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Impact of Clinical Pharmacists in Discharge Medication Reconciliation

	
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ABSTRACT

Medication reconciliation is a process of comparing the medications in order to resolve discrepancies or potential problems. The goals of medication reconciliation are to obtain and maintain accurate and complete medication information for a patient and use the information within and across the continuum of care to ensure safe and effective medication use. We, Pharm D students audited and re-audited the discharge prescription in accordance with the discharge summary and found out an improvement in compliance.



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INTRODUCTION

Medication errors are common in discharge summaries. Transcription errors are generally associated with manual writing of medications in the drug chart and in the summaries [1]. Some errors may cause potential harm to the patients. A new US study points out that more than half of cardiovascular patients made mistakes in taking their medications or misunderstand instructions given to them after being discharged from hospital [1]. Medication reconciliation is needed to prevent the errors in discharge summaries. Medication reconciliation is widely recognized and mandated nationally and internationally as a tool for the prevention of medication misuse and consequent patient harm at points of transfer of care [2]. The term medication reconciliation is defined by the Joint Commission as a process of comparing the medications “in order to resolve discrepancies or potential problems” [3]. The goals of medication reconciliation is to obtain and maintain accurate and complete medication information for a patient and use the information within and across the continuum of care to ensure safe and effective medication use^[4]. It is a laborious and time consuming job for clinical pharmacist [4]. Clinical pharmacist’s involvement in medication reconciliation is effective in identifying and rectifying medication errors [4]. For accomplishing the cent percentage compliance after discharge the clinical pharmacist has to take ownership of the process to monitor the medication reconciliation [5]. There is also an evidence that improved patient outcomes result when medication reconciliation forms a part of inpatient care during discharge [2]. The study focused on contribution of clinical pharmacists at the time of patient discharge while the patient was still in the hospital.

MATERIALS AND METHODS

It was a prospective observational pilot study to check the compliance with prescription before and after the reconciliation. The study was conducted in two recurrent months. We took a sample size of 60 and 70 cases in first and second month respectively. The details of our survey were audited and presented in the Cardiothoracic Unit monthly meeting.

RESULTS AND DISCUSSION

It was a pilot study to check the compliance with prescription before and after the reconciliation. The lack of information on discharge prescription about medications that discontinued or prescribed with changes during hospital stay was the main source of discrepancies [6]. These discrepancies may end with creating confusion among health care

professionals during their next admission while cross checking the prescription with the discharge summaries [6].

We, Pharm D students discussed each variance with the attending physician immediately upon discovery to determine if the variance was intended or unintended. When patients are admitted or discharged from a hospital, treating physicians may intentionally make some change to patient pre-admission medication regimens. Unintended variations were considered to be medication errors. Also appropriately verified the new medications started in the hospital, stopped medication, dose adjusted medication and new medication on hospital discharge.

The study demonstrates the role of clinical pharmacists in providing the compliance in matching the discharge prescription with discharge summary in cardiothoracic unit in a private hospital. We found out reasons for non-compliance between discharge prescription and discharge summary and resolved it. The discrepancy involved includes wrong dosage, wrong frequency, omission and spelling mistakes.

The study was conducted in two recurrent months and the results in the second month showed a better result comparatively. In the first month, a total of 60 cases were analyzed. Out of which 48% showed non-compliance. The reason for non-compliance were wrong dosage, wrong drug spelling and omission. 22% of prescription showed wrong dosage which includes double dosing, under dosing etc. Likewise, 9% were written in wrong spelling. The omission category includes the relation to food and duration of treatment. The relation to food embraces whether the drug should be taken before or after food. It was mentioned in some prescriptions but not in the correlated discharge summaries, which contributes 17% disparity which may lead to decreased effectiveness. For example, drugs like antacids, hypothyroid agents etc. should be taken before food. If not, it may result in decreased therapeutic action of the drugs. Similarly, in 6% of cases the duration of treatment were pointed out in discharge prescription but not in correlated discharge summaries.

The details of our survey were audited and presented in the Cardiothoracic Unit monthly meeting and we pointed out the root cause for these errors. It includes involvement of multiple staffs, Doctor/Physician Assistant does not cross verify discharge summary with discharge prescription and last minute changes in discharge prescriptions especially, in case of Diabetes Mellitus patients. We suggested the team to document the discharge prescription along with the diet in progress notes. Drug details should be written in capitals which

comprise various informations like drug name, dose, frequency and duration of treatment. In addition, before getting discharged from the hospital, the prescription and discharge summary should be double cross verified by both the junior medical officers and physician assistants. After the verification, they should undersign in both the prescription and discharge summary, before it has been handover to the respective patients.

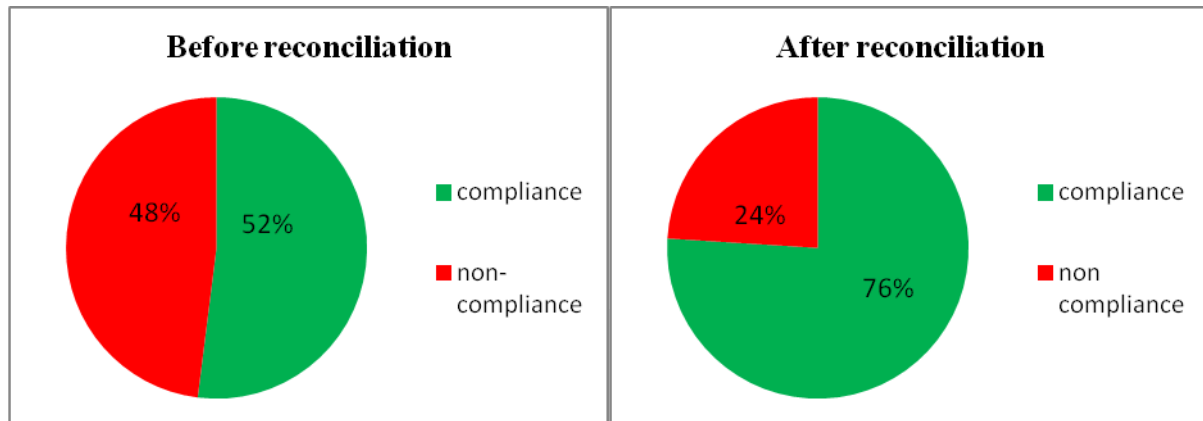


Figure 1 shows the increase in compliance of discharge summary with prescription before and after medication reconciliation process.

After a month, we re-audited 70 cases, out of which 76% showed compliance. The reasons for discrepancy were similar to the previous study but in lesser number. 3% of cases showed wrong dosage whereas 4% of prescription showed wrong frequency & also 4.5% were wrongly written in prescription. Out of the 12.5% of omission errors, drugs were omitted in one discharge summary, time relation to food and duration of treatment was also not mentioned in one prescription.

The re-audit report showed 24% increase in compliance of discharge prescription with discharge summary.

CONCLUSION

Clinical pharmacists contribute a key role in medication reconciliation process. There was 24% increase in compliance of discharge prescription with discharge summary within one month. Clinical pharmacist's responsibility in reconciliation process reduces medication errors and support safe medication use. But there is a need for more studies to reveal the role of clinical pharmacist in medication reconciliation process. Involving clinical pharmacists in hospital care, medication reconciliation and the planning of communication around discharge medication can affect medications discrepancies in the outpatient medication records.

Improving communication between physicians and clinical pharmacist can play a role in identifying medication discrepancies. Hospital should improve the communication of medication changes that occur during hospitalization with the patient's primary care physician and clinical pharmacist. Continuing efforts may require to having a long lasting impact.

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