Medication Reconciliation for Hospitalized Patients in Hadassah Ein-Karem Hospital 2009 - 2010

Inbal Yifrach-Damari

Background:
Medication errors are the fourth leading cause of death or major permanent loss of function in hospital patients. The majority of patient safety problems arise during transition from one care setting to another. Half of these problems occur during ambulatory-hospital transition, due to medical errors caused by poor communication and unconnected care settings involving input from different prescribers and care providers.

In order to improve patient safety, the Joint Commission actively endorsed a strategy to reduce medication errors by declaring "medication reconciliation" as a new national patient safety goal. Medical reconciliation is defined as the formal process of obtaining a complete and accurate list of each patient's current home medications and comparing a prescriber's admission, transfer and discharge orders to that list. Discrepancies can be brought to the attention of the prescriber at any time and, when appropriate, changes are made in the orders.

In addition, before patient handover, the physician must decide whether to continue each medication. The name, dosage, frequency and route of administration, and any resulting changes in each drug are documented, so that no drug is omitted.

Methods:
The current prospective study included more than 100 adult patients, taking at least five drugs on a regular basis, who were admitted to the ER.

The process began at admission with a review of home medications with the patient, family, primary physician and/or database of HMOs (sick funds), for the purpose of obtaining a complete and accurate list.

After 24-48 hours, the list of medications prescribed by the ward staff was checked and compared to the list in the ward. If any discrepancy was observed or if an error was suspected, the staff was approached to clarify the reason for the change.

The process continued at discharge with a review of the summary letter. Telephone interviews were conducted with the patients two or three weeks post-discharge.

The entire process, which included the participation of a clinical pharmacist, identified both medication and pharmacological errors.
**Results:**
At least one error / intervention was found in 97% of our patients. The errors were made during admission, hospitalization or discharge with an average of 7 mistakes / interventions per patient.

Medication errors were found in 75% of our patients during admission and in 65% during discharge, with an average of 3.5 mistakes per patient.

Pharmacological interventions were made in 56% and 68% of our patients, respectively, with the same total average of interventions per patient.

**Serious** medication errors were found in 15% of the cases during hospitalization and 9% during discharge. **Life-threatening** mistakes were made in 1% of the cases, during admission or discharge.

The majority of problems involved unexplained drugs discrepancies between current home medications and the prescriber's admission, transfer and discharge orders.

During phone interviews, at least one error / problem was found in 23% of the patients. Nearly 25% of patients were not aware of a change in their medication made during hospitalization and, on occasion, an error recorded during admission continued after discharge.

**Discussion and Conclusions:**
The rate of avoidable mistakes in medications during ambulatory-hospital transition was very high and consistent with observations elsewhere. At times, significant harm to the patient might have occurred due to the high rate of **serious** errors and one percent of **life-threatening** errors. This situation is a result of poor communication and a poor database-sharing infrastructure among different prescribers and care providers. Existing drug lists in the community and in hospitals, are not updated and often fail to reflect the medications that the patient actually takes.

The medication reconciliation process when implemented in the work environment proved an effective process to minimize medication errors during hospitalization and discharge. Our findings reflect those found in the literature: the involvement of a clinical pharmacist is useful in reducing both medication and pharmacological errors and improving outcomes.

**References:**