Validating the 'Student-Obtained Medication Histories' Program: The accuracy of pharmacy students compared to pharmacists

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WHO FLAGSHIP AREA

- Transitions of care

INTRODUCTION

- Medication reconciliation is an effective strategy to prevent medication deviations upon hospital admission (1) and requires obtaining a patients' best possible mediation history (BPMH) (3).
- Obtaining a BPMH is time-consuming and pharmacy students may assist in this task (3).

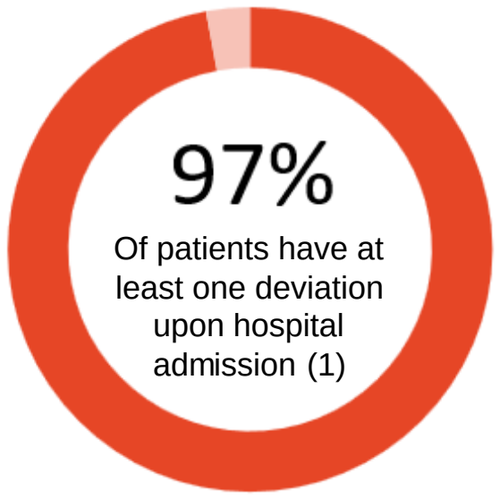
AIM

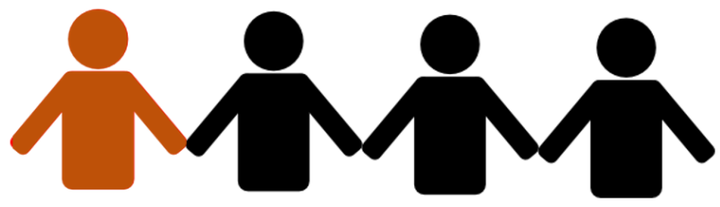
- Primary objective was to evaluate the proportion of patients who have an accurate BPMH from the pharmacy student-obtained BPMH compared to the pharmacist-obtained BPMH.
- Secondary objective was to evaluate the total, type, and severity of the medication discrepancies; and the factors that affected the number of medication discrepancies with a high -risk of harm.

METHODS

- Twelve students were trained to obtain BPMHs in 2 tertiary hospitals and worked in pairs.
- Each student pair completed one 8-hour shift each week for 8 weeks. Students obtained BPMHs for patients taking 5 or more medicines. A pharmacist then independently obtained and checked the student BPMH from the same patient for accuracy. Deviations were determined between student-obtained and pharmacist-obtained BMPH.

An accurate BPMH was defined as only having no-or-low risk medication deviations





Consequently, 1 in 4 patients have a **preventable** medication-related adverse event (2)

RESULTS

Table 1. Mixed effects logistic regression clustered for student pairs to predict BPMH accuracy

	Odds Ratio (95% CI)	P-VALUE
Type of 'Best Possible Medication History' sources		
One source type	Reference	Reference
Two source types	1.65 (1.09 – 2.50)	0.02
Student degree type		
Bachelor of Pharmacy	Reference	Reference
Master of Pharmacy	2.31 (0.06 – 86.83)	0.65
Community pharmacy experience		
No	Reference	Reference
Yes	0.30 (0.04 – 2.62)	0.27
Student had previous experience taking a BPMH		
No	Reference	Reference
Yes	0.71 (0.08 – 6.45)	0.76
Hospital site		
Site A	Reference	Reference
Site B	0.23 (0.05 – 1.02)	0.05
Charlson Comorbidity Index score	0.93 (0.76 – 1.15)	0.51
Patient age	1.04 (1.03 – 1.06)	<0.001
Total number of medicines	0.85 (0.75 – 0.97)	0.02

71.4% of patients had an accurate BPMH (n=65/91)

95.6% of medicines were deemed accurate (n=1118/1170)

51.2% of deviation types were omission (n=198/387)

CONCLUSION

Student-obtained BPMHs were **more likely to be accurate** for patients who were **older, had fewer medications,** and if students **used two source types** (administration and supplier) to obtain the BPMH

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