Healthcare Disparities in Atopic Dermatitis: Insights from TARGET-DERM Registry

Wine Lee[1], L, Knapp K[2], Munoz B[2], Perez A[2], Obi C[3], Calimlim B[3], Grada, A[3], Silverberg J[4]

[1] Medical University South Carolina, Charleston South Carolina, USA; [2] Target RWE, Durham North Carolina, USA; [3] AbbVie Inc, Mettawa IL, USA; [4] George Washington University, Washington DC, USA

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Introduction

- Atopic dermatitis (AD) disproportionately affects diverse patient populations
- Complex factors may influence the burden of disease and access to treatment amongst different racial and ethnic groups
- The aim of this study is to evaluate health disparities and real-world management patterns by racial and ethnic groups treated for AD in routine clinical practice

Methods

- TARGET-DERM AD is an ongoing, longitudinal, observational study of 2,600+ patients managed in clinical practice at 43 North American sites (22 community/21 academic)
- Inclusion criteria:
  - ≥age 6
  - Informed consent completed
  - Managed for atopic dermatitis
- Participants were classified in 4 race/ethnicity groups as reported at enrollment;
  - Non-Hispanic (NH) White
  - Non-Hispanic Black
  - Non-Hispanic Asian/Pacific Islander (NH-API)
  - Hispanic
- Advanced Systemic Therapies (AST) for this study: dupilumab, tralokinumab, upadacitinib, abrocitinib
- Both descriptive analytics and multivariate analysis (adjusted for race/ethnicity, age, sex, insurance status, comorbidities, vIGA, treatment status) were utilized
- Variables of interest included:
  - Patient demographics
  - Clinical characteristics
  - Disease severity metrics:
    - vIGA-AD: Validated Investigator Global Assessment scale for Atopic Dermatitis
    - TBSA: Total Body Surface Area
    - VxT: vIGA-AD x TBSA
  - Patient reported outcomes:
    - cDLQI: Children's Dermatology Life Quality Index
    - DLQI: Dermatology Life Quality Index
    - NRS-Pain: Numeric Rating Scale – Pain
    - NRS-Sleep: Numeric Rating Scale – Sleep
    - PROMIS
    - WPAI: Work Productivity and Activity Impairment questionnaire

Results

Patient disposition and summary statistics are presented in Figure 1.
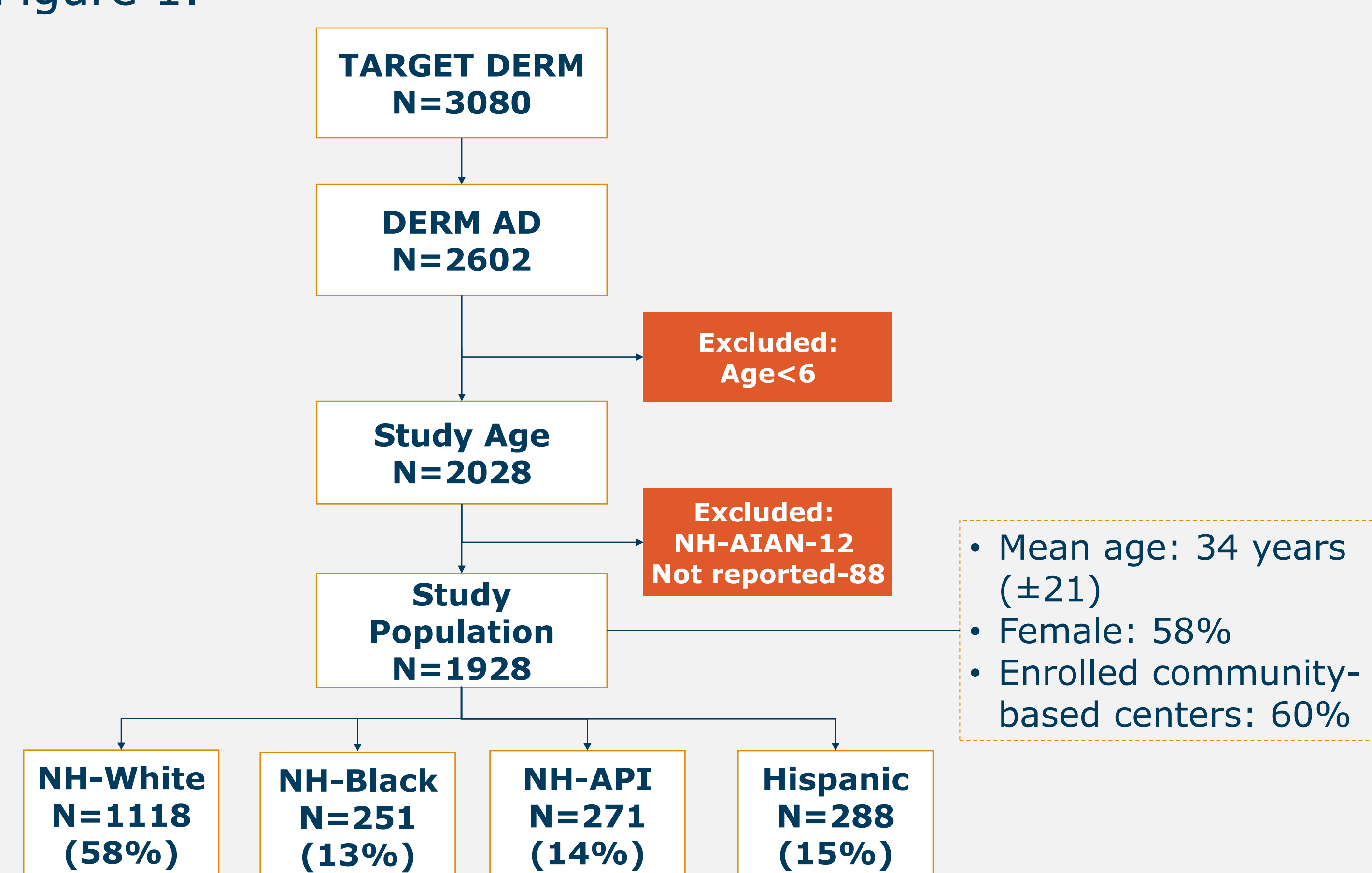

Figure 1. Patient Disposition

- Alaskan and American Indian populations had insufficient sample size to allow further analysis

Patient demographics by race/ethnicity are presented in Figure 2.
- Most (71%) had a medical comorbid condition with 30% having ≥3 conditions
- Insurance:
  - Private insurance was highest among NH-APIs (82%) and NH-Whites (70%)
  - Medicaid was highest among Hispanics (46%) and NH-Blacks (27%)
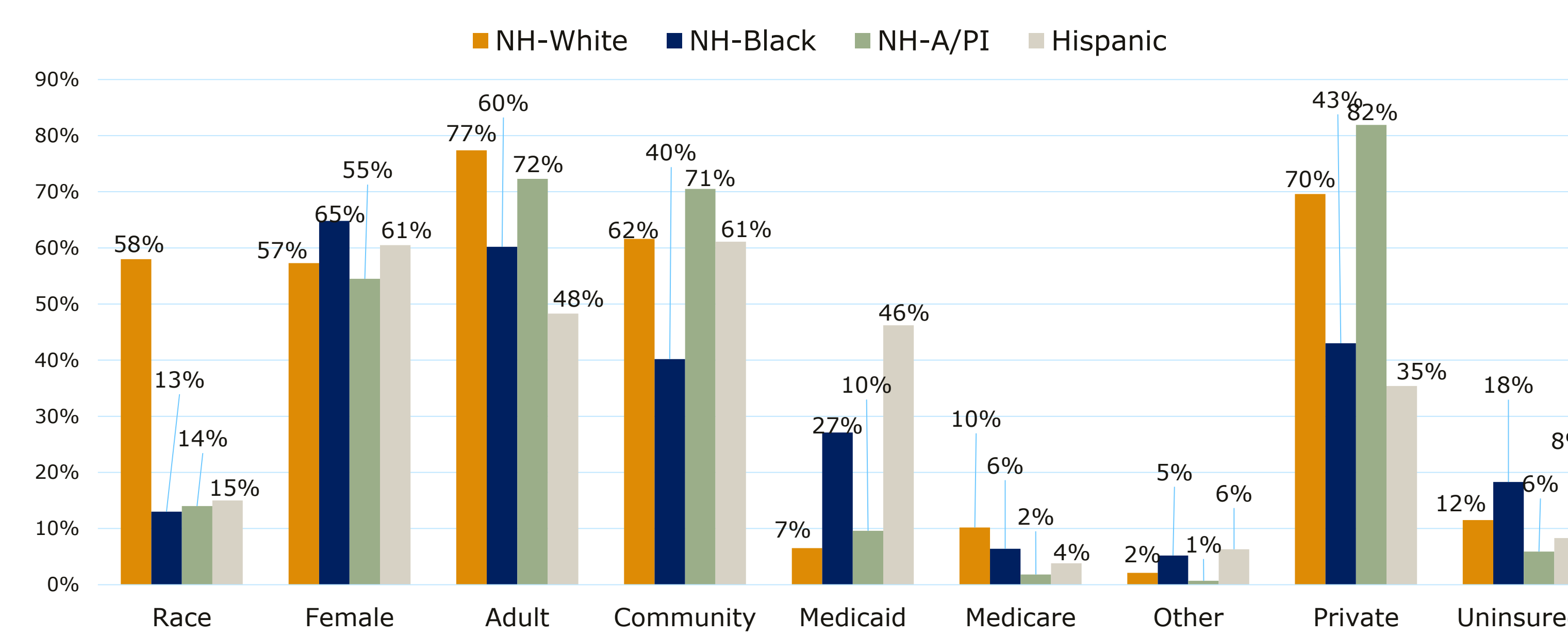 - Uninsured was highest among NH-Blacks (18%) and NH-Whites (12%)

Figure 2. Patient Characteristics

- All three clinical disease severity metrics at enrollment (vIGA-AD, TBSA and VxT) varied by race/ethnicity Table 1; p<0.0001. Clinical disease severity was lowest was among NH-Whites and generally most severe among NH-A/PIs

Race/Ethnicity	vIGA-AD clear/almost clear (P<0.0001)	VxT clear/almost clear (P<0.0001)	Median TBSA (P<0.0001)
NH-Whites	25.9%	26.7%	5%
Hispanics	21.7%	18.2%	7%
NH-Blacks	15.7%	15.3%	10%
NH-A/PIs	10.7%	13.8%	8%

Table 1. Distribution of Clinical Disease Severity Metrics

- Descriptive comparison of patient-reported outcome distributions identified no significant differences (p>.12).

- Multivariate Analysis
  - **Treatment with traditional systemic therapies**: No statistically significant differences by race/ethnicity groups were identified
  - **Treatment with ASTs in children:** NH-Black and Hispanics were less likely than NH-Whites to be treated with ASTs (odds ratio [OR] 0.61 and 0.52 respectively, p<0.05)
  - **vIGA-AD in children:** Hispanics were less likely than NH-Whites to have higher vIGA-AD scores (OR=0.55, p<0.01)
  - **vIGA-AD in adults:** NH-APIs and NH-Blacks were more likely than NH-Whites to have higher vIGA-AD scores (OR=1.55, 1.72 respectively; p<0.01)
  - **Quality of life in children:** NH-APIs more likely than NH-Whites were more likely to experience a greater quality of life impact as assessed by the Children's DLQI (OR=1.88, p<0.05)
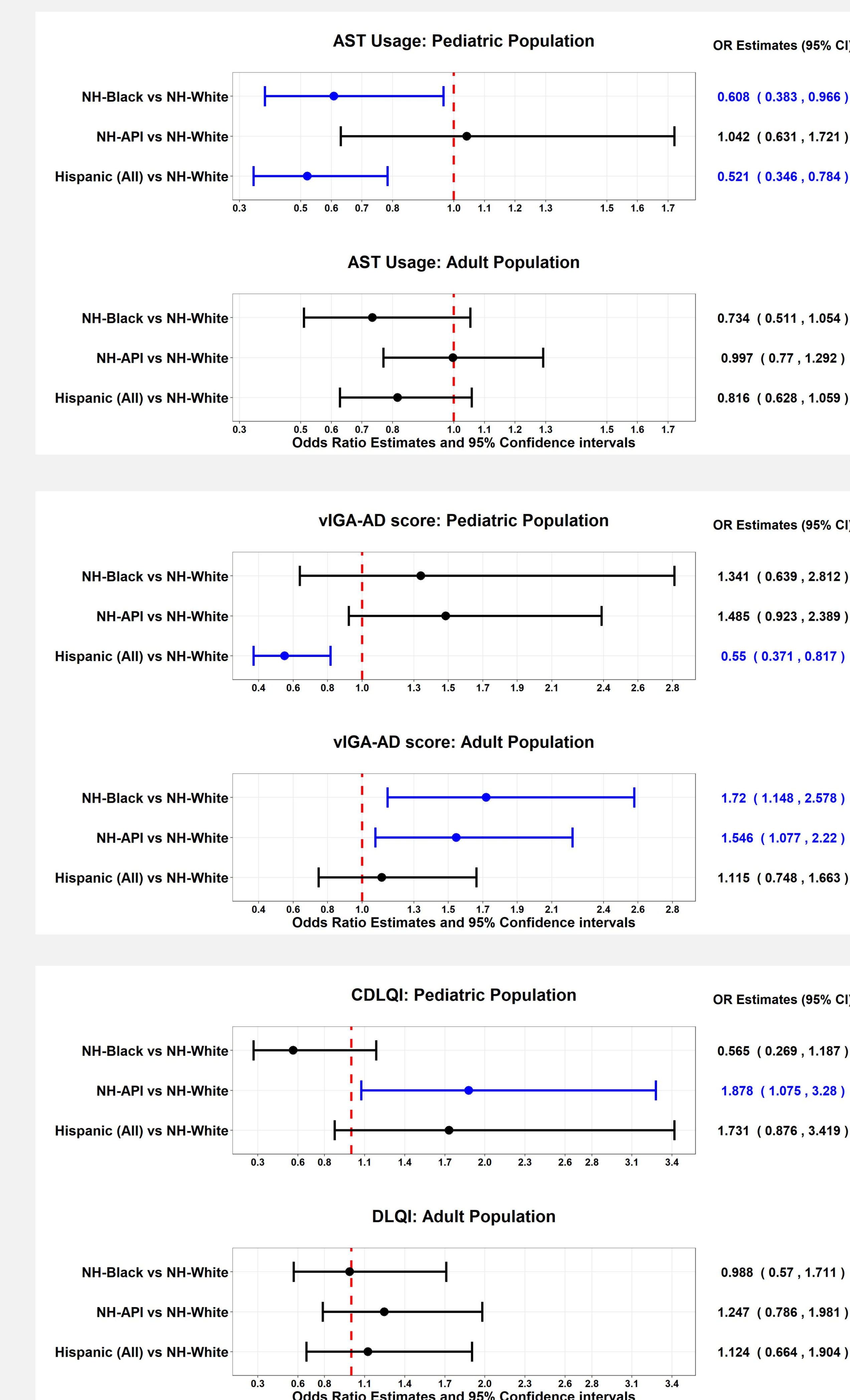

Figure 3. Odds Ratios for AST usage, elevated vIGA-AD score, and DLQI. Significant finding are in blue.

Conclusion:

- **Clinical disease severity metrics at enrollment (vIGA-AD, TBSA and VxT) favored whites compared to all other groups suggesting healthcare disparities.**

- **Despite presenting with more severe disease, Blacks and Hispanics have significantly lower odds of being treated with advanced systemic therapy relative to NH-Whites, which may lead to disparities in disease control. These disadvantages persist after adjusting for an array of characteristics.**

- **More efforts are needed by stakeholders to recognize and address health disparities among AD patients, specifically skin of color patients**