MEDICATION ERRORS

From the Hospital to Long-Term Care: Protect Vulnerable Patients During Handoff

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PROBLEM: More than three million Americans will rely on services provided by long-term care (LTC) facilities and more than 1.4 million will live in the nearly 16,000 LTC facilities on any given day.1 Approximately one-third of these residents will take an average of nine medications daily, significantly increasing the risk of medication errors, particularly during a transition from hospital to LTC facility.2–4

If you do not work in an LTC facility, you may be asking, “What does this have to do with me?” First and foremost, medication errors that occur during the transition from a hospital to an LTC facility often originate in the hospital.1–7 Lapses in communication among facility staff, along with documentation and transcription errors, have led to poor coordination of care.3 Studies have demonstrated that information on discharge summaries and transfer/referral forms does not match for more than 50% of LTC admissions, with at least one medication discrepancy in 70% of all admissions.3,5,6 Add to this the accidental continuation of medications intended for administration only while the patient was hospitalized,7 along with the omission of as-needed medications that should have been continued, and it is not surprising that error rates of 21% or more have been reported during transitions between hospitals and LTC facilities.3,6,7 Up to 60% of these errors have been serious, life threatening, or fatal,8 as in the following example.

After discharge from a hospital, a patient was transferred to an LTC facility. During the initial assessment of the patient at the LTC facility, the receiving nurse reviewed the transfer information faxed to the facility. This information included copies of the inpatient medication administration record (MAR), orders, progress notes, discharge summary, and the referral/transfer form. The orders and progress notes included the most recent morning and evening insulin doses. However, the referral/transfer form, discharge summary, and MAR did not specify the insulin doses, although the concentration of insulin, 100 units/mL, was listed on the MAR immediately after the drug name. The LTC nurse referred to the MAR and mistakenly listed the insulin dose as 100 units/mL when she copied the most current medications. The nurse then contacted the patient’s LTC physician, who had followed the patient’s course of hospitalization, and he instructed the nurse to “continue the same orders.” The nurse transcribed the list of medications onto an order form and sent it to the pharmacy, where the order was filled despite the unusually high insulin dose (100 units in the morning and evening). The patient received one dose of 100 units and experienced severe hypoglycemia. The patient was transferred back to the hospital but died a short time after arrival.4

As demonstrated with this error, poor communication across care settings and mistakes during order transcription are the most frequent causes of medication errors during transitions from hospitals to LTC facilities.3 More than half of these errors originated during initial documentation of medication therapy upon admission to the LTC facility. When a patient is newly admitted to an LTC facility, medication orders are typically reviewed by a nurse and verified on the telephone by an LTC physician who may be unfamiliar with the patient. LTC facilities rely on the hospital discharge summaries, prescriber-signed transfer/referral forms, and other documents sent from the hospital to communicate prior drug therapy to the admitting LTC physician. Given the daunting task of reconciling potentially conflicting or absent information from hospitals, many LTC facilities struggle with medication reconciliation.3,6,7 It may take up to 48 hours for the LTC physician to evaluate the patient in person. During this time, new admissions are particularly vulnerable to medication errors.

Errors involved in transitions from the hospital to an LTC facility may be more likely to cause a resident harm because they often involve high-alert medications.3,4,8–10 Warfarin, insulin, opioids, and cardiovascular medications top the list of drugs most frequently involved in harmful errors during transitions.3,5 These medications have also caused frequent emergency department visits among elderly patients.11 Errors during transitions are more likely to involve the wrong dose or the wrong drug, particularly drugs with look-alike names or those that require dose adjustments (e.g., warfarin).3

Medication errors that originate during transition from a hospital to an LTC facility have also led to preventable readmissions to the hospital.3,5,6 Patients or residents with medication discrepancies on their health records have a higher rate (14.2%) of 30-day readmissions than patients without medication discrepancies (6.1%).11 Hospitals have an additional incentive to prevent readmissions now that financial penalties are being levied by the Centers for Medicare and Medicaid Services against hospitals with high readmission rates for targeted conditions.

SAFE PRACTICE RECOMMENDATIONS

Numerous opportunities exist to improve the communication of accurate and appropriate medication therapy as patients transition to an LTC facility. Consider the following recommendations to improve medication safety during these vulnerable transitions in care.

• Establish a list. Prepare a generic list of medication categories that are generally not continued after hospitalization (e.g., pain medications, benzodiazepines, sleeping aids, electrolyte supplements, gastrointestinal agents, proton pump inhibitors).7 Share the list with prescribers and other clinicians who review the records that are forwarded to LTC facilities. Refer to the list during discharge medication reconciliation to identify potential discrepancies that may require clarification. Remind
staff that this list is only intended as a guideline and that in some cases it may be appropriate for the therapy to be continued (e.g., stool softener if the patient is taking a narcotic analgesic). In these cases, be sure to check the dose used as an inpatient to determine whether it needs to be modified for the next care setting.

- **Verify the accuracy of discharge summaries.** Require prescribers to co-sign (verify) the dictation and transcription of discharge summaries, and to ensure that the medication information contained in the summary is correct at the time of discharge and devoid of potentially confusing abbreviations. Changing the clinical workflow to coordinate the completion of the patient transfer/referral form with the discharge summary can enhance their consistency.6

- **Provide reasons for changes.** Most hospitals utilize a structured LTC transfer/referral document to assist with communication of medication lists. These documents/templates often prompt prescribers to include a complete order for each medication, as well as its purpose, whether it’s a new or changed medication (dose/frequency), any special cautions, or when the last dose was administered. It is also important for physicians to specify which drugs are being discontinued after discharge, the reason for discontinuation, and any changes to previous medications that the patient was taking prior to hospitalization.9,12

- **Conduct medication reconciliation.** For patients discharged to an LTC facility, a nurse, pharmacist, or other qualified professional should review the drugs prescribed upon discharge and compare them to the medications the patient was taking in the hospital and at home. Make note of any discrepancies, including newly prescribed drugs, potential omissions without an explanation, or differences in a prescribed drug’s form (e.g., extended release versus immediate release), dose, frequency of administration, or route of administration. After reviewing the prescribed medications, call the prescriber to discuss any discrepancies found, and clarify the continuation/discontinuation of hospital medications. Also verify the doses of medications that often require dose adjustments, such as insulin and warfarin, and ask about the frequency of special testing (e.g., blood glucose testing) and other laboratory studies (e.g., international normalized ratio, including the desired targeted range for monitoring).

- **Involve pharmacy.** Have pharmacists review the list of medications prescribed for patients being transferred to LTC facilities. Pharmacists can help identify omitted or non-indicated medications and dosing errors. If staffing does not permit pharmacy review of all LTC transfers, establish an automatic consultation to pharmacy for patients being discharged on drugs known to be involved in transition errors.

- **Standardize accompanying documents.** Determine which documents must accompany transfer/referral for LTC patients. Require a clinician to review the accompanying documents to ensure completeness and clarity prior to transfer.

- **Provide information early.** When possible, design a system in which the patient’s transfer information is provided to the LTC facility several hours before the patient arrives. This allows the LTC staff to begin the medication reconciliation process and helps ensure that required medications are available as soon as possible. However, experts advise not to prepare a discharge summary more than a few hours prior to transfer to make certain the document is up to date.3,6 For patients with complex care needs, a phone conversation between the hospital primary care nurse and an LTC facility nurse is highly recommended. When discussing medication orders, spell look- and sound-alike drug names that are often confused (e.g., alprazolam and lorazepam). A phone conversation between the discharging physician and LTC physician is also recommended for complex patients.

- **Solicit feedback from LTC facilities.** Ask staff at LTC referral facilities to report any discrepancies identified in discharge orders, transfer/referral forms, MARs, and orders, so you can improve the processes associated with coordinating and communicating each patient’s plan of care during transitions. Regularly scheduled meetings with nursing administration, social services, consultant pharmacists, and the medical director of commonly used LTC facilities would also be helpful in opening lines of communication and soliciting feedback.

**REFERENCES**


