

**Figure 2.** Resident Self-Assessment of Their Teaching Using the ER Scale.

Residents Overall N (%)	Didactic	Clinical	Approachable	Helpful
Outstanding	25 (4.8)	25 (4.8)	48 (9.3)	24 (4.6)
Above Average	159 (30.8)	181 (35.0)	175 (33.8)	183 (35.4)
Average	147 (28.4)	125 (24.2)	112 (21.7)	126 (24.4)
Below Average	6 (1.2)	5 (1.0)	2 (0.4)	3 (0.6)
Unacceptable	0	0	0	0
Not Enough Time	129 (24.9)	129 (24.9)	129 (24.9)	129 (24.9)
Missing	51 (9.9)	52 (10.1)	51 (9.9)	52 (10.1)
<b>PGY3 N (%)</b>				
Outstanding	2 (1.0)	4 (2.0)	18 (8.9)	5 (2.5)
Above Average	65 (32.3)	82 (40.8)	88 (43.8)	87 (43.3)
Average	83 (41.3)	65 (32.3)	49 (24.4)	60 (29.8)
Below Average	5 (2.5)	4 (2.0)	0	3 (1.5)
Unacceptable	0	0	0	0
Not Enough Time	34 (16.9)	34 (16.9)	34 (16.9)	34 (16.9)
Missing	12 (6.0)	12 (6.0)	12 (6.0)	12 (6.0)
<b>PGY4 N (%)</b>				
Outstanding	23 (7.3)	21 (6.6)	30 (9.5)	19 (6.0)
Above Average	94 (29.8)	99 (31.3)	87 (27.5)	96 (30.3)
Average	64 (20.2)	60 (19.0)	63 (20.0)	66 (20.9)
Below Average	1 (0.3)	1 (0.3)	2 (0.6)	0
Unacceptable	0	0	0	0
Not Enough Time	95 (30.1)	95 (30.1)	95 (30.1)	95 (30.1)
Missing	39 (12.3)	40 (12.7)	39 (12.3)	40 (12.7)

## 23 Emergency Medicine Trainees with High Emotional Exhaustion Are Associated with Lower Patient Satisfaction Scores

*Pinchbeck C, Weygandt P, Gisoni M, Lu D / Northwestern, Chicago, IL*

**Background:** Burnout is a syndrome of emotional exhaustion, depersonalization and sense of low personal accomplishment. Emergency medicine (EM) physicians experience the highest levels of burnout among all specialties. Physician burnout is associated with lower quality of patient care. It is unknown if EM trainee burnout is also associated with poorer quality of care.

**Objectives:** We examined the relationship between EM trainee burnout and resident-specific Press Ganey patient satisfaction (PS) scores. We hypothesized that burnout would be associated with lower PS scores.

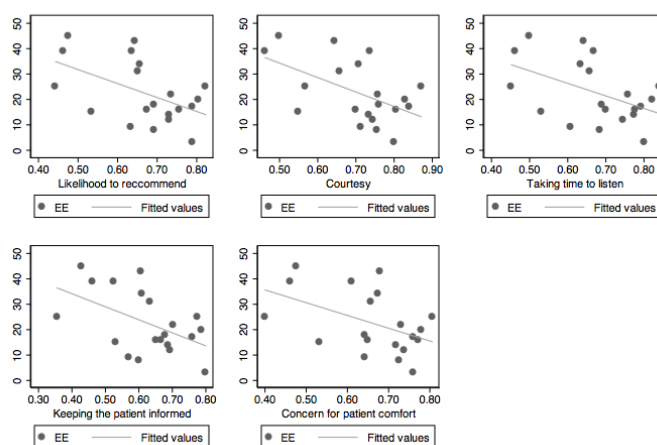
**Methods:** In this cross-sectional survey study conducted in October 2015 we assessed burnout in all post-graduate year 1-4 EM trainees at a single academic program using the Maslach Burnout Inventory. Resident-specific PS measures included: (1) likelihood to recommend; (2) courtesy; (3) taking the time to listen; (4) keeping the patient informed; and (5) concern for patient comfort. In our primary analysis overall burnout was dichotomized by high depersonalization or emotional exhaustion subscale scores and compared to PS scores using an independent samples t-test. In our secondary analyses each burnout subscale was treated as a continuous variable and compared to PS scores via linear regression.

**Results:** Thirty-six out of 54 (66.7%) eligible trainees responded to the survey and 27 (75.0%) reported burnout. Excluding trainees lacking PS data, mean PS scores for the remaining 20 participants were: (1) 66.8 (SD  $\hat{A}\pm 11.3$ ); (2) 70.8 ( $\hat{A}\pm 11.3$ ); (3) 67.6 ( $\hat{A}\pm 11.8$ ); (4) 62.7 ( $\hat{A}\pm 12.0$ ); and

(5) 66.2 ( $\hat{A}\pm 11.5$ ). In our primary analysis there were no significant associations between overall burnout and PS scores. In our secondary analyses, however, high emotional exhaustion scores were negatively associated with all PS scores: (1) 95% CI (-0.86, -0.08), p=0.02; (2) CI (-0.88, -0.10), p=0.02; (3) CI (-0.88, -0.04), p=0.03; (4) CI (-0.92, -0.08), p=0.02; and (5) CI (-0.85, -0.02), p=0.04. There were no significant associations between the depersonalization and personal accomplishment subscales with PS scores.

**Conclusions:** EM trainees' emotional exhaustion scores were negatively associated with all PS scores. We did not find associations between overall burnout with PS scores, but these results may have been limited by the study's small sample size.

**Figure 1.** Emotional Exhaustion (EE) vs Press-Ganey Patient Satisfaction.



## 24 Emergency Physician Presence At Two Large Outdoor Music Festivals

*Fidacaro G, Brazg J, Pushkar I, Likourezos A, Drapkin J, Fromm C, Friedman M / Maimonides Medical Center, Brooklyn, NY*

**Background:** Music festivals are a form of mass gatherings that require unique preparation and resource allocation. These events have recently gained increased attention due to an alarming number of hospitalizations and deaths, most notably at electronic dance music festivals (EDMFs). Crowd mood is a term shown to vary with music genre and correlates with the patient presentation rate (PPR). Currently, consistent, evidenced-based recommendations regarding optimal medical staffing and resource allocation currently do not exist.

**Objectives:** To describe medical utilization at two large, outdoor, summertime, urban music festivals with disparate crowd moods to improve future mass gathering medical preparedness.

**Methods:** This was a prospective, observational study enrolling consecutive patients who presented for medical

attention at two large music festivals. One music festival, Festival2015A, was an EDMF while the other music festival, Festival2015B, featured an assorted array of music genres. The main medical tent was staffed with two EM physicians, two EM nurses, in addition to eight paramedics and 52 EMTs. A physician performed a history and physical exam, and data were recorded by medical volunteers (figure 1). Data were then analyzed for differences between the two festivals.

**Results:** Festival2015A had a three-day attendance of >75,000 with a PPR of 2.3 per 1000 attendees. Festival2015B had a three-day attendance of >120,000 with a PPR of 1.1 per 1000 attendees. Festival2015A patients were more likely to have dilated pupils, diaphoretic skin and consumed more water. Alcohol and recreational drugs were more commonly abused at Festival2015A. The most common drug abused was MDMA (figure 2). There were no deaths at either event. Transport to hospital rates (TTHR) did not differ significantly (figure 3).

**Conclusions:** Despite a 62.5% greater attendance level at Festival2015B, there were more hospital transports at Festival2015A. While this study is consistent with previous data showing that crowd mood is correlates with PPR, it also suggests that crowd size may be less predictive of PPR. Although the patients at Festival2015A presented with more toxidromes, the TTHR did not differ, supporting the emerging notion that an adequately staffed medical tents can reduce over-burdening the local healthcare system.

Figure 1. Type of Drug Use Festival A.

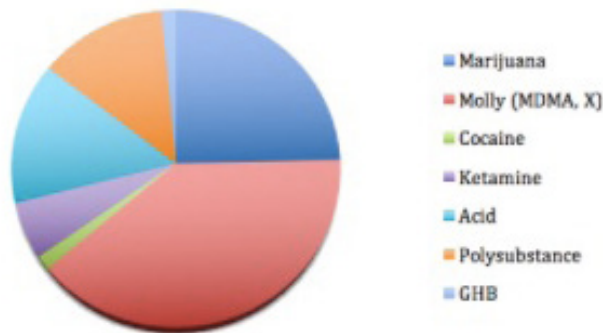


Figure 2. Type of Drug Use Festival A.

	FESTIVAL A	FESTIVAL B	
TOTAL ATTENDANCE			
TOTAL PATIENTS	173	126	
AGE	22	21	
MALE	91	36	< .0001
SYSTOLIC BLOOD PRESSURE	125	118	< .01
PULSE RATE	100	90	< .05
RESPIRATORY RATE	16	16	
WATER CONSUMPTION (OZ)	24	12	< .05
DILATED PUPILS	44	25	< .05
SKIN EXAM	46	13	< .0001
ALCOHOL	132	97	< .01
DRUGS	67	42	< .05
TRANSPORT RATES	8	4	
DEATHS	0	0	

## 25 Engaging the Audience During Medical Simulation

Cline C, Heitz C, Fortuna T / Virginia Tech Carilion School of Medicine, Roanoke, VA

**Background:** Today’s medical students rely on smartphones, tablets and various apps to enhance their individual knowledge. During medical simulation, the audience often passively observes team performance. While much research exists on enhancing simulation performance, little is known about audience learning methods and outcomes. Interactive software could engage observers, providing increased knowledge and skill to all participants.

**Objectives:** To evaluate the effect of using interactive software as a teaching tool for a simulation audience.

**Methods:** Early in their EM clerkship, students participated in a DKA simulation case. One student was team leader, while the others (up to 6) were observers. Students were randomized to one of two groups: Nearpod or control. Nearpod is web or app-based software which allows delivery of interactive content to learners. Students in group 1 used a web-connected device to receive questions and prompts, through the Nearpod software, during the case. Students in group 2 simply observed. All students were debriefed together. 2-3 weeks later, a 2nd DKA sim case was administered. Comparison was made between groups on performance of 7 DKA- specific critical actions. Evaluators were blinded as to group allocation. Goal recruitment is 40 students.

**Results:** To date, 28 students have completed the protocol. Sixteen students have been randomized to Nearpod, 12 to control. Students who used Nearpod accomplished on average 5.06 of the 7 (SD 1.4, 72.3 %) critical actions successfully vs 5.42 out of 7 (SD 1.4, 77.4 %) critical actions for those in the control group. There is no significant difference between groups (p=0.5).

**Conclusions:** Based on the current data, the use of interactive software to engage students during audience observation of high fidelity simulation did not result in increase performance of critical actions during a later simulation case. Further study may reveal ideal learning strategies to enhance observer education.

## 26 Enhancement of Cricothyroidotomy Procedural Competency using Cadaver Autograft

Chandler I, Coughlin R, Binford J, Bonz J, Hile D / Yale-New Haven Hospital, New Haven, CT

**Background:** Cricothyroidotomy is a rare but life-saving procedure required in up to 2% of emergent airways. Emergency medicine residencies frequently instruct this procedure via cadaver training, but cadaver cost and availability