

# Annual Congress and Medicare Expo on **Trauma & Critical Care**

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## Medical simulation for teaching trauma care in low-resource settings

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Morbidity and mortality from intentional and unintentional injury accounts for a high burden of disease in low- and middle-income countries. In addition to preventative measures, interventions that increase healthcare capacity to manage injured patients can be an effective way to decrease this burden. Medical simulation has been shown to augment traditional didactic curricula and better access the clinical skills of trainees in a variety of training scenarios. Simulation lends itself particularly well to trauma training, as it emphasizes, and provides an opportunity to assess, a team-based approach. A trauma curriculum tailored to low-resource settings and utilizing low-cost simulation methods and traditional didactics was implemented in Managua and then adapted for a variety of other low-resource settings. Participants were tested for knowledge gain, which was assessed by comparing pre- and post-course multiple-choice exams and by scoring distinct pre- and post-course simulation scenarios using a critical action checklist. The Wilcoxon signed-rank test was used to compare the pre- and post-training difference. Overall written scores improved 26.3% with a positive mean increase of 15.4% ( $p < 0.001$ ) while simulation scores improved by 91.4% with a positive mean increase of 33.67% ( $p < 0.001$ ). These results were duplicated in Rwanda, American Samoa, and Kenya where the course was implemented for residents, physicians, and medical students, respectively. The participants showed the greatest improvement in the simulation scenarios, in which they learned and demonstrated a standardized approach to assessing and managing trauma patients. Simulation can be an effective and low cost education tool in low- and middle-income countries.

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## Psychological benefits of trauma-focused yoga intervention on female prisoner population

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Until now, practitioners of trauma-focused yoga have suggested that it has many benefits, but little research has been conducted to test these possible benefits. As a part of the Yoga Prison Project, female inmates at 2 correctional facilities in South Carolina served as subjects. Inmates were selected from those who applied to be allowed to participate in a ten-week trauma-focused yoga program. To create control and experimental groups, inmates who requested to participate in the yoga class were randomly assigned to either be in the class (Experimental group,  $n=33$ ) or placed on a waitlist (Control Group,  $n=17$ ). Inmates on the waitlist joined the next class so all who wanted could participate. A variety of psychological measures were tested and data were collected from both groups before the class began and again at the end, 10 weeks later. To assess the changes from preintervention to postintervention, mixed design ANOVA's tests were conducted. Inmates in the yoga group reported a significant decrease in depression ( $p < 0.05$ ) and stress ( $p < 0.01$ ) and improved self awareness ( $p < 0.02$ ). No significant effect was reported on anxiety, rumination and self-control in the treatment group. Although not substantial, anxiety scores did decrease and self-control scores improved for the yoga group. Inmates in the control group reported a worsening or no change on these measures. Rumination stayed about the same for both groups. The results suggest that yoga is an inexpensive intervention that could benefit both inmates and prison staff by reducing negative behaviors and possibly mental health problems. Future studies should include male participants and measure the effect of a longer yoga program.

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