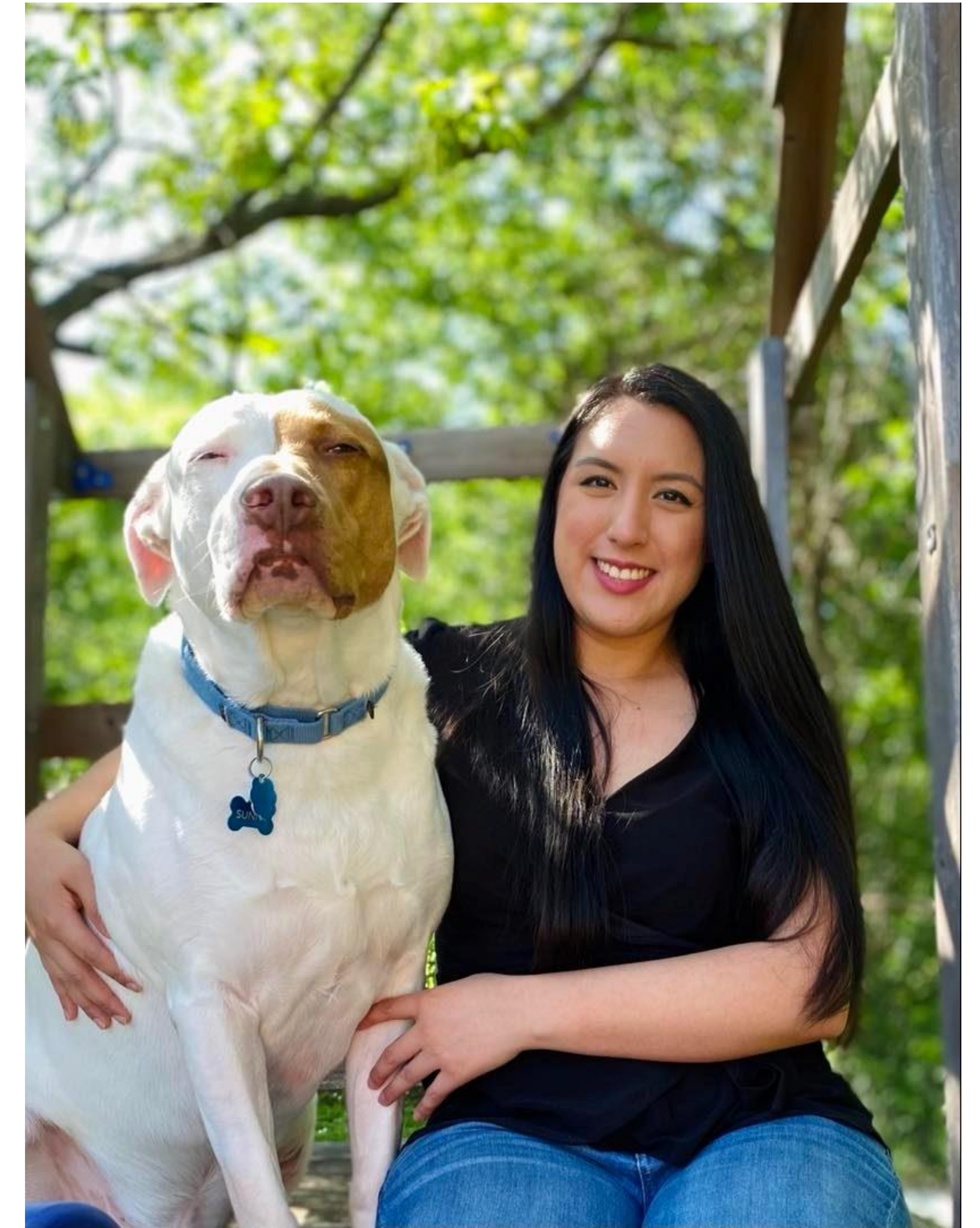
	Delivered vaginally July-December 2019 (N=846)	Delivered vaginally July-December 2020 (N=944)	P value
Age in years (median (IQR) ¹)	26 (22-30)	27 (23-31)	0.033*
Gravidity (median (IQR))	2 (1-3)	2 (1-4)	0.743
Parity (median (IQR))	1 (0-2)	1 (0-2)	0.114
Gestational age at time of delivery in weeks (mean (SD)) ²	38.4 (2.4)	38.2 (2.7)	0.135
Prior cesarean delivery	47 (5.6%)	50 (5.3%)	0.809
Time of day of delivery			0.014*
0700-1559	347 (41.0%)	338 (35.8%)	
1600-2359	306 (36.2%)	354 (37.5%)	
0000-0659	193 (22.8%)	252 (26.7%)	
Mode of delivery			0.646
Spontaneous vaginal	817 (96.6%)	918 (97.2%)	
Forceps assisted	23 (2.7%)	19 (2.0%)	
Vacuum assisted	6 (0.7%)	7 (0.7%)	
Neuraxial labor analgesia	717 (84.8%)	803 (85.1%)	0.854

1.IQR=interquartile range, 2.SD=standard deviation

- Neuraxial labor analgesia utilization rates were nearly identical before and during the COVID-19 pandemic
- More babies were delivered vaginally outside of the 0700-1559 time period during the COVID-19 pandemic
- No differences in vaginal delivery technique between subjects who delivered before and during COVID-19 pandemic
- 28 subjects (3.0%) had active COVID infections at the time of admission and 22 (78.6%) had neuraxial labor analgesia

Discussion

- Despite having more vaginal deliveries that took place outside daytime hours, neuraxial labor analgesia utilization was the same before and during the COVID-19 pandemic
- Based on our sample size, we had adequate statistical power to detect a 5.5% decrease in neuraxial labor analgesia utilization from 85.0%
- Expert opinion supported neuraxial labor analgesia for patients who had an acute COVID infection¹ and our neuraxial labor analgesia utilization for COVID positive patients approximated that of our general laboring population.



References

1. Bauer ME, Bernstein K, Dinges E, et al. Obstetric Anesthesia During the COVID-19 Pandemic. *Anesth Analg.* 2020;131(1):7-15