

comprehension of these messages. However, there remains a lack of clarity about whether or not images improve risk perception and associated behavioral intention.

Methods: Participants will complete items from the Domain-specific Risk Taking scale to position their personal risk threshold profile. Participants will then be randomly assigned to one of three conditions (emergency messaging with no imagery; emergency message with images that escalate as the message urgency increases; and emergency messaging with a generic, non-escalating image) and have their responses to the message measured using eye tracking software. Finally, participants respond to a short on-line questionnaire about their perceptions and understanding of the behaviors being elicited by the messages.

Results: Our preliminary results indicate that the addition of visual imagery improves risk perception and comprehension of the immediacy of the message. The results from the proposed extension experiments described here will be presented in this presentation.

Conclusion: Grammatical construction, language, imagery, media channel, and length must all be considered as important factors in maximizing messaging for optimal effect.

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Outcome Following Cranioplasty, with Bone Flap Stored in Bone Bank or in Abdomen, in Severe Head Injury Patients

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Study/Objective: To find the Outcome Following Cranioplasty, with Bone Flap Stored in Bone Bank or in Abdomen, in Severe Head Injury Patients

Background: Following Decompressive Craniectomy (DC), bone flap is usually stored either in abdomen or in the bone bank. Patients who return for cranioplasty following DC are considered to have the best outcome, as it is a cosmetic procedure. However, infection of the bone flap can lead to high morbidity and mortality in this group.

Methods: The study included 190 cases of cranioplasty done between August 2011 and September 2012. All were post-traumatic cases who had undergone decompressive craniectomy for severe head injuries, and had no apparent features of localized or systematic infection. Infection was defined as presence of culture positive collection, or frank pus around the bone flap.

Results: Twenty-six of 190 cases (13.7%) had infection of the bone flap presenting after 1–14 months of cranioplasty requiring its removal. The infection rate in 119 flaps kept in bone bank was 14.3%, and in 54 flaps kept in abdomen was 11.1% ($p > 0.5$). Two out of 17 (11.7%) cases done with bone cement had infection. There was no significant difference of age, sex, presence of tracheostomy, type of graft used and post-op hospital stay. This compared to patients who had early surgery, multiple surgical procedures, suture line infections and long

hospital stay after primary surgery had a significantly higher rate of bone flap infection.

Conclusion: This is the only study of its kind which has assessed the infection rates in different kinds of storage of bone flaps, and it shows that there is no significant increase in infection rate, if bone is stored in bone bank.

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Online Disaster Training for Clinicians and Non-clinicians at a Children's Hospital

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Study/Objective: To examine changes in knowledge acquisition of pediatric disaster preparedness among clinicians and non-clinicians who completed an online training course of 5 modules: planning (M1), triage (M2), age-specific care (M3), disaster management (M4), and emergency code response (M5).

Background: Terrorism and natural disasters have brought disaster preparedness to the forefront in the medical world. Although children are vulnerable victims during disasters, no standardized pediatric disaster preparedness training exists to date for medical and nonmedical hospital personnel.

Methods: An online training course was developed through the hospital's Pediatric Disaster Resource and Training Center. Course data from July 2009 to August 2012 were analyzed through linear growth curve multilevel modeling, with module total score as the outcome (range 0–100 points), attempt as the level 1 variable (participants could repeat the course), role (clinician versus non-clinician) as the level 2 variable, and attempt by role as the cross-level effect.

Results: There were 44,115 module attempts by 5,773 participants (3,686 clinicians, 2,087 non-clinicians) were analyzed. As shown in the results table, intraclass correlations indicated substantial variance in knowledge acquisition. The average module total score upon first attempt across all participants ranged from 60.28 to 80.11, and participants significantly varied in how they initially scored. On average in M1, M2, M3: total scores significantly increased per attempt across all participants (average rate of change ranged from 0.59 to 1.84); clinicians initially had higher total scores than non-clinicians (average difference ranged from 13.25 to 16.24). Cross-level effects were significant in M4 and M5: on average, non-clinicians' total scores significantly increased per attempt by 3.77 in M4 and 6.40 in M5, while clinicians' total scores did not significantly improve from additional attempts.

Conclusion: Medical and nonmedical hospital personnel alike can acquire knowledge of pediatric disaster preparedness. Key content can be reinforced or improved through successive training in the form of an online course.