Medication Reconciliation Upon Admission from the Emergency Department

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INTRODUCTION

The Joint Commission (TJC) requires that hospital organizations "maintain and communicate accurate patient and resident medication information" (National Patient Safety Goal 03.06.01). Medication reconciliation is the process in which a clinician compares the medications a patient should be using (and is actually using) to the new medications that are ordered for the patient and resolves any discrepancies. The comparison addresses duplications, omissions, interactions, and the need to continue current medications. The implementation of medication reconciliation continues to be a complex process and obtaining medication information prior to admission (name, dose, route, frequency, duration, indication) continues to be challenging.

Inaccurate/incomplete medication histories upon admission have been shown to contribute to medication errors throughout hospitalization and upon discharge.[1] The Agency for Healthcare Research and Quality (AHRQ) has estimated that 2.5% of medications are potentially harmful to a patient during hospitalization at a cost of $4,800 per harmful medication error. With the over 9,000 admissions from the Emergency Department in FY17, these potential harmful medication errors pose a significant potential cost impact to Baylor Scott and White Health Medical Center – Grapevine. This study was designed to evaluate and improve the medication reconciliation process at Baylor Scott and White Health Medical Center – Grapevine.

The objectives of this study were to:

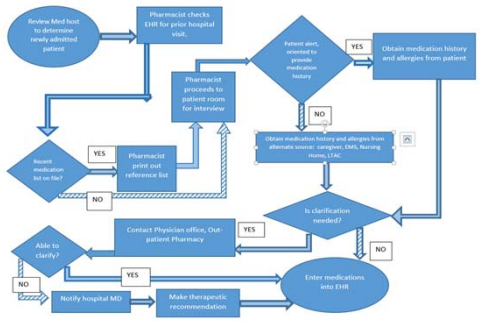
1. Describe the barriers to obtaining an accurate and complete medication history
2. Identify the defects in medication reconciliation that occur when obtaining a patient's medication history
3. Demonstrate the impact of a clinical pharmacist on completing an accurate and complete medication history

METHODS

Medication histories were obtained by clinical pharmacists for patients who admitted from the Emergency Department to the hospital between the hours of 1400 – 2230. The pharmacist inquired about what medications the patient was taking at home along with the dose, route and frequency. If further clarification was needed, the pharmacist contacted the patient's family, retail pharmacy and/or primary care physician office. The clinical pharmacist entered the medication history in the electronic health record and maintained a data spreadsheet of their interventions. For this study, the process of obtaining patients' medication histories was observed and data was extracted from the spreadsheet as well as the internal medication error reporting system (MIDAS).

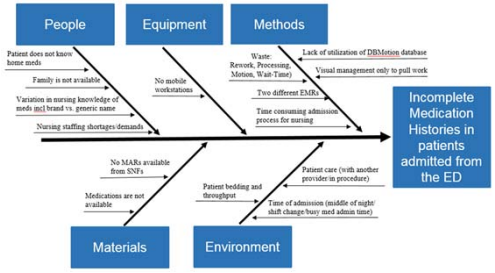
RESULTS

Figure 1: Process Map



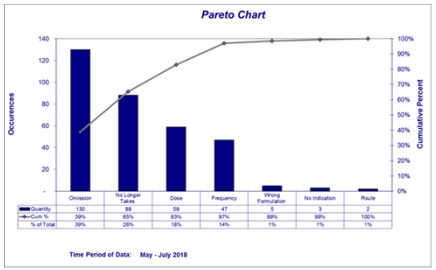
- Complexity of the medication reconciliation process

Figure 2: Ishikawa Diagram



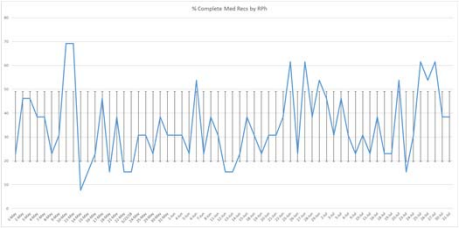
- Multiple barriers exist in obtaining an accurate and complete medication history

Figure 3: Types of Defects in Medication Reconciliation



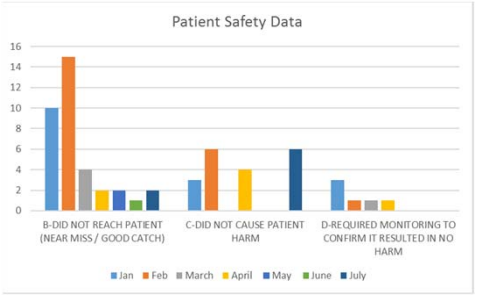
- Medication omission had the highest occurrence due to the pharmacists' more robust and detailed medication review

Figure 4: Clinical pharmacist completion of



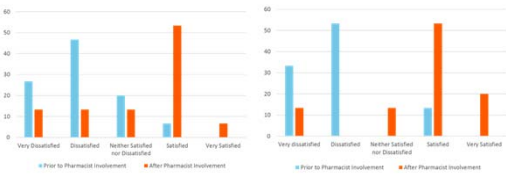
- Increased average completed medication reconciliations from 13% to **34.6%**
- Achieved **91%** completion of medication reconciliation within 2 hours per policy

Figure 5: Patient Safety Impact



- Because of the clinical pharmacist intervention, many of the medication defects found when obtaining a patient's medication history did not reach the patient and did not cause harm

Figure 6: Physician satisfaction with the timeliness and accuracy of the completion of medication reconciliation before and after clinical pharmacist involvement



- Physician had high and very high satisfaction with clinical pharmacist involvement in obtaining medication histories

Figure 7: Patient satisfaction with the clinical pharmacist asking about home medications

- Patients were very satisfied with the clinical pharmacist service

CONCLUSION

Medication reconciliation is an important safety issue. The complexity of the medication reconciliation process poses inherent risks and potential for negative patient outcomes associated with medication discrepancies. A clinical pharmacist has shown to have a positive impact on the timeliness, accuracy and completion of the medication history.

REFERENCES

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3. Kwan JL[1], Lo L, Sampson M, Shojania KG. Medication reconciliation during transitions of care as a patient safety strategy: a systematic review. Ann Intern Med. 2013 Mar 5;158(5 Pt 2):397-403. doi: 10.7326/0003-4819-158-5-201303051-00006.