Abstract for Original Research

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# Title: Enhancing Medication Safety: Insights from a prospective audit at Sarawak General Hospital

Introduction:

Ensuring medication safety in the Emergency Department (ED) is of paramount importance to prevent adverse outcomes, which may contribute to patient mortality and morbidity. This study aimed to assess medication administration practices and identify areas for improvement in providing health services.

Objectives:

To identify medication errors incident.

To assess compliance to safe medication administration practices among healthcare workers across different zones in the ED.

To identify factors associated with non-compliance to safe medication administration and develop specific and practicable interventions.

Methods:

Over the course of two weeks in April 2024, a prospective audit was conducted, observing 100 occasions of medication administration by assistant medical officers (AMOs), nurses, and doctors across different zones in the ED. A single-blind randomization through convenient sampling without interventions was employed and compliance to practices related to medication safety was assessed according to medication safety checklist. Between-group analysis was conducted using Pearson Chi-Square with crosstabulation, and *p*-value of < 0.05 was taken as statistically significant.

Results:

The audit revealed no medication error incident occurring within the time frame period. However, analysis uncovered key areas of non-compliance: verification of patient’s allergies (40%), setting up medication cart or dishes (36%), counterchecking by another staff (31%), and preparation of medication in front of patients (17%). AMOs notably lacked medication counterchecks (18%, *p* = 0.014). The red zone exhibited the highest non-compliance rates in setting up medication cart or dishes (27%, *p* < 0.001), counterchecking by another staff (13%, *p* = 0.03), and verification of patient’s allergies (28%, *p* = 0.002).

Conclusion:

This audit identifies critical areas of non-compliance of medication safety in ED. Contributing factors include communication gap among healthcare providers and workload pressures, especially in high-risk situation involving high-risk patient in red zone. Strategies to mitigate inherent risk should prioritize in bridging the knowledge gap on medication preparation and administration, improving healthcare providers’ awareness on medication safety and errors through Continuing Medical Education (CME) and optimising staff numbers in high-stress zones.

Keywords:

Medication safety audit, medication administration, compliance

Conflict of Interest Statement:

The authors declare no financial support or conflicts of interest related to this study.

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