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Evaluation of post-discharge pharmacist-only review in a General Medicine ambulatory care setting

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Background

General Medicine Unit (GMU) patients commonly have complex treatment regimens, with multiple medication changes often occurring during a hospital inpatient admission. The transition period from hospital to home is often complicated, with a high risk of medication mismanagement. There is evidence that a substantial number of patients make medication errors after hospital discharge, despite receiving medication education. (1)

Pharmacist involvement at different stages throughout any hospital visit (including during admission and post-discharge) can lead to improved outcomes, such as reduced hospital utilisation and improved medication management. (2,3)

The Alfred Health GMU ambulatory care service was redesigned in 2015, including changes to pharmacist roles, with a new emphasis on follow-up of patients in the immediate period post-discharge, including capability for independent pharmacist review (Table 1).

Table 1. Summary of GMU ambulatory care redesign

	Old clinic structure	Redesigned clinic
Post-discharge follow-up	<50% patients	All (except palliative)
Pharmacist present	No	Independent pharmacist review
Reviewed by	Any clinic doctor	Same doctor&/or pharmacist from inpatient admission
Review method	Face-to-face	Face-to-face or telephone

Aims

To determine whether independent pharmacists, post-discharge review of general medicine patients is feasible, effective and safe.

Methods

A retrospective cohort study was conducted between April and September 2016 within the General Medicine Unit (GMU) at Alfred Health. Patients referred for review in the GMU post-discharge clinic were included. Reviews were undertaken via telephone or face-to-face appointment, with a pharmacist-only, a doctor-only or pharmacist plus doctor, according to each patient's follow-up requirements. Patients reviewed by a pharmacist-only could be escalated to a medical review if required. Pharmacist activity, frequency of escalation, and patient outcomes, including 30-day readmission rates, were evaluated.

Post-discharge patient review

Of 861 patients referred for post-discharge review, 123 (14.3%) were referred for pharmacist-only review and 738 (85.7%) referred for doctor-only or partnered review (Figure 1). Excluding failures to attend, 89 of 586 attending patients (15.2%) underwent pharmacist-only review.

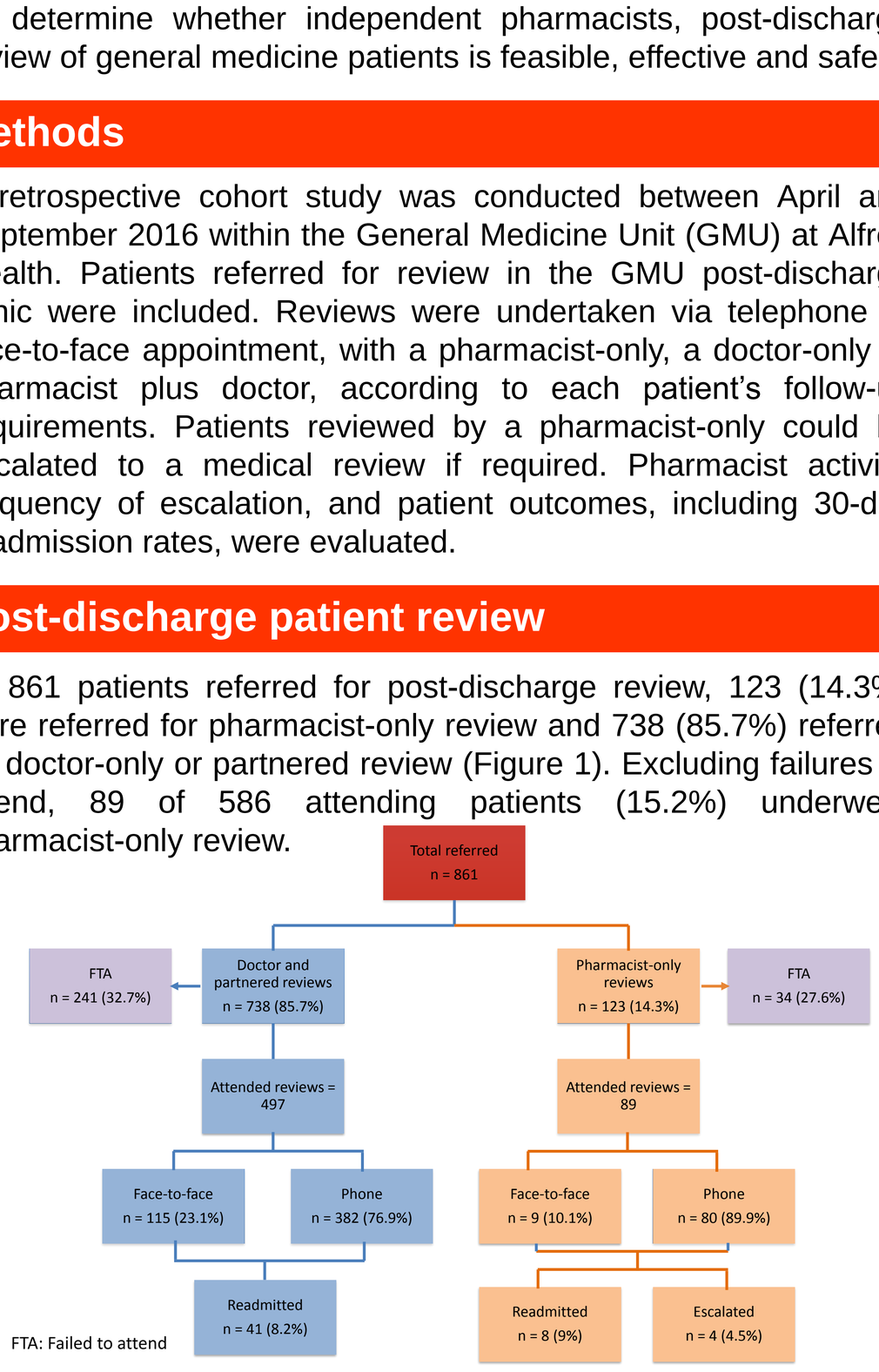

Figure 1. Participant flow chart (time period: 04/04/16 – 01/09/16)

Results

Of the 89 patients reviewed independently by a pharmacist, 85 (95.5%, 95%CI 91.2-99.8%) were successfully reviewed without unplanned escalation to medical review. Four patients (4.5%, 95%CI 0.2-8.8%) required escalation, three due to unanticipated clinical symptoms and one for a medication-related problem. A greater proportion of patients required escalation in the face-to-face group, compared with the telephone group (3/9 vs 1/80; p=0.003).

Table 2. Summary of patients requiring escalation to medical review, n (%)

	Telephone call (n=80)	Face-to-face (n=9)	P-value
Escalated to medical review	1 (1.3)	3 (33.3)	0.003
Successfully reviewed independently	79 (98.8)	6 (66.7)	

There was no significant difference in 30-day hospital readmission rates between patients reviewed independently by a pharmacist and all other patients. In addition, an interdisciplinary clinical panel unanimously agreed that none of the readmissions of patients reviewed independently by a pharmacist were considered to be related to any omission of action during the pharmacist review.

Table 3. 30-day hospital readmissions, n (%)

	Pharmacist-only (n=98)	All other reviews (n=497)	p-value
30-day hospital readmission	8 (9%)	41 (8.2%)	0.84

Discussion

Pharmacists undertook independent post-discharge reviews of approximately 15% of the total cohort of patients reviewed in the GMU clinic during the study period. Of these, 96% of patients were reviewed without requiring additional unplanned medical review at the time of the appointment. This demonstrates that the innovative role of GMU pharmacists in the post-discharge clinic has been a feasible and successful addition to the service. Independent pharmacist reviews may allow more patients to be seen in a timely manner after hospital discharge, and help ensure patients receive the most appropriate follow-up according to their specific needs.

The independent pharmacist reviews were considered safe, as demonstrated by the readmission rate of those reviewed by a pharmacist-only being similar to the rate of other patients.

Conclusion

Pharmacist-only post-discharge review of GMU patients is feasible, effective and safe. In this novel service model, pharmacists reviewed 15% of all patients, with only a minority of these patients (4.5%) requiring escalation to an unplanned medical review. Thirty-day readmission rates did not differ between the groups.

This study provides evidence that pharmacists working in a GMU outpatient service could potentially optimise workforce utilisation and improve the quality of clinical care. The service has now been a standard of care at Alfred Health since April 2016.

References

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