# THE INPATIENT COST AND UTILIZATION IMPACT OF ALCOHOL-ASSOCIATED HEPATITIS (AH) AMONG TRADITIONAL MEDICARE BENEFICIARIES, 2017-2019

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### **INTRODUCTION**

- AH is an acute form of alcohol-associated liver disease (ALD). Based on data from the Nationwide Inpatient Sample database, hospitalizations for AH increased about 24% between 2015 and 2019.1
- Medicare provides health insurance coverage to 64 million people, 12.6% of whom are under age 65 and have disabilities.<sup>2</sup> In traditional Medicare, hospitals receive a fixed rate per Medicare Severity Diagnosis Related Group (MS-DRG) regardless of the level of resources used.
- This analysis evaluates the impact of an AH diagnosis on patients' hospital costs and payments to assess payment adequacy in Medicare.

## **METHODS**

- We used the Medicare 100% Inpatient Standard Analytic File Limited Data Set for calendar years 2017-2019.3
- Cases of ALD (including AH) are coded along with fibrosis and cirrhosis of the liver as "Cirrhosis and AH"; they are subclassified based on secondary diagnoses to MS-DRGs 432-434 (Fig. 1).
- Cases with secondary AH diagnoses group to other MS-DRGs based on the primary diagnosis (Fig. 3).

### RESULTS

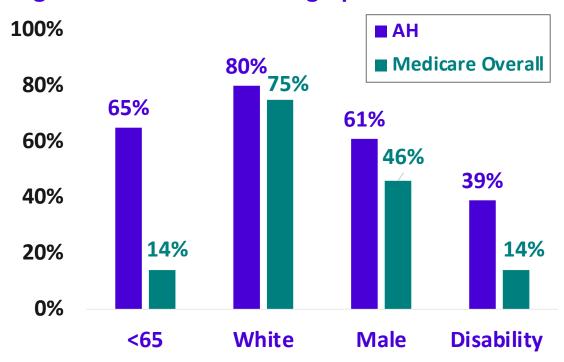
- We identified 41,427 discharges with a primary (n=3,039, Fig. 1) or secondary (n= 38,388) diagnosis of AH.
- Patients with AH are more likely to be younger, white, male and eligible through disability coverage (Fig. 2).
- Most cases in the MS-DRGs 432-434 are for conditions other than alcohol-associated hepatitis (Fig. 1 & Fig. 3).
- Hospitals are paid the same for cases assigned to the same MS-DRG, but AH cases generate higher hospital costs, which are primarily due to longer lengths of stay.
- AH w/ MCC: 7.8 days v. Other 432: 6.2 days
- AH w/o MCC: 4.7 days v. Other 433-434: 4.0 days
- Hospitals lose on average \$800 to \$5,700 per discharge for hospitalizations in the most common MS-DRGs associated with AH, compared to similar cases without an AH diagnosis (Fig. 3).

### **FIGURES**

Figure 1: Hospitalization Case Mix, MS-DRGs 432-434

MS-DRG	AH cases	All other cases	Total
432 Cirrhosis and AH with MCC	1,308	29,996	31,304
	(4%)	(96%)	(100%)
433 Cirrhosis and AH with CC	1,600 (7%)	21,196 (93%)	22,796 (100%)
434 Cirrhosis and AH without CC/MCC	131	1,164	1,295
	(10%)	(90%)	(100%)

Figure 2: AH Patient Demographics in Medicare



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- 2. Center for Medicare and Medicaid Services. (2021). Beneficiaries: Medicare At Glance. a https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Beneficiary-Snapshot/Downloads/Bene\_Snaphot.pdf
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Figure 3: Average Loss Per Stay for Hospitalizations With and Without a Diagnosis of AH, 2017-2019

871 Septicemia or Severe Sepsis w/o MV >96 Hours w/ MCC -\$5,7	705 •	<b>●</b> -\$ <mark>645</mark>
438 Disorders of Pancreas Except Malignancy with MCC	-\$4 <b>,223</b> •	• -\$22 <b>7</b>
377 G.I. Hemorrhage with MCC	-\$3,686 <b>●</b>	<b>-</b> \$559
432 Cirrhosis and AH with MCC	-\$3,576 ●	• \$224
441 Disorders of Liver Except Malignancy, Cirrhosis	-\$3,373 ●	• \$201
896 Alcohol, Drug Abuse or Dependence without Rehab. with MCC	-\$2,262 ●	<b>●</b> \$238
433 Cirrhosis and AH with CC	-\$1,827 ●	<b>-\$260</b>
894 Alcohol/Drug Abuse or Dependence, left AMA	-\$1,811 ●	• \$825
378 G.I. Hemorrhage with CC	-\$1,777 ●-	<b>-\$8</b> 27
439 Disorders Of Pancreas Except Malignancy with CC	-\$1,567 •	• -\$7 <mark>98</mark>
641 Misc. Disorders Nutrition, Metabolismwithout MCC	-\$1,405	• <del></del>
897 Alcohol, Drug Abuse or Dependence without Rehab. without N	-\$1,379	• \$872
434 Cirrhosis and AH without CC/MCC	-\$8	\$17
-\$8,000 -	\$6,000 -\$4,000 -\$2,000	\$0 \$2,000

#### With AHWithout AH

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

## **CONCLUSION**

- A diagnosis of AH raised the expected costs of hospitalizations for ALD and other common conditions, primarily by increasing the length of stay for hospitalizations.
- 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.
- Payment below a hospital's costs may contribute to underdiagnosis and undertreatment of AH at a time when AH is on the rise.
- Payment rates should adjust to reflect the higher resource use associated with AH to ensure financial viability of treatment and accessibility for this population.

REFERENCES