

Medication Utilization for Alcohol Use Disorder in a Commercially-Insured Population

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Background

- 14.5 million Americans age 12 or older had an alcohol use disorder (AUD) in 2017
- Evidence-based treatments, including several medications, are available
- Only about one in six with AUD received any treatment in the past year, and medications have been particularly slow to diffuse
- Barriers include provider shortages, coverage restrictions (e.g., prior authorization), clinician failure to detect AUD, and patient lack of readiness to address AUD

Data and Study Population

- 2008-2016 claims from a large national commercial insurer
- Inclusion Criteria:
 - Age 17-64
 - At least one claim for face-to-face encounter with an AUD diagnosis in primary or secondary field (first claim = index AUD visit)
 - Continuously enrolled in medical, behavioral health and pharmacy benefits for 90 days before (and including) index AUD visit
 - No claims for AUD medications (naltrexone, disulfiram, acamprosate, topiramate) during those 90 days

Methods

- Estimated days to first AUD medication use after index visit using cause-specific hazards approach to account for the competing risk of loss of benefits from this insurer
- Identified first medication used for those who filled AUD medication prescription after index visit
- Examined use of specific types of SUD services within the seven days before (and including) the first AUD medication fill

Variables

- Sociodemographic characteristics: age, sex, employee status, residence in a rural area, region, median household income for zip code of residence (in quartiles)
- Baseline clinical characteristics: diagnosis of moderate/severe AUD, OUD, SUD other than AUD or OUD, severe mental illness, acute alcohol-related condition, chronic alcohol-related condition
- Whether practice in which patient received majority of AUD care had psychiatrist or addiction medicine specialist billing during year of index visit
- Setting of index visit: inpatient/emergency department, intermediate care (relative to outpatient)
- Year of index visit

Descriptive Characteristics of Individuals with Index AUD Visit (n=57,017)

	N(%)
Age	
17-25	10,836 (19.0%)
26-35	10,002 (17.5%)
36-45	12,098 (21.2%)
46-55	14,825 (26.0%)
56 and over	9,256 (16.2%)
Male	36,346 (63.8%)
Employee status	
Employee	33,548 (58.8%)
Dependent	23,469 (41.2%)
Rural	3,964 (7.0%)
Region	
Northeast	16,743 (29.4%)
Midwest	8,006 (14.0%)
West	12,843 (22.5%)
South	19,425 (34.1%)



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Descriptive Characteristics of Individuals with Index AUD Visit (n=57,017)

	N (%)
Psychiatrist or Addiction Medicine Specialist Billing in Practice where Patient Received Most AUD Care	22,422 (39.3%)
Moderate or Severe AUD Diagnosis during Baseline Period	32,702 (57.4%)
ODD Diagnosis during Baseline Period	11,118 (19.5%)
At Least 1 SUD Diagnosis besides AUD or OUD during Baseline Period	13,858 (24.3%)
Hallucinogens	6,124 (10.7%)
Cannabis	5,379 (9.4%)
Sedatives	3,134 (5.5%)
Cocaine	2,919 (5.1%)
Amphetamines	1,625 (2.9%)

Descriptive Characteristics of Individuals with Index AUD Visit (n=57,017)

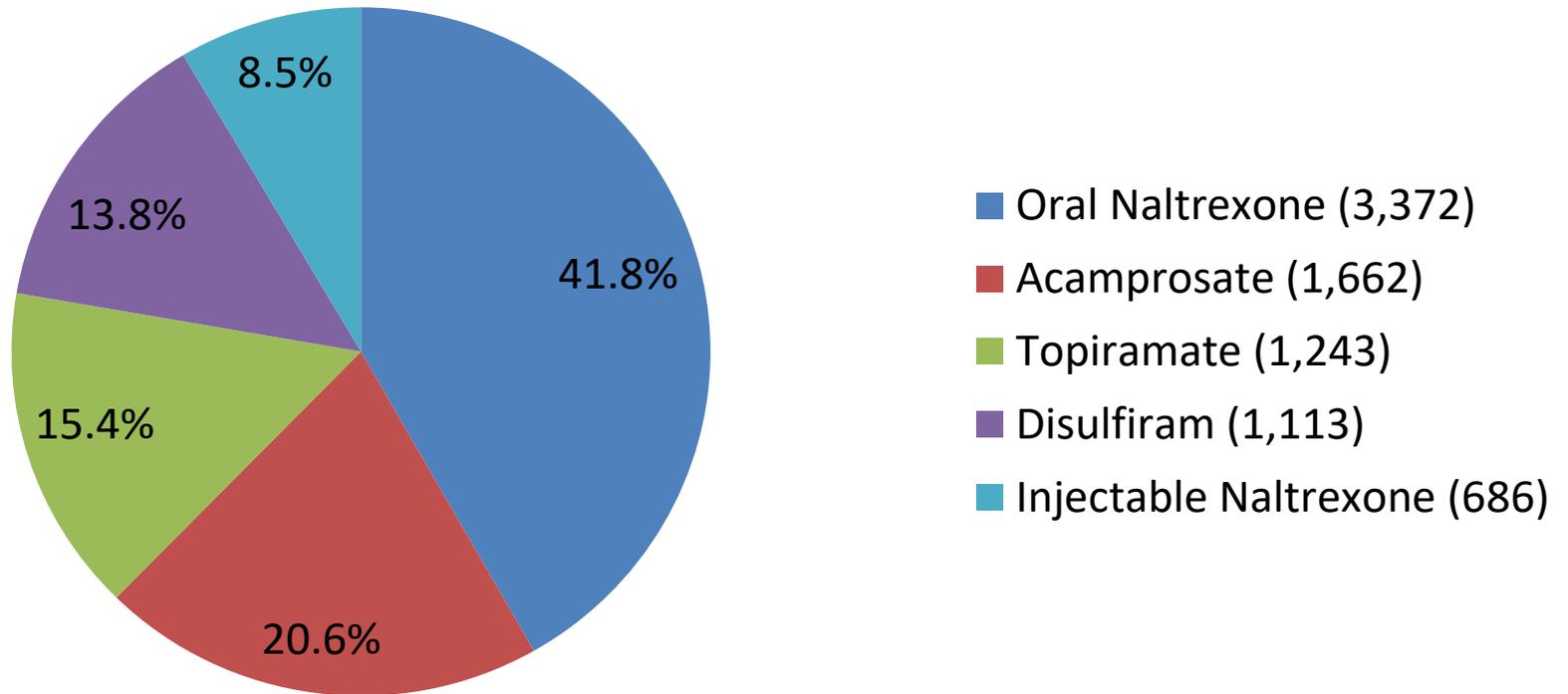
	N(%)
Acute Alcohol-related Medical Diagnosis during Baseline Period	6,270 (11.0%)
Chronic Alcohol-related Medical Diagnosis during Baseline Period	20,697 (36.3%)
Severe Mental Illness Diagnosis during Baseline Period	14,170 (24.9%)
Site of Index AUD Visit	
Inpatient or Emergency Department	33,586 (58.9%)
Intermediate Care	1,762 (3.1%)
Outpatient	21,669 (38.0%)



Time to AUD Medication

- 14.2% filled an AUD Rx after index visit while maintaining benefits
 - Median days until Rx fill was 34 [IQR:8,166]
- 53.7% lost benefits before filling a prescription
 - Median days from index visit to benefits loss was 240 [IQR:96,535]
- 32.1% maintained benefits after index visit through study period end but didn't fill AUD Rx
 - Median days from index visit to study end was 278 [IQR:131,454]

AUD Medications Used for First Prescription Fill after the Index AUD Visit (N=8,076)



Notes: The denominator includes those who fill a prescription for an AUD medication after the index AUD visit and while maintaining insurance benefits with the large national insurer studied.

SUD Service Use in the Seven Days before and including the First AUD Medication Fill among Those with Index AUD Visit who Fill an AUD Medication (n=8,076)

	N(%)
SUD Inpatient Care	5,727 (70.9%)
SUD Residential Care	1,846 (22.9%)
SUD Partial Hospital Care	1,671 (20.7%)
SUD Intensive Outpatient Care	1,485 (18.4%)
SUD Emergency Department Care	748 (9.3%)
SUD Outpatient Care	4,402 (54.5%)

Results from Competing Risk Model of AUD Medication Use after Index AUD Visit, Accounting for Risks of Benefit Loss

	Hazard Ratio	95% Confidence Interval
Age		
17-25	1.20	1.09, 1.31
26-35	1.56	1.44, 1.70
36-45	1.54	1.42, 1.66
46-55	1.41	1.31, 1.52
56 and over	Reference	--
Male		
Yes	0.74	0.71, 0.78
No	Reference	--
Employee status		
Employee	0.97	0.92, 1.02
Dependent	Reference	--
Rural		
Yes	0.94	0.86, 1.04
No	Reference	--
Median Household Income for Zip Code of Residence, in Quartiles		
Quartile 1	Reference	--
Quartile 2	1.18	1.11, 1.26
Quartile 3	1.24	1.16, 1.33
Quartile 4	1.47	1.38, 1.57



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Results from Competing Risk Model of Alcohol Use Disorder (AUD) Medication Use after Index AUD Visit, Accounting for Risks of Benefit Loss

	Hazard Ratio	95% Confidence Interval
Psychiatrist or Addiction Medicine Specialist Billing in Practice where Patient Received Most AUD Care		
Yes	1.02	0.97, 1.07
No	Reference	--
Moderate or Severe AUD Diagnosis at Baseline		
Yes	2.30	2.15, 2.45
No	Reference	--
ODD Diagnosis at Baseline		
Yes	1.35	1.27, 1.44
No	Reference	--
SUD Diagnosis besides AUD or OUD at Baseline		
Yes	0.92	0.87, 0.97
No	Reference	--
Acute Alcohol-related Medical Diagnosis at Baseline		
Yes	0.89	0.83, 0.96
No	Reference	--
Chronic Alcohol-related Medical Diagnosis at Baseline		
Yes	1.20	1.12, 1.28
No	Reference	--

Results from Competing Risk Model of Alcohol Use Disorder (AUD) Medication Use after Index AUD Visit, Accounting for Risks of Benefit Loss

	Hazard Ratio	95% Confidence Interval
Severe Mental Illness Diagnosis at Baseline		
Yes	1.32	1.25, 1.38
No	Reference	--
Index AUD Visit Setting		
Inpatient/ED	1.55	1.46, 1.64
Intermediate	1.33	1.17, 1.51
Outpatient	Reference	--
Year of Index AUD Visit		
2016	1.87	1.68, 2.07
2015	1.64	1.48, 1.81
2014	1.70	1.53, 1.90
2013	1.43	1.28, 1.60
2012	1.35	1.21, 1.50
2011	1.26	1.13, 1.40
2010	1.28	1.15, 1.43
2009	1.08	0.97, 1.20
2008	Reference	--

Limitations

- Individuals identified as having AUD and receiving treatment may be undercounted
- Some may have received AUD treatment through employee assistance program or at public, state-funded SUD programs that did not bill insurance
- Single large national insurer -- our findings may not be generalizable to enrollees in other commercial plans

Conclusions and Implications

- Only 14.2% of those with index visit filled AUD medication Rx while maintaining insurance benefits
- Most medication users used intensive SUD services in 7 days before Rx fill and appear to have more severe and/or complicated conditions
- Those with acute alcohol-related medical condition less likely to fill Rx while those with chronic alcohol-related medical condition were more likely
- More than half (59%) of index AUD visits occurred in inpatient/ED setting rather than in outpatient