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904. OUTCOMES RESEARCH-NON-MALIGNANT CONDITIONS

Prevalence and Proportion of Transcranial Doppler Screenings in a Population Children with Sickle Cell Disease and Association with Hydroxyurea Adherence

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Sickle cell disease (SCD) is an inherited or genetic hemoglobinopathy in the United States and approximately 100,000 Americans are affected. The prevalence of stroke in unscreened children with sickle cell anemia (SCA) is 10% and can begin at infancy. National guidelines strongly recommend annual Transcranial Doppler (TCD) screenings as well as hydroxyurea (HU) administration in children with SS and S β ⁰ thalassemia (SCA) genotypes. The purpose of this project was to examine the prevalence and proportion of TCD screenings in North Carolina (NC) Medicaid enrollees and to identify associations with sociodemographic factors (age, sex, and rurality) and HU adherence. A longitudinal analysis of NC Medicaid claims data (2016-2019) was conducted for children with SCD ages 2-16 years. Prevalence of TCD screening claims was calculated to determine the number of children with TCD claims for each of the three, 12-month enrollment periods. The proportion of TCD screening claims was calculated based on NC Medicaid enrollees who had increasing TCD claims (0, 1, 2, or 3+) for 12, 24, and 36 months of Medicaid enrollment. HU adherence was measured using Proportion of Days Covered (PDC). HU PDC is a measure of HU prescription fills over 365 days within a 12-month period. HU PDC was used to categorize enrollees into good ($\geq 80\%$), moderate (60-79%), or poor ($< 60\%$) adherence categories. Age (years) was declared as the age in years of each participant during each study observation period and was categorized into three groups: preschoolers (2-5 years), school aged (6-11 years), and adolescents (12-16 years). Rurality was identified by converting residential zip codes to rural/urban county codes (RUCC). An adjusted multivariable Poisson regression model was fit to assess the rate of TCD screenings by HU adherence while controlling for age, sex, and rurality. The prevalence of children with annual TCD screening claims ranged from 39.5% to 40.1%. The percentage of children with 2 or more TCD claims increased when they had extended months of NC Medicaid enrollment (10.5% at 12 months, 33.7% at 24 months, and 52.6% at 36 months). Overall, children with Good HU adherence were 2.48 (95% CI 2.00, 3.06) times more likely to have TCD claims than children with poor HU adherence. In conclusion, the prevalence of TCD screenings of children with SCD on NC Medicaid was extremely low. Children with better HU adherence and extended NC Medicaid enrollment time were associated with higher number of TCD screenings.

Disclosures No relevant conflicts of interest to declare.

Table 1. Proportion of NC Medicaid enrollees with 0, 1, 2, or 3 plus TCD Claims*

Child Enrollment: N	Proportion Of TCD Claims In Children With SCD		
	12 Months	24 Months	36 Months
0 TCD Claims, N (%)	315 245 (77.8%)	353 192 (54.4%)	578 212 (36.7%)
1 TCD Claim	37 (11.7%)	42 (11.9%)	62 (10.7%)
2 TCD Claims	23 (7.3%)	72 (20.4%)	143 (24.7%)
3 Or More TCD Claims**	10 (3.2%)	47 (13.3%)	161 (27.9%)

Note: TCD, transcranial Doppler. *There was statistically significance as the p-value < 0.0001. When the child participants were enrolled in NC Medicaid for longer periods of time, there was a statistically significant incremental increase in number of TCD claims observed within the study population. **Enrollees with 3, 4, 5, or 6 TCD claims. These categories were aggregated into one category due to small cell sizes. This action helped to improve the overall model.

Figure 1:

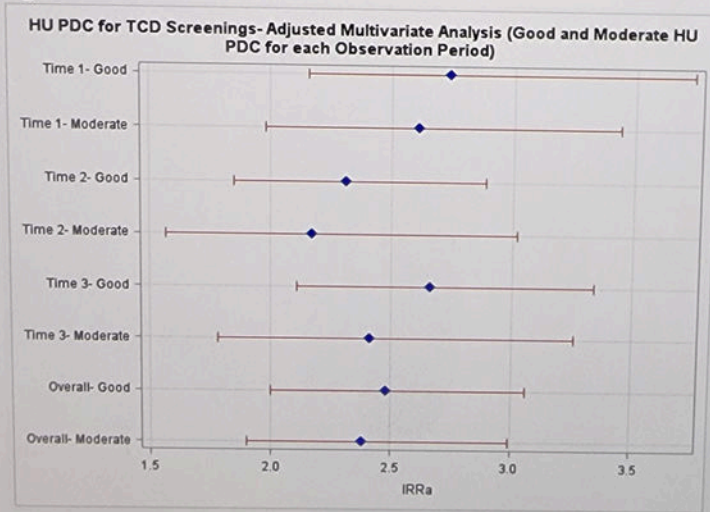


Figure 1

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