

Socioeconomic Deprivation and Its Influence on Hospitalization Patterns and Resource Utilization in Liver Cirrhosis

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Purpose: The purpose of this study is to describe in-hospital resource utilization and associated cost in patients with liver cirrhosis living in low vs high-resourced environments using Area Deprivation Index (ADI).

Methods: This is a retrospective cohort study of privately insured adults with cirrhosis using a large national insurer claims database from 7/2011-12/2022. Hospitalization rates, in-hospital resource utilization and cost were analyzed. ADI categories are reported (D1: least deprived; D5: most deprived). Multivariate analyses were adjusted for age, gender, insurance type, Charleston Comorbidity Index (CCI), and etiology.

Results: In 393,745 patients (mean age 63.9 years; 45.5% female; Medicare 57.6%), the most common etiology was ALD (38.8%). Average CCI is 5.7, and mean MELD 3.0 is 14.1. Mean hospitalization rate is 65 hospitalizations/100 patient years. Patients in D5 vs D1 had 11.1% higher hospitalization rates, lower outpatient-to-inpatient visit ratio by 13.5%, and an increase in acute care visits by 50.8%. D5 patients experienced 2.1% higher LOS. D5 patients were 10.3% more likely to be discharged to hospice and 28% more likely to leave the hospital against medical advice. D5 patients underwent 17.8% fewer cirrhosis related procedures. D1 had a higher cost per hospitalization at \$18,251.74 vs \$16,194.69 in D5 but overall cost of care/100-patient years was 5.1% higher in D5 vs D1 (\$1,332,500 vs \$1,268,478) (Figure). All results reached statistical significance ($p < 0.05$).

Conclusions: Hospitalization rates are high for patients with cirrhosis. Patients living in the most deprived geographic areas have lower cost of hospitalizations, but because of higher hospitalization rates and fewer outpatient relative to inpatient visits, patients in more deprived areas incur higher overall costs of inpatient care.

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