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## Evaluation of Adverse Drug Reactions and Their Impact on Patient Safety in Tertiary Care Hospitals

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### Abstract

**Introduction:** Adverse drug reactions (ADRs) are a significant cause of morbidity and mortality in tertiary care hospitals, contributing to prolonged hospital stays, additional medical interventions, and increased healthcare costs.

**Aim & Objective:** "Evaluation of Adverse Drug Reactions and Their Impact on Patient Safety in Tertiary Care Hospitals". This study aims to evaluate the incidence, severity, and impact of ADRs on patient safety in a tertiary care setting.

**Study Period:** A retrospective observational survey-based design was employed, analyzing patient records over a 12-month period.

**Methods & Conclusion:** The findings revealed an ADR incidence rate of 12.5%, with antibiotics, NSAIDs, and anticoagulants being the most frequently implicated drug classes. Using Hartwig's severity scale, 24% of ADRs were classified as severe, leading to increased hospital stays and the need for additional treatments. Elderly patients and those with polypharmacy or comorbidities were found to be at higher risk for severe ADRs. Furthermore, underreporting of ADRs was identified as a critical gap in the hospital's pharmacovigilance system. This study underscores the importance of strengthening ADR reporting mechanisms, adhering to clinical guidelines, and incorporating pharmacist-led interventions to improve patient safety. Future research should explore the role of pharmacogenomics and personalized medicine approaches in reducing ADR incidence.

### Keywords:

Adverse drug reactions, pharmacovigilance, patient safety, tertiary care hospitals.

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