**Towards Safer Medication Practices: A Retrospective Analysis of Adverse Drug Reactions**

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**Introduction.** Adverse drug reactions (ADRs) remain a significant challenge in modern healthcare, raising concerns among clinicians and healthcare systems worldwide. Despite advances in medical research and pharmacology, ADR reporting rates among healthcare providers remain low, primarily due to barriers such as limited time and insufficient knowledge.

**Aims**. This study aims to examine the patterns and impact of ADR reporting to the Therapeutic Goods Administration (TGA) using an automated reporting tool embedded within the electronic medical records (eMR).

**Methods**. This retrospective study was conducted at Blacktown Hospital, where an automated ADR reporting tool was integrated into the eMR in 2022. The tool captured all the necessary information for regulated TGA reporting. Monthly ADR reports were compiled by the hospital’s medication safety committee and submitted to the TGA. ADRs were categorised using the Medical Dictionary for Regulatory Activities (MedDRA), and causality was assessed using the World Health Organization-Uppsala Monitoring Centre (WHO-UMC) criteria.

**Results.** In contrast to the 13 reports submitted in 2021, over 1,500 ADR reports were submitted to the TGA from Blacktown and Mt Druitt Hospitals between March 2022 and June 2025 using the automated tool. Analysis of 1,181 reports revealed that 11% of patients experienced two or more distinct ADRs. Anti-infectives (39%) and nervous system drugs (17%) were the most frequently implicated drug classes. Dermatological reactions accounted for the highest proportion of ADRs at 33%.

**Discussion.** The findings demonstrate that embedding an automated ADR reporting tool within clinical workflows significantly enhances reporting rates. This digital health solution effectively addresses key barriers faced by healthcare professionals, promoting safer medication practices and improved patient outcomes.