Medication Reconciliation for Older Adults Transitioning from Long-Term Care to Home

By

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Medication reconciliation is a process that involves comparing the drugs that the patient, client, or resident has been taking before the time of an admission or entry to a new or different care setting with the drugs that the facility or provider is recommending or providing. Medication reconciliation has been identified as the most important way of decreasing or eliminating medication discrepancies (9), and several lines of transitional care research have tested a variety of methods for implementing successful medication reconciliation. The limited financial resources of most long term care facilities necessitate that nurses perform medication reconciliation services in this care setting. Based on the available research, implications for suggested medication reconciliation practiced at the time of discharge from long-term care are provided.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>ANTECEDENT CONDITIONS</td>
<td>1</td>
</tr>
<tr>
<td>STRUCTURE</td>
<td>2</td>
</tr>
<tr>
<td>CARE PROCESS</td>
<td>3</td>
</tr>
<tr>
<td>OUTCOME</td>
<td>8</td>
</tr>
<tr>
<td>SUMMARY/CONCLUSION</td>
<td>8</td>
</tr>
<tr>
<td>APPENDIX</td>
<td>10</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>12</td>
</tr>
</tbody>
</table>
Medication Reconciliation for Older Adults Transitioning from Long Term Care to Home

Introduction

The days when general practice physicians woke early to round on their hospital and long-term care patients prior to their first clinic appointments are a thing of the past. It appears impossible for primary care providers to maintain a thriving ambulatory practice, as well as tend to patients that are hospitalized or in long-term care facilities. Many patients are admitted to long-term care facilities for short-term rehabilitation (10). Prior to discharge home, these patients have generally received care in several settings from a multitude of providers. Numerous changes in their medication regimens have likely occurred during their care transitions that may include home to emergency department, ED to inpatient units, and hospital to long-term care. Thus, when short-term rehabilitation patients are ready to be discharged to home, medication reconciliation is a critical intervention. In the absence of medication reconciliation, patients and caregivers may be confused about the proper medications to take at home, which can lead to harmful errors. Medication errors lead to adverse drug events in 1.5 million people annually (2). The purpose of this manuscript is to discuss the medication reconciliation process for long-term care patients who are being discharged to home using the Patient Safety Management Framework (Figure 1) as a guide.

Antecedent Conditions

As previously discussed the multitude of care setting and providers combined with a patients' ever changing acute and chronic conditions creates a “perfect storm” for transition-related medication problems. Additional contributing factors include older age which incurs the
potential for cognitive decline and a greater likelihood of low health literacy. Both of these conditions can inhibit patients' abilities to understand and successfully implement medication management. Older adults with chronic conditions often take five or more medications. As the number of medications increases, the potential for mis-management also increases.

Structure

As patients transition through acute and long-term care healthcare professionals are responsible for tracking and administering medications. Unfortunately, the literature demonstrates that healthcare professionals do not always accurately reconcile medications during transitions through care settings (4). Further, patients and caregivers have generally not kept up-to-date on the medication changes. Thus, when patients are discharged home, it is extremely important to thoroughly reconcile all medications to prevent adverse events. It is estimated that 400,000 preventable drug related injuries occur each year (6).

A study by Delate, Chester, Stubbings, and Barnes (1) evaluated the outcomes of patients receiving medication reconciliation during the transition from long-term care to home. This study showed that intervention participants had a 78% reduction in the risk of medication-related deaths. Research has shown that pharmacists are the healthcare professionals, who are the most effective at medication reconciliation (8). Unfortunately, their role in long-term care is generally limited to monthly reviews. Therefore, when older adults are discharged from long-term care, nurses generally have the responsibility for leading the medication reconciliation process.

Care Processes
In an effort to identify "best practices" of medication reconciliation from long-term care to home, a thorough search of available literature from 1992 to the present was conducted using PubMed, CINAHL, Medscape, and Google Scholar search engines. The literature search resulted in the identification of only one study about medication reconciliation during the transition from long-term care to home (1). In this study a pharmacist worked with a primary care provider and a chronic condition nurse to augment the usual transitional services. The process included evaluating 24 months of previous prescription data including drug names, dosages, fill dates, review of previous drug history and current discharge medication information. Outcomes included decreased risk of death related to medications and participant knowledge of drug regimens and potential side effects.

Due to the lack of research about medication reconciliation during long-term care to home transitions, literature pertaining to hospital to home transitional medication reconciliation was evaluated to discern strategies that may be applicable to long-term care. Four prominent models for improving transitional care were identified and each model included medication reconciliation practices.

Medication reconciliation strategies used in the Transitional Care Model are initiated during hospitalization and continue to a post-discharge home visit (5). The Transitional Care Nurse (TCN) collaborates with the primary care provider and the pharmacist to eliminate unnecessary medications and provide a plan for safe administration and identification of adverse side effects prior to hospital discharge. Teaching about this plan is done at the time of discharge. The TCN then makes a home visit to evaluate medication use in the home setting and once again collaborates with the physician(s) and pharmacist as needed for safe medication use in the home.
Project RED also attempts to reconcile medications prior to hospital discharge (3). Patients are assigned a Discharge Advocate (DA) who first present an electronic medication list to the patient and have them identify what medications they are currently taking. Next the DA meets with the treatment team for a complete medication reconciliation meeting. Follow-up strategies include ensuring patients understand the purpose of the medications, proper administration, identification of side effects, and identifying a realistic plan for obtaining medications following discharge.

The BOOST program utilizes a screening tool that identifies risks factors such as psychological problems, polypharmacy, poor health literacy, patient support, use of high risk medications, and the patient and/or caregivers understanding of the implications of medication use. Based on the information obtained from the screening tool, risk specific interventions are implemented. For example, for patients identified with polypharmacy the medication regimen is carefully evaluated to determine whether any medications can be eliminated and/or whether medication scheduling can be simplified. In addition, patients are scheduled to receive a phone call 72 hours after discharge to assess for medication adherence and any potential problems (7).

The Care Transition Intervention is based on a four pillar program approach. These pillars include medication self-management, patient-centered records, follow-up and red flags. Medication reconciliation practices focus on medication self-management and evaluation of medication discrepancy causes, contributing factors, and resolution. The medication self-management pillar begins with the patient goal of being knowledgeable about the medications they are on and a system for managing the medications safely. A designated representative then visits the patient in the hospital to educate and discuss the importance of the patient goal. The patient then receives a home visit following discharge to reconcile pre and post-hospitalization
medications lists. Finally follow-up calls to the patient are performed to answer any remaining questions patients or their caregivers may have about medications.

The Transitional Care Model program uses similar interventions as the Care Transition Interventions but takes follow up one step further by accompanying patients to their first follow-up visit with their primary care provider after hospital discharge. This further enhances the exchange of health information and assists in concrete medication reconciliation. The features of these medication reconciliation approaches, as well as strategies utilized in the study by Delate et al. can be successfully applied to care processes used by nurses in long-term care when patients are being discharged home.

In long-term care settings an interdisciplinary team assists a patient from admission to discharge with the goal of a successful transition home. A nurse case manager is generally responsible for medication reconciliation and education prior to discharge. Although it may appear to be time intensive, following the suggestions of best practices for medication reconciliation extracted from the aforementioned transitional care literature, in conjunction with the nurse’s professional judgment may improve medication safety following discharge.

The first step in the reconciliation process is to obtain a list of the medications the patient was taking prior to their hospitalization. Often the home medication list obtained in the hospital is incorrect and incomplete. Patients and families often omit medications or provide inaccurate dosing information due to giving a list primarily by memory. An incorrect or incomplete medication history at the time of admission creates a high-risk situation for medication problems when the patient actually returns home. Having an accurate home medication list facilitates comparing drug classes present on the home list with those the patient is currently using in the long term care setting. Obtaining an accurate list, may be best accomplished by asking family
members, caregivers, or friends to bring the actual medication bottles that the patient has at home to the long-term care facility. Identifying duplicate drug classes is important to eliminate the possibility of patients inadvertently taking two medications for the same indication. If duplicative drug classes are identified, the nurse can clarify the desired medication with the patient, caregiver, and physician. Medication duplication even if harmless, adds to health care cost. The next step involves clarifying and confirming proper dosages, administration frequency, and identifying any new medications as well as all medications that have been discontinued. After these steps are completed a new medication list needs to be developed and provided to the patient.

Once the discharge medications are reconciled with the home medications, the nurse can fax the updated medication orders including a list of all discharge medications signed by the primary care provider, to the patient’s pharmacy. This is an important next step because the new order list provides the pharmacy with the most current prescription list. This list should also include all over the counter medications, vitamins, supplements, and herbal remedies. The pharmacy can then update their database with the patient’s new medications and ensures that all new/changed medications are filled while avoiding refills for medications that have been discontinued. Pharmacists are legally mandated to review any new medication with the patient and/or family member. Thus, education about each new medication, with time to address patient and caregiver questions or concerns should be provided by the outpatient pharmacist. Education from the pharmacist will also reinforce the medication instructions provided by the nurse prior to discharge from the long-term care facility.

Communicating updated information to the primary care provider is equally important. Faxing the discharge and newly developed medication list along with pertinent laboratory
results, pending laboratory or other diagnostic tests and any other pertinent updates about the patient’s condition will assist in bridging the gap between the patient’s primary care provider and all that occurred during the patient’s acute and rehabilitative care admissions. Scheduling follow-up appointment with the patient’s primary care provider should be considered as a part of the discharge process. Scheduling the appointment prior to the patient’s discharge from long-term care will facilitate patient follow up and is consistent with the best practices in hospital to home transitions. Instructing patients/families/caregivers of the importance of keeping the follow-up appointment and facilitating transportation plans to get to the appointment is also recommended (3).

Finally, the education that the long-term care discharge nurse provides to the patient, family, and/or caregivers can ultimately be the most important step of all. Being certain that the current medication list has been thoroughly reviewed, as well as ensuring the patient has an understanding of the purposes of their medications, which medications have changed from their home regimen and what medications are new can reduce medication discrepancies and the likelihood of adverse drug events (3). The “teach-back” method is often used for transitional care education. The teach-back method is an approach in which the nurse shares new information and then asks the patient or caregiver to “teach-back” the information. Using this approach allows the nurse to assess patients understanding of the teaching. Ensuring that the information and the instructions provided are understood by the patient/family/caregiver may facilitate medication adherence at home (11). Another helpful practice is to use a medication list table and include both the brand and the trade name on the discharge list to decrease confusion and the possibility of medication duplication. From among the medication bottles the family/caregiver/friend brought to the long-term care setting, the discharge nurse should separate
medications the patient is no longer taking from those that are to be continued. Patients/family members/caregivers should also be advised to properly dispose of the discontinued medications.

Outcome

Improving patient and caregiver knowledge of the currently prescribed medications will lead to safe medication management after the transition home which is the overall goal of medication reconciliation. Reconciling the patient’s medication list and sharing it with the patient, caregiver (if applicable), pharmacist, and primary care provider facilitates accurate information transfer. Use of the teach-back technique helps patients and caregivers gain adequate knowledge regarding, the purpose of medications, potential side effects, and correct dosing and administration, thereby enhancing post-discharge medication safety. Improving accurate information transfer and patient and/or caregiver knowledge of safe medication management may lead to fewer adverse drug events, less healthcare costs, and better quality of life for the patients.

Summary/Conclusion

Medication reconciliation is a critical process to promote safe and effective care transitions. The Patient Safety Management Framework provides a theoretical basis for successfully approaching medication reconciliation in older adults transitioning through care settings during times of illness. By taking into consideration the antecedent conditions, as well as the care structure and processes that can influence the need for, and outcome of, medication reconciliation during that transition from long-term care to home, theory-based strategies to improve medication safety can be implemented and evaluated. Such an approach will eventually
lead to truly identifying “best practices” for medication reconciliation during the long-term care to home transition.

While there appears to be continued emergence of research about the effectiveness of pharmacist-led medication reconciliation practices (1,8), there is a near absence of studies that involve a nurse’s role during transitions from long-term care to home with regards to medication reconciliation. Due to the likelihood that nurses are performing medication reconciliation during the transition from the long-term care setting to home, research to implement and evaluate outcomes of suggested best practices (Table 1) are recommended.
APPENDIX

(Figure 1)

Antecedents Conditions  

Care Process

Structure

Outcome

Patient Safety Management

Adjust structure and process to eliminate or minimize risks of health care associated injury before they have an adverse event that impacts the outcomes of care.
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<thead>
<tr>
<th>Strategies for Medication Reconciliation in LTC During the Transition Home</th>
</tr>
</thead>
<tbody>
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<td>Obtain all medication bottles from the patient's home via a relative, friend or caregiver.</td>
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<tr>
<td>Compare pre-hospitalization medications with current medication list.</td>
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<td>Contact primary care provider and request review of medication changes during hospital and long term care stay to request that any medication substitutions be returned to previous medication that the patient has at home.</td>
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<td>Identify the patient's preferred pharmacy and fax a current signed medication order list to the pharmacy. Ask the pharmacist to update all profiles to reflect any changes including discontinued and new medications.</td>
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<tr>
<td>Order a supply of all new and/or changed medications for pick up prior to discharge.</td>
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<tr>
<td>Fax a current reconciled medication list and any pertinent documentation and recent lab values for reference to the patient's PCP.</td>
</tr>
<tr>
<td>Verbally reconcile medications with patient, family, and/or caregivers. Use teach-back techniques to ensure that knowledge of medication changes has been acquired.</td>
</tr>
<tr>
<td>From among the medication bottles the family/caregiver/friend brought to the long-term care setting, separate medications patient is no longer taking from those that are to be continued. Advise patient/family/caregiver to properly dispose of discontinued medications.</td>
</tr>
</tbody>
</table>
References


