

The evaluation and management of drug-drug interactions in patients on cardiovascular and cardiosurgery wards in Namazi and Shahid Faghihi hospitals, Iran, Shiraz

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Background and Aims: A drug-drug interaction (DDI) can be defined as the modification of the therapeutic effect of one drug by co-administration of another drug. DDIs represent a common cause of Adverse Drug Events and may be preventable so DDIs are an important target for improving patient safety. Managing drug interactions in hospitalized patients is important and challenging. The present study was designed to evaluate the prevalence of DDIs in hospitalized patients on cardiovascular wards and improve the clinical management of potential DDIs (pDDIs) by specific interventions.

Methods: Inpatients on 6 wards were screened for DDIs using the interaction screening program. DDIs were classified as C, D and X according to Lexi_COMP. Clinical and demographic characteristics of patients were recorded from their files. After assessment of the detected DDIs for clinical relevance, recommendations and/or information about the pDDIs were sent to the treating physicians. Feedback from the physicians, implementation of the recommendations, and any probable Adverse Drug Reactions were documented. Statistical analysis were performed by SPSS 17.

Results: The study included 495 patients and 3702 orders. 6478 DDIs were detected, of which 446 (6.88%) were judged to be D and X classifications and a total of 43.4 % of all hospitalizations had at least 1 pDDIs. Factors having the greatest influence on pDDI incidence included increased age, increased number of drugs and drug orders. Sixty percent of the recommendations were accepted and implemented. The most frequent interacting drug in C and D groups were aspirin and warfarin, respectively.

Conclusions: Clinically relevant pDDIs are common in patients on medical wards, and pharmacists can play a critical role in managing the medication therapy of hospitalized patients.

Keywords: Drug-drug interactions; Cardiovascular wards; Interventions