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# Implementation of an Alcohol Medical Amnesty Policy at an Urban University With a Collegiate-Based Emergency Medical Services Agency

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A B S T R A C T

**Purpose:** Medical amnesty policies (MAPs) at universities attempt to encourage students to seek emergency medical care by reducing disciplinary sanctions. This study analyzed how a MAP affected requests for emergency medical help to a collegiate-based emergency medical services (CBEMS) agency for alcohol-related issues.
**Methods:** This before-and-after study analyzed CBEMS call data for the 6 semesters prior to and after MAP implementation. Extracted data included patient demographics, dispatch time, and requests for advanced life support (ALS) resources.
**Results:** Following MAP introduction, increases were observed in alcohol-related calls/day in the fall semesters (0.84 vs. 0.93; $p < 0.01$). The median time of calls decreased; 1:20 A.M. versus 12:59 A.M. (median difference 21 minutes, $p < 0.001$). Finally, ALS was requested less often (9.0% vs. 3.7%; odds ratio 0.39; $p < 0.01$).
**Conclusions:** MAP implementation at a university with a CBEMS is associated with a higher call volume, requests for service that occur earlier in the evening, and reduction in ALS requests for alcohol-related emergencies.



**IMPLICATIONS AND CONTRIBUTIONS**

Implementing a medical amnesty policy is associated with a significant increase in alcohol-related emergency medical services calls, a reduction in illness severity, and earlier requests for service. Such policies seem to lower barriers for students to request assistance from alcohol-related illness.

The significant use of alcohol in colleges has long been demonstrated [1,2]. However, students may hesitate to request medical assistance for acute alcohol-related illness, fearing disciplinary actions [3]. Many universities have adopted medical amnesty policies (MAPs) to encourage students and bystanders to seek emergency care by reducing sanctions. The effects of these policies have not been well-documented.

In the Fall of 2014, Georgetown University, an urban university with an undergraduate student population of 7,500 and a collegiate-based emergency medical services (CBEMS) agency, implemented a MAP that immunized students seeking medical treatment for alcohol-related emergencies from the student disciplinary process.

This study's primary objective was to evaluate a MAP's effect on the rate of alcohol-related calls to a CBEMS. The authors hypothesized that the introduction of a MAP would lead to increases in alcohol-related calls. Secondary objectives included analyzing a MAP's effect on the severity and timing of alcohol-related calls.

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## Methods

This retrospective study was conducted by analyzing the call database of the studied CBEMS agency, Georgetown Emergency Response Medical Service. The study period was August 1, 2011 – July 31, 2017. A MAP was implemented on August 1, 2014. Six semesters were analyzed in both the pre- and postintervention periods. The database was abstracted for patient age, date/time of call, and whether advanced life support (ALS) EMS resources from the District of Columbia Department of Fire and EMS were requested as a surrogate for illness severity. The agency's protocol proscribing when the CBEMS's basic life support (BLS) providers must request ALS resources (including unstable airway, Glasgow Coma Score <8, and unstable vital signs) remained consistent between the study periods. Unpaired Student's *t* tests were used to compare the 2 periods' call volume and ALS requests with a significance level of $p < 0.05$. *T* tests and subsequent *p* values were calculated. Mann–Whitney tests were used to calculate 95% confidence intervals and *p* values for median differences in call timing.

Only calls in which the patient's chief complaint was "intoxication" were included. Chief complaints are either stated by the patient or determined by the provider if the patient is unable to state a complaint.

The study protocol was approved by the Georgetown University Institutional Review Board.

## Results

Prior to MAP-implementation, alcohol-related EMS calls had a bimodal distribution across the year: peaking in the months of September and October and again in April and May (Figure 1). Additionally, students aged 18 and 19 years were the most frequent patients for alcohol-related emergencies. There was no difference in average total annual calls after MAP-implementation (909 pre-MAP vs. 860 post-MAP, $p = 0.28$).

An average of 0.84 alcohol-related calls per day in the fall and 0.42 in the spring were handled pre-MAP implementation. This increased to 0.93 per day in the fall ($p < 0.01$) and decreased to 0.41 ($p = 0.91$) in the spring following the implementation of medical amnesty, as noted in Figure 2.

Requests for ALS on alcohol-related calls were significantly less in the post-intervention period (9.0% pre-MAP vs. 3.7% post-MAP, odds ratio = 0.392, $p < 0.01$). Calls for alcohol-related service occurred earlier in the evening, with a median difference of 21 minutes following MAP-implementation (1:20 A.M. vs. 12:59 A.M.; $p < 0.001$).

## Discussion

After implementation of the MAP at Georgetown University, a statistically-significant increase in the number of alcohol-related calls to the studied CBEMS was observed in the fall semesters, without significant change in the spring. Additionally, there was a 60% decrease in alcohol-related calls requiring ALS, and students were calling earlier in the evening. This suggests that intoxicated students, or bystanders, are calling for medical assistance before the patients became more acutely ill. This finding is promising, as one of the objectives of MAP is to empower students to seek assistance before becoming severely sick. The apparent threshold for students calling for CBEMS assistance may be lower after MAP implementation.

One potential criticism of MAP is they may enable students to consume alcohol without disciplinary consequences [4]. In the studied MAP, students were only immunized against underage alcohol possession and consumption. They faced disciplinary consequences if they violated other parts of the code of conduct. While this study did not examine overall alcohol consumption trends,

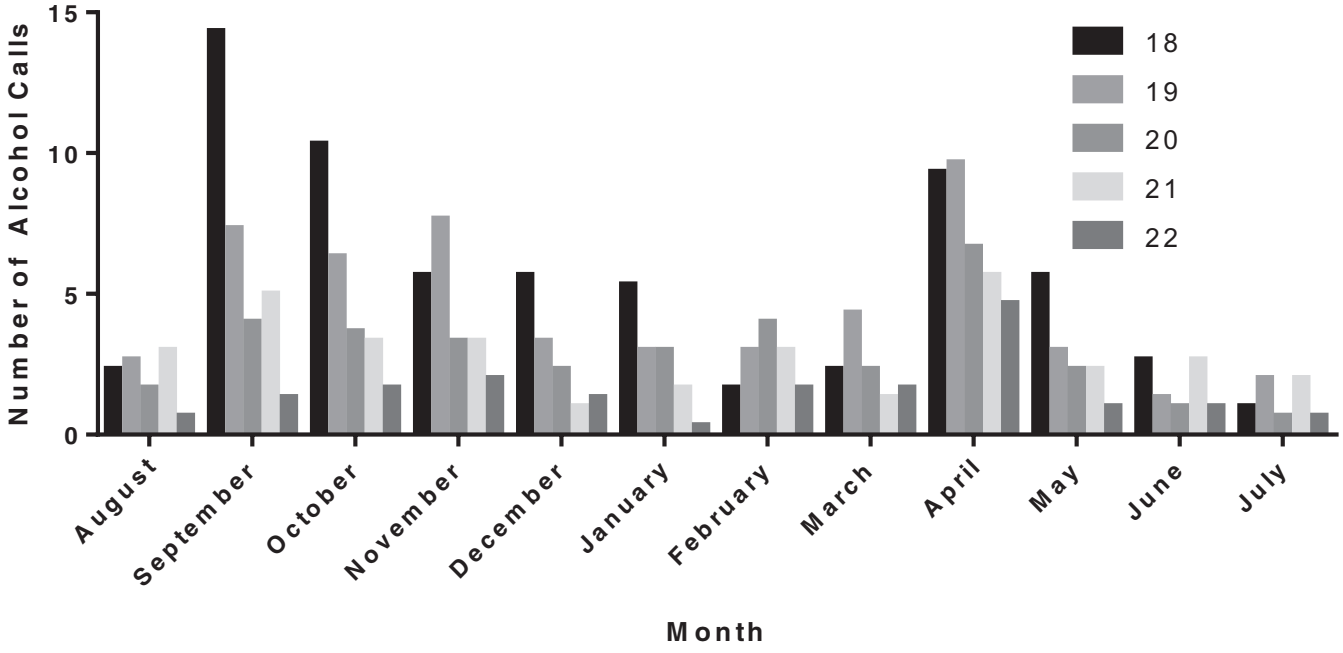


**Figure 1.** Average number of alcohol-related emergency medical services calls to the studied collegiate-based emergency medical services agency by patient age and month of call (August 2011–July 2014) prior to implementation of Medical Amnesty Policy.

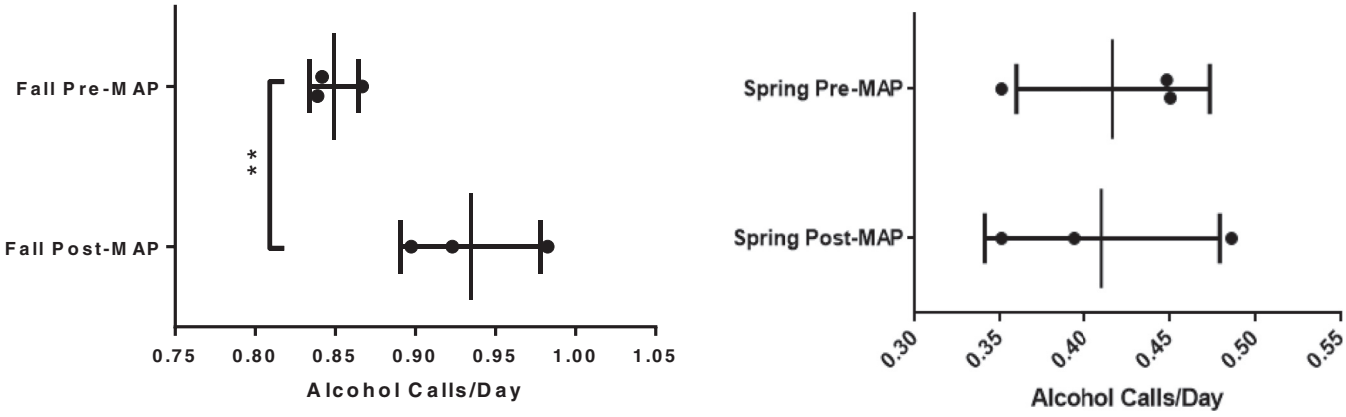


**Figure 2.** Alcohol calls/day in the Fall (August–December) and Spring (January–July) Semesters Premedical amnesty policies (August 2011–July 2014) versus Postmedical amnesty policies (August 2014–July 2017). One SD of data is shown on graph as shown by the horizontal line. The vertical middle line is the mean of the data. ** denotes $p <$ 0.01 each dot represents one semester (Fall or Spring) worth of data.

there was an associated reduction in illness severity of those who present to EMS following MAP implementation. The data in this study also suggest that students are seeking help earlier in the evening, when the severity of alcohol intoxication is presumably less severe.

College students are well-positioned to recognize signs of acute intoxication in their peers [5,6]. The MAP implemented in this study was also used by administrators to identify at-risk students and engage them in behavioral therapy, which has been shown to decrease risky drinking behaviors [7,8].

The clinical significance of 0.84 versus 0.93 alcohol-related calls is challenging to assess, especially since the EMS investigators did not have access to hospital records. However, the investigators believe that a MAP is only part of an overall strategy to encourage students to seek help for alcohol-related issues. The findings of this study support the implementation of a MAP to encourage students to seek medical help for themselves or their peers, in the setting of acute alcohol intoxication. At the studied university, MAP-implementation was associated with an increase in alcohol-related EMS calls, which occurred earlier in the evening, with a reduction in the need for ALS level care. Further study is needed to determine why there was no significant change in call rate in the spring, student decision making factors, and to assess patient level data to determine intoxication severity more specifically.

## Limitations

This study is limited by its retrospective single-center design, and lack of control for potential changes in alcohol consumption trends in the population over the study period. Also, there was no lengthy washout period after implementation of the amnesty policy. Additionally, only calls where alcohol was a chief complaint were studied. Calls involving other chief complaints, (where alcohol may have been a factor) were not included. Finally, students at the studied university participate in a variety of health insurance plans and have the option of calling jurisdictional EMS services (for a fee), rather than the CBEMS (without a fee); therefore, a potential reporting bias exists.

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