

Optimizing Collegiate EMS Resources During Major Events

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POSTER PRESENTATION ABSTRACT

Introduction: Each year, Brown University holds Spring Weekend (SWE), an outdoor concert drawing 6,000 attendees per day. Mass gatherings are prone to developing into mass casualty incidents (MCIs) due to unplanned events and attacks. Though campus venues face comparable risks, collegiate resources are more commonly and predictably overwhelmed by medical surge from trauma and/or toxicological emergencies. These ‘planned MCIs’ offer unique training opportunities and inform disaster planning. Brown EMS (BEMS) provides primary medical coverage for SWE and develops annual response plans using data-driven evaluation. **Program Development & Implementation:** BEMS establishes EMS Operations during major events using a modified ICS structure. Whereas our ALS/BLS-licensed ambulance and non-transport SUV are routinely in-service, venue resources are augmented by dedicated apparatuses and pairs of EMTs assigned to ground details. By increasing its resources, BEMS aims to increase venue capacity, optimize response, and limit mutual-aid requirements. The number and proportion of transports by external agencies consistently increased over 2014–2016: 25.0% (3/12), 31.3% (5/16), and 45.0% (9/20) during the six-hour Friday concert, respectively. For SWE 2017, we hypothesized that renting and staffing an additional ALS ambulance with BEMS personnel would decrease mutual-aid utilization. **Program Evaluation:** To control for annual variations, we compared mutual-aid utilization in 2017 against aggregate utilization during the three prior years and observed no significant difference: 20.8% (5/24) vs. 35.4%(17/48) (p=0.21). This suggests that in response planning, the temporal density of patient presentations during surge conditions may better predict mutual-aid requirements than historical call volume. **Discussion/Conclusion:** Though mutual-aid is a cornerstone of MCI management, collegiate systems may face unique pressures to decrease its utilization if students are exposed to additional billing. Expanding our transport sector in 2017 did not significantly decrease the proportion of patients requiring mutual-aid transport. To optimize incident response, collegiate services may instead consider establishing on-site triage/treatment areas and concurrently transporting low-acuity patients.

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