A retrospective study of ambulance response time in priority one cases

ABSTRACT

Background: Ambulance response time (ART) is one of the key performance indices set by the Ministry of Health (MOH) in Malaysia. In priority one cases, the response time must be 15 minutes or less. The association between ART and patient outcomes has yet to be assessed in the Malaysian setting. Methods: This was a single-centre study that coordinated by the Medical Emergency Call Centre (MECC) of the Emergency and Trauma Department Hospital Raja Perempuan Zainab II (ETDHRPZ II) and received a call from the Malaysian Emergency Response Services (MERS) 999 or a direct line. Patients must have met the Delta and Echo classification using the Medical Priority Dispatch System for priority one case with age more or equal to 18 years. The data were collected was done from November 2019 to March 2020. Results: A total of 175 ambulance calls were recorded during the study period, during which the number of ambulances could reach 141 (80.6%) patients within 15 minutes or less. The remaining 34 (19.4%) patients responded in more than 15 minutes. The associations between ART and mortality and morbidity were not significant, with p-value=0.746 and p-value=0.749 respectively. The median length of stay (LOS) among admitted patients was the same which was four days. Conclusion: This study revealed no significant association between ART (less than or equal to 15 minutes) in priority one cases and patient outcomes. However, there is a need to consider multiple variables that influence the emergency medical response due its nature of complexity.