



MEDICAID RECEIPT AS A PREDICTOR FOR HEALTH DETERMINANTS IN YOUTH WITH SICKLE CELL DISEASE

*Research conducted by Kendall Moody, Howard University School of Social Work
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The receipt of Medicaid among youth diagnosed with a chronic illness is associated with favoring outcomes, such as increased well-child visits and decreased emergency room (ER) and inpatient visits; however, the relationship between Medicaid receipt and health outcomes among children and adolescents diagnosed with sickle cell disease (SCD) is not well understood. This preliminary research study investigates whether the receipt of Medicaid is linked with disease severity (e.g., frequency of pain crises and disease-related symptoms) among youth diagnosed with SCD.

Association Between Medicaid Status And Health Outcomes In Youth With SCD

In this paper, the association between the receipt of Medicaid and disease severity among youth with SCD was examined. Individuals diagnosed with SCD may experience severe complications such as pain, infection, and early death (Lee et al., 2019). Medicaid pays a significant portion of their healthcare needs. Recent data shows there are 41,995 Medicaid beneficiaries with SCD (Centers for Medicare & Medicaid Services [CMS], 2022). On average, Medicaid pays up to five times more for the health care of those with SCD in comparison to those without this disease (Grady et al., 2021). This is significant considering patients may have a lifetime SCD-related medical expense of \$1.1 billion, according to a 2009 analysis of Medicaid data (Kauf et al., 2009).

Literature investigating Medicaid recipients' health outcomes have variable outcomes (Dennett & Baicker, 2022). For example, Liu et al. examined the association between Medicaid status on health outcomes of patients after receiving bariatric surgery and found no association between Medicaid receipt and weight loss outcomes (Liu et al., 2021). Christopher et al. found similar results after investigating the connection between Medicaid status and the health outcomes of patients receiving clinical care and found no association between Medicaid receipt and control of diabetes (Christopher et al., 2016). The Oregon Health Insurance Experiment, which was a larger study that examined health outcomes of 6,387 adults receiving Medicaid, also found Medicaid receipt had no demonstrable effects on physical health (Finkelstein et al., 2012). The results of these studies may be surprising given that Medicaid status has been shown to increase healthcare utilization, access to specialty care and medications, and decrease mortality (Baicker et al., 2013; Sommers et al., 2014; Thompson, 2017; Torres et al., 2017; Wherry & Miller, 2016). Seemingly, youth with SCD who receive Medicaid would have favoring outcomes; yet, this association is not well established.

The participants in the current study consisted of patient/parent dyads from a comprehensive sickle cell program at a children's hospital in Southeastern Virginia. A total of 150 patients aged 8–17 years old and their parents completed assent and consent forms, respectively. I used the Statistical Package for the Social Sciences to assist with data analysis. I conducted a univariate analysis to gather description details of the



study participants and variables. Next, I deployed a linear regression model, while controlling for age and gender, to investigate whether the receipt of Medicaid predicts health outcomes in youth with SCD. In the model analyzing the association between Medicaid status and pain, I transformed the pain variable from the ordinal scale to three dummy variables for patients who experience pain *never*, *sometimes*, or *always*. In the model investigating the connection between Medicaid receipt and disease-related symptoms, the variable for *disease-related symptoms* is continuous and will not be transformed for this analysis. I used the coefficient on Medicaid to interpret the analysis outcome.

Medicaid Receipt May Be Associated With More Pain Crises

Using a linear regression model to investigate whether the receipt of Medicaid would predict pain frequency in youth with SCD, it was found that youth who receive Medicaid may expect to experience more pain episodes related to their disease. From the analysis, there was a 20-percentage point difference in the probability of experiencing pain *often* between those with Medicaid and those without. This differs from what was expected. A -.20 would be more reasonable, as the receipt of Medicaid may offer patients the opportunity to have access to medication and other pain-stabilizing interventions.

Youth With SCD May Also Experience More Disease-Related Symptoms

I also estimated that Medicaid receipt would predict a lower frequency of disease-related symptoms. The linear regression model was used to analyze whether Medicaid status would predict the frequency of disease-related symptoms in youth with SCD. Based on the results of this analysis, the hypothesis was not supported. Youth with SCD who receive Medicaid may expect to experience more symptoms related to their disease.

Implications

- More research examining the association between Medicaid status and health outcomes in youth with SCD is warranted.
- Since youth who receive SSI benefits are also jointly qualified for Medicaid, examining SSI and Medicaid policies will be informative.
- Policies targeting the pathophysiological process of SCD may be ineffective. Policies would also benefit from targeting psychological and social constructs.

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