

# Getting Medicines Right the First Time

## A Clinical Pharmacist in ED at Lismore Base Hospital



**Margaret Hewetson, Kerry Lloyd**  
Pharmacy Department, Lismore Base Hospital

### Introduction

Emergency Departments (ED) have the highest rate of preventable adverse drug events in hospitals.

Cobaugh and Schneider (2005) found that 10-97% of medication regimens written up by ED doctors were inaccurate. Tam et al (2005) found 31% of patients admitted to ED were found to have potentially serious drug interactions.

Pharmacy intervention in the ED at Lismore Base Hospital (LBH) identified that 39% of high risk patients had at least one error on the medication list written up by the ED doctor.

As a result of this project, Pharmacists now see high risk patients in ED, continue to review their medicines during their hospital journey and ensure patients understand how to take their medicines at discharge.

### Aim

To ensure the accuracy of charted medications for patients over 65 years on four or more medications admitted through the ED at LBH.

### Method

The project team was headed by the General Manager, and included the Medical Director of ED, the NUM of ED, Director of Pharmacy and the pharmacy graduate. This support from Executive level allowed timely decision making and implementation of change strategies.

Following review of the literature and the results of the snapshot audit, the project team identified that placement of pharmacy resources in the ED was the most likely successful strategy. The team met to agree project details and to monitor progress and outcomes.

The graduate pharmacist was located in the ED and integrated into the ED team with the support of the Medical Director and NUM of ED.

Patients who were over 65 and on four or more medicines were the target group for the project.

Information about the patients' medication was obtained from the GP, the community pharmacist, the patient and carer as well as viewing the medicines brought in by the ambulance driver.

### Method *continued...*

The pharmacist wrote the correct list of medications on the front of the medication chart and details about missing medicines were communicated to the doctor verbally or via the patient's notes.

Information about the patient's compliance problems, drug interactions or medication related reasons for admission was also provided to the doctor to facilitate diagnosis and treatment.

### Results

One hundred and seventy six patients were reviewed by the pharmacy graduate during the four month project. It took 101 graduate pharmacist hours to complete the reviews with an average time of 34 minutes per patient.

The average age of patients reviewed was 76 years.

Sixty nine patients (68%) had at least one omitted medication on the medication list written up by the ED doctor.

The total number of missed medications for these patients was 152 with an average of 2.2 medications per patient.

Figure 1. Describes the types and frequency of omitted medication on the medication list written up in the ED. The major groups of omitted medications were: oral analgesics 14%, cardiovascular 13%, complementary therapies 13%, warfarin and antiplatelet medication 8%, respiratory medications 8%, eye medications 7%, antibiotics 5%, psychotropics 5%, gastrointestinal medications 5%, antiemetics 5%, angina medication 5% and miscellaneous 5%.

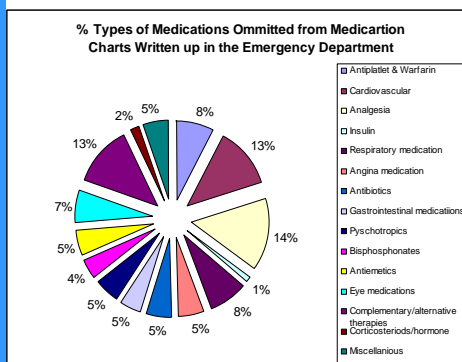


Figure 1: Omitted Medications from Medication Charts in Lismore Emergency Department

### Results *continued...*

When potential Severity Assessment Code (SAC) ratings were allocated to the 69 occasions where one or more medications were missed, 53 (77%) were rated SAC 2 and 16 (23%) were rated SAC 3.

These potentially adverse patient outcomes could have caused the older patient to lose some functionality, making increased length of stay, increased care and an increased number of investigations required. All have higher cost implications for the health service.

Increasing the length of stay also increases the chance that it will be more difficult for them to manage their own care in the community.

### Conclusion

Medication and associated errors are ubiquitous to all health care settings.

Ensuring accuracy and safety of medications at the start of the patient hospital journey is a pivotal strategy to reduce these errors.

Pharmacist-conducted medication histories have been reported to save an average of \$7million per year per hospital and reduce mortality rates by 128 deaths per year per hospital, compared with hospitals that do not use this service (Nester and La Donna 2002)

The improved clinical care of patients and financial savings would fund further pharmacist positions.

The improved job satisfaction and the experience of being part of the medical team would improve retention of clinical pharmacists in the hospital service, making extensions of this service feasible (Muir and Bortoletto 2007).

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