

# Pica Trends in Pediatric Sickle Cell Disease

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## Aims

- Characterize demographics and diagnoses of pediatric patient population with Sickle Cell Disease (SCD)
- Examine rates of pica diagnosis
- Quantify pica risk

## Background

- SCD**: monogenic disorder characterized by abnormalities in hemoglobin S
- Decreased oxygen delivery, tissue hypoxia, and anemia
- Children with SCD experience nutrient deficiencies

- Pica**: developmentally and culturally inappropriate consumption of nonfood items

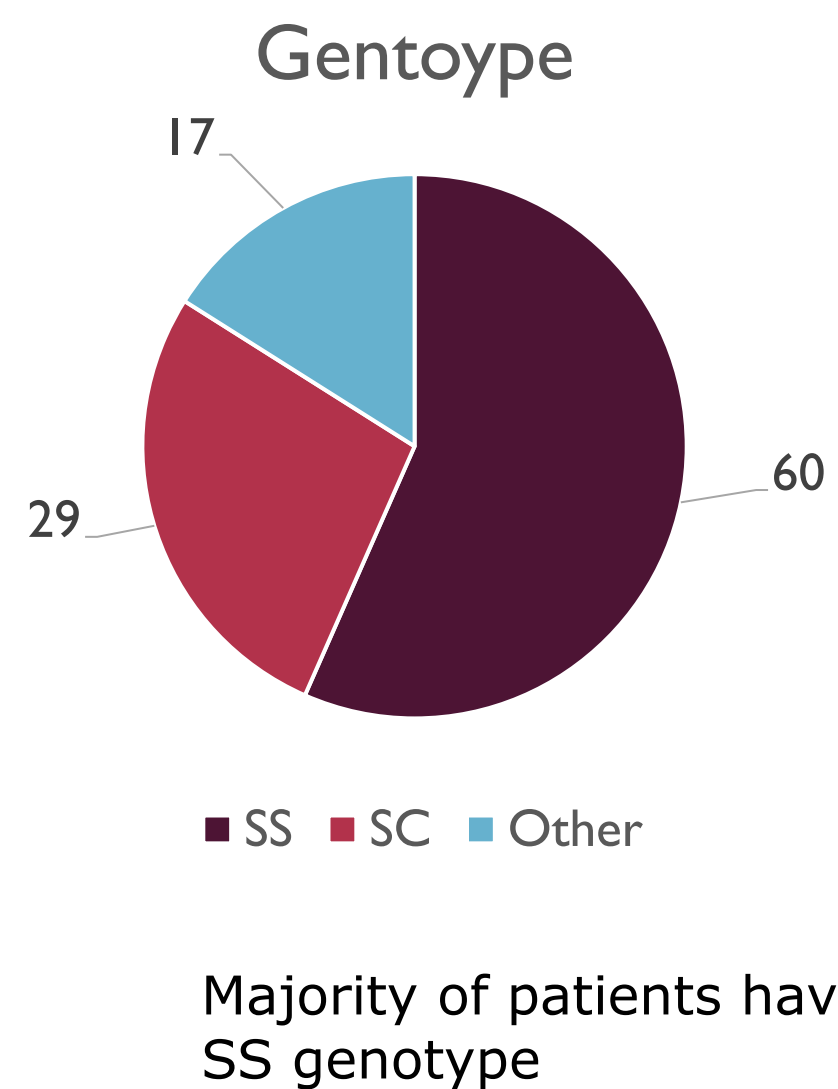
- Children with SCD**: high risk for pica (40-60%)
- Etiology of co-occurrence unknown
- Potential mechanisms:
  - Micronutrient statuses
  - Psychosocial stressors
  - Cognitive impairment

## Methods

- Retrospective chart review: 1/1/2014 – 1/1/2024
- Patients in the Pediatric Sickle Cell Program (PSCP)
- Ages 0-17
- $N = 106$  total
- Data collected: diagnosis of SCD, lab values, pica diagnosis, co-occurrence of constipation, average ED and hospital visits/yr

## Results: Demographics

Race	%
Black/African American	93.3
Asian	1.9
White	0.01
Other/Not Specified	3.8
Ethnicity	
Not Hispanic	89.6
Sex	
Female	52.8



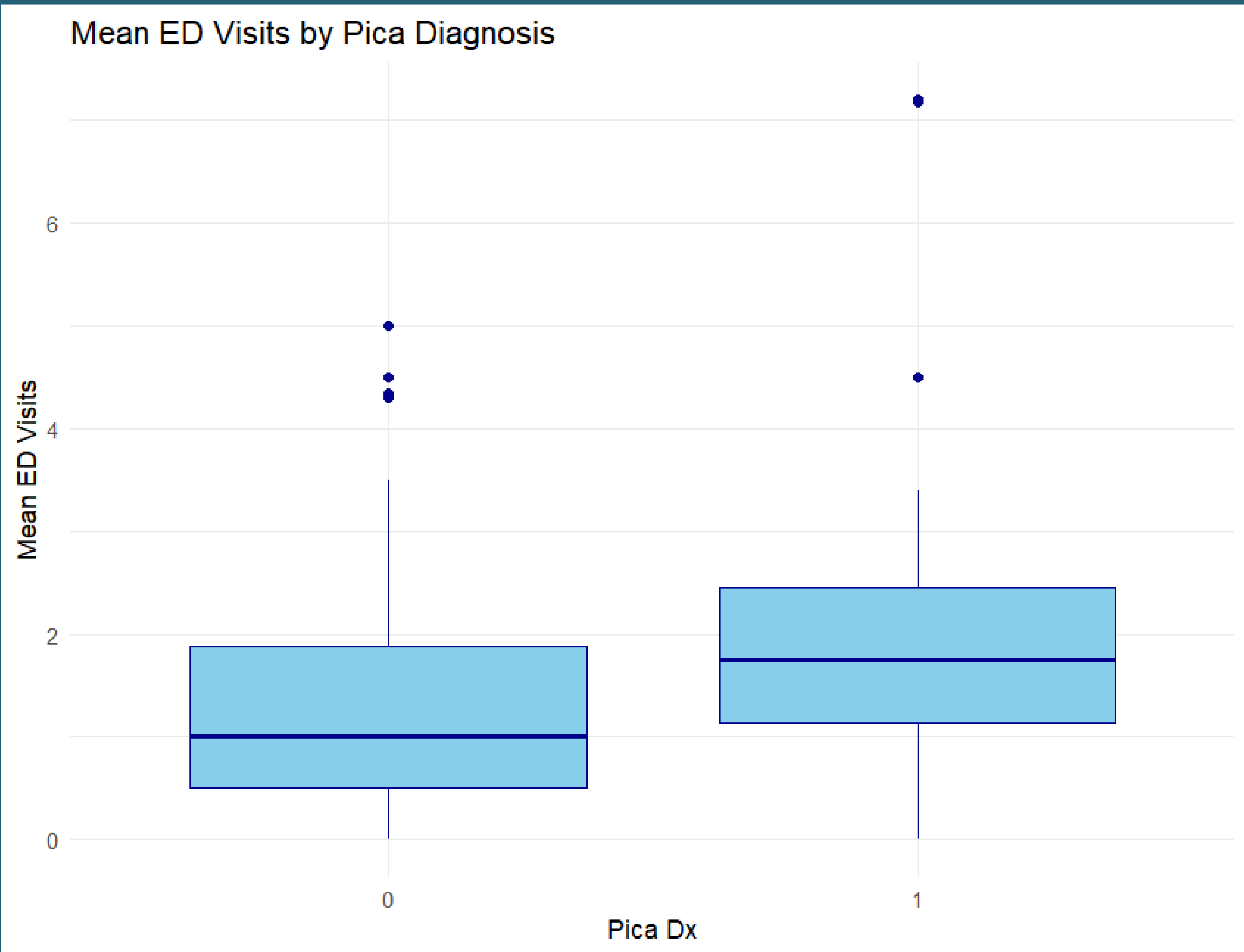
Of 106 pediatric patients with SCD,  
**28% ( $n = 30$ ) were diagnosed with pica**  
(or recorded as ingesting nonfood items)

Odds of pica diagnosis are not associated with SCD genotype

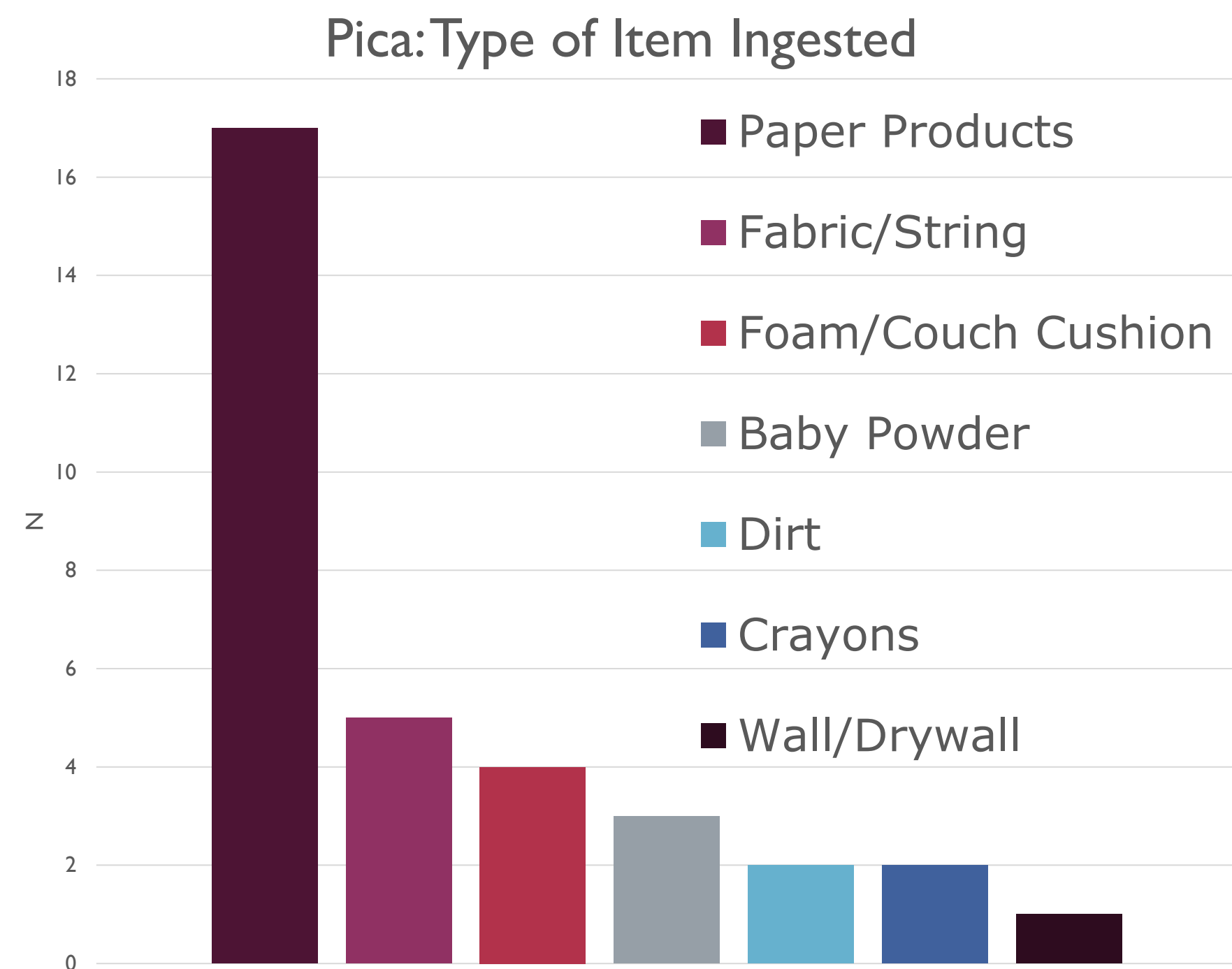
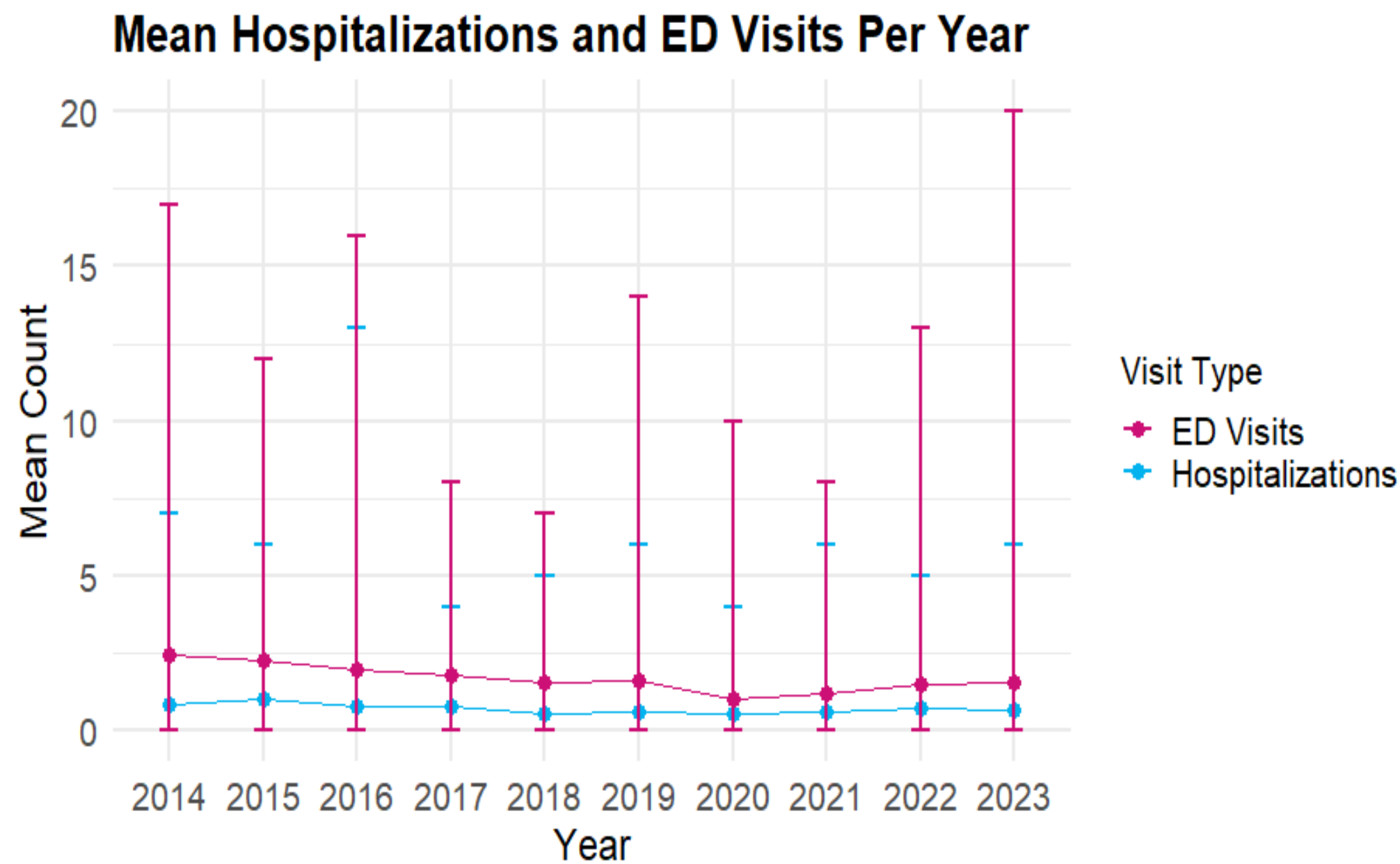
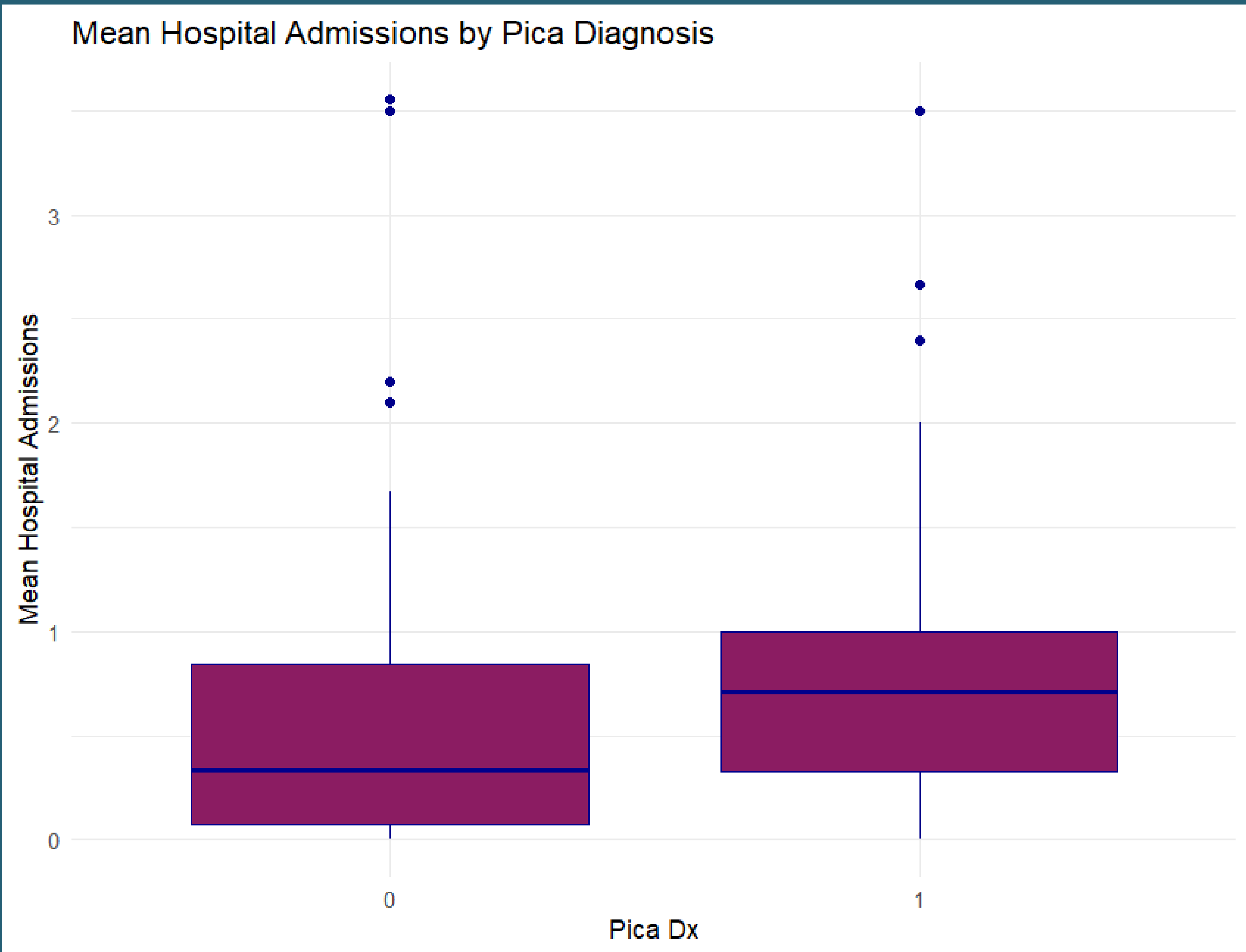
SS vs SC: OR = 0.74,  $p = 0.56$

SS vs Other: OR = 0.97,  $p = 0.96$

Patients with pica have **higher average ED visits/yr**  
 $t(104) = -2.48, p = 0.015$



No difference in average hospitalizations/yr  
 $t(104) = -1.51, p = 0.134$



- 16% ingested more than 1 type of nonfood substance
- Mean age of diagnosis 3.6 years

## Conclusions and Clinical Implications

- Pica diagnosis rates in PSCP similar to those found in the limited available literature
- SCD genotype not predictive of pica diagnosis
- Patients with pica diagnoses have higher average ED visits/year
  - May indicate higher risk of other health conditions, as most ED visits were not pica-related
- Only 20% of individuals with pica received behavioral therapy – need for more intervention

- Limitations:**
  - Small sample size
  - Pica is not routinely screened for in our clinic, so numbers are likely an underestimate

- Future directions:**
  - Examine lab values and pica diagnosis
  - Examine complications seen in pica vs non-pica patients