**Introduction:** Unpredictable environmental conditions, crowd dynamics, and a variety of medical emergencies create logistical and clinical obstacles when planning emergency medical response coverage for mass-gathering events. In a collaborative endeavor between a university athletics program and an academic division of Emergency Medicine, a stadium emergency medical response system was created consisting of hospital-based healthcare providers and pre-hospital healthcare providers.

**Objectives:** Provide descriptive statistics relevant to the nature and frequency of injury/illness, location of treatment within stadium confines, and resources used in the care of event staff, and spectators during collegiate football operations, to assist in future planning of mass-gathering events.

**Methods:** A continuously updated, quality assurance database of de-identified, aggregate statistics was utilized to analyze trends regarding aspects of medical operations.

**Results:** During a 7-game home football season, there were a total of 399 patients encountered, including 1 cardiac arrest (0.25%), 12 “life-threatening” (3.01%), 121 urgent (30.33%), and 266 routine (66.67%). Total season attendance was 201,248 attendees (28,749/game and 19.83 patients encountered per 10,000 in attendance). Twenty-eight patients were transported (1.39 per 10,000), with eight resultant hospital admissions. Encounters varied by complaint, with skin (42%) comprising the largest number of encounters. Other categories included: (1) heat-related (23.5%); (2) allergic (15%); (3) neurologic (10.3%); (4) cardiopulmonary (3.5%); (5) gastrointestinal (3.6%); (6) musculoskeletal (5%); and (7) other (5%). Encounters increased noticeably when the heat index was greater than 80 °F (29.4 vs. 10.5 per 10,000 attendees).

**Conclusions:** The collaborative effort by a multi-level provider model adequately covered presenting medical conditions. Consistent with previous literature, a strong correlation existed between heat index and number of patient encounters deemed urgent and routine. Interestingly, the number of “life-threatening” encounters did not appear to vary much with the heat index. Further studies of medical presentations and provider/resource utilization could provide for predictive modeling of future staffing and supply models.

**Keywords:** athletics program; crowds; mass-gathering events; sporting events; stadiums

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**Background:** The Pacific Arts Festival is a mass-gathering event occurring every four years in Oceania. The 10th festival in American Samoa, July 20 to August 2, 2008, brought 2200 performers and 2500 tourists (a 15% population increase) from 27 Pacific nations to the island. Anticipated healthcare concerns included hospital surge (175% in 2004), HIV/STI transmission, imported/communicable diseases, food/water/sanitation-borne illness, interpersonal violence, and healthcare resource utilization.

**Objective:** To describe the preparedness and response efforts for this mass gathering event by emergency medical services, the hospital, and the department of health.

**Methods:** A retrospective review of after-action reports, public health and emergency department surveillance records, and...