While leading causes of mortality for the college-aged population are well-documented and include unintentional injuries, homicides, and suicides\(^2\)\(^,\)\(^3\), there is less understanding of the clinical reasons this population accesses emergency medical care. At the University of Michigan in Ann Arbor, students live in high proximity (< 1 mile for most residence halls) to campus Health Services and the University Medical Center. Analysis of student emergency services encounters, specifically primary diagnoses codes, provides insight into leading reasons the college-aged population seeks emergency care. It also informs scope of care offered by on campus health services.

**Objectives**

The goals of this project are to better understand the clinical reasons students seek emergency medical care, and to provide insight into any overlap between leading causes of mortality and leading diagnostic categories in emergency service encounters.

**Methodology**

A retrospective study was conducted of 3,014 student patients who sought 3,817 visits at a Michigan Medicine Emergency Service, close to campus University Health Service, between August 29, 2021, and April 30, 2022. Demographic information including gender (1,292 male and 1,720 female) and academic level (2,346 undergraduate and 666 graduate or professional) were provided from a university roster. Primary diagnosis codes from each encounter were used to group visits into diagnosis categories, using clinical classification groupings from the Agency for Healthcare Research and Quality\(^1\). Chi-squared goodness of fit tests examined differences between demographic group and diagnostic subcategories.

**Results**

The leading diagnostic categories for student emergency services visits are similar to leading causes of mortality for that aged population: accidents and injuries accounted for a plurality of encounters (22.6%, \(n = 861\)), and mental health-related visits accounted for 16.2% (\(n = 620\)) of all encounters.

There were significant differences in the proportion of visits for high-interest diagnostic categories among demographic subgroups:

- Males had a significantly higher proportion of visits that were related to substance use (8.3% vs. 6.0%) or accidents and injury (28.5% vs. 18.2%)
- Females had a significantly higher proportion of visits related to mental health (10.3% vs. 7.9%)
- Undergraduate students had a significantly higher proportion of visits related to mental health (9.8% vs. 7.4%) or substance use (8.0% vs. 3.1%)

These results, illustrating the connection between leading causes of mortality and emergency department encounters, prompt college health professionals to intentionally target on campus health service offerings to better align with the urgent health needs of the college-aged population.

Further investigation is warranted into the Abnormal Signs and Symptoms category, as it is non-specific and comprises the second-largest diagnostic group (20.4%, \(n = 778\)) of all encounters.

**Conclusions**

The leading diagnostic categories for student emergency services visits are similar to leading causes of mortality for that aged population: accidents and injuries accounted for a plurality of encounters (22.6%, \(n = 861\)), and mental health-related visits accounted for 16.2% (\(n = 620\)) of all encounters.

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**References**