

Mental Health Comorbidities Among Patients With Chronic Medical Conditions and Alcohol Use Disorder

Lauren Strand¹; Regina Grebla¹; Summera Zhou²; Xin Zhao²; Allison Keshishian²; Monica McClain²; Sandra Springer³

¹Alkermes, Inc., Waltham, MA; ²Genesis Research, Hoboken, NJ; ³Yale School of Medicine, New Haven, CT

INTRODUCTION

- Alcohol use disorder (AUD) is associated with greater rates of comorbid mental health disorders relative to the general population and an increased burden of illness among patients with chronic medical conditions^{1,2}
- The relationship between mental health and substance use disorders (SUDs) is complex; mental health disorders can increase substance use risk, and substance use can exacerbate or trigger mental health disorders³
- Patients with AUD and comorbid psychiatric disorders often do not receive specialized substance abuse treatment that addresses both conditions⁴
- Additionally, the overlap with medical comorbidity is significant and may exacerbate management of chronic medical conditions⁵
- Early identification of SUD in patients with comorbid psychiatric disorders and chronic medical conditions may improve long-term health outcomes⁶

OBJECTIVE

- To characterize the burden of select mental health comorbidities among patients with ambulatory care-sensitive conditions* (ACSCs) with and without co-occurring AUD using real-world data

*ACSCs are chronic medical conditions for which hospitalization is generally avoidable if patients are adequately managed and treated in ambulatory/primary care settings, or conditions for which early intervention can prevent complications or more severe disease (herein referred to as "chronic conditions")⁷

METHODS

STUDY DESIGN

- Retrospective cohort study using real-world claims data from the Merative™ MarketScan® Commercial and Medicare Supplemental (1/1/2016–12/31/2020) and the Multi-State Medicaid Database (1/1/2016–12/31/2019) (Figure 1)
- Mental health comorbidities were identified from patients with ≥1 claim during baseline for any of the following conditions (ICD-10 codes):
 - Schizophrenia
 - Schizoaffective disorder
 - Bipolar disorder
 - Manic episode
 - Major depressive disorder (MDD)
 - Anxiety disorder, any
 - Post-traumatic stress disorder (PTSD)
- Other co-occurring SUDs were identified from patients with ≥1 claim during baseline or within 6 months post-index date** with any of the following (ICD-10 codes):
 - Opioid use disorder
 - Cannabinoid use disorder
 - Sedatives/hypnotic use disorder
 - Cocaine use disorder
 - Other stimulant use disorder
 - Hallucinogen use disorder
 - Nicotine use disorder
 - Inhalant-related disorders
 - Other psychoactive use disorder

**The 6 months post-index date has been included because these disorders are not considered sudden onset; it is likely that these conditions, if identified within 6 months, are prevalent (as opposed to incident).

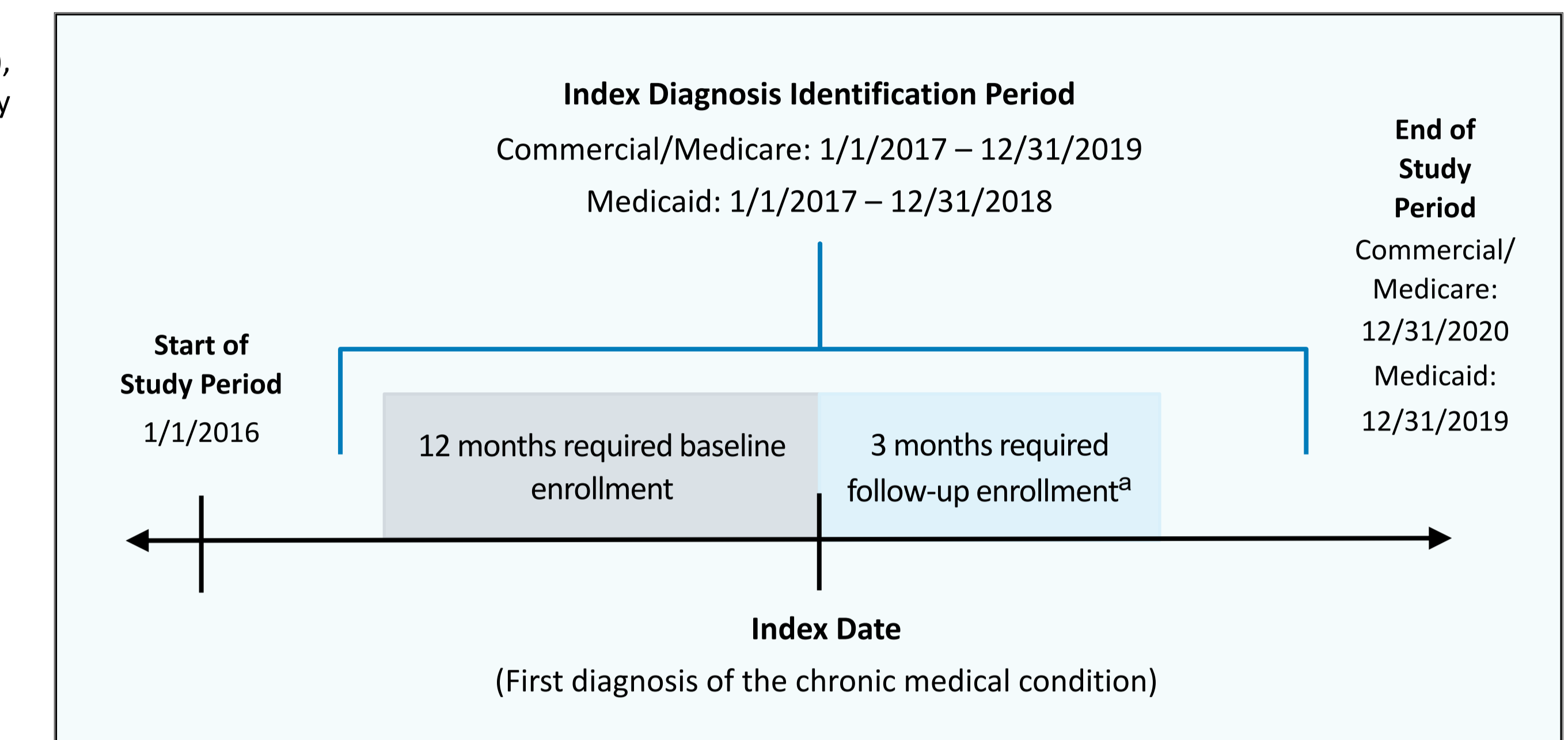
STUDY POPULATION

- Eligible adults had ≥1 inpatient or ≥2 outpatient claims on separate days for asthma, chronic kidney disease (CKD), congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), diabetes (type 1 and type 2), hypertension (HTN), or inflammatory bowel disease (IBD), respectively
- Patients were required to have ≥1 year of continuous enrollment prior to first diagnosis of the chronic medical condition (baseline) and for 3 months after (follow-up)
- Adults with comorbid moderate-to-severe AUD were identified from the set of patients with select chronic conditions
 - Moderate-to-severe AUD (DSM-5) was defined by the presence of an associated claim (ICD-10-CM: F10.2x, excluding F10.21) during baseline

STATISTICAL ANALYSIS

- Patient demographics and clinical characteristics were assessed in the 1-year baseline period and summarized using descriptive statistics for each chronic condition cohort overall and by the presence of AUD in the baseline period
- Mental health comorbidities and other co-occurring SUDs during baseline were examined in each chronic condition cohort

Figure 1. Study Design



*The main objective of the overall study is to evaluate healthcare resource use and costs between matched chronic condition patients with and without comorbid AUD

RESULTS

PATIENT DEMOGRAPHICS AND CLINICAL CHARACTERISTICS

- Among 5,494,756 eligible unique patients with select chronic conditions, 64,777 (1.2%) patients had comorbid moderate-to-severe AUD (Table 1)
- Of patients with a chronic condition and AUD, the average age across cohorts ranged from 45 (asthma) to 57 (CHF) years; 48% (asthma) to 71% (CHF) were male; 46% (IBD) to 71% (COPD) were insured by Medicaid
- Patients with comorbid AUD were more likely to have a higher overall comorbidity burden relative to patients without comorbid AUD, as indicated by greater Charlson Comorbidity Index (CCI) scores

Table 1. Demographics and Characteristics Among Patients With Select Chronic Conditions and Comorbid AUD

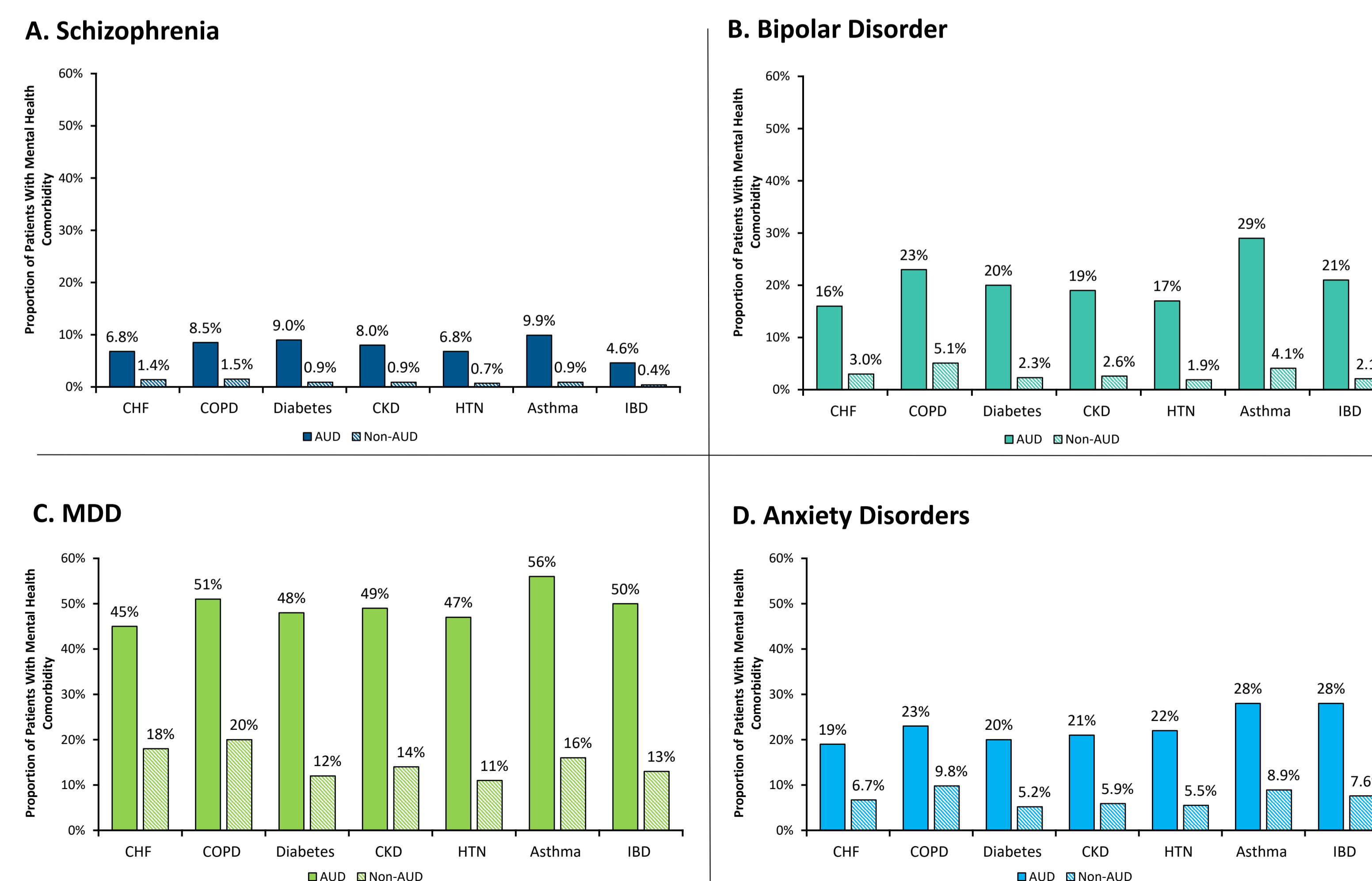
	CHF		COPD		Diabetes		CKD		HTN		Asthma		IBD	
	AUD	Non-AUD	AUD	Non-AUD	AUD	Non-AUD	AUD	Non-AUD	AUD	Non-AUD	AUD	Non-AUD	AUD	Non-AUD
N	5,917	288,975	17,066	633,768	12,340	1,568,191	14,472	1,140,670	41,392	3,974,393	10,617	908,452	962	114,413
Age, y, mean (SD)	57 (11)	66 (16)	54 (11)	58 (16)	53 (11)	57 (14)	53 (12)	57 (16)	52 (12)	57 (14)	45 (13)	45 (16)	47 (13)	48 (16)
Male, n (%)	4,196 (71%)	144,872 (50%)	10,457 (61%)	252,566 (40%)	8,402 (68%)	771,606 (49%)	10,012 (69%)	577,987 (51%)	27,580 (67%)	1,913,381 (48%)	5,137 (48%)	282,972 (31%)	563 (59%)	50,870 (44%)
White race, n (%)*	1,736 (58%)	29,644 (55%)	7,422 (71%)	128,672 (72%)	3,147 (53%)	119,070 (56%)	3,970 (58%)	93,584 (58%)	11,469 (61%)	250,627 (55%)	3,593 (59%)	117,959 (55%)	260 (71%)	7,698 (70%)
Insurance, n (%)														
Commercial	1,731 (29%)	106,883 (37%)	3,917 (23%)	277,791 (44%)	4,644 (38%)	1,033,817 (66%)	5,422 (37%)	701,176 (61%)	16,749 (40%)	2,724,468 (69%)	3,391 (32%)	600,849 (66%)	487 (51%)	91,553 (80%)
Medicare	674 (11%)	120,004 (42%)	1,109 (6.5%)	152,748 (24%)	833 (6.8%)	289,293 (18%)	1,006 (7.0%)	252,967 (22%)	2,522 (6.1%)	721,931 (18%)	223 (2.1%)	65,216 (7.2%)	35 (3.6%)	10,072 (8.8%)
Medicaid	3,512 (59%)	62,088 (21%)	12,040 (71%)	203,229 (32%)	6,863 (56%)	245,081 (16%)	8,044 (56%)	186,527 (16%)	22,121 (53%)	527,994 (13%)	7,003 (66%)	242,387 (27%)	440 (46%)	12,788 (11%)
CCI score, mean (SD)	10.2 (5.4)	7.7 (5.0)	8.7 (5.2)	5.9 (4.6)	8.6 (5.5)	4.9 (4.2)	9.0 (5.5)	5.6 (4.5)	7.1 (5.1)	3.9 (3.8)	7.9 (5.3)	4.3 (3.9)	8.6 (5.2)	4.9 (4.2)

*Only available for Medicaid population. AUD, alcohol use disorder; CCI, Charlson Comorbidity Index; CHF, congestive heart failure; CKD, chronic kidney disease; COPD, chronic obstructive pulmonary disease; HTN, hypertension; IBD, inflammatory bowel disease; SD, standard deviation.

MENTAL HEALTH COMORBIDITIES AND OTHER CO-OCCURRING SUD

- Across all cohorts, the proportion of select mental health comorbidities was higher in patients with comorbid AUD compared with those with the same condition without AUD (Figure 2)
- MDD was the most common baseline mental health comorbidity among those with AUD assessed: 45% (CHF) to 56% (asthma)
- Among patients with chronic medical conditions and comorbid AUD, the frequency of other mental health comorbidities across the conditions were as follows:
 - Schizoaffective disorder: 3.4% (IBD) to 9.1% (asthma)
 - Manic episode: 0.4% (CHF) to 1.2% (IBD)
 - PTSD: 1.6% (CHF) to 3.7% (asthma)

Figure 2. Frequency of Baseline Mental Health Comorbidities Among Patients With Select Chronic Conditions*



*These data reflect proportions among unmatched AUD and non-AUD patients within each chronic condition cohort. N-values for each group are included within Table 1. AUD, alcohol use disorder; CHF, congestive heart failure; CKD, chronic kidney disease; COPD, chronic obstructive pulmonary disease; HTN, hypertension; IBD, inflammatory bowel disease; MDD, major depressive disorder.

STUDY LIMITATIONS

- Baseline mental health comorbidities were reported among unmatched AUD and non-AUD patients within each cohort and comparisons are unadjusted, thus results may reflect bias owing to confounding factors
- Administrative claims evaluated in this study were generated for billing, instead of research purposes, and may contain omissions and inaccuracies; this is expected to equally affect all cohorts and, thus, should have minimal impact on overarching conclusions
- Patients could be included in analyses for >1 chronic condition, limiting the potential for statistical comparisons across cohorts

CONCLUSIONS

- In this real-world study, the presence of AUD in patients with select chronic medical conditions was associated with a greater burden of comorbid mental health conditions
 - Of the mental health comorbidities analyzed, MDD was the most common baseline mental health comorbidity among patients with and without comorbid AUD
- Interestingly, patients with asthma and comorbid AUD, while younger and healthier on average than AUD patients in most of the other ACSC cohorts, had the highest burden of mental health comorbidities
 - Our findings confirm the previously known association between pulmonary disease and mental health comorbidity,⁸ and screening and treatment of comorbid AUD in these patients may reduce their chronic disease burden
- Further research is needed on patient outcomes in multimorbidity
- Greater understanding of the interplay between mental health and SUDs in patients with chronic conditions may aid healthcare professionals in developing a comprehensive plan of care that includes both screening and treatment

DISCLOSURES

This study was funded and supported by Alkermes, Inc. RG and LS are employees and may be stockholders of Alkermes, Inc. XZ, SZ, AK, and MM are contractors of Alkermes, Inc. SS has received funding from the NIH and VA, in-kind study drug donations from Alkermes, Inc. and Indivior Pharmaceuticals for NIH-funded research, and provides paid consultation for Alkermes, Inc. Medical writing support was provided by Nancy Nguyen, PharmD, of Envision Pharma Group and was funded by Alkermes, Inc.



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