



Medicaid Expansion and Access to Allogeneic Hematopoietic Stem Cell Transplantation in Adults with Acute Leukemia

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BACKGROUND

- Allo-HCT remains the main curative therapy for many patients with acute leukemia (AL).
- Access is inequitably distributed, constrained by insurance status, race, and socioeconomic factors.
- The ACA (2010) extended Medicaid eligibility to adults earning ≤138% of the federal poverty level, reaching millions of previously uninsured Americans.
- The impact of Medicaid expansion on allo-HCT access and overall mortality in AL remains undefined.

OBJECTIVE: To evaluate the impact of Medicaid expansion with allo-HCT access and all-cause mortality among US adults with acute leukemia.

METHODS

- Data Source**
- National Cancer Database (NCDB)
- Population**
- 51,220 adults aged 40-64 with histologically confirmed AL (2010-2021)
 - Upper age cap: to minimize Medicare overlap
- Exposure**
- Medicaid expansion state vs. non-expansion state at diagnosis
 - Pre-expansion (2010-2013) vs. post-expansion (2014-2021)
- Outcomes**
- Primary: Allo-HCT receipt (logistic regression) and All-cause mortality (Cox proportional hazards)
 - Secondary: Uninsured status at diagnosis.
- Statistical Approach**
- Adjusted for age, sex, race, income, education, insurance, metropolitan status, comorbidity (Charlson-Deyo).
 - Multiple imputation with chained equations (MICE; m=5) for missing covariates.
 - Expansion-state × post-2014 interaction tested policy effect modification.

RESULTS

COHORT OVERVIEW

51,220 Adults with AL 2010 – 2021	73.1% Expansion States (n=37,431)	10.7% Uninsured (Non-Expansion)	4.0% Uninsured (Expansion)
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PRIMARY OUTCOMES

ALL-CAUSE MORTALITY - - Expansion States	ALL-CAUSE MORTALITY - - Post-2014 Era
HR 0.96 95% CI: 0.93 – 0.99 p = .004 4% lower hazard of death in expansion vs. non-expansion states	HR 0.79 95% CI: 0.77 – 0.81 p < .001 21% lower hazard of death in the post-ACA era
ALLO-HCT ACCESS - - Expansion States	ALLO-HCT ACCESS - - Post-2014 Era
OR 1.15 95% CI: 1.07 – 1.23 p < .001 15% higher odds of receiving allo-HCT in expansion states	OR 1.25 95% CI: 1.17 – 1.34 p < .001 25% higher odds of receiving allo-HCT in the post-ACA era

UNINSURED STATUS - - COVERAGE PATHWAY		
OR 0.51 Expansion vs. Non-Expansion (p < .001)	OR 0.55 Post-2014 decline in uninsured EXP states (p < .001)	OR 0.83 Post-2014 decline in uninsured NON-EXP states (p = .002)
Interaction p < .001 -- post-2014 uninsured decline was substantially greater in expansion states		

CONCLUSIONS

- Medicaid expansion was independently associated with:
 - ↑ **15% higher odds of allo-HCT receipt**
 - ↓ **4% lower hazard of all-cause death**
- Post-2014 era contributed additive but independent benefits: 25% ↑ allo-HCT, 21% ↓ mortality.
- Medicaid expansion dramatically reduced uninsurance, the likely mechanistic pathway to improved outcomes.
- Persistent racial disparities in both transplant access and survival underscore that coverage reform alone is insufficient.**

RACIAL DISPARITIES

Despite full adjustment for insurance, income, education, and comorbidity, Black patients faced:

OR 0.56 95% CI: 0.49–0.63 p < .001 44% LOWER Allo-HCT Access vs. White patients	HR 1.14 95% CI: 1.09–1.18 p < .001 14% HIGHER All-Cause Mortality vs. White patients
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- Disparities persisted after full covariate adjustment - insurance alone did not close the gap.
- Within expansion states, Black patients retained higher uninsured odds (OR 1.27, p=.004)

Equity-focused interventions addressing structural racism, care fragmentation, and social determinants of health remain essential.

ACKNOWLEDGEMENTS

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- The data used in this study are derived from a de-identified NCDB file. The American College of Surgeons and the Commission on Cancer have not verified and are not responsible for the analytic or statistical methodology employed, or the conclusions drawn from these data by the investigator.