Evaluation of a Pharmacist-led Discharge Service

Ryan F[1,2], McCool S[1], Byrne S[2]
Pharmacy Dept., St. Luke's Hospital, Kilkenny[1], School of Pharmacy, University College Cork[2]

Introduction:

Medication errors commonly occur at transitions of a patients care, however, evidence suggests that medication errors are more common on discharge.[1] A study undertaken in Ireland in 2010 found that medication non-reconciliation occurred in 50% of patients' discharge documentation.[2] Evidence from the literature has shown that pharmacist intervention has a positive impact at the transition of a patients' care at discharge through a variety of interventions. Medication Reconciliation (MR) at admission and discharge from the hospital setting has been found to reduce the risk to patient safety and improve communication between care settings.[3,4]

Aims and objectives:

Aims:

Evaluate a pharmacist led discharge service via the measurement of:

- The quality of information provided at discharge.
- Acceptability of the service to all stakeholders.

Objectives:

- Assess if the discharge prescription for patients receiving the pharmacy led discharge service has a greater compliance with the HIQA National Standard for Patient discharge information than the patients receiving standard pharmacy service and no pharmacy service.[5]
- Evaluate stakeholders' satisfaction with the service.
- Assess the effectiveness and user acceptability of an electronic based medication reconciliation system versus a paper based system.

Methods:

Study A:

- The study took place in a 270-bed acute general hospital over a four month period involving seven inpatient wards.
- The intervention group (n=94) received MR on admission. The process on discharge involved both preparation of the discharge prescription and clarification of any outstanding issues.
- The control wards consisted of two groups; one which received no pharmacy service (n=100), and the other received MR on admission only (n=100).
- The discharge prescriptions of the three groups were audited against the HIQA national standards for patient discharge summary.[5]

Study B:

- Satisfaction surveys were undertaken of the stakeholders involved in this project i.e. GPs, Community Pharmacists, Hospital nurses and doctors.

Study C:

- An electronic MR system (eClinical) was introduced to generate a MR and a discharge prescription.
- A survey was developed for community pharmacists and GP to determine their satisfaction with the electronically generated prescription.
- The electronically generated prescriptions were also audited against the HIQA standards (n=10).[5] Data was recorded and analysed using Microsoft Excel®.

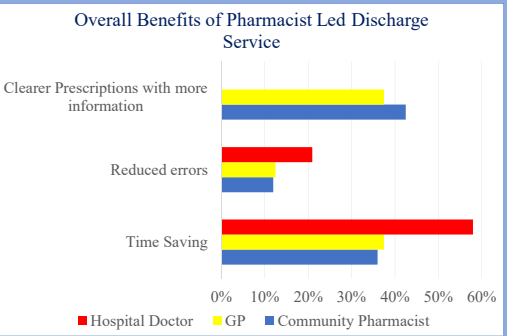
Results:

Compliance of Discharge Prescriptions with the HIQA National Standard of Patient Discharge Summary Information[5]

	Intervention Group	Medication Reconciliation on Admission Only	No Pharmacy Service
Allergy status recorded	95.7%	9%	3%
Reason for new medication prescribed	88.5%	29.2%	31.5%
Reason for medication changes	85.1%	37.2%	24%
Reason for medication stopped	93.8%	30.3%	40%
All medication on prescription correct for dispensing	85.1%	49.5%	64%
Antibiotic duration documented	100%	96.9%	95%
Prescription written generically	85.1%	39%	27%
Prescription meeting the legal requirements	92.6%	75%	81%
All items on the prescription legible	100%	94%	97%
Prescription contains ALL of a patient's medications	99%	85%	71%

Compliance of eClinical Discharge Prescriptions with the HIQA National Standard of Patient Discharge Summary Information[5]

Allergy status recorded	90%
Reason for new medication prescribed	100%
Reason for medication changes	87.5%
Reason for medication stopped	90%
All medication on prescription correct for dispensing	100%
Antibiotic duration documented	100%
Prescription written generically	100%
Prescription meeting the legal requirements	70%
All items on the prescription legible	100%



Results of Satisfaction Surveys:

- 94% of community pharmacists and 100% of GPs and hospital doctors stated the pharmacist led discharge service has improved the quality of prescriptions.
- Pharmacist led discharge prescriptions were received by 61.5% of GPs and 87.5% of these were received prior to patient presentation.
- Pharmacist prepared discharge prescription were received by 66% of community pharmacies surveyed and 75.8% of these were received prior to patient presentation.
- Hospital doctors reported preparing the discharge prescription on the day of patient discharge, where 64% reported spending 6 to 10 minutes preparing the prescription and the majority of doctors never send the prescription to primary care.
- Just 8% of hospital doctors reported that prescriptions never need clarification from primary care, while 60% reported spending greater than five minutes resolving queries per prescription.
- Suggestions for improvement of the service include the extension of the service to more patients and the use of ePrescriptions.
- The most common issues with discharge prescriptions prepared by doctors were, illegible prescriptions, incorrect dose, no/lack of information on new or discontinued drugs and issues with controlled drug prescriptions.

Discussion:

- This study demonstrates the positive impact that pharmacist intervention has on the accuracy and completion of discharge prescriptions.
- Complete and accurate information in relation to a patient's discharge medication is of paramount importance in the efficient, accurate and safe dispensing of the correct mediations.
- The reasons for new medications prescribed, medication changes and medication stopped were all significantly higher in the intervention group due to pharmacist involvement in the discharge prescription, as there was no significant difference between the control groups.
- This study clearly shows that pharmacist involvement greatly reduces ambiguity associated with incomplete drug information, therefore reducing the risk to patients and facilitating the accurate and efficient transfer of information.
- No or lack of information on new or discontinued medications was shown to be a common issue on discharge prescriptions prepared by doctors as found in the surveys, which correlates with the results shown in the audit of compliance of Discharge Prescriptions with HIQA standards.[5]
- The most commonly reported benefit was clearer prescriptions containing more information. Other key benefits were time saving, reduced phone calls, reduced errors and improved patient safety.

Conclusion:

- Pharmacist involvement in the preparation of a patient's discharge prescription improves compliance with the HIQA National Standards for Patient Discharge Information.[5]
- Discharge prescriptions prepared by the pharmacists were shown to have fewer discrepancies than discharge prescriptions prepared by hospital doctors.
- Discharge prescriptions prepared via eClinical scored favourably with the HIQA Standards for Patient Discharge Summary Information.[5]
- Feedback on the use of ePrescriptions was very positive from GPs and community pharmacists and will hopefully lead to the extension of this service.
- Suggestions for future improvements include extension of the service to a wider cohort of patients.

References:

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