

UC Davis

Pediatrics

Title

Pediatric Asthma: UC Davis Participation in a Global Network Study

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Pediatric Asthma: UC Davis Participation in a Global Network Study

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Introduction

What is PERN?

- The Pediatric Emergency Research Network (PERN) is a global consortium of pediatric emergency medicine research networks.
- Enables the pursuit of globally relevant research questions through large-scale, multi-center studies, leveraging diverse patient populations and healthcare settings to generate impactful, generalizable knowledge and improve emergency care for children.
- Includes representatives from five of the six World Health Organization regions, with ongoing efforts to expand

Why Asthma?

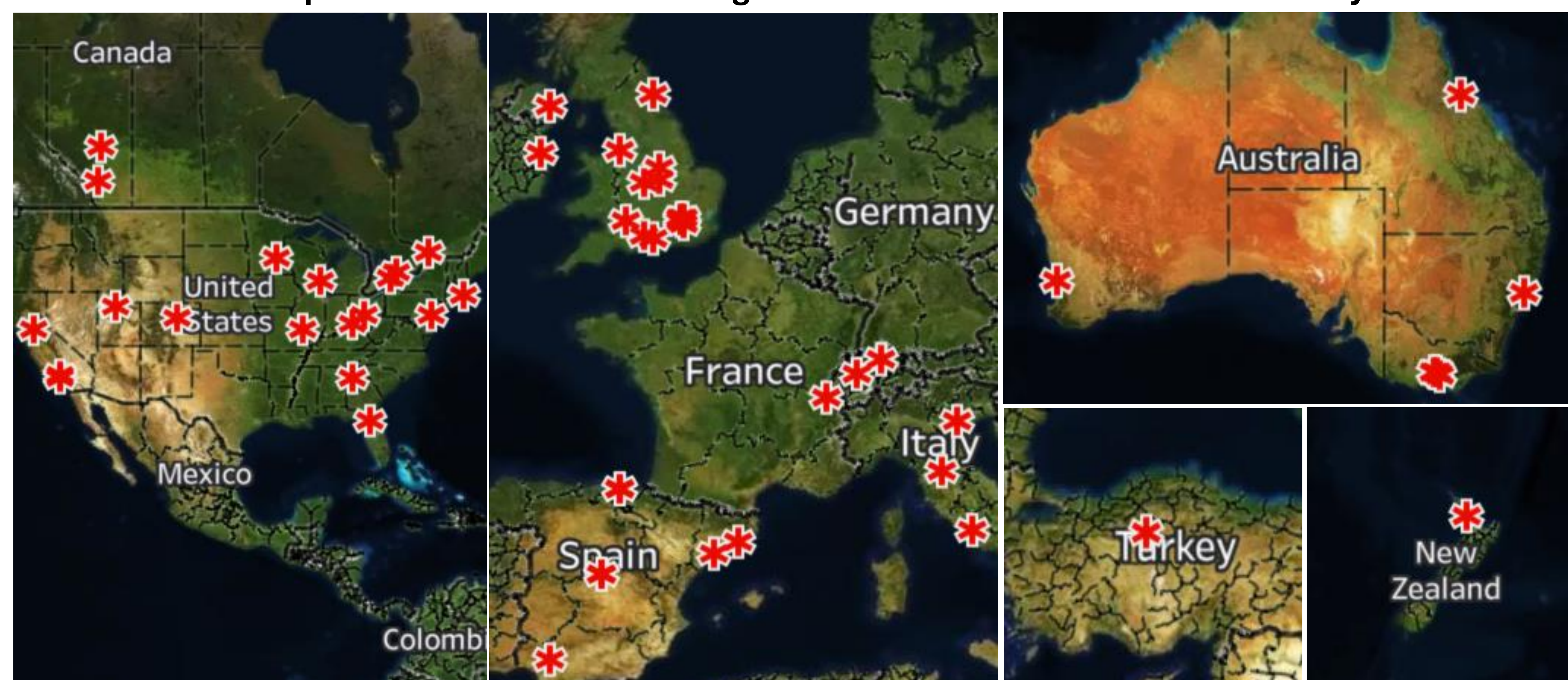
- Acute pediatric asthma exacerbations remain a significant clinical challenge, with notable variation in management practices worldwide.
- While clinical guidelines provide general recommendations, discrepancies in their content and quality contribute to inconsistent care, particularly for severe cases.
- Regional differences in guideline development, applicability, and implementation further highlight the need for a unified approach to managing these emergencies.

Significance:

- This project leverages PERN-Global's network to analyze international asthma guidelines, identifying alignment, reducing practice variation, and enhancing care. It aims to develop evidence-based recommendations for consistent pediatric asthma management.

Methods

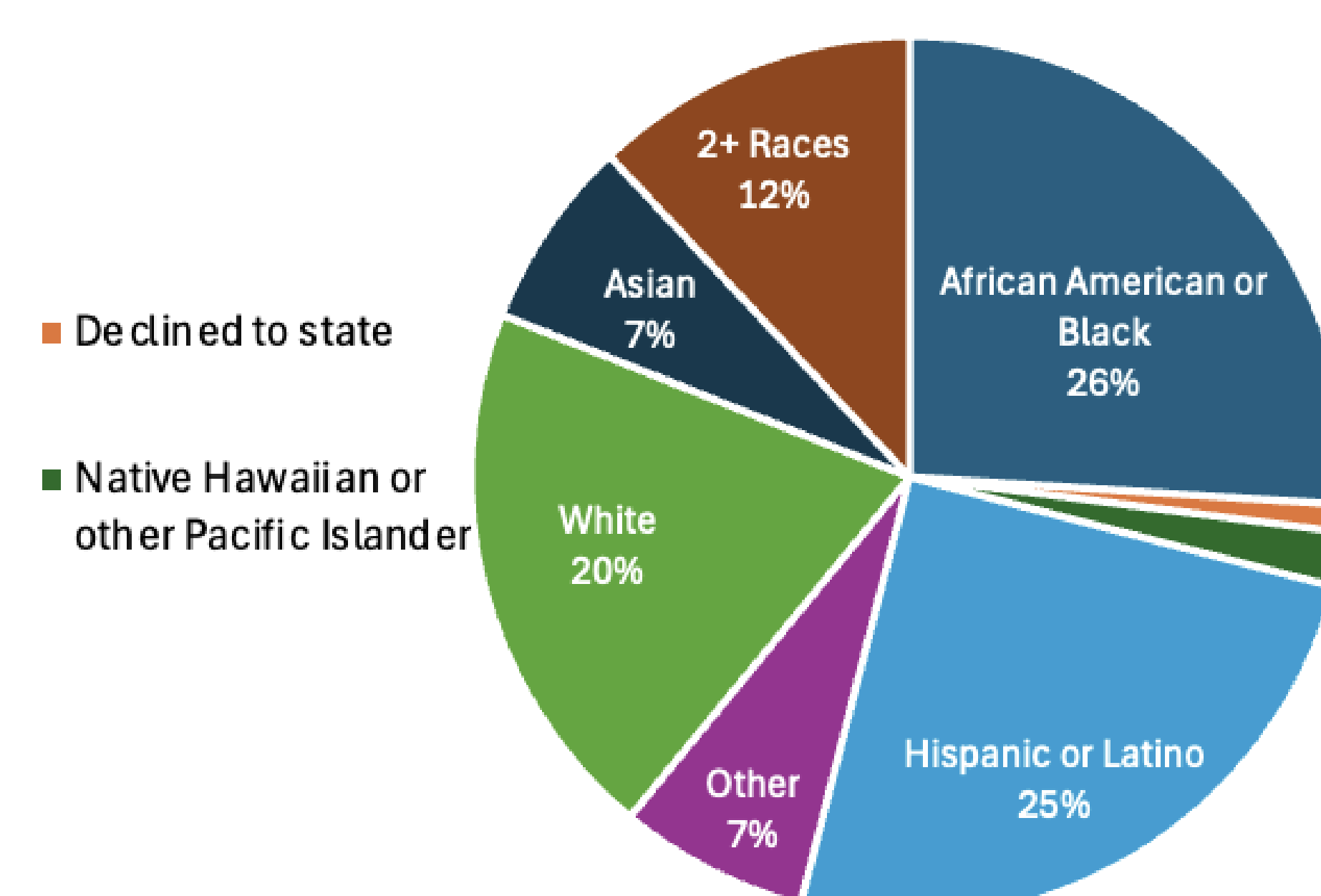
Map of PERN Sites Contributing Patient Data to Pediatric Asthma Study



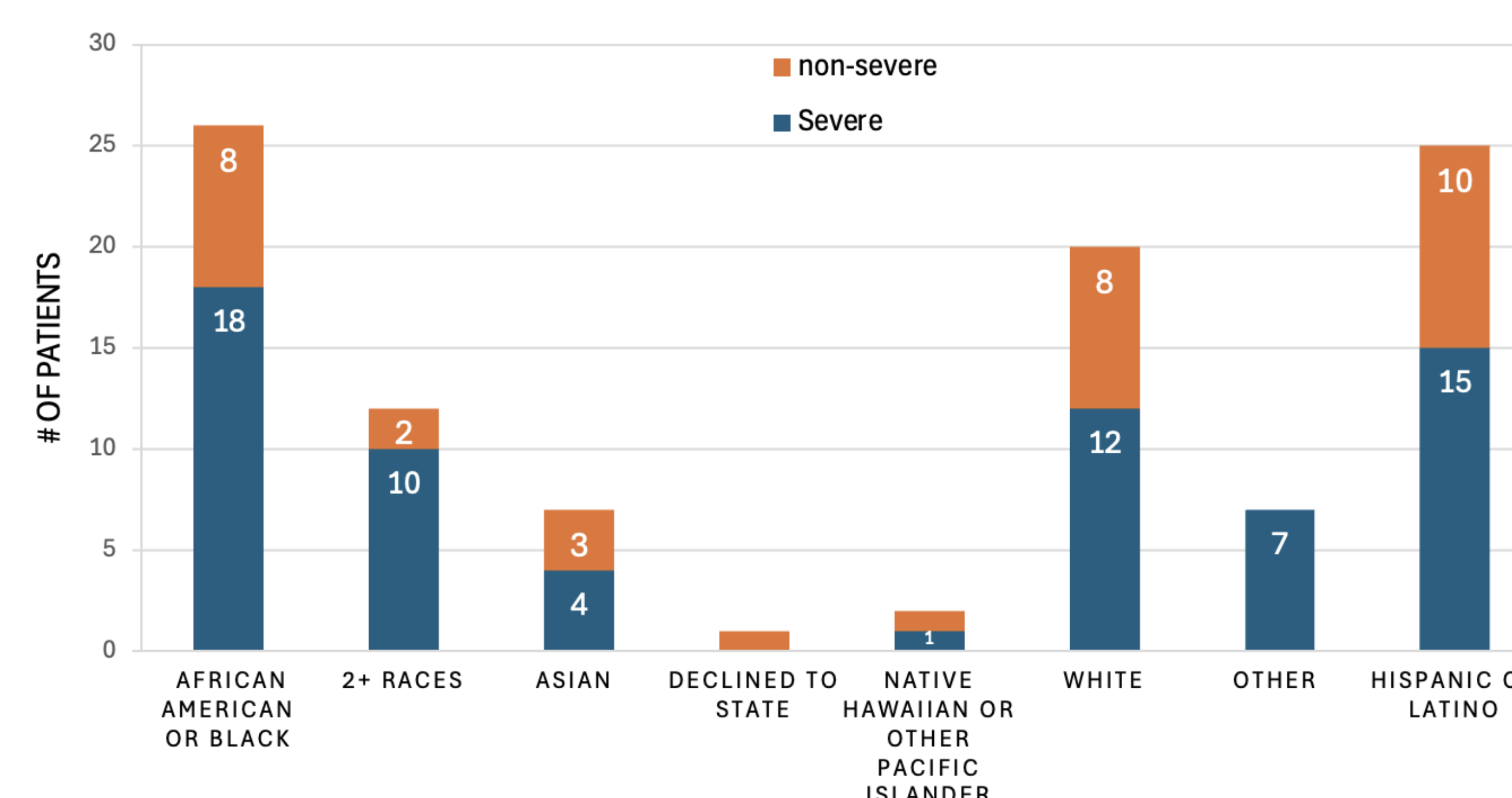
- Retrospective, multicenter, international cohort study of pediatric patients presenting to emergency departments with acute moderate to severe asthma exacerbations.
- Data collected from electronic health records by medically-trained reviewers.
- To minimize ascertainment bias, data collectors were **blinded** to the study objectives and hypotheses.
 - Note: This blinding limits our ability to fully comprehend the study's overarching goals and analytical focus at this stage.*
- Eligibility/enrollment data and initial observations shown pending full multicenter results.

Results

RACE/ETHNICITY OF UCD STUDY PARTICIPANTS



RACE/ETHNICITY VS. SEVERITY OF ASTHMA



Analysis/Summary

- A total of 233 patients were screened and 100 patients were deemed eligible for enrollment into the study. Exclusion criteria included: presence of chronic condition, mild asthma exacerbations, and previous enrollment.
- 52% of eligible study participants were hospitalized
- 67% of all participants had severe asthma exacerbations as classified via a composite score which is calculated based on physical exam findings and standardized severity score calculators (Pediatric Asthma Score)

Reviewer Reflections

- Analyzing clinical guidelines and patient outcomes will clarify variations in admission rates and treatment approaches, highlighting factors that influence decisions and areas for improvement. Ultimately, this insight will enhance treatment consistency and optimize outcomes for children with acute asthma exacerbations worldwide.

Next Steps:

- Analyze demographic data by zip code and insurance type to identify localized disparities in asthma exacerbations within Sacramento area.
- Compare sample size with broader UC Davis Health databases to ensure robust and representative findings.
- Evaluate variations in treatment regimens and investigate disparities related to race and ethnicity.