

ORIGINAL ARTICLE

## Time Indices of Emergency Medical Services; a Cross-Sectional Study

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### Abstract

**Introduction:** Considering the importance of the role and function of emergency medical services (EMS) in a society's health and the need for continuously evaluating its function, especially in indices affecting the process of giving service to the patients, the present study was done with the aim of comparing time indices of providing services in EMS during two 6-month periods 1 year apart throughout Zanjan province, Iran. **Methods:** This study was a retrospective cross-sectional study. Out of all the calls recorded in EMS centers of Zanjan province during October to March 2013 and 2014, 742 calls that had resulted in the patient being transferred to a hospital were randomly selected and the required data including time indices and population indices were extracted from EMS forms that are filled by a medical emergency technician for each mission. **Results:** Among the total of 742 patients transferred by EMS during October to March 2013 and 2014, 452 were male and 290 were female. Mean age of the patients was 28 years. Most calls to EMS were related to trauma due to accident (345 cases) and internal (114 cases), respectively. Regarding time indices, mean times observed, respectively, were 0.02 minute (delay time), 8 minutes (response time), 10 minutes (time to reach the scene), 20 minutes (total of the 3 mentioned times), 27 minutes (time to reach hospital), 94 minutes (total mission time). Only 2 time indices, namely time to reach hospital ( $t=3$  and  $p=0.001$ ) and total mission time ( $t=2$  and  $p=0.009$ ), were significantly different between the studied periods and no significant difference was detected regarding other time indices. **Conclusion:** Based on the findings of this study, time indices of EMS were desirable and at the same level as national and international indices. Meanwhile, differences in time indices were only significant regarding time to reach hospital and total mission time and these indices were lower in 2013 compared to 2014.

**Key words:** : Emergencies; Emergency Medical Services; Time management

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