

UC Irvine

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

Title

Low Fidelity Simulation Workshop to Teach Principles of Mass Casualty Management in the ED with Emphasis on Quality Improvement

Permalink

<https://escholarship.org/uc/item/3qc082jc>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 18(5.1)

ISSN

1936-900X

Authors

Spillane, L
Cushman, J
Sensenbach, B
et al.

Publication Date

2017

Copyright Information

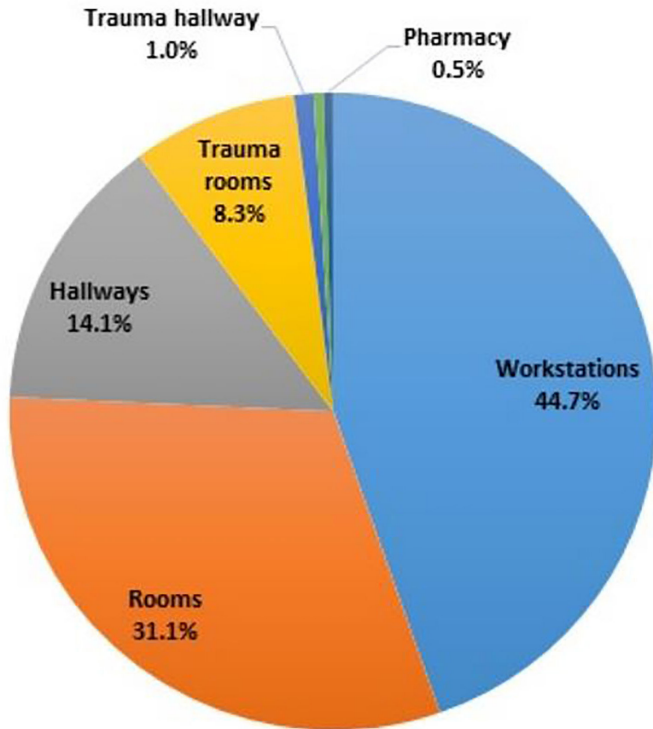
Copyright 2017 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

the ED, LM is scalable to other clinical departments and institutions across the nation as we seek to design the optimal learning ecosystem and maximize experiential learning for future physician trainees.

40 Low Fidelity Simulation Workshop to Teach Principles of Mass Casualty Management in the ED with Emphasis on Quality Improvement

Spillane L, Cushman J, Sensenbach B, Lu M, Pasternack J, Stephanos K, Bodkin R /University of Rochester, Rochester, NY

Location of Learning Moment



Background: In a mass casualty incident, emergency physicians must respond to a rapid influx of patients. Identifying challenges and lessons learned through simulation can be used to guide performance improvement (PI) and Emergency Department (ED) mass casualty planning.

Educational Objectives: To identify and apply through a PI activity key principles of disaster management including patient identification/tracking, triage, team structure, communication, resource allocation, clinical care, and security.

Curricular Design: We created a low fidelity mass casualty exercise, shrinking the ED in size - but imposing four conditions: hospital at capacity, ED beds full with patients waiting, multiple entrances, and distinct treatment areas. The exercise occurred in an educational suite divided into critical care, urgent care, triage and waiting areas. Faculty controlled the influx of patients and available resources. Learners included EM residents, medical students, and pharmacists and were assigned as clinicians, support staff, or patients.

Learners were given a mass casualty scenario and asked to manage the event. The scenario lasted 40 minutes with 10 minutes allowed to organize their teams before casualties arrived. Following the scenario, learners completed a structured written reflection, engaged in small group discussions, and attended a faculty led debriefing. Roles were reassigned and the scenario was repeated.

Debriefing content and written reflections were thematically analyzed and included: need for geographically assigned teams with clear communication; need to coordinate resources across areas; inability to use electronic records for triage/tracking; importance of securing entrances and using a central triage point; and strategic management of low acuity patients. Repeating the scenario improved event management in some areas at the expense of others which emphasized the need for fluidity in resource allocation.

Impact/Effectiveness: Participants were able to engage in a PI experience while learning principles of disaster management (Milestones SBP1, SBP2, PBL1, ICS2). This low fidelity workshop is easily reproducible and can be adapted to conditions in a variety of settings allowing lessons learned to influence departmental disaster planning.

Table 2. Pilot Survey Data.

Survey Item (1- Strongly Disagree, 3- Neutral, 5- Strongly Agree)	Agree or Strongly Agree	Mean
Overall I am highly satisfied with the EM Foundations course.	28/30	4.17
I believe EM Foundations was beneficial to my development as an EM practitioner.	28/30	4.33
I believe EM Foundations course content was appropriate for my level of learning.	30/30	4.57
I prefer small group oral boards style cases over traditional lecture or powerpoint review of equivalent course content.	24/30	4.17
Practice oral boards cases were relevant and helpful for learning fundamental knowledge within our specialty.	29/30	4.53
Case teaching points were relevant and helpful for learning fundamental knowledge within our specialty.	29/30	4.60
Foundations meetings were engaging and enjoyable.	28/30	4.47
Practice oral boards cases had a positive impact on my clinical performance.	25/30	4.13
Case Teaching Points had a positive impact on my clinical performance.	27/30	4.10