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From the hospital to long-term care: Protecting vulnerable patients during transitions of care

More than 3 million Americans will rely on services provided by long-term care (LTC) facilities during the year, and greater than 1.4 million will live in the nearly 16,000 LTC facilities on any given day. Approximately one-third of these residents will take an average of nine medications daily, significantly increasing the risk of medication errors, particularly during the transition from a hospital to a LTC facility.[2-4]

Medication errors that occur during transition from a hospital to a LTC facility often originate in the hospital.[1-7] Lapses in communication among facility staff along with documentation and transcription errors[3] have led to poor coordination of care. Studies have demonstrated that information on discharge summaries and transfer/referral forms do 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 (prn) medications that should have been continued. Thus, 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 being discharged from the hospital, a patient was transferred to a 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 per 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 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 the initial documentation of the medication therapy upon admission to the LTC facility. When a patient is newly admitted to a LTC facility, medication orders are typically reviewed by a nurse and verified on the telephone by a 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 task of reconciling potentially conflicting or absent information from hospitals, LTC facilities may struggle with the medication reconciliation process.[3,6,7] It may take up to 48 hours for the LTC physician to evaluate the patient in person. During this time period, new admissions are particularly vulnerable to medication errors.

Errors involved in transitions from the hospital to a LTC facility may be more likely to cause resident harm because they often involve high-alert medications.[3,6,8-10] Warfarin, insulin, opioids, and cardiovascular medications top the list of drugs most frequently involved in harmful errors during transitions.[3,9] Table 1 provides additional medications commonly involved in errors during transitions between the hospital and LTC facility. These

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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 a LTC facility have also led to preventable readmissions to the hospital.[3,5-8] Patients or residents with medication discrepancies on their health record 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 & Medicaid (CMS) against hospitals with high readmission rates for targeted conditions.

Numerous opportunities exist to improve the communication of accurate and appropriate medication therapy when patients transition to a LTC facility. To improve medication safety during these vulnerable transitions in care, consider the recommendations listed in the "Recommendations" section at the end of this article on page 3.

Table 1:

Medication	Common Error Type(s) During Transition
warfarin[3,6,8,9,10]	Communication error regarding dose, failure to order INR
insulin[3,6,9]	Communication error regarding dose
oxy**CODONE** with acetaminophen[3,6,9,10]	Name confusion with **HYDRO**codone with acetaminophen
HYDROcodone with acetaminophen[3,6,9,10]	Name confusion with oxy**CODONE** with acetaminophen
enoxaparin[3,6,8]	Dosing errors and delays in administration
furosemide[3,6,8,9,10]	Dosing errors
metoprolol[3,6]	Dosing errors or accidental discontinuation
potassium[3,6,9,10]	Omissions or accidental continuation of a drug used during acute illness but no longer needed
LORazepam[3,9,10]	Name confusion with **ALPRAZ**olam
ALPRAZolam[3,9,10]	Name confusion with **LOR**azepam
aspirin[3,6]	Dosing errors
acetaminophen[3,6]	Dosing errors
fenta**NYL**[3,6,9,10]	Dosing errors, and patches not removed and properly discarded before application of new patch
omeprazole[3,6,10]	Name confusion with esomeprazole, and accidental continuation of a drug used during acute illness but no longer needed
esomeprazole[6,10]	Name confusion with omeprazole, and accidental continuation of drug used during acute illness but no longer needed
morphine[6,9,10]	Dosing errors and name confusion with methadone, mix-ups between regular strength and concentrated oral solutions
methadone[6,10]	Distractions and name confusion with morphine leading to transcription errors
risperi**DONE**[6,8,10]	Transcription errors (unspecified) and dosing errors
nitrofurantoin[6,10]	Transcription errors (unspecified)
other gastrointestinal agents[6] (e.g., laxatives, stool softeners, antidiarrheals, antiemetics)	Omissions or accidental continuation of a drug used during acute illness but no longer needed

Source: NurseAdviseERR July 2014

Recommendations To improve medication safety during transfers from hospital to LTC facility

- 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] Refer to the list during medication reconciliation to identify potential discrepancies that may require clarification.
- Do not write "continue orders" on discharge summaries. Discharge summaries/transfer forms or verbal orders to the LTC facility should not simply state "continue" or "resume" the same medications prescribed during hospitalization or as listed. Prescribers should provide a new, complete order for each medication.
- Verify accuracy of discharge summaries. Require prescribers to cosign (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.[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 precautions, and 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.[6,12]
- Conduct medication reconciliation for readmissions. Review the drugs prescribed upon hospital discharge and compare them to the medications the patient was taking in the hospital and prior to hospitalization. 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. Pay particular attention to the drugs most often involved in transition errors (Table 1, on page 2) during the reconciliation process. After reviewing the prescribed medications, contact 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 with insulin and warfarin, and ask about the frequency of special testing (e.g., blood glucose testing) and other laboratory studies (e.g., INR, including the desired targeted range for monitoring).
- Standardize accompanying documents. Determine which documents must accompany transfer/referral documents for LTC patients. Require a clinician to review the accompanying documents to ensure completeness and clarity prior to transfer.
- Obtain 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 a 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 LOR-azepam). A phone conversation between the discharging physician and LTC physician is also recommended for complex patients.

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Latta, Ohio delegation send letter to DEA

WASHINGTON, D.C. – U.S. Representative Bob Latta (R-Ohio) has joined Senator Rob Portman (R-Ohio), Senator Sherrod Brown (D-Ohio) and members of the Ohio Congressional delegation in sending a letter to the Office of Management and Budget, urging it to expedite the Drug Enforcement Administration's (DEA) promulgation of the final rule under the Secure and Responsible Drug Disposal Act. The rule would provide guidelines for the proper disposal of prescription drugs.

"Unfortunately, prescription drug abuse is prevalent in Ohio and across the country," said Latta. "Therefore, it is troubling that the DEA has yet to promulgate the Secure and Responsible Drug Disposal Act's rule relating to the proper disposal of prescription drugs. With 70 percent of abused medications obtained from family members or friends, this rule will help curb the prescription drug abuse epidemic by providing Ohio with the necessary tools to dispose of potentially deadly and unneeded prescription medications. I am proud to join my colleagues in the Ohio delegation in urging the DEA to expedite its promulgation process, so these commonsense practices can be implemented as soon as possible."

The Secure and Responsible Drug Disposal Act of 2010 authorized Attorney General Holder to promulgate regulations for the disposal of prescriptions medications – the responsibility of which he delegated to the DEA. After taking public comment and holding a public meeting January 19-20, 2011, the DEA published notice of proposed rulemaking for disposal of controlled substances on December 21, 2012.

The proposed rule expands the options available for the collection of prescription drugs, including additional take-back events, mail-back prescription programs and collection receptacles. However, without approval of the final rule, the State of Ohio does not have the necessary tools to implement these options.