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## Adverse drug reactions leading to hospital admissions: Results from a prospective study

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Adverse drug reactions (ADR) are identified as fifth leading cause of death in USA, and estimated approximately 2.9–5.6 % of hospital admissions are due to ADR. ADRs not only increase the morbidity and mortality, adds to the overall healthcare cost. There is limited number of studies published from India to assess ADR-related hospital admissions. The objective of this prospective observational study was to evaluate the nature of ADR-associated hospital admissions and the cost involved in the management of ADR. The study was conducted in the medicine wards (medicine, dermatology and paediatrics) of a tertiary care teaching hospital in Mysore, India. Suspected ADRs were collected through spontaneous reporting by healthcare professionals. The causality assessment of suspected ADR was performed using WHO probability scale. Preventability of ADR was assessed using modified Hartwig and Siegel's scale. The cost incurred in treating ADR was calculated by considering direct and indirect costs.

**Results:** During the study period, there were 6449 patient admissions to the study medical units. Amongst which, a total of 89 reactions were reported in 82 (1.2%) patients that were attributed to be ADR-related hospital admission. The drug class most commonly implicated was NSAIDs [32 (35.9%)] followed by antibiotics [30 (33.7%)]. Diclofenac was the most common drug [13 (14.6%)] involved in causing ADRs. Most commonly involved WHOART system organ classes (SOC) in the reported ADRs were gastrointestinal system disorder [30 (36.5%)] and dermatological system disorder [26 (31.7%)]. Most of the reported ADRs were probable [48 (53.9%)] in their causal association. Most of the ADRs 70 (85.3%) were predictable and preventable. Patients admitted with an ADR had an average hospital stay of 9.32 days and the average cost incurred in managing each ADR was found to be Rs. 2,388 per patient.

**Conclusion:** The incidence of hospital admissions due to ADRs was found to be 1.2%. Most of the ADRs were predictable and preventable, and the average cost incurred in managing each ADR was found approximately Rs. 2,388 (US \$37.38 Approx.). A successful ADR surveillance system in a developing country like India can have a greater impact on the medication use system to improve the quality of patient care and in reducing the occurrence of devastating and costly events.

### Biography

Anand Kunchanur has completed his Masters in Pharmacy at the age of 26 years from J.S.S. University, Mysore, India. He is currently working as Senior Pharmacovigilance Scientist at Quanticate. He has around 10 years of experience in Pharmacovigilance, working in different industries in India. He has been invited as speaker in many conferences and workshops conducted in India.

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