ALCOHOL-ASSOCIATED HEPATITIS AS A SECONDARY DIAGNOSIS: COMPARISONS OF MEDICARE PATIENT OUTCOMES AND HOSPITAL FINANCIAL PERFORMANCE, 2017-2019

Natalie Marlowe[1], Robert C. Saunders[2], Clarisa Peer[1], Keith Lui[1], Julia Sheriff[2], Lane Koenig[2], Norman Sussman[1]

[1]DURECT Corporation, Cupertino, CA [2]KNG Health Consulting, North Bethesda, MD

INTRODUCTION

- Alcohol-associated hepatitis (AH) is an acute, life-threatening form of alcohol-associated liver disease (ALD), with 90d mortality rates up to 50% in severe AH.[1]
- Based on data from the Nationwide Inpatient Sample database, hospitalizations for AH increased in the U.S. about 24% between 2015 and 2019.[2]
- Focusing on primary diagnosis of AH understates the magnitude of AH's impact in Medicare. In 2017-2019 only 3,039 Medicare hospitalizations had a primary diagnosis of AH compared to 20,752 hospitalizations with a secondary diagnosis of AH.[3]
- Secondary diagnosis of AH raises the complexity and cost of care beyond that normally expected for the primary condition.[3]
- This analysis evaluates differences in mortality, readmissions, and inpatient hospital costs between hospitalized Medicare patients with AH as a secondary diagnosis and those without AH.

METHODS

- We used the Medicare 100% Inpatient Standard Analytic File Limited Data Set for calendar years 2017-2019.
- We compared direct standardized mortality (in-hospital, 30d and 90d), readmission rates (30d and 90d), and hospital losses (payments minus costs).
- We included hospitalizations paid in MS-DRGs 432-434 (Cirrhosis and Alcoholic Hepatitis) or in one of the ten most frequent MS-DRGs where AH was a secondary diagnosis (56% of secondary AH cases).

RESULTS

- Within MS-DRGs 432-434, the in-hospital mortality rate when AH was a secondary diagnosis was nearly twice that of cases without AH (8.4% v. 4.3%), and 30d and 90d mortality was nearly 50% and 25% greater, respectively (Figure 1). Similar discrepancies hold for the top 10 MS-DRGs.
- Readmission rates at 30d and 90d were comparable across MS-DRGs and between cases with v. without secondary AH diagnosis (Figure 2).
- Hospitals lost between $807 and $5,705 on average per stay for patients with secondary AH for the studied MS-DRGs. When AH was not present, hospitals lost up to $827 or gained up to $872 per stay (Figure 3).

FIGURES

Figure 1: Mortality for Hospitalizations With v. Without a Secondary AH Diagnosis

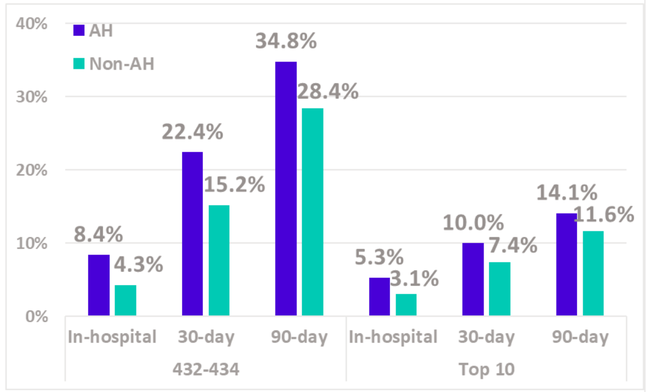


Figure 2: Readmissions for Hospitalizations With v. Without a Secondary AH Diagnosis

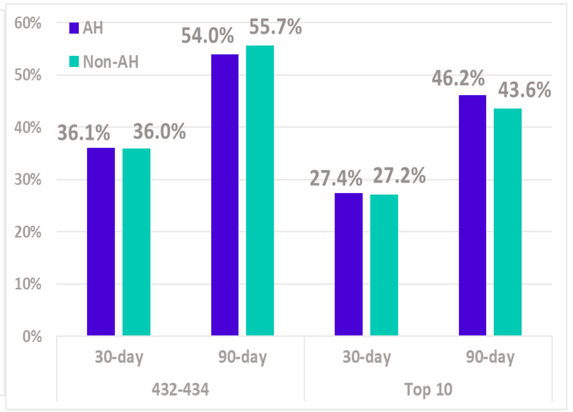
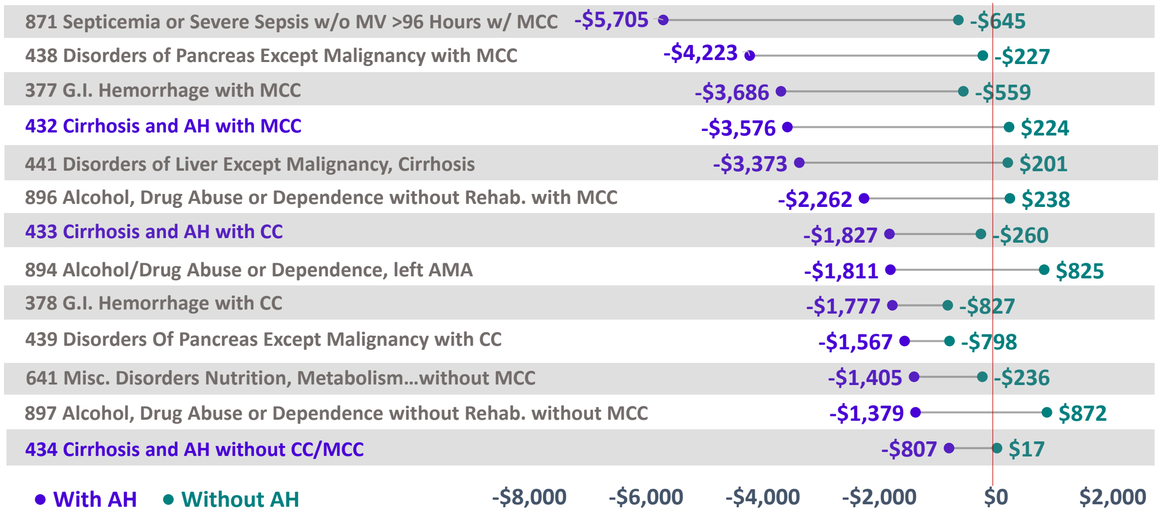


Figure 3: Average Loss Per Stay for Hospitalizations With and Without a Diagnosis of AH, 2017-2019



Note: MCC = Major Complication or Comorbidity; CC = Complication or Comorbidity; MV = Mechanical Ventilation

CONCLUSIONS

- The in-hospital mortality rate when AH was a secondary diagnosis was nearly twice that of cases without AH (8.4% v. 4.3%), and 30d and 90d mortality were nearly 50% and 25% greater.
- Hospitalizations with an AH diagnosis consistently cost more than hospitals were paid, which creates a financial burden for hospitals in Medicare's fixed payment environment.
- Mortality may indicate elevated case complexity and contribute to the large losses per hospitalization.
- Payment below a hospital's costs may contribute to underdiagnosis and undertreatment of AH at a time when it is on the rise.[4]
- Reimbursement policies should address the increased resource use and severity associated with an AH diagnosis.

REFERENCES

1. Mathurin P, Bataller R. Trends in the management and burden of alcoholic liver disease. J Hepatol. 2015;62(1 Suppl):S38-S46.
2. Marlowe N, et al. (2022). Prevalence, co-morbidities, and in-hospital mortality of patients hospitalized with alcohol-associated hepatitis in the United States from 2015 to 2019. *ACER*, 46(8):1472-1481. doi: 10.1111/acer.14896.
3. Marlowe N, et al. (2022). The Inpatient Cost and Utilization Impact of Alcohol-associated Hepatitis (AH) Among Traditional Medicare Beneficiaries, 2017-2019. Poster at AASLD Annual Meeting 2022.
4. Marlowe N, et al. Epidemic within pandemic: Alcohol-related hepatitis and COVID-19. Abstract submitted to the EASL Congress 2023, Vienna, Austria.

CONTACT INFORMATION

Natalie.Marlowe@durect.com