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| ORIGINAL ARTICLE |

**Evaluating the Frequency and Pattern of Drug Interactions in Patients Admitted To the Emergency Department; a Cross-Sectional Study**

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| Abstract |  |
| **Introduction:** Drug interactions, as one of the most important subsets of medication errors, can lead to adverse reactions in patients. Considering the increase in drug interactions and their consequences, this study aimed to evaluate the frequency and pattern of drug interactions in patients admitted to the emergency department of a university affiliated hospital. **Methods:** This was a cross-sectional study. The study population consisted of patients referring to the Emergency Department of Imam Hossein Hospital from April to the end of September 2018. 552 patients hospitalized in the emergency department of Imam Hossein Hospital were selected via random sampling and the rate of drug interactions reported in their medical profile was evaluated. **Results:** The mean age of these patients was 58.51 ± 20.05 years. Sex distribution evaluation showed that 54.4% were male. Based on the number of patients-days recorded, 34.2% had no drug interactions. The total number of interactions recorded was 1139, the highest number of which belonged to group C and the lowest number belonged to group X and A. 50% of people experienced two or less drug interactions and 75% of people experienced 4 or less drug interactions. Mean hospitalization days were 7.63 ± 6.15 days. Finally, 90.8% of patients recovered and 9.2% died. **Conclusion:** Based on the findings of the present study, only 34.2% of the patients had no drug interactions. The total number of interactions recorded was 1139, the highest number of which belonged to group C and the lowest number belonged to group X and A. There was a significant correlation between the number of administered drugs with duration of hospitalization, final outcome and the probability of drug interactions. In addition, there was a significant correlation between type D and X drug interactions with mortality rate in patients. |
| **Key words:** Length of Stay; Drug interactions; Drug-Related Side Effects and Adverse Reactions; Emergency Service, hospital |