

# The Association between Physical Health and Drinking after Hospitalization among Inpatients with Unhealthy Alcohol Use

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# Background

1. Adverse health outcomes common in patients with unhealthy alcohol use
2. Patient recognition that physical health is related to their drinking may lead to modification of drinking behaviors
3. Hospitalization may provide a “teachable moment” that links health to drinking
4. Results of studies of alcohol brief intervention in hospitals have been mixed
5. Demonstration of such a link could inform and improve the efficacy of hospital-based brief intervention

# Research Question

Among medical inpatients with unhealthy alcohol use, does physical health predict drinking at follow up?

# Methods

## Design

- Secondary analysis of data collected prospectively for a randomized controlled trial

## Setting

- Urban hospital in Northeastern United States

## Participants

- Medical inpatients who reported unhealthy alcohol use and consented to participate in a randomized trial of brief intervention

# Data Collection

- Research Screening
- Among 5,813 patients screened, 986 (17%) screened positive for unhealthy alcohol use, and 341 (35%) enrolled
- Physician review of the inpatient record at the time of enrollment
- Research Interview at Baseline (after enrollment)
- Research Interview at 3 months

# Outcome Measures

Two self-report alcohol use outcome measures were obtained at 3 months using the validated Timeline Follow-Back Assessment:

- 30-day Abstinence (yes/no)
- Change in the number of heavy drinking episodes since baseline (continuous)
  - Heavy drinking episodes:  $\geq 5$  drinks/occasion for men and  $\geq 4$  drinks/occasion for women

# Predictors

## MEDICAL COMORBIDITY

- Katz Questionnaire
- Current
- Lifetime
  - E.g., renal, cardiovascular, endocrine, pulmonary

## PHYSICAL HEALTH-RELATED QUALITY OF LIFE (HRQL)

- Physical Component Score of SF-12
  - Scale of 1-100, standardized to US population mean of 50 (SD 10)
  - e.g., Ability to bend, kneel, or stoop, or climb stairs

## ALCOHOL-RELATED MEDICAL DIAGNOSIS

- Identified by physician structured record review
  - Alcoholic liver disease

# Analyses

- Logistic regression modeled relationship between each predictor and 30 day abstinence
- Linear regression modeled relationship between each predictor and heavy drinking episodes
- Models adjusted for: age, gender, randomization group, and drinks/day
- Performed tests for interactions with alcohol use severity and stratified models where indicated

# Participant Characteristics (n=341)

	<b>N(%)</b>
Mean Age (SD)	44 (11)
Male	242 (71)
Race	
Black	155 (45)
White	133 (39)
Hispanic	30 (9)
Other	23 (7)
Alcohol Dependent	261 (77)
Median Drinks/Day	3.5 (1-9)
Principal Dx Alcohol-Related	51 (15)

# Distribution of Predictors

<b>Predictor</b>	<b>N(%) or Mean (SD)</b>
Current Medical Comorbidity	163 (52%)
Lifetime Medical Comorbidity	206 (66%)
Physical HRQL Score	38 (9)
Alcohol-Related Diagnosis	156 (46%)

# Results of Adjusted Regression Models

	Abstinence	$\Delta$ in # HDEs*	
	AOR (95% CI)	$\beta$	p-value
Current Medical Comorbidity	1.5 (0.8, 3.0)	0.8	0.5578
Lifetime Medical Comorbidity	1.1 (0.6, 2.2)	0.8	0.5601
Physical HRQL	1.0 (0.9, 1.0)	-0.0	0.8896
Alcohol-Related Diagnosis	1.2 (0.7, 2.2)	-4.8	<0.001

\*Heavy Drinking Episodes

# Results Stratified by Alcohol Dependence

		<b>Abstinence</b>
	Sample N	<b>OR (95% CI)</b>
Alcohol-Related Diagnosis		
Non Dependent	62	4.4 (1.1, 17.0)
Dependent	210	0.9 (0.5, 1.7)

# Limitations

- Generalizability of consented trial population
- Study not designed to answer these questions
- Stratified analyses reported unadjusted ORs
- Limited sample size for stratified analyses

# Conclusions

- Physical HRQL and medical comorbidity not associated with heavy drinking or abstinence
- Alcohol-related diagnosis associated with fewer heavy drinking episodes.
- Alcohol-related diagnosis associated with increased abstinence for patients with nondependent alcohol use
- Patient recognition of a link between drinking and physical health could help modify drinking
- Hospital clinicians may be uniquely positioned to help patients recognize this link

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## Patients

All  
n=341

Dependent  
n=261

### Alcohol-Related Diagnosis

Principal Admission

51 (15%)

45 (17%)

Noted during Admission

156 (46%)

137 (52%)