Medication Incidents Associated with Hospital Discharge: A Multi-Incident Analysis

J. CAO1 and C. HO1,2
1. Institute for Safe Medication Practices Canada
2. Leslie Dan Faculty of Pharmacy, University of Toronto

INTRODUCTION

Transitional Care: according to the American Geriatric Society (AGS), it is a set of actions designed to ensure the coordination and continuity of health care as patients transfer between different locations or levels of care within the same location.1

- Up to 23% of hospital discharged patients experience at least one adverse event; with 72% being adverse drug events.2
- Patients with one or more medication discrepancy have higher rate of readmission than patients without; therefore, adverse medication events, hospital readmission, and death can be a result of suboptimal discharge.3,4

OBJECTIVE(S)

To identify vulnerabilities and areas of improvement associated with the discharge process so that recommendations can be made to prevent medication incidents associated with transitional care.

METHOD(S)

- Search ISMP Canada Community Pharmacy Incident Reporting (CPhIR)® Database for medication incidents involving hospital discharges from April 2010 to December 2014
- Search Keywords: "Discharge", "Hospital", "Release", "Transfer", "fax" or "incorrect" in patient charts

Selected Incidents for final analysis:
221 incidents were retrieved; but only 83 incidents met the inclusion criteria and were included in this multi-incident analysis.

- Analyzed and categorized incidents into three main themes and further divided into subthemes.
- Identified potential contributing factors.
- Provided recommendations to fill in patient-safety gaps.

RESULT(S)

Theme: Error on Discharge Prescription
- Subtheme: Medication Inappropriately Ordered
  Example: A patient was prescribed Lipitor® (Atorvastatin), but it is contraindicated with the patient’s co-morbidities. The pharmacy was aware of the allergy, but not the community pharmacy. Pharmacy discussed with both the patient and prescriber not to use Lipitor® due to low risk for bleed.

- Subtheme: Medication Limited
  Example: Patient’s prescription was sent to the pharmacy in the morning, and the pharmacy received it in the afternoon. The pharmacy called the prescriber to confirm the dosage and the co-morbidities.

- Subtheme: Medication Overdosed
  Example: A patient’s discharge prescription was faxed to the pharmacy but a thin white line cut off the part of the "4" so the pharmacy believed the patient received 1 mg of the drug and not 4 mg.

- Subtheme: Medication Underdosed
  Example: The discharge prescription was written for a 30-day supply with five refills for all medications; however, the pharmacist prescribed for 30 days only.

- Subtheme: Medication Limited
  Example: The discharge prescription was written for a 30-day supply with five refills for all medications; however, the pharmacist prescribed for 30 days only.

- Subtheme: Communication Failure
  Example: The discharge prescription was written for a 30-day supply with five refills for all medications; however, the pharmacist prescribed for 30 days only.

Theme: Communication Failure
- Subtheme: Eligible Fax & Prescription
  Example: Lipitor® 10 mg was dispensed instead of 40 mg. Discharge prescription was noted on the next day to review the patient’s chart and to ensure the patient was on the correct dose.

- Subtheme: Eligible Fax & Communication Failure
  Example: The discharge prescription contained an order for Covaren® 4 mg once daily as well as Covaren® 2 mg once daily. Patient was told to take the lower dose if the blood pressure remains low. This was a near-miss event where both Covaren® strengths were filled and the patient asked the community pharmacist if both strengths should be taken.

- Subtheme: Eligible Fax & Communication Failure
  Example: The discharge prescription contained an order for Covaren® 4 mg once daily as well as Covaren® 2 mg once daily. Patient was told to take the lower dose if the blood pressure remains low. This was a near-miss event where both Covaren® strengths were filled and the patient asked the community pharmacist if both strengths should be taken.

Theme: Communication Failure
- Subtheme: Eligible Fax & Communication Failure
  Example: The discharge prescription contained an order for Covaren® 4 mg once daily as well as Covaren® 2 mg once daily. Patient was told to take the lower dose if the blood pressure remains low. This was a near-miss event where both Covaren® strengths were filled and the patient asked the community pharmacist if both strengths should be taken.

- Subtheme: Eligible Fax & Communication Failure
  Example: The discharge prescription contained an order for Covaren® 4 mg once daily as well as Covaren® 2 mg once daily. Patient was told to take the lower dose if the blood pressure remains low. This was a near-miss event where both Covaren® strengths were filled and the patient asked the community pharmacist if both strengths should be taken.

Theme: Community Integration
- Subtheme: Different Preparations used in Hospitals
  Example: Patient’s discharge prescription was written to administer 1 mg of vitamin D3 (400 units) as ordered on the hospital discharge prescription. Presumably the mother was administering 1 drop every 400 units. Pharmaceutical clarified that the hospital utilized a different concentration/preparation.

- Subtheme: Duplication in Medication Therapy
  Example: The discharge prescription was noted on the next day to review the patient’s chart and to ensure the patient was on the correct dose.

- Subtheme: Multi-Medication Compliance Aids
  Example: The discharge prescription was written to administer 1 mg of vitamin D3 (400 units) as ordered on the hospital discharge prescription. Presumably the mother was administering 1 drop every 400 units. Pharmaceutical clarified that the hospital utilized a different concentration/preparation.

- Subtheme: Multi-Medication Compliance Aids
  Example: The discharge prescription was written to administer 1 mg of vitamin D3 (400 units) as ordered on the hospital discharge prescription. Presumably the mother was administering 1 drop every 400 units. Pharmaceutical clarified that the hospital utilized a different concentration/preparation.

- Subtheme: Multi-Medication Compliance Aids
  Example: The discharge prescription was written to administer 1 mg of vitamin D3 (400 units) as ordered on the hospital discharge prescription. Presumably the mother was administering 1 drop every 400 units. Pharmaceutical clarified that the hospital utilized a different concentration/preparation.

CONCLUSION(S)

The role of Best Possible Medication History (BPHM) when conducting a comprehensive medication review (e.g. MedCheck in Ontario) and medication reconciliation (MedRec) is critical in mitigating medication incidents associated with hospital discharge or transitional care.

ACKNOWLEDGEMENTS

ISMP Canada would like to acknowledge support from the Ontario Ministry of Health and Long Term Care for the development of the Community Pharmacy Incident Reporting (CPhIR) Program (http://www.cphir.ca). The CPhIR Program also contributes to the Canadian Medication Incident Reporting and Prevention System (CMIIPS, http://cphir.ca). A group of CMIIPS is to analyze medication incident reports and develop recommendations for enhancing medication safety in all healthcare settings. The incidents anonymously reported by community pharmacy practitioners to CPhIR were extremely helpful in the preparation of this multi-incident analysis.

REFERENCES


CONTACT INFORMATION

For more information contact us below:
- Website: www.cphir.ca
- Telephone: 1-888-54-CPhIR (1-888-54-27447) Toll Free
- Fax: 416-733-1396
- Address: 4712 Story Street, Suite 301

May 2016 © 2016 ISMP Canada. Poster integrated by Boomin S. 