

Reducing Medication Risks As Patients Move Between Hospital & Community

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Research by our group has sought to develop strategies to reduce unintentional discrepancies in prescribing post-discharge and hence drug-related problems and drug-related re-admissions.

We demonstrated a significant reduction in discrepancies between supplies of hospital prescribed drugs and those received in the community, following hospital discharge. General medical patients were recruited into intervention and comparison groups. Those recruited into the intervention group were given a copy of the drugs prescribed at discharge. These patients were asked to give the letter to their regular community pharmacist when they went to obtain their prescribed drugs, following hospital discharge, whilst a comparison group returned home without a letter for their community pharmacist. A total of 501 patients were followed up during the trial: 264 in the intervention group and 237 in the comparison group. A total of 2736 prescribed supplies was observed. The number of unintentional discrepancies observed in drug supplies of the intervention group (32.2%, 454/1408) was lower than in the comparison group (52.7%, 700/1328), (Chi-squared 117.38, $p < 0.001$). In addition, the number of those judged to have a definite adverse effect occurred less in the intervention group (1.6%, 23/1408) than in the comparison group (3.1%, 41/1328), (Chi-squared 6.32, $p < 0.01$). As a result of discharging 19 patients with this information to take to their community pharmacist, an unintentional discrepancy having a definite adverse effect was prevented. Providing community pharmacists with a copy of the discharge summary is an effective method of reducing unintentional discrepancies, with measurable patient benefit.

We have further developed a standardised method of documenting drug-related information, suitable for transfer across the health care interface. The effect of this drug-related information transfer was tested on defined patient outcomes: re-admissions to hospital; utilisation of primary care services and drug-related problems. A multi-method approach was undertaken to inform the study design and to ensure involvement and ownership by the participating practitioners. A randomised-controlled trial was conducted where general medical patients were allocated to the trial cohort and received a pharmaceutical care plan at discharge for delivery to their GP and community pharmacist. Patients in the control cohort received the usual discharge care. All patients were followed-up at 30 and 60 days post-discharge to establish the number of GP/practice nurse and community pharmacy visit; re-admissions to hospital; and patient reported drug-related problems post-discharge.

401 patients were recruited (165 trial, 236 control) We found that patients taking more meds were more at risk of changes. Drug related problems were most common in Cardiac and Respiratory diagnoses. Patients reporting a drug related problem were more likely to visit GP or CP following discharge. Patients with 4 or more admissions in the previous 12 months were more likely to have a respiratory diagnosis, to be prescribed more medicines at discharge (median of 8) and were less likely to have had a medicine initiated.

There was a trend towards increased time to re-admission in the trial cohort. However, the paper-based communication was able to delay readmission by communicating any problems for resolutions post discharge but re-admission is not prevented due to the high level of morbidity in this patient group. This is an important finding especially in this population where a high percentage (20%) of patients were re-admitted within the study period (60 days).

The RISK factors for readmission to hospital are the number of drugs; number of changes to drugs and the patient's age. All are DRUG focussed, so provide evidence for pharmaceutical input. All patients should be discharged with standard information for their community pharmacist, then stratified by risk factors and receive appropriate add-on care. This standardised documentation provides a method of documenting the pharmacist's contribution to patient care which is currently not routinely undertaken, but which is vital for demonstrating effective medicines management across the health care interface.