Quality Improvement Assessment of Discharge Medication Reconciliation For Surgery Patients

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Background

- Interprofessional (pharmacist-prescriber) medication reconciliation and patient education at discharge is associated with a significant decrease in hospital readmissions when part of a medication management care bundle
- At our institution, medication reconciliation and patient education at discharge for surgical patients is prescriber-led with minimal pharmacy involvement
- Barriers and facilitators to providing these services and high-risk patients are not well defined in the surgical population

Objectives

Primary

- Determine the proportion of surgical patients with at least one unintentional medication discrepancy at discharge

Secondary

- Identify barriers and facilitators to providing interprofessional discharge medication reconciliation and patient education

Methods

Design (two components)

•Retrospective chart review
•Qualitative focus groups

Population

•*Chart review:* 40 patients discharged from each of the general, gynecology, thoracic, and urology surgical wards
•*Focus groups:* pharmacists (RPh) and prescribers

Data Collection

•Chart review of patients discharged from Aug. 1 – Oct. 2, 2018
•Semi-structured focus groups (pre and post completion of chart review)

Results

Table 1. Patient Characteristics – Retrospective Chart Review

Variable	n=160
Age, Years – mean (SD)	61.4 (15.5)
Male Sex – no. (%)	68 (42.5)
Length of Stay, Days – mean (SD)	7.0 (6.3)
Medications on BPMH[1] – mean (SD)	4.8 (3.8)
Medications on BPMDL[2] – mean (SD)	7.3 (3.6)
Medications on Discharge Rx – mean (SD)	6.3 (3.8)
Discharge Reconciliation Review By RPh – no. (%)	8 (5.0)
Prescription Generated – no. (%)	
Paper	37 (23.1)
Electronic	103 (64.3)
Paper and Electronic	12 (7.5)
None	8 (5.0)

[1]BPMH: Best Possible Medication History
[2]BPMDL: Best Possible Medication Discharge List

Table 2. Retrospective Chart Review Findings

Outcome Measure	
Proportion of Patients with ≥1 Unintentional Medication Discrepancies – no. (%)	98 (61.3)
Surgical Service	
General	18 (45.0)
Gynecology	20 (50.0)
Thoracic	35 (87.5)
Urology	25 (62.5)
Prescription Generated	
Paper	31 (83.8)
Electronic	54 (52.4)
None	7 (58.3)
Both	6 (75.0)
Medications on BPMDL	
≥10 (n=37)	27 (73)
<10 (n=123)	71 (57.7)
Length of Stay	
≥14 days (n=15)	12 (80.0)
<14 days (n=145)	86 (59.3)
Total Unintentional Medication Discrepancies	364
Mean Discrepancies Per Patient (SD)	3.7 (3.3)
Discrepancies From High Risk Medications – no. (%)	82 (22.5)
Opioids	51 (14.0)
Anticoagulants/Antiplatelets	18 (4.9)
Antimicrobials	11 (3.0)
Insulin	2 (0.5)

Figure 1. Frequency of Medication Discrepancies By Type

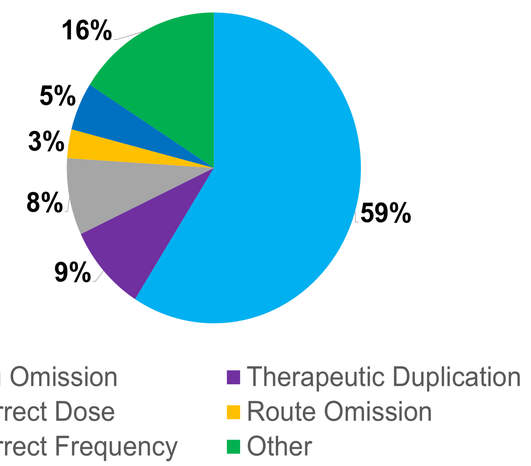

Table 3. Themes Identified in Focus Groups[1]

Discharge Medication Reconciliation and Patient Education	
Barriers	**Resource limitations** • Time • Staffing • Inadequate prescriber training with electronic discharge reconciliation **Lack of a standardized process** • Absence of explicit RPh role at discharge • Poor communication amongst providers at discharge
Facilitators	**Establish a pharmacist-prescriber collaborative practice model** • Identify high-risk patients • Use an RPh referral based system • Mandatory RPh discharge medication review for subset of patients • Ensure advanced notice of discharge to all team members to enhance communication

[1]n=9 (8 RPh, 1 nurse practitioner

Discussion

- Results from this retrospective chart review mirror similar studies that focused on general medicine patients
- Surgical patients that received a paper prescription, had ≥10 medications on their BPMDL, or had a length of stay of ≥14 days had a higher proportion with ≥1 unintentional medication discrepancies
- An interprofessional collaborative practice model at discharge may help address issues such as timing, communication, and workflow
- A clinical assessment of the discrepancies is planned to understand the potential patient impact
- Limitations:
  - Chart review cannot assess interprofessional verbal communication
  - Majority of focus group participants were pharmacists

Conclusions

- Majority of surgical patients had ≥1 unintentional medication discrepancies at discharge
- Barriers and facilitators to providing interprofessional discharge services for surgical patients were identified through focus groups
- Future research may include a pre-post analysis once an interprofessional practice model is implemented

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