

## UC Irvine

### Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

#### Title

Under Pressure: Stress Inoculation Training as a Simulation Tool

#### Permalink

<https://escholarship.org/uc/item/7p99n364>

#### Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 25(3.1)

#### ISSN

1936-900X

#### Authors

Hudson, Blakeley

Raper, Jaron

von Schweinitz, Benjamin

et al.

#### Publication Date

2024-03-24

#### DOI

10.5811/westjem.20455

#### Supplemental Material

<https://escholarship.org/uc/item/7p99n364#supplemental>

#### Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

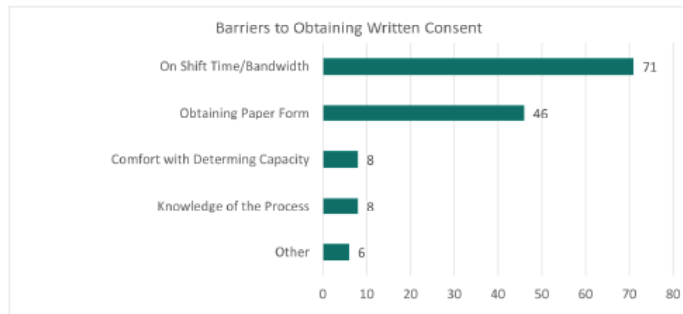


Figure 2. Reported barriers to IC.

## 68 Under Pressure: Stress Inoculation Training as a Simulation Tool

Blakeley Hudson, Jaron Raper, Benjamin von Schweinitz, Andrew Bloom

**Background:** Emergency Medicine residents are often tasked to make rapid, high stakes decisions with limited information and resources. Understandably, this work can be inherently stressful. While residents get considerable training in patient management, formalized stress management is not a standard curricular requirement.

**Objectives:** We aimed to utilize a simulated case to load cumulative stress in order to assess response and performance under stress.

**Methods:** We created a low fidelity stress inoculation simulation which introduced sequential stressors common to working in a high-acuity emergency department. 18 residents were given 10 minutes to complete a series of patient encounters of advancing complexity. Simulated clinical interruptions were introduced, forcing learners to make rapid decisions. Proficiency was measured via completion of 19 critical actions. Resident heart rates (HR) were also monitored throughout the case. Following the simulation, a survey was conducted utilizing the National Aeronautics and Space Administration Task Load Index on a 10 point Likert-type scale.

**Results:** All participants noted prior experience in stressful clinical situations, but only one learner reported any prior stress management training. All participants felt satisfied with the simulated case, would be worthwhile to continue and would be helpful in the future. Post-intervention data noted a direct relationship between HR variation and perceived stress. We observed no correlation between level of stress reported and number of critical actions completed. Realism of the experience was rated 9.37. Ability to recognize cognitive overload was rated 8.84.

**Conclusion:** While we observed no correlation between stress experienced and clinical performance, stress inoculation training resulted in a heightened awareness of cognitive overload. Future curricula should consider

integration of simulated stress inoculation to identify and mitigate stressors.

Table 1-3.

Table 1 ▲		Percentage who answered 'yes'
Do you think it would be helpful to simulate stressful situations before you face them?		100%
Do you think this simulation would be worth continuing		100%
Prior to this workshop, I have experienced a stressful situation while working clinically		100%
Prior to this workshop, I have received formal training in stress management		5.60%
Table 2		Average
Prior to this workshop, rate your comfort with stressful medical situations (scale 1-10;10 being very comfortable)		6.54
This simulation complimented my learning style (10=Strongly agree)		9.53
My knowledge of the presence of cognitive stress improved after this workshop:		9
My ability to recognize cognitive overload improved after this workshop:		8.84
This workshop would be useful for future ED residents and providers to participate in (10=Strongly agree)		9.47
I am satisfied with the overall simulation experience:		9.58
Do you think this simulation was directly related to your work?		9.53
Table 3 ▼		p-Value
Change in Heart Rate vs Perceived stress during simulation		0.1
Change in Heart Rate vs Critical actions correct		0.5

## 69 Topical Oxygen Therapy in the Treatment of Non-Healing Chronic Wounds: A Systematic Review

Adam Pearl, Katherine O'Neil

**Background:** Clerkships provide 4th year medical students the opportunity to gain clinical knowledge, procedural skills, and comfort with the ED workflow. They also allow students to network and determine if a program is the right fit for their residency training. Understanding what factors students value in their education may improve learner experience.

**Objectives:** This study aims to assess the perceived impact of dedicated resident teaching shifts and organized social events on the student experience.

**Methods:** We reviewed survey responses of 4th year students at the end of their audition month in the ED. De-identified surveys assessed satisfaction with availability of social events and teaching shifts during rotation. Open ended feedback was summarized using thematic analysis to highlight commonly cited themes for improvement. Students were also asked if inclusion of these experiences would have a positive or negative impact on the program's position on their residency rank list.

**Results:** All surveys, completed by 93% of rotating students, reported attendance at a resident social event during the rotation. 100% felt inclusion of the events positively influenced the program's spot on their rank list and helped determine if the program was a good fit. Only 46% of respondents were scheduled for a teaching shift with a resident. However, 74% of all respondents reported having teaching shifts in the rotation would positively influence the program position on their rank list. The other 26% responded it would not make an impact. Average satisfaction ratings for events and teaching shifts were 8.9 and 8.6 respectively on a 10-point scale.