

## **Prehospital Care of Patients With Lower Extremity Fractures Presenting at Moi Teaching and Referral Hospital, Kenya**

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**Purpose:** Prehospital care of patients with lower extremity fractures has been shown to influence morbidity and mortality. The main purpose of the study was to determine the prehospital trauma care given to patients with lower extremity fractures presenting at a tertiary referral hospital in Kenya.

**Methods:** A cross-sectional study of 196 adult patients presenting with lower extremity fractures at the Accident and Emergency Department (ED). The study was conducted between 1 January 2017 and 31 December 2017. Multivariate analysis of factors associated with prehospital care was done.

**Results:** The male to female ratio was 5:1 with a median age of 35.5 (interquartile range [IQR] 27, 50). The ISS median was 9 (IQR 9, 13). Out of the 196 patients, 133 had closed fractures (68%). The cause of injury was road traffic accidents (RTA) in 149 patients (76%) and falls in 31 (16%). Initial first aid and extrication from injury site was by bystanders in 135 patients (69%), ambulance personnel in 44 (22%), and police in 16 (8%). The mode of transport to hospital was ambulance for 96 patients (48%), public service vehicle 59 (30%), private vehicle 20 (10%), motorcycle 12 (6%), and police vehicle for 9 (4.6%). 67 patients (34%) arrived at the ED within 1 hour after injury. Prehospital time was significantly lower ( $P = 0.03$ ) in those involved in RTA compared to other causes. Most patients (141, 72%) had not received any analgesics before arrival. Hemorrhage control, dressing of open wounds, and intravenous fluid resuscitation were carried out in 19 (30%), 28 (44%), and 12 (19%) patients with open fractures, respectively. In multiple logistic regression analysis, open fractures ( $P = 0.003$ ) and transport by ambulance ( $P = 0.004$ ) were significantly associated with adequate prehospital care.

**Conclusion:** Road traffic accident was the major cause of lower extremity fractures and affected mostly young men. Most patients with lower extremity fractures had multiple injuries. A third of patients with lower limb fractures presented within the “golden hour” of trauma. Less than half of the injured patients were transported to hospital by ambulance. The level of prehospital care was found to be insufficient. It is recommended therefore that the national, county governments, and non-state actors establish a formal prehospital trauma protocol and service, for safe care and expeditious transport of the patient with lower extremity injuries. Efforts should be made to prevent road traffic injuries by implementing the road safety standards.