Evaluation of Errors in Medical-Documented Admission Medication Histories at a Metropolitan Hospital

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BACKGROUND

All patients require a home medication history to be documented on admission to hospital.[1] In Australia, over 250,000 hospital admissions annually are related to medication misadventure.[2-3] To ensure these issues are addressed, accurate medication histories on admission are essential.

It is common for pharmacists to document medication histories on admission. Pharmacists' medication histories have fewer errors than those documented by other health professionals.[4-9] However, pharmacists may not always be available at the time of admission. In these situations, medical doctors need to document a medication history as part of their admission assessment. To date, the accuracy of medical-documented medication histories in this context has yet to be evaluated at Eastern Health.

AIM

To evaluate the number and type of errors that occur in medical-documented home medication histories.

METHOD

This retrospective medical record audit reviewed 50 randomly selected medical-documented medication histories completed in 2022 that met inclusion criteria (**Table 1**). Medical-documented histories were compared to those undertaken by a pharmacist at a later point in the admission. Any discrepancies in the medical-documented history were considered errors. High-risk medications and error types were classified based on processes developed by the Australian Commission on Safety and Quality in Healthcare.[10-11]

Table 1. Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
• Medication histories documented by both pharmacist and medical staff	• Documentation of medication history by pharmacist **BEFORE** medical doctor's admission assessment
	• Emergency depart encounters (except admission to short stay units)
	• Same day encounters
	• Hospital transfers

Table 2. Patient demographics

Characteristics	Mean	Median	Range*	Standard Deviation
Age (years)	69	72	17 – 99	19
Length of Stay (days)	8.5	5.1	1.0 – 83	13
Time from admission to medical medication completion (hours)	7.1	5.9	(-) 6.9 – 22	5.2
Time from admission to pharmacist medication history completion (hours)	41	31	5.5 – 147	28

**Negative value indicates admission assessment was undertaken prior to admitting to an inpatient ward (i.e., assessment performed in emergency department)*

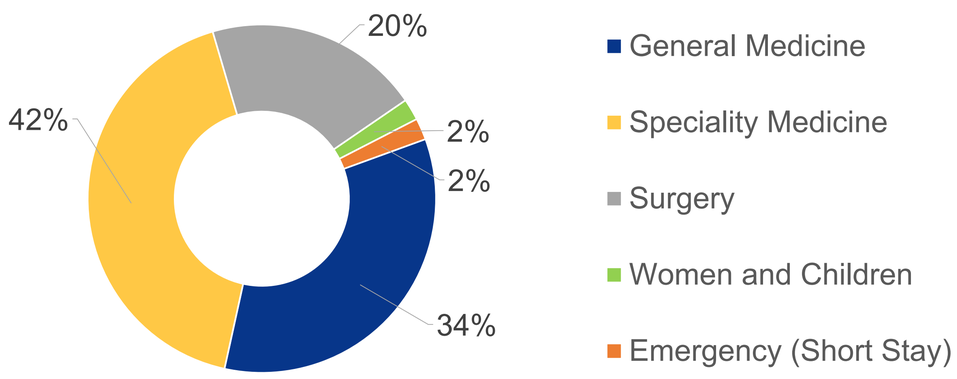

Figure 1. Patient demographics (by clinical speciality)

RESULTS

Of the 50 medical-documented medication histories reviewed, most contained one or more errors (**Table 2, Figure 1 and 2**). In total, 271 medication errors were identified (**Figure 3**). Over-the-counter medication accounted for 40% of errors while high-risk medication accounted for 8.9%.

94% of medical-documented medication histories had **ONE** or **MORE** errors

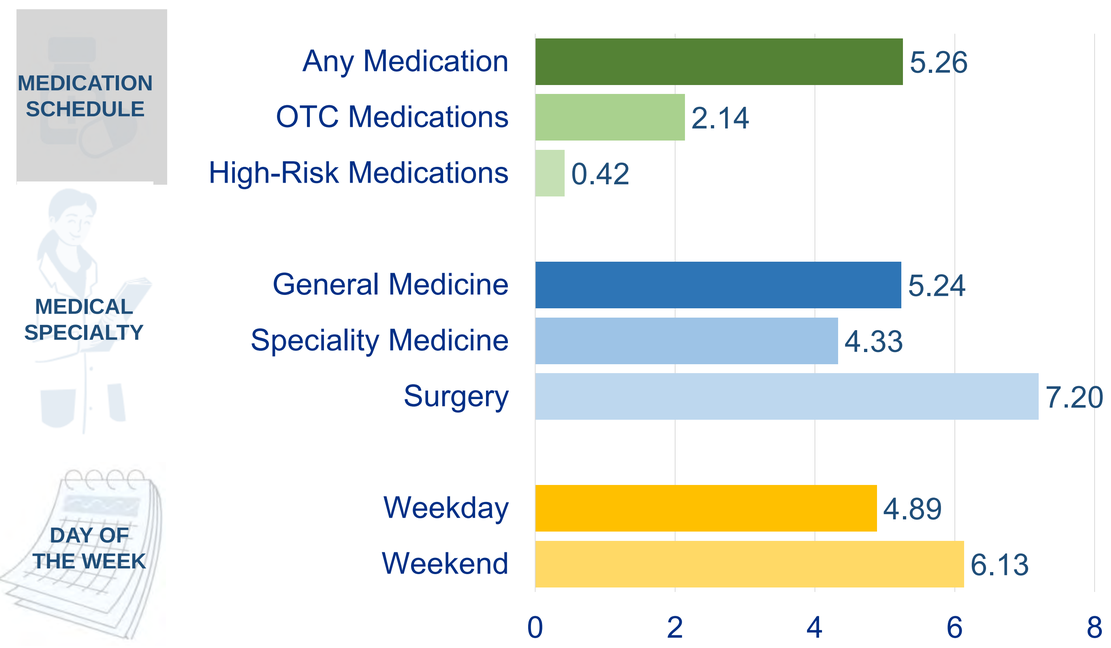

Figure 2. Medication errors (mean per admission) by medication schedule, medical specialty, and day of the week

DISCUSSION

This study found that medical-documented medication histories commonly contain errors. Although limited to a small sample, the scale of errors identified is concerning as medication issues frequently contribute to hospital admissions.[2-3] Relying on inaccurate histories may result in delayed recognition and resolution of medication-related issues.

Ensuring pharmacists are available early in the admission may be a potential method of reducing medication documentation errors.

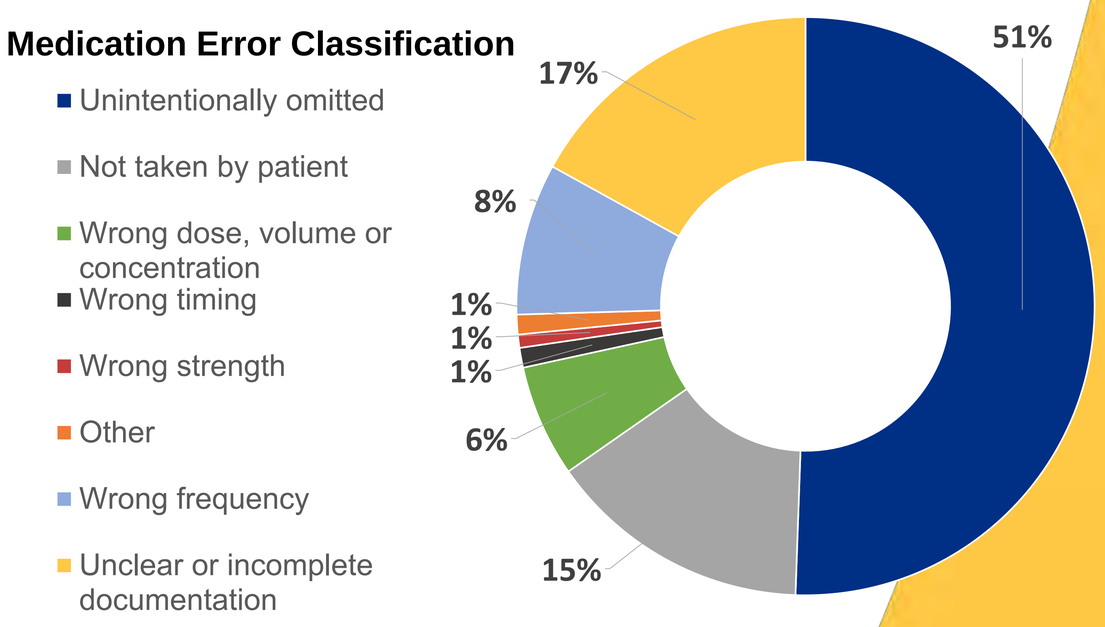

Figure 3: Medication errors by error classification

CONCLUSION

Medication errors in medical-documented histories are common. This finding supports the need for consistent pharmacist involvement early in the patient's admission.

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