

Observational Audit of Pharmacist Clinical Intervention and Continuum of care activities at Nambour General Hospital.

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INTRODUCTION & AIMS

Medication errors are potentially harmful to patients and are common on hospital admission.[1, 4] Studies have found that the most common intervention by a pharmacist on admission is alerting prescribers to the unintentional omission of drugs [2, 4, 6-8]. Dean et al found that pharmacists identify and rectify a prescribing error in 1.5% of all medication orders written.[7] Bracey suggests that pharmacists complete significantly more accurate medication histories than doctors.[8]. Continuity of care processes between hospitals and primary care providers increase safe and effective use of medicines, reduces readmission rates and reduces burden on health care. Al-Rashed found the combination of patient medication counselling and discharge medication records sent to general practitioners (GPs) benefited patients' health care. Increased patient medication knowledge, higher compliance, less frequent GP visits, and fewer hospital admissions were observed.[3] The Australian Pharmaceutical Advisory Council (APAC) reported that research indicated that 12% of patients had an error in their discharge prescription and 9% of patients were discharged from hospital with insufficient medicine supplies to enable continuity of therapy.[5]

The aims of this study were to:

- Observe the services provided to patients by the ward pharmacist in a two week observational period with regards to the continuity of care,
- Observe & record time spent engaged in pharmacist activities relating to continuity of care and,
- Determine the nature and frequency of interventions made by ward pharmacists.

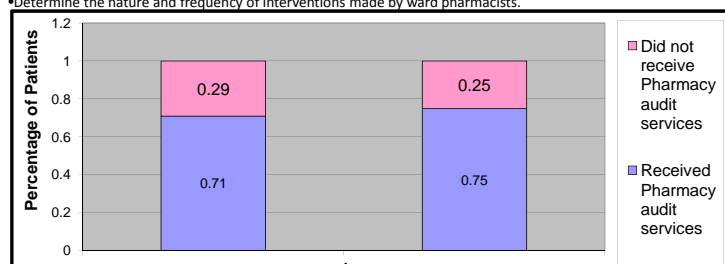


Figure 1 Comparison of patients receiving pharmacy services 2C and 2E during the audit period

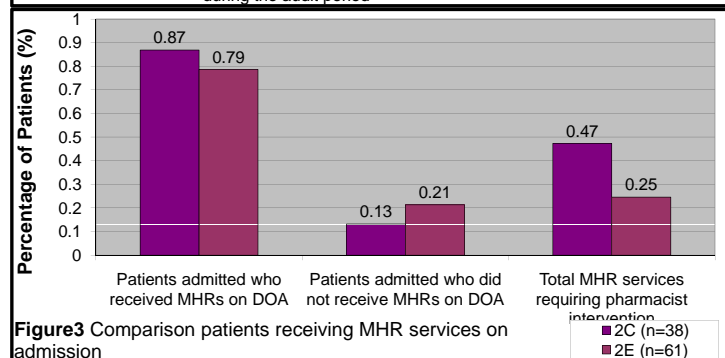


Figure 3 Comparison patients receiving MHR services on admission

MATERIALS & METHOD

- A Safe Medication Practices Unit (SMPU) developed audit tool was used to record and time a range of pharmacist activities on wards 2E and 2C at Nambour General Hospital over a 2 week period in March 2009 (Only on weekdays). These wards were 30 bed general medical wards.
- Previous to this a two day dry-run was conducted under supervision of the developer, to ensure consistency of recorded data.
- Data was collected on 2E and 2C every weekday for 2 weeks whenever the ward pharmacist was undertaking activities for respective ward patients.
- Recorded activities included taking medication histories, interventions, discharge services and counselling etc.
- In addition to this, the nature of the intervention was also recorded and classified based on a system adapted from Cipolle, Strand and Morley[9.]

Excluded from analysis:

Patients that did not have discharge/admission/cognitive services completed during the audit period

Only patients who received admission and discharge services were included in the study

Patient chart checking activities: If a patient's only contact with the ward pharmacist was having their chart checked they were excluded (unless an intervention was made).

RESULTS

Overall, 71-75% of patients received ward pharmacist services (**Figure 1**). Between the wards, the majority (79-87%) (n=99) of patients had their medication history taken on admission (**Figure 3**). However, some patients (13-21%) did not have their medication history taken on admission. Of these medication histories taken, a majority (25-47%) required interventions. The most frequent type of intervention was the wrong dose or form of drug (34%) (**Figure 2**). Of the ninety-nine patients admitted during the two week period, forty did not receive admission services (See full report). The majority of the ward pharmacists time is spent on preparing patients for discharge followed closely by doing medication histories and making interventions (**Figure 4**).

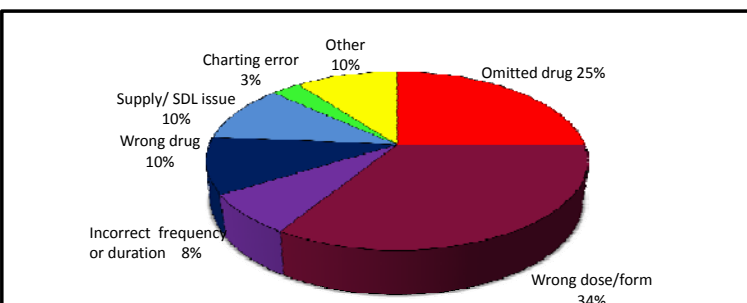


Figure 2. Frequency and Nature of Interventions

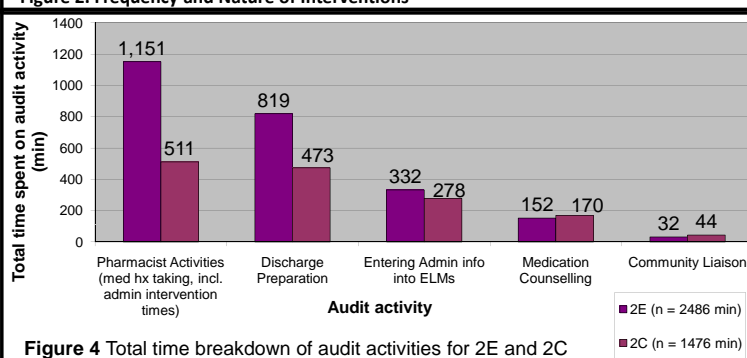


Figure 4 Total time breakdown of audit activities for 2E and 2C

DISCUSSION

There were a number of factors affecting the results of the study. The inability to record cognitive processes or multi-tasking, which commonly occurs, affected the timing of activities. The different interpretation of time to dispense lead to a discrepancy in the median dispensing time. The outbreak of rota virus on ward 2C affected patient movement and sample size, but is thought to be reflective of real life events. The ward pharmacists underwent a review process on the 9th and 10th day of the study leading to an increase in the amount of time taken to complete activities. Overall, roughly 25% of patients did not receive pharmacy services (Figure 1). Given that 25-47% of patients who had medication histories taken required interventions (Figure 3), there is potential for improvement by streamlining pharmacy services. More patient interventions were made on 2C in comparison to 2E and may be related to the lower patient turnover. The majority of interventions made were related to wrong drug or dosage form (34%), followed closely by omission of a patient's regular prescribed medication. This is consistent with current literature [2, 4, 6-8]. Further study over a greater period of time would provide more conclusive results as to whether notification of discharge would allow better time management of pharmacist activities.

CONCLUSION & RECOMMENDATIONS

By giving 24 hours notice of a patients discharge, pharmacists will have more time to prepare and allocate time to other ward activities. Addition of a satellite pharmacy on level 2 of the hospital would improve workflow.

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