

Abstract:

OBJECTIVES: We aimed to describe and evaluate prehospital life-saving interventions performed in a pediatric population in the Afghanistan theater of operations.

DESIGN: Our study was a post hoc, subanalysis of a larger multicenter, prospective, observational study.

SETTING: We evaluated casualties enrolled upon admission to one of the nine military medical facilities in Afghanistan between January 2009 and March 2014.

PATIENTS: Adult and pediatric (<17 yr old) patients.

MEASUREMENTS: We conducted initial descriptive analyses followed by comparative tests. For comparative analysis, we stratified the study population (adult vs pediatric), and subsequently, we compared injury descriptions and the interventions performed. Following tests for normality, we used the t test or Wilcoxon rank-sum test (nonparametric) for continuous variables and chi-square or Fisher exact for categorical variables. We reported percentages and 95% CIs.

MAIN RESULTS: We enrolled 2,106 patients, of which 5.6% (n = 118) were pediatric. Eighty-two percent of the pediatric patients were male, and 435 had blast related injuries. A total of 295 prehospital life-saving interventions were performed on 118 pediatric patients, for an average of 2.5 life-saving interventions per patient. Vascular access (IV 96%, intraosseous 91%) and hypothermia prevention-related interventions (69%) were the most common. Incorrectly performed life-saving interventions in pediatric patients were rare (98% of life-saving interventions performed correctly) and n equals to 24 life-saving interventions over the 6-year period were missed. The most common incorrectly performed and missed life-saving interventions were related to vascular access. When compared with adult life-saving interventions received in the prehospital environment, pediatric patients were more likely to receive intraosseous access ($p < 0.0001$), whereas adult patients were more likely to have a tourniquet placed ($p = 0.0019$), receive wound packing with a hemostatic agent ($p = 0.0091$), and receive chest interventions ($p = 0.0003$).

CONCLUSIONS: In our study, the most common intervention was vascular access followed by hypothermia prevention and hemorrhage control. The occurrence of missed or incorrectly performed life-saving interventions were rare.

Reference:



Reeves, L.K., Savell, S.C., Maddry, J.K., Samsey, K.M., Mora, A.G. and Laird, J.R. (2020) Prehospital Life-Saving Interventions Performed on Pediatric Patients in a Combat Zone: A Multicenter Prospective Study. *Pediatric Critical Care Medicine*. March 6th. doi: 10.1097/PCC.0000000000002317. (Epub ahead of print).