Association Between Language, Medical Complexity, and PICU Admission in Acute Respiratory Illness

Background

- Children with medical complexity (CMC) are at greater risk for hospitalization and PICU admission compared to the general pediatric population
- Children of families speaking languages other than English (LOE) have worse outcomes during hospitalization, including higher odds of PICU transfer
- **Hypothesis:** CMC of LOE speaking families would be at increased risk of PICU admission during hospitalization for acute respiratory illness compared to CMC of English-speaking families



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Results

- Study Demographics:
- 939 encounters; 326 unique CMC patients were included in the analysis

	Overall (N=326)
Age	
Mean (SD)	4.46 (4.95)
Median [Min, Max]	2.00 [0, 17.0]
Race	
Asian	8 (2.5%)
Black or African American	67 (20.6%)
Other	21 (6.4%)
White	230 (70.6%)
Ethnicity	
Hispanic	23 (7.1%)
Non-Hispanic	303 (92.9%)
ICU (Yes No)	
Mean (SD)	0.380 (0.486)
NonEnglish	
Mean (SD)	0.0706 (0.256)
Spanish	
Mean (SD)	0.0368 (0.189)
LOES (Language other than English or Spanish)	
Mean (SD)	0.0337 (0.181)

 7.1% of patients' primary language was not English, with 3.7% Spanish and 3.4% language other than English or Spanish (LOES)

Languages Other Than English	
Arabic	P
French	R
Hindi	
Nepali	V
Pohnpeian	
Sign Language	R
Tigrinya	H
Uzbek	

Most Common Principal Problems

neumonia Bronchiolitis

/iral respiratory illness

Respiratory distress lypoxia

rac ins





Mixed Effects Regressions:

- Outcome: odds of PICU
- Exposure: patient language

Model	LOE Coefficient	Odds Ratio (OR)	95% Confidence Interval (CI)
sic Regression	1.36	3.89	0.95 – 15.9
gression adjusted for e, age, public surance	1.73	5.63	1.1 – 28.3

Model	LOES	Odds Ratio	95% Confidence
	Coefficient	(OR)	Interval (CI)
gression adjusted for	2.49	12.1	1.1 – 140
e, age, public			
urance (LOES)			



