



Free of Charge: Analysis of an Urban Collegiate EMS Agency

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Introduction

Meet Tulane EMS

Tulane Emergency Medical Services (Tulane EMS), a 24/7 departmental organization within Tulane Campus Health, is a fully-licensed, student-staffed, basic life support (BLS) EMS agency. Providing free ground transport to local hospitals, Tulane EMS aims to ensure equal access to emergency medical care to students, staff, and non-affiliates.



Free of Charge: Proving Community Worth of Volunteer Collegiate EMS Agencies

To date, there is no published data on the financial impact of collegiate EMS agencies on their student bodies and surrounding communities. Within a service area surrounding the college campus, Tulane EMS not only alleviates call volume from municipal EMS agencies but also provides all hospital transports free of charge. In order to obtain novel financial data for university administration, this study will comparatively demonstrate the financial impact of activating Tulane EMS.

By using billing values charged by municipal advanced life support (ALS) service New Orleans EMS, the agency that would otherwise respond to an on-campus call, this research demonstrates the cost savings to students by activating a free-of-charge volunteer staffed collegiate EMS agency.

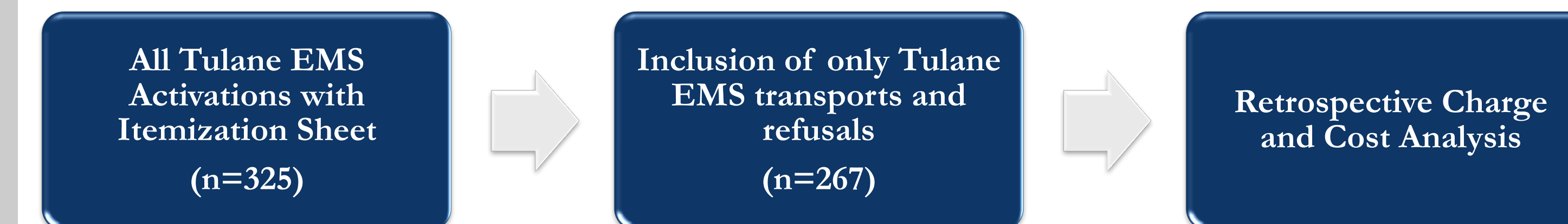
Study Objectives

- To estimate the cost to students if New Orleans were to respond instead of Tulane EMS
- Obtain financial data for use by both Tulane EMS and Tulane University administration
- Demonstrate the significant financial benefits of collegiate EMS agency presence in an urban community

Methods

Tulane EMS Activations and Inclusion Criteria

All Tulane EMS transports and refusals between August and December 2018 were included in analyses (n=267). Cancellations and ALS transfers (n=58) were excluded. Per Tulane EMS protocol, a billing itemization sheet was completed after each activation, capturing call disposition; airway and cardiac interventions; splinting and wound care; hospital destination; medication administration; and baseline maintenance fees.



New Orleans EMS Charges

Charges of all services provided by both Tulane EMS and New Orleans were obtained from a New Orleans EMS representative. All charges, besides transportation, were discovered to be fixed charges. The cost per mile of transportation was adjusted to reflect the distance between the Tulane EMS service area and the hospital destination. All charges incurred over a Tulane EMS activation were summated to give a total charge.

T-SHIP Coverage as a Charge-to-Cost Adjustment

Using Tulane Student Health Insurance Program (T-SHIP) as minimum health insurance coverage per university policy, charges were corrected to out of pocket costs. According to T-SHIP, ambulance transports are out-of-network services, covering 90% charges deemed “Usual and Customary” once the \$500 deductible is met. Alcohol- and substance-related activations are not covered by T-SHIP, and therefore, charges were not corrected accordingly.

Data Analysis

Using IBM® SPSS® Statistics Version 25, hypothetical charges were calculated by summation code and were then corrected to represent T-SHIP coverage.

Results

Descriptive Statistic	Alcohol- and/or Substance- Related	Other Chief Complaint
Call Volume	33.1% (n=88)	66.9% (n=179)
Hypothetical New Orleans EMS Charge	M=\$1328.43 (SD=\$370.78, R=\$130.00-2219.00)	
Out of Pocket Cost Correction Assuming Unmet Deductible based on T-SHIP	Not covered by T-SHIP Mean hypothetical charge reflects estimated out of pocket cost.	M=\$582.84 (SD= \$37.08)

Discussion

Estimating Cost By Chief Complaint

Over the course of the study period, 33.1% of Tulane EMS activations were alcohol- or substance-related charges for which would average \$1328.43. The remaining 66.9% of activations were not alcohol- or substance-related, which based on T-SHIP coverage with an unmet deductible, would approximately cost a student \$582.84. While frequency of chief complaints is likely impacted by the time of year, this aggregated data is the first reportable chief complaint distribution that can be reported to university administration.

Worth Beyond Finances

Attempting to quantify the financial impact of a collegiate EMS agency is useful in demonstrating organizational impact to university administration. By quantifying an estimated amount of money saved by the patient population, collegiate EMS agencies are better poised to receive support from governing university departments. Altogether, the existence of Tulane EMS alleviates a significant financial burden from its patients, provides rapid access to emergency medical care, and reduces the campus-call burden on municipal EMS agencies. These findings, taken with impact on the broader community, should prompt universities to establish respective EMS services.

Acknowledged Limitations

- Insurance variability among the patient population**
Tulane students are required to enroll in T-SHIP unless their insurance policy is “equal or better coverage” per Gallagher Student Health & Special Risk standards, creating variability of hypothetical out-of-pocket costs. T-SHIP is used to serve as a bare minimum coverage in this study.
- Ambiguity of “Usual and Customary Charges”**
Insurance companies retain the right to determine “usual and customary charges” with respect to interventions used during a transport, yielding more patient-to-patient coverage variability.
- Lack of patient demographic data**
Tulane EMS does not collect patient demographics, such as student, staff, or non-affiliate status. Patients not subject to T-SHIP could not be controlled for.
- Differing scope of practices**
As an ALS agency, New Orleans EMS has a larger scope of practice and is likely to apply different interventions; however, their agency remains the best group for comparison due to their overlapping service area.
- Likelihood of activating EMS**
Tulane EMS provides transport at no additional charge to the patient, which may increase the likelihood to activate EMS on-campus.

Acknowledgments & Contact

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