

The Impact of the First Family Coronavirus Response Act on Healthcare Service Utilization Among Individuals with Sickle Cell Disease Using Wisconsin Medicaid Insurance.

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Background

- Sickle cell disease (SCD) is an inherited blood disorder characterized by sickle-shaped red blood cells, leads to acute and chronic complications.
- Individuals with SCD often need acute care to treat their disease exacerbations. Routine outpatient visits can prevent SCD complications.
- Health insurance is a major driver of access to care, and majority of SCD population in Wisconsin are enrolled in Medicaid.
- Approximately, 30-40% of individuals with SCD living in Wisconsin lack continuous Medicaid coverage over a 3-year time frame.
- In 2020, due to widespread uncertainty and economic instabilities caused by COVID-19 pandemic, the Families First Coronavirus Response Act (FFCRA) was enacted to facilitated continuous Medicaid coverage.
- FFCRA created a unique natural experiment to evaluate the effect of continuous coverage on healthcare service utilization (HSU) among individuals with SCD.

Objective

- To evaluate the impact of FFCRA on HSU among individuals with SCD enrolled in Wisconsin Medicaid.
 - Hypothesis:** Individuals with SCD would have reduced acute care utilization (ACU) and increased outpatient care.

Methodology

Study Design: A pre-post comparison study to compare HSU rates from 2017 through 2019 (i.e., pre-FFCRA) to rates from 2021 through 2022 (i.e., during the FFCRA)

Data Sources: Medicaid data within the Sickle Cell Data Collection Program in Wisconsin (SCDC-WI) from 2017 through 2022.

Study Population: Individuals who had ≥3 unique claims with an associated SCD diagnosis within a 5-year window, categorized based on their pre-FFCRA enrollment pattern group: Continuous coverage vs. Coverage gap.

Outcome Variable: HSU rates (emergency department (ED), inpatient, and outpatient visits) identified based on the Center of Medicaid place of service codes.

Primary Independent Variable: FFCRA era

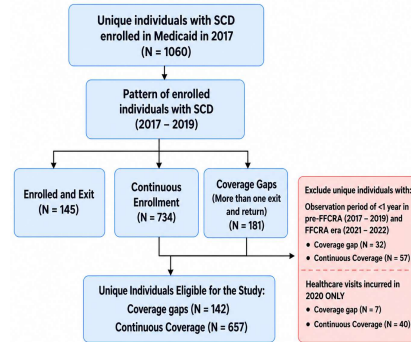
Statistical Analysis

- Used generalized estimating equations (GEE) with a Poisson distribution and a log link function.
- Tested for interaction between FFCRA and pre-FFCRA enrollment pattern groups, and the impact of FFCRA.

Results (N=799)

- We stratified all analyses by these pre-FFCRA enrollment groups

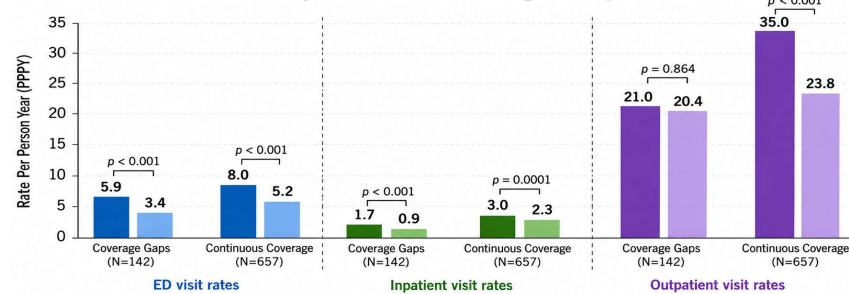
Graphical Representation of the Study Population



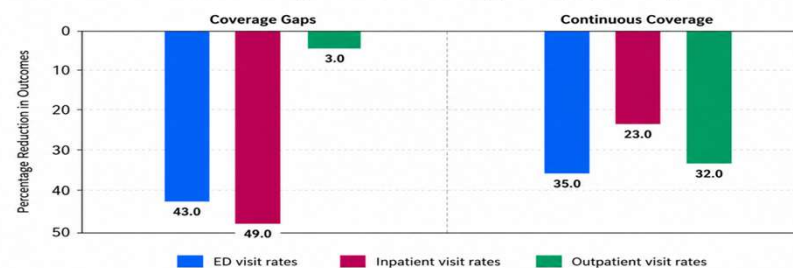
Baseline Characteristics, Stratified by Pre-FFCRA Coverage Groups (N=799)

| Baseline Characteristics | Coverage Gaps (N=142) Number (%) | Continuous Coverage (N=657) Number (%) |
|---------------------------------|----------------------------------|--|
| Total Population (N=799) | | |
| Sex | | |
| Female | 73 (51.4) | 393 (59.8) |
| Male | 68 (48.6) | 264 (40.2) |
| Age at First Enrollment | | |
| ≤ 19 Years | 64 (45.1) | 281 (42.8) |
| > 19 years | 78 (54.9) | 376 (57.2) |
| Disability Status | | |
| Yes | 41 (28.9) | 462 (70.3) |
| No | 101 (71.1) | 195 (29.7) |
| Ethnicity | | |
| Hispanic | 5 (3.5) | 10 (1.5) |
| Non-Hispanic | 137 (96.5) | 647 (98.5) |
| Race | | |
| Black | 119 (83.8) | 450 (68.5) |
| Others | 10 (7.0) | 19 (2.9) |
| Unknown | 13 (9.2) | 184 (28.0) |

Average Healthcare Service Utilization Rate (PPPY) Before and During FFCRA, Stratified by Pre-FFCRA Coverage Groups (N=799)



Percentage Decrease in Healthcare Service Utilization Rates (PPPY) from Before to During FFCRA Implementation, Stratified by Pre-FFCRA Coverage Groups (N = 799)



Discussion

- These findings demonstrate a significant reduction in ACU (ED and inpatient visits).
 - However, the magnitude of these reductions was greater among individuals with coverage gaps than those with continuous coverage.
- Outpatient visits showed a significant reduction among individuals with continuous coverage.
 - However, this remained relatively stable among those with coverage gaps.
- After adjusting for covariates (age, sex, and disability), findings on FFCRA impacts on HSU remained consistent.
- Age and disability were independently associated with reduced ACU (ED and inpatient visits).

Conclusion

- These findings underscore the importance of maintaining policy measures that promote coverage stability and reduce dependence on acute care, particularly for patients with chronic, high-acuity conditions, such as SCD.
- These findings are especially relevant given policy debates around Medicaid expansion and coverage renewal processes in the post-pandemic era.
- Additional work is needed to understand the mechanisms underlying these findings.

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References

