

**Study/Objective:** Test a model that was developed to compare PC screen-based vs high-fidelity simulation supported training for basic trauma skills in terms of learning and cost outcomes.

**Background:** As disasters increase in numbers and intensity, more attention is being paid to trauma skills training for health workers. There is a wide spectrum of simulation types, and while high-fidelity simulation is known to be effective, it is also very costly.

**Methods:** The Nursing Education Simulation Framework guided the development of a model to compare the two simulation methods in terms of confidence, knowledge, skills, and cost outcomes. Participants (N = 70) were nurses and EMT's from the civilian and military sectors. All underwent pre-testing, random assignment to PC screen-based or high-fidelity simulation training groups, trauma skills training, immediate post and then post-post (6-12-weeks) evaluation. The evaluator was blinded to the simulation training type for each participant.

**Results:** There were no differences in the learning outcomes between the PC screen-based vs high-fidelity groups. Both groups increased their confidence, knowledge, and skills. However, the cost of high-fidelity simulation was ten times that of PC screen-based instruction per unit.

**Conclusion:** For basic trauma nursing skills, a less costly method of instruction can achieve the same learning outcome results.

*Prehosp Disaster Med* 2017;32(Suppl. 1):s224-s225

doi:10.1017/S1049023X17005805

### Self-Assessment of Intensive Care Nurses' Team Performance Compared with Intensive Care Nursing Students

*Ralf Kirchhoff, Arnbild V. Kongsbaug, Tove B. Vadset*

Department Of Health Sciences Aalesund, Norwegian University of Science and Technology, Aalesund/Norway

**Study/Objective:** The study aims to explore whether there are differences between intensive care nurses' (ICN) team performance and ICN-students, measured by a validated instrument.

**Background:** Due to lack of ICN-students working experiences, a joint high-fidelity, simulator-based training can bridge the gap between nursing school and appropriate hospital practice. Data originated from a training project in Norway. ICNs from a hospital intensive care unit collaborated with educators from a nearby university to improve ICN-students team performance, to make those students better prepared for practice.

**Methods:** The study used an explorative design. Thirty registered nurses, who were allocated into five teams representing intensive care specialty, participated in a high-fidelity, simulation-based pneumonia with acute respiratory failure setting. Each team consists of five ICN's and one ICN-student. The Mayo High Performance Teamwork Scale was used to measure team performance. We used the Mann-Whitney U test to compare and analyze the teams' self-assessment.

**Results:** Statistical significant differences were found between ICN-students and ICN's self-assessments on two variables: 1) The team prompts each other to attend to all significant clinical indicators throughout the procedure/intervention; and

2) When team members are actively involved with the patient, they verbalize their activities aloud. ICN's perceived and gave their support to these two assertions to a greater extent than ICN-students.

**Conclusion:** Our findings indicate that ICNs and ICN students perceive aspects of team performance in a joint team training setting differently. ICN's tend to have a higher awareness than ICN students, in terms of being attentive about clinical indicators throughout the intervention, and by noticing other team members' involvement with the patient.

*Prehosp Disaster Med* 2017;32(Suppl. 1):s225

doi:10.1017/S1049023X17005817

### Large-Scale Disaster Simulations: Advancing Pediatric Disaster Preparedness and Safety through Whole-Hospital, Inter-Professional Learning

*Tamara Gafoor, Elene Khalil, Ilana Bank, Margaret Ruddy*

Pediatric Emergency Medicine, Montreal Children's Hospital, Montreal/Canada

**Study/Objective:** To underline the importance of the health care network in the response to a disaster. To share one method of training HCW, and improving communication under strenuous conditions through simulation. To use pediatrics as an example of one of our most vulnerable populations, and their particular needs in a disaster.

**Background:** Disasters, whether natural or human-made, have a significant impact on the population. Hospitals play an important role in the response to disasters and Health Care Workers (HCWs) must be prepared to respond. Training HCWs for such rare events and especially maintaining their competency is challenging. It has been shown that an all-hazards (CBRNe-Chemical, Bacteriologic, Radiologic, Nuclear, explosive) approach to hospital disaster preparedness is most effective and efficient. Recent Canadian hospital surveys show considerable gaps in hospital disaster preparedness, particularly with respect to decontamination capabilities.

**Methods:** We report details of our experience in conducting two large-scale, real-time, in-situation disaster simulations in a tertiary care, Level 1 pediatric trauma center. Quantitative and qualitative data from a city-wide trauma disaster simulation (2012), as well as one including exposure to a hazardous substance (2015), will be presented.

**Results:** Our findings endorse large-scale, in-situational simulations as opportunities for whole-team learning, practicing effective communication, and overall improvement of hospital disaster preparedness.

**Conclusion:** Training for the rare but high-impact event that is a disaster, and maintaining competency of HCWs, is difficult and costly. Participants in these simulations felt they improved their ability to respond to a Chemical, biological, radiological, nuclear, and explosive (CBRNe) disaster, and that these were valuable to their learning and practice. Our findings endorse large-scale, in-situational simulations as opportunities for whole-team learning, practicing effective communication, and overall improvement of hospital disaster preparedness.

*Prehosp Disaster Med* 2017;32(Suppl. 1):s225

doi:10.1017/S1049023X17005829