Evaluation of nature, documentation and communication of coded adverse drug reactions

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Background

Adverse drug reactions (ADR) impact upon morbidity and mortality, increasing both hospital length of stay and healthcare costs.

Aim

To evaluate the nature, documentation and communication of ADRs coded at a tertiary referral, metropolitan hospital between January and December 2016.

Methods

All patients with an ICD Y40-Y59 codes were identified and a random sample of 126 patient charts were audited.
Naranjo algorithm, Hartwig's scale and the Schumock and Thornton scale were applied to assess likelihood, severity and preventability of ADRs.
ADRs were classified as an allergic reaction, side-effect or intolerance.
Documentation and communication to primary care providers of ADRs were evaluated by reviewing hospital forms, systems and discharge summaries.

Results

In 2016 there were 2243 Y40-Y59 coded events, 61% (n=1367) were present on admission and 39% (n=876) occurred as an inpatient. The drug classes most commonly coded as causing ADRs were anticoagulants, opioids and glucocorticoids.

Figure 1: Top 10 drug classes of coded ADRs

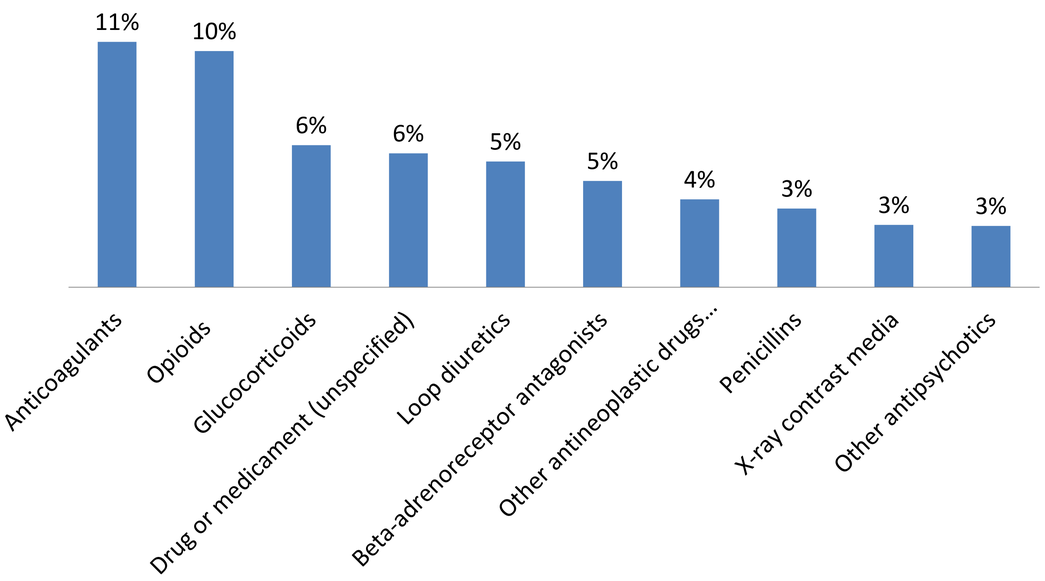


Figure 2: Likelihood of coded ADRs assessed according to the Naranjo algorithm

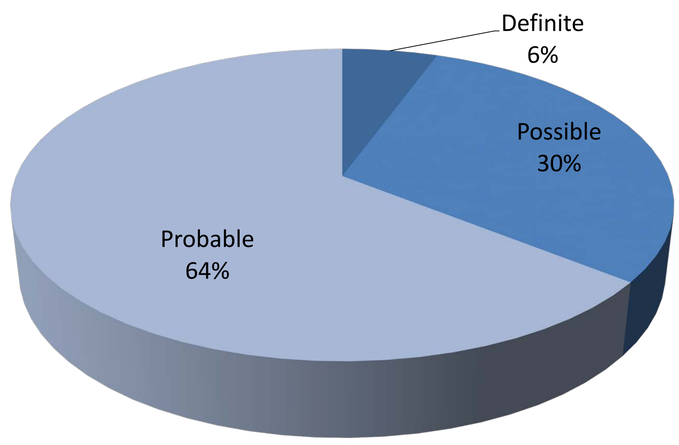


Figure 3: Severity of coded ADRs classified according to reaction types

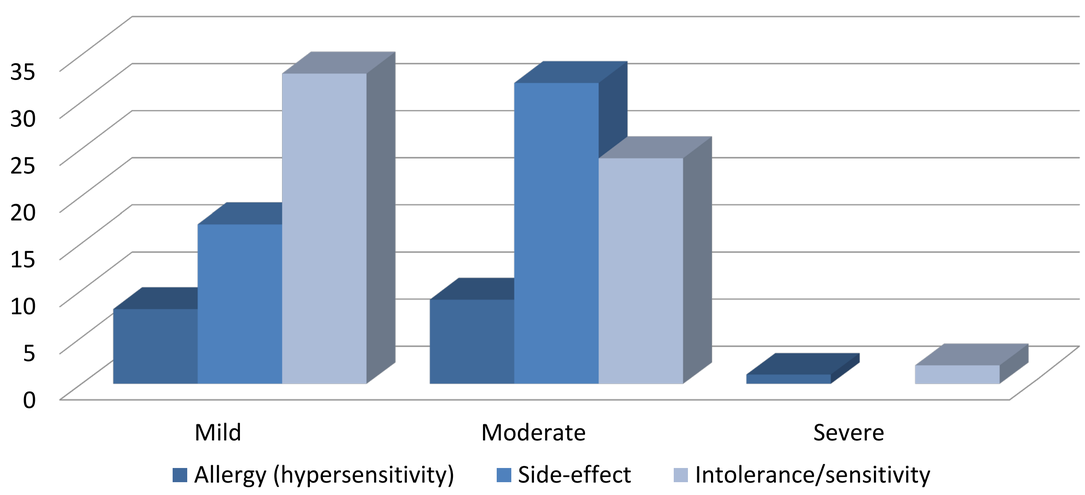


Figure 4: Preventability of coded ADRs according to the Schumock and Thornton scale

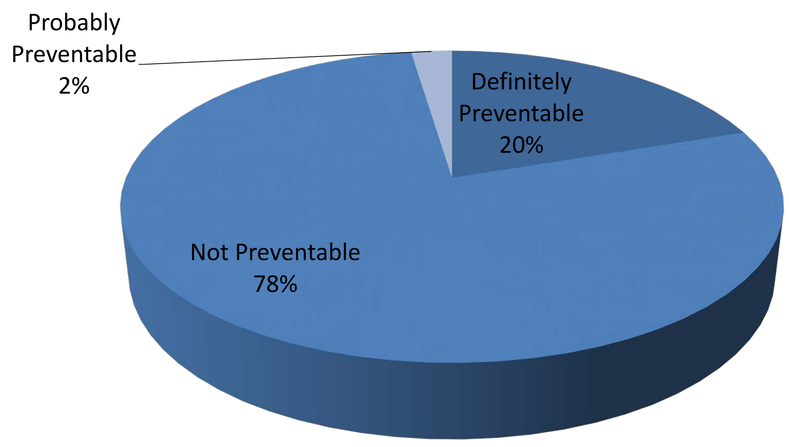
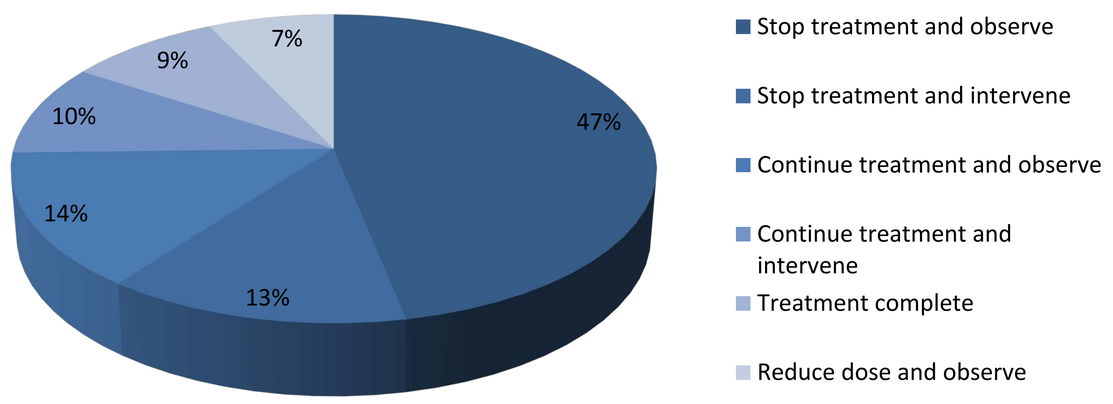
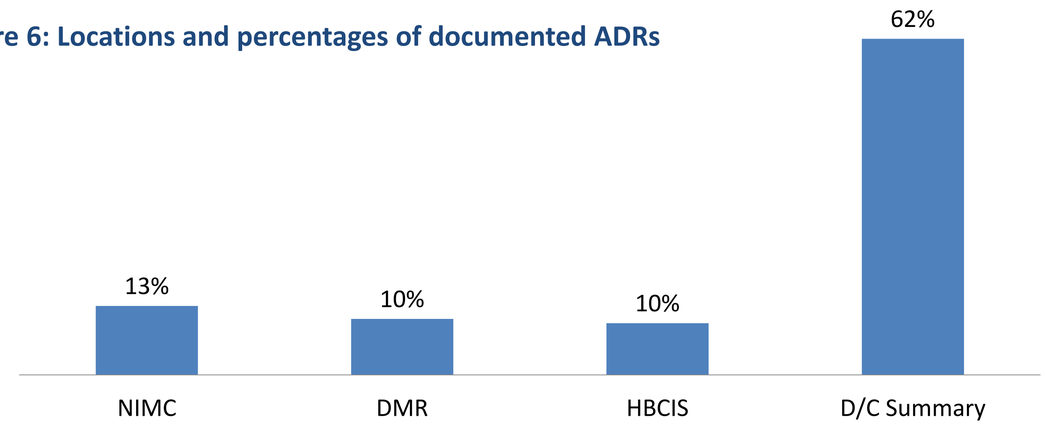


Figure 5: Management of coded ADRs



The details of ADRs were present in 62% of patient's discharge summaries but only 10% were documented in the organizational wide clinical information system (HBCIS).

Figure 6: Locations and percentages of documented ADRs



No ADRs were recorded in the hospital incident reporting system and 0.8% of ADRs were reported to the Therapeutic Goods Administration (TGA).

Conclusion

The most commonly coded drug class causing an ADR were anticoagulants. Over half of the ADRs were moderate or severe and one in five were preventable. The documentation of ADR details within discharge summaries and relevant clinical information systems was sub-optimal.

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