February, 2007

The Nursing Research Committee
Methodist Hospitals

Volume 2, Issue 1

PEER Professionals Evolving Through Education and Research

Preventing Medication Errors Through Medication Reconciliation

The Medication Error Problem

You've probably heard the numbers, and they're high. For example, according to the Institute of Medicine's (IOM) 2007 estimate, each hospital patient is subject to one medication error each day. Think about the number of patients on your unit, multiply that by the number of patients in the hospital and you can see that the number of medication errors would be extremely high. Although not all medication errors lead to an adverse outcome, the incidence of preventable adverse outcomes resulting from medication errors is also very high. The Institute of Medicine estimated that 1.5 million preventable adverse drug events occur each year in this country. The negative impact on human life is very high as is the financial cost. For example, the IOM report (2007) estimated the annual financial cost of medication errors to be 3.5 billion dollars (2007).

The Institute for Healthcare Improvement (IHI)and the IOM have studied the medication error problem and identified many contributing factors. One factor that was found to contribute to 50 percent of all medication errors in the hospital setting is poor communication during transitions. These transitions include admission to the hospital, transfer from one unit to another, or upon discharge home (Barnsteinter, 2005)

Managing Transitions to Lower Medication Errors

The primary method to manage transitions that has been recommended by the IHI and required by the Joint Commission on Accreditation of Hospitals is medication reconciliation. The IHI defines medication reconciliation as "the process of creating the most accurate list possible of all medications a patient is taking —including drug name, dosage, frequency, and route — and comparing that list against the physician's admission transfer and/or discharge orders, with the goal of providing correct medications to the patient at all transition points within the hospital (IHI 2006, p. 5). Basically the medication reconciliation process involves 3 steps. These include:

- Verification — collecting the patient's medication history
- Clarification — ensuring the appropriateness of medications and doses, and
- Reconciliation — documenting any changes of the medication orders.

Medication Reconciliation Can Work

Recent studies have demonstrated that the implementation of medication reconciliation processes have been associated with lower medication error rates. The IHI (2006) published the findings of several articles that evaluated the effectiveness of medication reconciliation programs. The rate of medication errors decreased by 70% in one study and potential adverse drug events decreased by 80% in another. Similarly, in a review of the literature, Barnsteiner (2005) found

that through implementation of a medication reconciliation process, the accuracy of discharge orders increased dramatically from accuracy rates in the 40% range to the 80% to 90% range.

Remaining Challenges

Several challenges in the medication reconciliation process remain to be addressed. These include the need for further research. Although initial reports show positive effects, larger well-designed studies still need to be completed. Additionally, studies identifying best-practices for carrying out the process need to be completed.

Challenges in addition to the need for further evidence also exist. Healthcare professionals have voiced concerns regarding the amount of time required and have questioned who should be responsible for reconciling medications. However, the IHI has recognized that increased time spent up front reconciling medications can save time later by preventing rework and potential medication errors. In addition IHI recognizes that preventing medication errors is a team effort and that multiple healthcare disciplines are responsible for preventing medication errors and keeping patients safe.

The Methodist Hospital Medication Reconciliation Process

The Methodist Hospital's Medication Reconciliation policy was approved by the Board of Directors in October, 2006 and is available on the intranet at Policies/Manuals_Nursing_Inpatient Care_Medication as NSI-14. Following are a few of the main points of the policy.

The Policy

Reconciliation needs to occur upon admission, internal transfers, procedural transfers and upon discharge. It is viewed as a collaborative process between physicians, nursing, pharmacy, and the patient.

Admission

Nurses obtain medication histories upon patient arrival and/or admission to the Emergency Department, outpatient department or inpatient unit. Medication histories include medication, dose, route, frequency, reason for medication, time of last dose, allergies/reactions, and home pharmacy. The history is recorded on the Medication Reconciliation Form (7405-4) and reviewed by the physician. When patients are directly admitted to the inpatient unit, the physician determines whether each medication listed should be continued or discontinued. When patients are admitted to the inpatient unit from the Emergency Department, the nurse from the inpatient unit reviews the medication history obtained in the Emergency Department with the physician.

Transfer

When patients are transferred to another unit or are transferred for procedures, nurses from the sending unit print a Current Order Summary (COS) and forward it to nurses from the receiving unit. Nurses from the receiving unit then review the COS with the physician.

Discharge

Upon discharge, nurses print the Discharge Medication Profile. The physician reconciles the list by identifying the medications to be either continued or discontinued. Any additional new orders are written at that time.

Summary

The medication reconciliation process at Methodist is new and there may be still be some questions about the policy or inconsistencies in implementation. The primary goal of implementing the policy is patient safety and reducing the risk for error. It is hoped that this new practice will help us reach this goal.

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