A Retrospective Audit of Missed Adverse Drug Reaction Reports at a Large Metropolitan Hospital

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Background

Adverse drug reactions (ADRs) contribute to increased hospital admissions, poorer patient outcomes and significant clinical and economic burdens to healthcare systems[1-4]. It is estimated that within Australia, approximately 90% of ADRs are not reported[2,5]. The barriers to reporting ADRs include heavy workloads, time constraints and lack of awareness amongst clinicians of reporting responsibility[2,6-7].

Aim

1. To identify the number of ADRs that occur at a tertiary hospital to ascertain the extent of under-reporting to the hospital ADR Committee and to estimate the number of ADR reports that should be received annually.
2. To develop a risk matrix tool to stratify the severity of any missed ADRs that occur.

Methods

A retrospective audit of 130 International Classification of Disease (ICD-10) adverse drug event codes was conducted and assessed against existing reports from the ADR committee. A risk matrix tool was developed and used to stratify the significance of the ADRs.

Results

From 130 ICD-10 codes, 84 ADRs were identified. 0% (0/84) of these coded ADRs were reported to the hospital ADR committee.

The risk matrix was developed to maximise accuracy and consistency in assessment of ADR significance and focuses on the two main factors that relate to the significance of an ADR:

1. severity of symptoms the patient experienced from the reaction; and
2. the intensity of the treatment required to manage or resolve the reaction.

Table 1. Risk Matrix for ADR assessment

Symptom severity	Treatment Required			
	Level 1	Level 2	Level 3	Level 4
Mild	Low	Low	Medium	High
Moderate	Low	Medium	Medium	High
Severe	High	High	High	Very high
Major	High	High	Very high	Very high
Catastrophic	n/a	n/a	Very high	Very high

Assessment of the 84 found ADRs against the risk matrix found that 11% (9/84) were low risk, 26% (22/84) were medium risk, 43% (36/84) were high risk and 20% (17/84) were very high risk.

As can be seen in Figure 1.0, a number of adverse events occurred to patients as a result of the ADR including, 45% (38/84) were the reason for the patient's admission to hospital, 11% (9/84) resulted in prolongation of hospitalisation, 7% (6/84) caused increased investigational and/or treatment costs and 5% (4/84) resulted either indirectly or directly in death. Overall, 82% of ADRs resolved without sequelae, 17% resulted in sequelae to the patient and 1% was unclear.

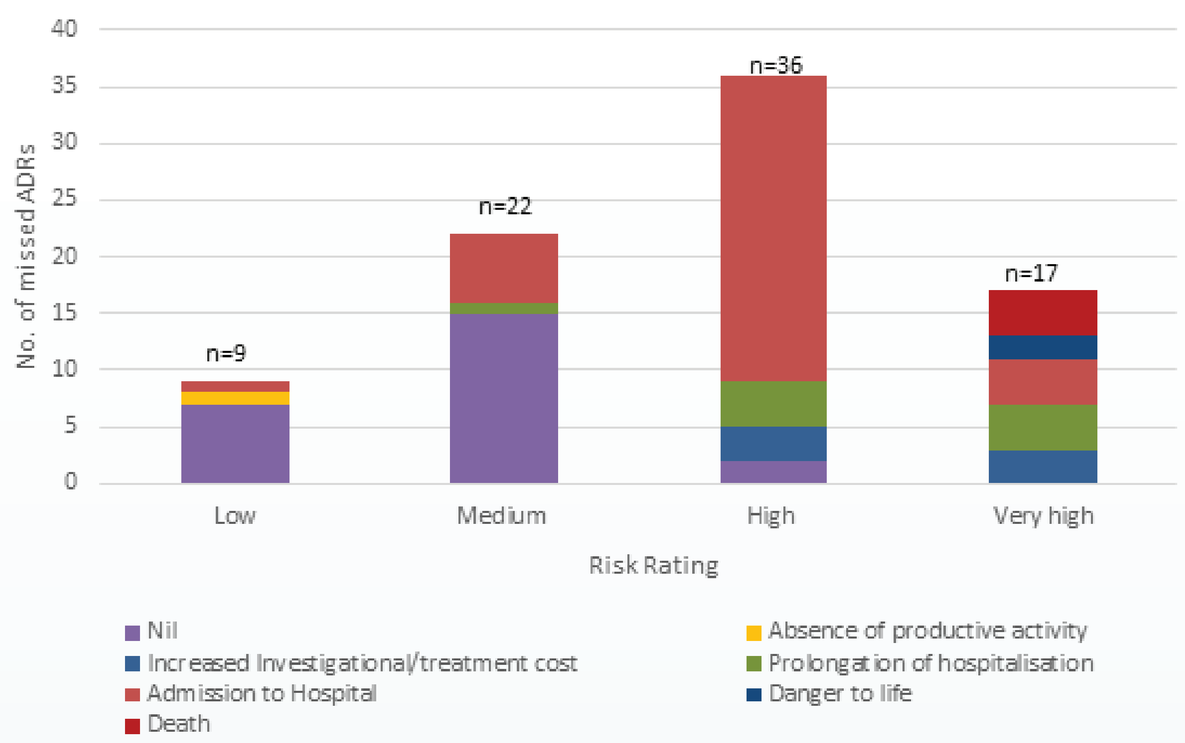

Figure 1. Types of Adverse Event Experienced by Patient as a Result of the ADR

Conclusions

The Hospital ADR committee received 66 reports the previous year however, extrapolating audit results revealed that it is likely they should receive closer to 350 reports annually.
These results highlight that current processes in place for reporting ADRs at the tertiary hospital are inadequate and should be reviewed in light of barriers as reported in literature.

Reference

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