

# Primary language and pain experiences after cesarean delivery

Jennifer L. Grash, MD<sup>1</sup>, Jennymar C. Rojas, MD<sup>1</sup>, Mitra Sharifi<sup>1</sup>, Megan McLaughlin<sup>1</sup>, Surya S. Bhamidipalli, MS<sup>2</sup>, David M. Haas MD, MS<sup>1</sup>  
<sup>1</sup> Indiana University School of Medicine, Dept of Obstetrics & Gynecology; <sup>2</sup> Indiana University Department of Biostatistics



## OBJECTIVE

To evaluate whether experiences of pain and pain medication use after cesarean delivery differed by primary language

## BACKGROUND

Our urban public hospital serves patients from diverse backgrounds, including many recent immigrants and patients with limited English proficiency, yet the majority of providers are primarily or exclusively English speaking. Although interpretation services are available, language barriers between healthcare providers and patients influence care in innumerable ways.<sup>1</sup> Specifically, language barriers may limit a patient's ability to express pain and request pain medications when needed.<sup>1</sup>

Our objective was to undertake a holistic investigation of the association between primary language and postoperative pain experience, exploring pain medication use, reported pain scores and overall satisfaction.

We hypothesized that non-English speaking patients would report higher average pain scores and less "as needed" opioid medication use in the postoperative period.

## MATERIALS and METHODS

This is a subgroup analysis of a quality improvement study that evaluated postoperative opioid use after cesarean delivery (CD). All women undergoing CD, whether scheduled, urgent, or emergent, at a single academic institution during a three month period were included. Demographic, delivery, and inpatient opioid use data were obtained by chart review. Two weeks after discharge, women were surveyed about their delivery experience, analgesic usage, and complications. The primary outcome of this sub-analysis was average pain score in the first 24 hours after delivery.

Table 1: Demographic data

n = 72	English (n = 53)	Spanish (n = 16)	Other (n = 3)	P-value
Maternal age at delivery (y)	28.1 (6.1)	26.7 (6.4)	31.7 (8.5)	0.42**
BMI at delivery (kg/m <sup>2</sup> )	35.0 (7.0)	32.0 (4.3)	34.1 (3.4)	0.28**
Gestational age at delivery (wk)	38.0 (2.4)	38.6 (1.8)	37.3 (3.8)	0.58**
Nulliparous	20 (37.7%)	7 (43.8%)	1 (33.3%)	0.90*
Primary CD	27 (50.9%)	9 (56.3%)	2 (66.7%)	0.91*
Trial of labor	30 (56.6%)	9 (56.3%)	2 (66.7%)	1.00*
Vertical hysterotomy	3 (5.7%)	2 (12.5%)	0	0.46*

Data are mean ± SD or n (%).

Figure 1: Postpartum opioid use

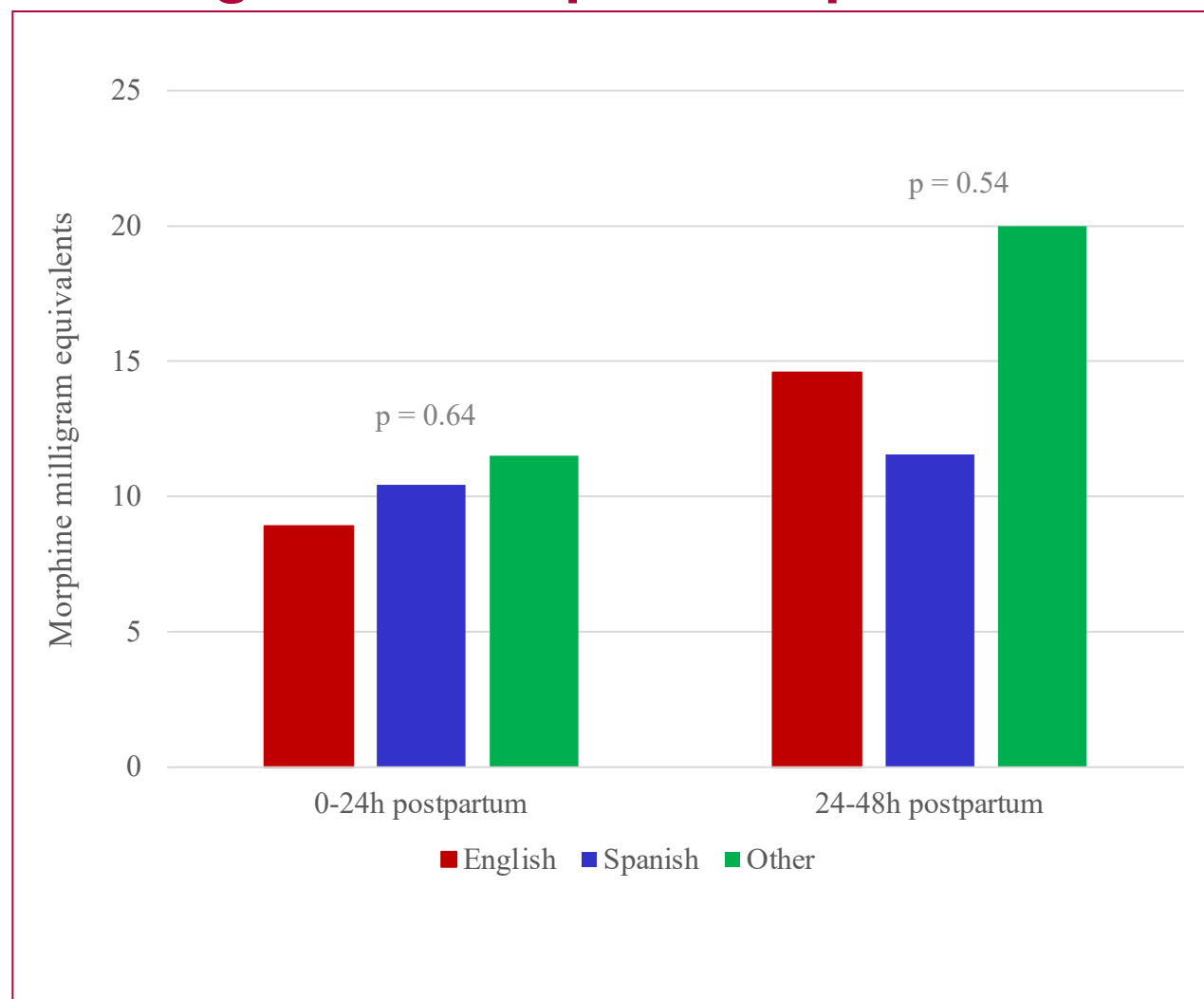


Figure 2: Postpartum pain scores

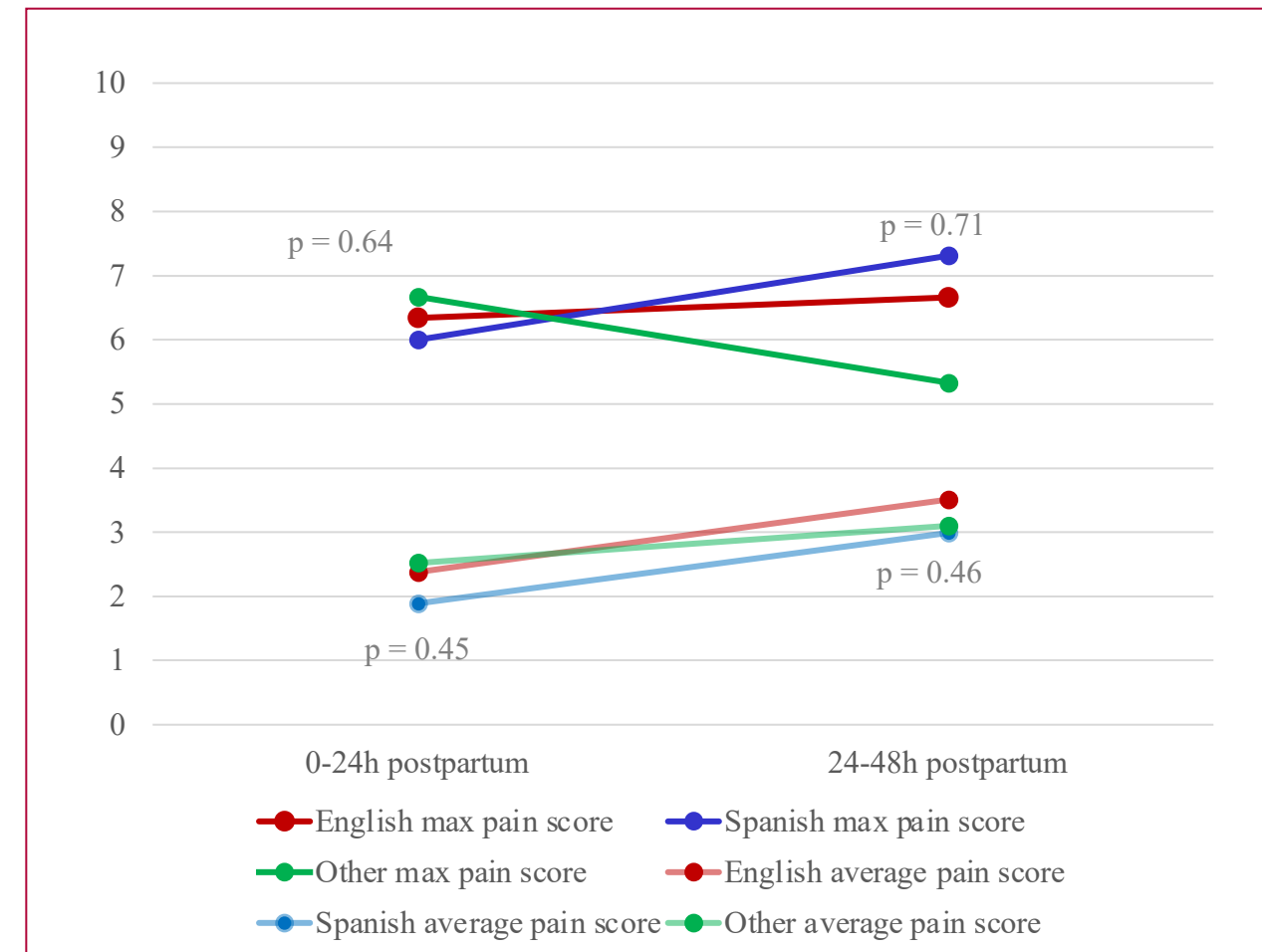


Table 2: Post-discharge survey responses

	English (n = 32)	Spanish (n = 10)	Other (n = 1)	P-value
Overall satisfaction <sup>‡</sup>	+3.84 (1.8)	+4.90 (0.3)	+5.00	0.08
Overall pain <sup>*</sup>	4.08 (2.6)	4.90 (2.9)	4.00	0.76
How would you describe your pain from your C-section?				0.28
- More than I expected	14 (37.8%)	3 (33.3%)	0	
- What I expected	12 (37.8%)	1 (11.1%)	1 (100%)	
- Less than I expected	11 (29.7%)	5 (55.6%)	0	
Have you called or seen a doctor because of pain?	Yes: 5 (13.5%) No: 32 (86.5%)	0 9 (100%)	0 1 (100%)	0.61

Data are mean ± SD or n (%).  
<sup>‡</sup> on a scale from -5 (extremely dissatisfied) to +5 (extremely satisfied).  
<sup>\*</sup> on a scale from 0 (no pain) to 10 (worst pain imaginable).

## RESULTS

- No significant difference in either maximum or average pain scores in the first 48 hours after cesarean delivery among patients who reported English, Spanish or a different language (other) as their primary language
- No difference in amount of prn opioid administered during the first 48 hours after cesarean delivery
- No difference in number of opioid pills prescribed at discharge
- No difference in patient reported satisfaction, overall pain experience or need to seek additional care due to pain after discharge

## CONCLUSIONS

In this retrospective sub-group analysis, we found no significant difference in objective or subjective measures of pain, or in pain medication usage, after cesarean delivery among women who reported English, Spanish or a different language (other) as their primary language.

Racial and ethnic inequities in pain assessment and treatment after CD after been shown in previous studies.<sup>2,3</sup> This study suggests that factors beyond language barrier may be driving this inequity.

Limitations include small sample size, particularly of patients who identify a primary language other than English or Spanish, and single institution study.

## REFERENCES

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