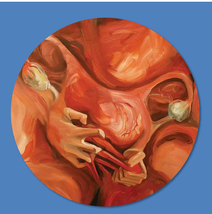


Self-Reported Pain, Pressure, and Satisfaction During Cesarean Delivery in Patients with Spanish as Preferred Language

Stephanie Wong, BA; Alexander "Sascha" Morris, BS; Scott Kelly, BS; George Ghafari, BS;
Jean Guglielminotti, MD-PhD; Ruth Landau, MD
Department of Anesthesiology, Columbia University Irving Medical Center

Background

- Over 25 million people (age > 5y) in the U.S. have limited English proficiency (8.5% of population)
- Barriers to communication are associated with worse patient outcomes
- Non-English speaking patients have lower rates of epidural analgesia use during labor and higher rates of primary Cesarean delivery (CD)
- Recent studies found that Spanish as preferred language was a risk factor for pain during CD, with one study finding that Spanish-speakers report near-twice higher rates of pain
- In this analysis, we evaluated differences in self-reported pain, pressure, and patient satisfaction among English and Spanish-speaking patients

Hypothesis:

We hypothesized that patients with Spanish as their preferred language might experience barriers in communication resulting in higher levels of pain and pressure and lower satisfaction with anesthesia care

SOAP 2026 ANNUAL MEETING SOAP
MONTRÉAL, QUÉBEC, CANADA APRIL 29-MAY 3, 2026

COLUMBIA
COLUMBIA UNIVERSITY
DEPARTMENT OF ANESTHESIOLOGY

Methods

- Prospective survey-based study conducted in 2025 at large academic center
- Questions assessed sensation, satisfaction, and patient-provider ethnic concordance as perceived by the patient
- 1,005 patients undergoing all CD types under neuraxial anesthesia (spinal, CSE, epidural in situ) completed a survey within 48h after CD. Anesthesia data pulled from EMR
- English-speaking patients completed survey in English; Spanish-speaking patients completed in Spanish with access to an interpreter

Outcomes

Primary outcomes:

Incidence and severity of pain and pressure/tugging during CD (severity defined as none/mild, vs moderate/ severe)

Secondary outcomes:

- Satisfaction with pain or pressure management
- Importance of perceived patient-provider ethnic concordance
- Overall satisfaction

Analysis: outcomes assessed using Fischer exact or χ^2 tests

Table 1: Patient-reported outcomes according to preferred spoken language

	English (n=737)	Spanish (n=268)	P-value
Sharp pain			
Severity of pain			0.512
None	688 (93.5%)	252 (94.4%)	
Mild	21 (2.9%)	7 (2.6%)	
Moderate	15 (2.0%)	2 (0.7%)	
Severe	12 (1.6%)	6 (2.2%)	
If present, was it adequately addressed?			**0.019**
Yes, did not need analgesia	0 (0.0%)	3 (20.0%)	
Yes, received epidural/IV analgesia	40 (83.3)	11 (73.3%)	
No, wanted more analgesia	3 (6.2%)	1 (6.7%)	
Not sure	5 (10.4%)	0 (0.0%)	
Pressure/tugging			
Severity of pressure/tugging?			**<0.001**
None	96 (13.0%)	58 (21.6%)	
Mild	346 (46.9%)	136 (50.7%)	
Moderate or severe	227 (30.8%)	60 (22.4%)	
Severe	68 (9.2%)	14 (5.2%)	
If present, was it adequately addressed?			0.221
Yes, did not need analgesia	513 (80.5%)	169 (80.5%)	
Yes, received epidural/IV analgesia	92 (14.5%)	33 (15.8%)	
No, wanted more analgesia	12 (1.9%)	0 (0.0%)	
Not sure	20 (3.1%)	8 (3.8%)	

Pain:

- Incidence of pain was 6.5% in English group, 5.6% in Spanish group
- Spanish-speakers more likely to not want more analgesia

Pressure:

- Incidence of pressure was 87% in English group, 78.4% in Spanish group
- Lower rates of moderate or severe pressure in Spanish group (35.2% vs 46%, P=0.006)

Table 1 (cont.): Patient-reported outcomes according to preferred spoken language

	English (n=737)	Spanish (n=268)	P-value
Satisfaction			
Overall satisfaction with anesthesia care			0.722
Very Satisfied	625 (84.8%)	233 (86.9%)	
Satisfied	92 (12.5%)	31 (11.6%)	
Neutral	13 (1.8%)	2 (0.7%)	
Unsatisfied	7 (0.9%)	2 (0.7%)	
Communication and ethnicity			
Provider directly asked/offered intra-op meds [1]			**0.002**
Yes	480 (65.1%)	158 (59.0%)	
No	187 (25.4%)	96 (35.8%)	
Not sure	70 (9.5%)	14 (5.2%)	
Is ethnic concordance important?			**<0.001**
Yes, important	144 (19.8%)	105 (39.9%)	
No, not important	558 (76.6%)	142 (54.0%)	
Not sure	26 (3.6%)	16 (6.1%)	
Was there ethnic concordance?			**<0.001**
All members of the team	37 (5.1%)	37 (13.9%)	
Some members of the team	196 (26.8%)	44 (16.5%)	
None of the team	277 (37.9%)	110 (41.4%)	
Not sure	221 (30.2%)	75 (28.2%)	

Table 2: Importance and presence of ethnic concordance in patients who experienced pain regardless of language

	No pain (n=940)	Pain (n=63)	P-value
Is concordance important?			**0.012**
Yes, important	223 (23.7%)	25 (39.7%)	
No, not important	665 (70.8%)	34 (54.0%)	
Not sure	40 (4.3%)	2 (3.2%)	
Was there concordance?			0.819
All members of the team	68 (7.2%)	6 (9.5%)	
Some members of the team	223 (23.7%)	16 (25.4%)	
None of the team	363 (38.7%)	23 (36.5%)	
Not sure	280 (29.8%)	16 (25.4%)	

No difference between groups in patient-reported difficulty communicating with anesthesia team

[1] IV analgesia, anxiolytic, or general anesthesia

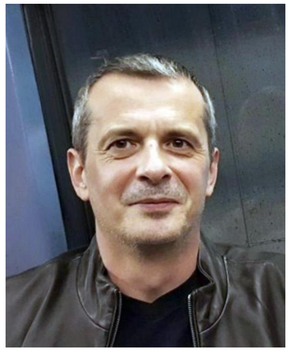
In a cohort of 737 English-speaking and 268 Spanish-speaking patients:

- Pain incidence was low, pressure incidence was high, and satisfaction was high in this cohort
  - No differences in incidence of pain between groups, but Spanish-speaking patients who had pain were less likely to want more analgesia
  - Spanish-speaking patients experienced overall less frequent and less severe pressure despite expected language barriers
- Findings might be explained by comorbid, obstetric and anesthetic differences between groups. Compared to English-speakers, Spanish group had higher rate of scheduled CD with spinal anesthesia and lower history of anxiety disorder
- Spanish-speaking patients were less likely to be directly offered or asked if they wanted additional intra-op medication
- Ethnic concordance with providers was important to Spanish-speaking patients and patients who experienced pain regardless of language, emphasizing importance of diverse care teams

Discussion & Conclusion

Our Team

Ruth Landau, MD
Principal Investigator



Jean Guglielminotti, MD-PhD

Stephanie Wong, BA

Sascha Morris, BS

Scott Kelly, BS

George Ghafari, BS

Thank You!