



National Association of
Emergency Medical Technicians

PHTLS STUDY

Title: [Effect of basic prehospital trauma life support program on cognitive and trauma management skills.](#)

Results from a study published in The Journal of Trauma: Injury, Infection, and Critical Care ([view the abstract](#)) indicate that learning trauma skills from the PHTLS course may be associated with improved mortality and morbidity rates.

The study indicates that "there was a further improvement in overall trauma patient mortality from 15.7% to 10.6% after the PHTLS course?"

"We have demonstrated in this study that, after the introduction of the PHTLS program. There was better airway control, C-spine control, splinting of fractures, hemorrhage control, and use of oxygen. These factors may have accounted for patients arriving at the hospital setting in a more optimal state. This status, in turn, should be expected to improve the chances of survival of patients as well as decrease the morbidity rates after injuries."

ABSTRACT

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Title: Effect of basic prehospital trauma life support program on cognitive and trauma management skills.

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Abstract

We tested the effectiveness of a basic prehospital trauma life support (PHTLS) program by assessing cognitive performance and trauma management skills among prehospital trauma personnel. Fourteen subjects who completed a standard PHTLS course (group I) were compared to a matched group not completing a PHTLS program (group II). Cognitive performance was assessed on 50-item multiple choice examinations, and trauma skills management was assessed with four simulated trauma patients. Pre- PHTLS multiple choice questionnaire scores were similar (45.8 +/- 9.4% vs. 48.8 +/- 8.9% for groups I and II, respectively), but the post-PHTLS scores were higher in group I (80.4 +/- 5.9%) than in group II (52.6 +/- 4.9%). Pre-PHTLS simulated trauma patient performance scores (standardized to a maximum total of 20 for each station) were similar at all four stations for both groups, ranging from 7.9 to 10.4. The post-PHTLS scores were statistically significantly higher at all four stations for group I (range 16.0-19.0) compared to those for group II (range 8.0-11.1). The overall mean pre-PHTLS score for all four stations was 8.3 +/- 2.1 for group I and 8.8 +/- 2.0 (NS) for group II; the group I post-PHTLS mean score for the four stations was 17.1 +/- 2.7 ($p < 0.05$) compared to 9.1 +/- 2.3 for group II. Pre-PHTLS Adherence to Priority scores on a scale of 1 to 7 were similar (1.1 +/- 0.9 for group I and 1.2 +/- 1.0 for group II). Post- PHTLS group I Priority scores increased to 5.9 +/- 1.1. Group II (1.1 +/- 1.0) did not improve their post-PHTLS scores. The pre- PHTLS Organized Approach scores in the simulated trauma patients on a scale of 1 to 5 were 2.1 +/- 1.0 for group I and 1.9 +/- 1.2 for group II (NS) compared to 4.2 +/- 0.9 ($p < 0.05$) in group I and 2.0 +/- 0.8 in group II after PHTLS. This study demonstrates improved cognitive and trauma management skills performance among prehospital paramedical personnel who complete the basic PHTLS program. [References: 14]

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