Post-Hospital Discharge: Medication Discrepancies and Drug Therapy Problems in Primary Care

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Nature of the Problem

• High risk of medication discrepancies after hospital discharge
  – at discharge 41.3% have at least 1 actual discrepancy (Wong) other studies found 40 - 56% (Vira, Nickerson).
  – post-discharge medication discrepancies not studied

• If not intercepted discrepancies may lead to medication errors, drug therapy problems (DTP) and adverse drug events
  – 96.2% have at least 1 DTP requiring monitoring after discharge (Nickerson)
  – 23% have an adverse event within 30 days post-discharge, of these 72% are drug related (Forster)

### STUDY OVERVIEW

| 1° Endpoints | # Pt $\geq 1$ post-discharge discrepancy requiring clarification  
# Pt $\geq 1$ DTP linked to medication information transfer |
|--------------|-----------------------------------------------------------------|
| 2° Endpoints | **Discrepancy types & relation to system vs patient factors**  
**DTP types and link to medication information transfer** |
| Patient Sample | 30 Patients after hospital discharge |
| Inclusion Criteria | ❖ FHT patient hospitalized for $> 48$ hours  
❖ Discharged home  
❖ Visit within 14 days post-discharge  
❖ Informed consent for use of data |
1. Patient Identification & Recruitment
2. Initial Visit: RPh comprehensive med assessment identified PdMD and DTPs
3. Standardized Classification
   • Categorized discrepancies requiring clarification by type (drug, dose, etc.) and system vs patient related.
   • Categorized DTPs (7 categories) evaluated link to medication info transfer.
4. Follow-Up: determined status of discrepancies/DTPs within 45 days post-discharge
Med-Rec in Community Practice

Self-Reported Medication Regimen Post-Discharge:
Patient/Caregiver Interview

Compare

Discrepancies & DTPs Linked to Information Transfer

UPDATED Best Possible Medication Regimen (BPMR) After Discharge

Drug Therapy Problems

Hospital Records
Primary Care Notes
Medication Labels
Primary Medication History
Community Pharmacist
Hospital Discharge Summary
Specialist Consult Letters
Outpatient Clinic
CCAC/Home Care
23 out of 30 patients (77%) had at least 1 discrepancy required clarification

23% 77%

At least 1 Discrep No Discrep

23 out of 30 patients (77%) had at least 1 DTP linked to med information transfer

23% 77%

At least 1 DTP linked No DTP linked

<table>
<thead>
<tr>
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<th>No linked DTP</th>
<th>At least 1 linked DTP</th>
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<tbody>
<tr>
<td>No Discrep req. clarification</td>
<td>5 (16%)</td>
<td>2 (7%)</td>
</tr>
<tr>
<td>At least 1 Discrep req. clarification</td>
<td>2 (7%)</td>
<td>21 (70%)</td>
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Distribution of Discrepancies

- Of the 52 discrepancies requiring clarification:
  - 25 (48%) were system associated
  - 27 (52%) were patient associated
Characterization of DTPs

Of 122 DTPs 50% were linked to medication information transfer.

- Tx Required: 14 linked, 21 all
- Unnecessary Tx: 0 linked, 5 all
- Tx Not Effective: 4 linked, 12 all
- Dose Low: 12 linked, 21 all
- Dose High: 5 linked, 9 all
- ADR: 21 linked, 30 all
- Non-Adherence: 9 linked, 14 all
Study Conclusions

• Ultimately seamless care medication management must incorporate medication reconciliation and pharmaceutical care to prevent harm and fully optimize the patient’s medication regimen.

• Post-discharge medication discrepancies
  – appeared frequently at initial visit
  – equally influenced by system and patient factors

• Post-discharge drug therapy problems
  – frequently linked to medication information transfer gap

• Most patients that have a medication discrepancy after discharge also have a DTP linked to medication information transfer.
FHT Practice Enhancement

1) Increased Awareness & Advocacy for Post-Discharge Follow-up

2) Team Work!
- NEW Automatic Pharmacy Referral for any patient discharged to home
- Need buy in from FHT, especially receptionists to implement automatic referral

3) Standardized Medication Management Process
- Post-discharge pharmacist visit (~30 minutes)
- MedRec to clarify post-discharge discrepancies
- Pharmacy Care Plan for issues or DTPs requiring ongoing monitoring, some may be linked to information transfer
- Back to back visits with pharmacist & physician helps implement pharmacy recommendations
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