

# Disparities in Pediatric Respiratory Illness Care in US Hospitals

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## BACKGROUND

Respiratory illnesses are leading causes of childhood hospitalization. Despite general/community hospitals providing most inpatient pediatric care in the US, care quality and disparities in these settings are poorly understood.

## METHODS

1. Retrospective cohort study of pre-trial data collected via chart review at hospitals in the SIP trial.
2. Children eligible if they had a primary diagnosis of asthma, pneumonia, or bronchiolitis
3. Multi-level regression models used to evaluate care quality and health outcomes by race/ethnicity, payor and primary language. These variables sequentially added to models to explore interacting effects.

## DISCUSSION

Disparities in reutilization persisted despite adjustment for payor and/or language, suggesting that structural racism plays a role in driving these disparities, independent of insurance/household income or language barriers. Driving factors may include social determinants of health (e.g., housing quality), access to high-quality follow-up care, and/or bias in healthcare provider care practices.

## ACKNOWLEDGEMENTS

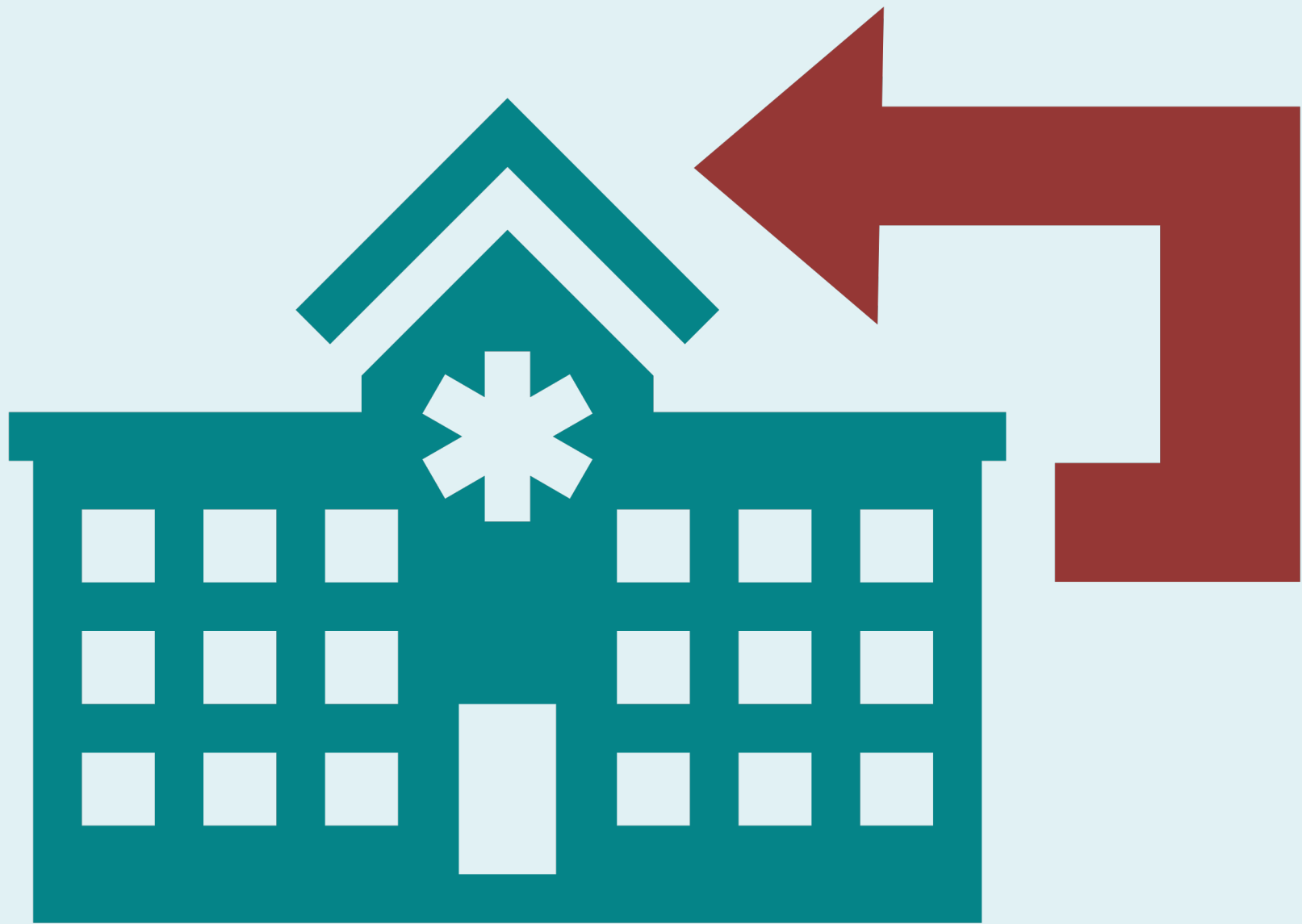
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# Structural racism plays a role in reutilization disparities among children hospitalized with asthma at community hospitals

| Table 1: Quality Measures |                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------|
| Pneumonia                 | Use of narrow-spectrum antibiotics                                                      |
|                           | No macrolide prescription at discharge                                                  |
| Asthma                    | Prescription of inhaled corticosteroids at hospital discharge for children ≥5 years old |
|                           | Use of bronchodilators via metered dose inhalers early in hospitalization               |
|                           | Placement of asthma pathway/protocol order                                              |
| Bronchiolitis             | Avoidance of albuterol                                                                  |
|                           | Avoidance of chest radiographs                                                          |

2,390 admissions from 33 hospitals. Children with public insurance were more likely to receive recommended inhaled corticosteroids to control asthma (OR 1.72 [1.05, 2.81]) compared to those on private insurance, but there were no other differences in care quality.



| Table 2: 30-day readmission or ED revisits for children with asthma |                   |                    |                   |                         |                      |
|---------------------------------------------------------------------|-------------------|--------------------|-------------------|-------------------------|----------------------|
|                                                                     | Model 1:          | Model 2: Insurance | Model 3: Language | Model 4: Race/ethnicity | Model 5: All factors |
| Race/Ethnicity                                                      |                   |                    |                   |                         |                      |
| Non-Hispanic White Alone                                            | Ref               | Ref                | Ref               | --                      | Ref                  |
| Non-Hispanic Black Alone                                            | 2.8 (1.19, 6.62)  | 2.44 (1.02, 5.86)  | 2.81 (1.19, 6.64) | --                      | 2.44 (1.02, 5.86)    |
| Non-Hispanic Other Race                                             | 2.46 (0.84, 7.17) | 2.64 (0.9, 7.8)    | 2.43 (0.83, 7.1)  | --                      | 2.64 (0.89, 7.79)    |
| Hispanic                                                            | 3 (1.21, 7.44)    | 2.57 (1.02, 6.48)  | 2.84 (1.1, 7.32)  | --                      | 2.54 (0.97, 6.66)    |
| Language                                                            |                   |                    |                   |                         |                      |
| English                                                             | Ref               | Ref                | --                | Ref                     | Ref                  |
| Non-English                                                         | 1.55 (0.58, 4.18) | 1.26 (0.46, 3.43)  | --                | 1.27 (0.43, 3.69)       | 1.05 (0.35, 3.11)    |
| Insurance                                                           |                   |                    |                   |                         |                      |
| Private                                                             | Ref               | --                 | Ref               | Ref                     | Ref                  |
| Public                                                              | 2.83 (1.33, 6.03) | --                 | 2.79 (1.3, 5.96)  | 2.49 (1.14, 5.43)       | 2.49 (1.14, 5.43)    |

Hispanic and Non-Hispanic Black children with asthma were more likely to experience 30-day readmissions or ED revisits compared to Non-Hispanic White children, and these risks were significant even with adjustment for payor, or primary language. Children with public insurance were also at greater risk compared to those on private insurance. We found no disparities in length of stay or ICU transfer.



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