



# The Epidemiology of Alcohol and Substance-Related Emergency Department Admissions within a University Population



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## Background

- We established a data repository of University of Virginia (UVA) students who were seen in the Emergency Department (ED) at the UVA Health System.
- The primary objective of this study was to characterize the prevalence of substance and alcohol misuse among college students attending the university who visited the ED between 01 JUL 2009 and 30 JUN 2014.
- The secondary objectives were to measure the impact of the substance and or alcohol use on their clinical presentation to the emergency room, and to evaluate the referral process used to help the students with their substance or alcohol use disorder.

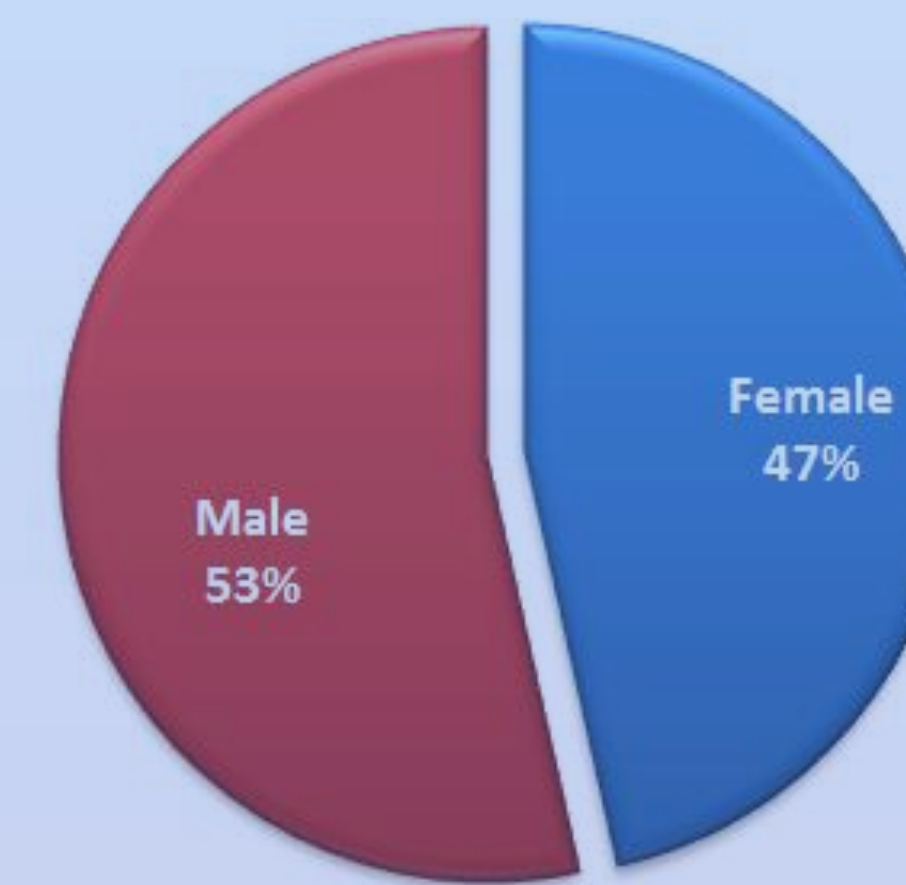
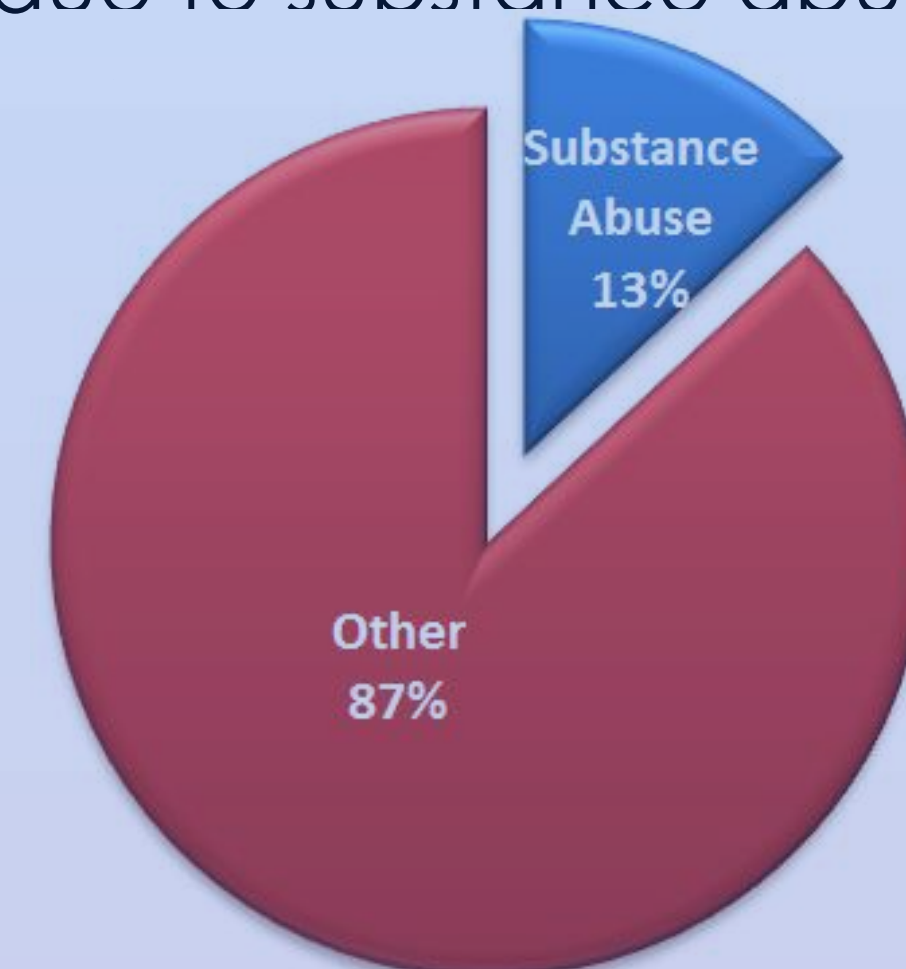
## Methods

- ED admissions during the study time frame were queried for all unique admissions (i.e. one admission per student per day) and identified as a substance abuse (alcohol, pharmaceutical drugs, or illicit substances) admission through diagnostic coding.
- Clinical presentation characteristics (such as intoxication, clinical withdrawal, delirium, depression, anxiety, mania, psychosis, suicidal or homicidal ideation) were characterized and tabulated through ED admission notes.
- Differences in demographics between those with substance abuse admissions and those who did not were evaluated via chi-squared analyses.
- The range of substances identified through self-reports, management and follow up recommendations were tabulated.

## Results

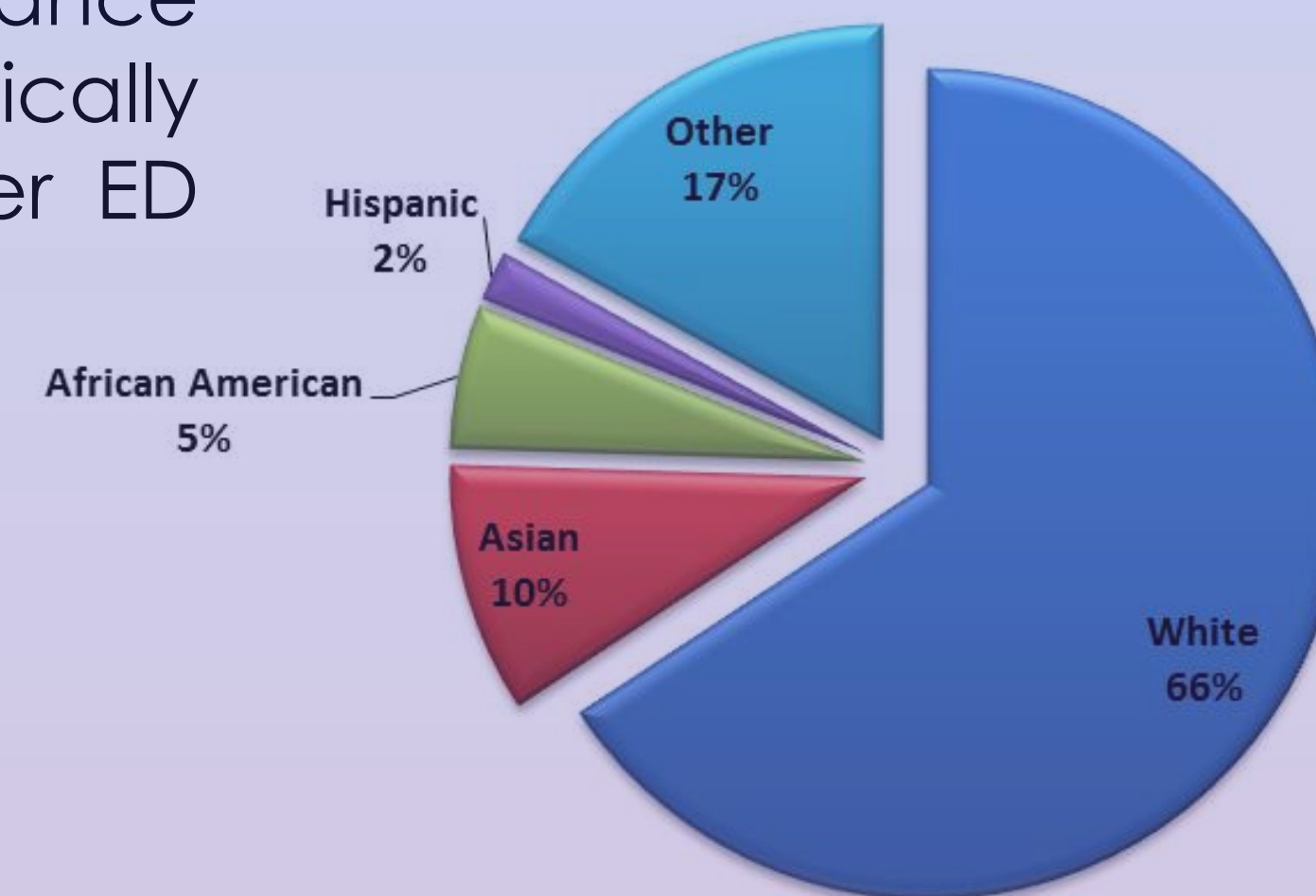
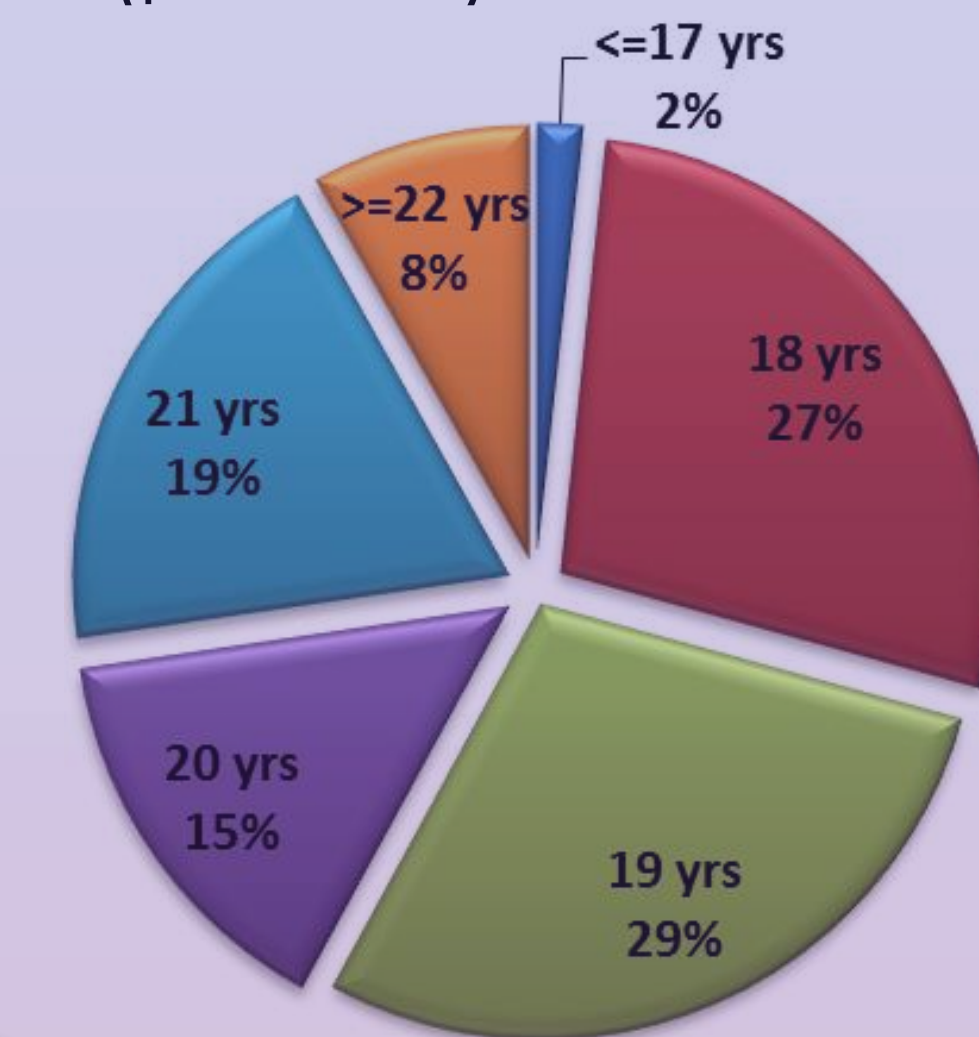
### Demographics

▼ Of the 2,754 ED visits, 359 were due to substance abuse.



▲ Males were more likely to be seen for substance abuse than females when compared to other ED visits (p=0.011).

▼ The age distribution of substance abuse visits was statistically significant compared to other ED visits (p<0.001).

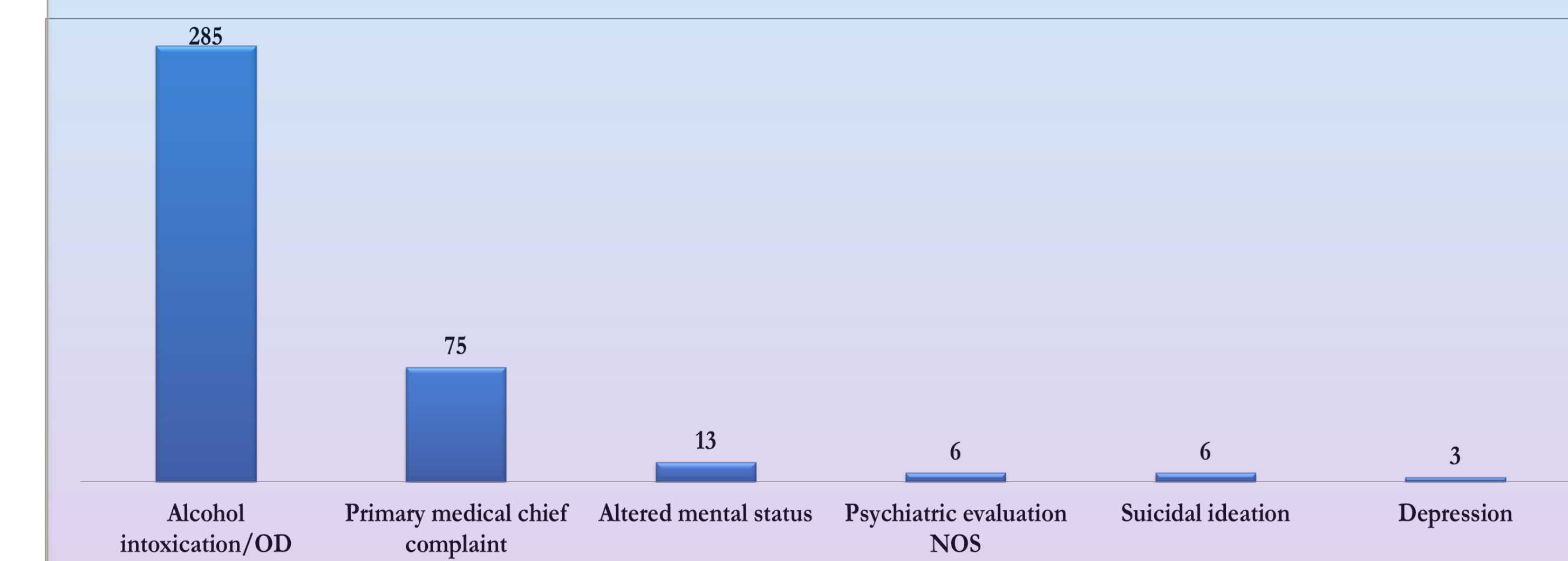


▲ There was no difference in race/ethnicity between substance-abuse and other ED visits (p=0.347).

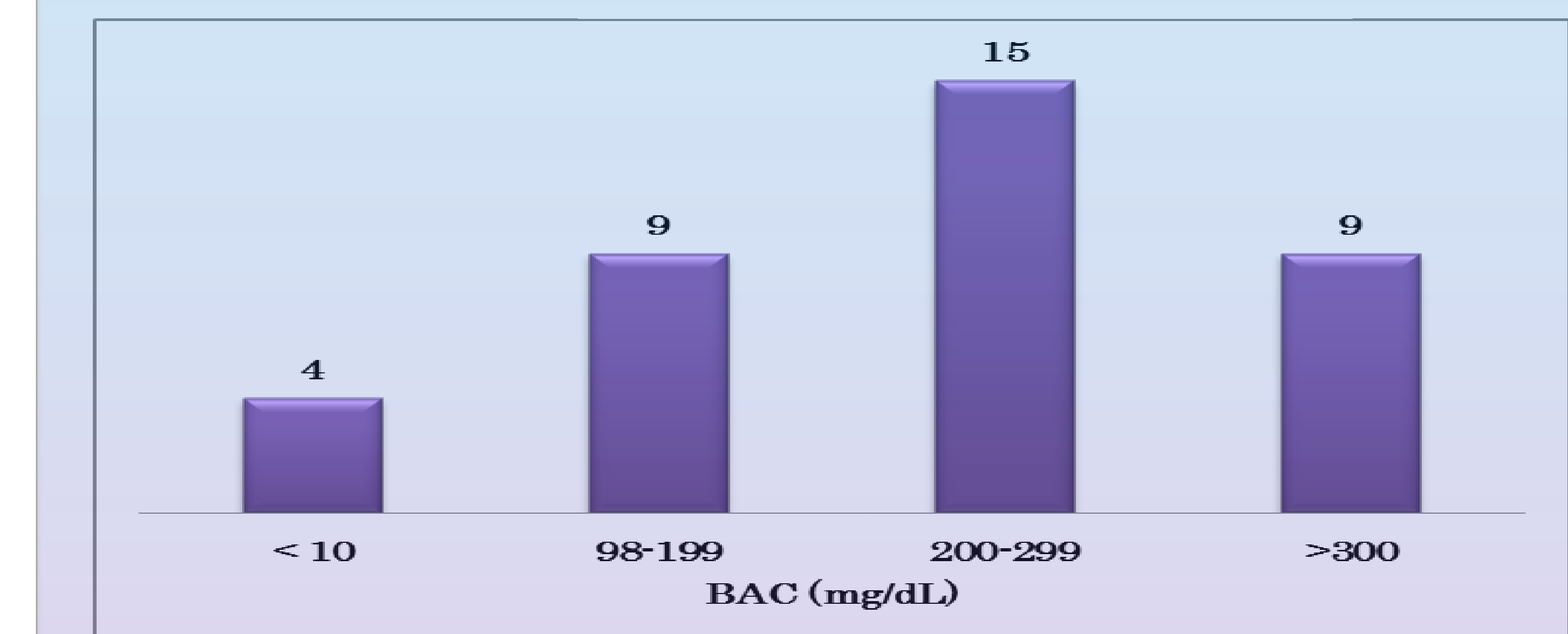
### Substances Self-Reported

Type	N	%	Type	N	%
Alcohol	338	94.2	Benzodiazepines	2	0.6
Cannabis	21	5.8	Mushrooms/psilocybin	2	0.6
Cocaine	5	1.4	LSD	2	0.6
Rx amphetamine	3	0.8	MDMA/ecstasy	1	0.3
Rx methylphenidate	2	0.6			

### Most Frequent Chief Complaints



### Blood Alcohol Content



- BAC was tested in 37 students only (<15%).
- Urine drug screens were rarely ordered (<5%).

### Follow-Up

- 70.2% of students were referred to the UVA Student Health Center and the Counseling and Psychological Services team.
- Only 33 students (9.2%) were seen within 30 days after the ED visit.

## Conclusions

- The most common clinical presentation was alcohol intoxication but objective measures to confirm alcohol or drug intoxication such breath alcohol concentration or urine drug tests were not commonly used in our ED which corroborate similar practices in other institutions.
- A large proportion was lost to follow up and those students may be at an increased risk of substance-related complications.
- By monitoring the university population for alcohol and substance related admissions to the ED, we can evaluate the prevalence or burden within our student body, identify the populations at greatest risk, and establish educational interventions and appropriate counseling regarding substance abuse.