An Avoidable Mistake and a Wake-Up Call

Jane Doe was a frail 81-year-old female resident who had resided in a skilled nursing facility for 18 months. Her medical history included hypothyroidism from having had a total thyroidectomy when she was a young adult. She required levothyroxine daily.

After Ms. Doe had been a resident at the SNF for approximately 15 months, she was transferred to the hospital, then discharged to the SNF 3 days later. There had been no changes to her levothyroxine order. But when Ms. Doe was readmitted to the SNF, the licensed vocational nurse (LVN) who transcribed the transfer orders from the hospital failed to transcribe the levothyroxine order. The facility had no policy in place to compare the orders on a readmitted patient to the medication administration record (MAR) from the previous admission.

The admitting LVN recalled verifying the admitting orders with the nurse practitioner. After drafting the physician’s orders, it was her practice to fax the orders to the pharmacy to obtain the medications. Initial MARs were then created based on these transcribed physician’s orders, and were not based on the orders actually received from the hospital.

During her long residency, Ms. Doe was seen at regular intervals by her attending physician, her nurse practitioner, and another physician in her group. None of these clinicians caught the transcription mistake, and none of them realized that Ms. Doe was no longer receiving her levothyroxine. As the days went on, Ms. Doe was receiving all her other chronic medications, but none of the facility staff realized that she was not receiving her levothyroxine. The consultant pharmacist reviewed the file twice after her readmission and also failed to catch the omitted levothyroxine.

Ms. Doe gradually began exhibiting signs of hypothyroidism, but none of the health care practitioners made the connection between her symptoms and her failure to receive levothyroxine.

Ms. Doe did not receive levothyroxine for 3 months. She was transferred to the hospital with hypotension and mumbled speech. The hospital determined that she had not been receiving her levothyroxine, and it was resumed. However, her laboratory work demonstrated extremely high levels of thyroid-stimulating hormone (TSH) and a negligible amount of circulating thyroid hormone (T3 or T4). She developed respiratory failure and pneumonia, and she could not be weaned from the ventilator. Ms. Doe’s family decided to withdraw ventilator support due to her poor prognosis, and Ms. Doe died 25 days after being admitted to the hospital.

The death certificate listed hypothyroidism as a contributing cause of her cardio-pulmonary arrest.

Ms. Doe’s daughters sued the facility, the attending physician, the nurse practitioner, the associate physician, the physician group, and the consultant pharmacist. In depositions, the physicians, physician assistant, and pharmacy consultant all pointed fingers at each other. The facility ended up settling with the family for approximately $1.5 million. Even though the physician, his associates, and the pharmacist shared liability for not discovering the error, the facility recognized that the LVN, in all likelihood, had made a mistake when she was transcribing the orders and that other staff members, at every level, failed to discover the error until it was too late to save Ms. Doe.

While there were questions about causation — and the hypothyroidism was not the only factor contributing to Ms. Doe’s death — the medical experts consulting on the case opined that if she had remained on her levothyroxine, a reasonable degree of medical probability (i.e., more likely than not), Ms. Doe would not have died when she did. The big question for the facility staff is how can a long-term resident who is known to many staff members to require a certain medication to maintain basic metabolic functions not be provided that medication? How did the nurse practitioner not catch the error? How did the nurses passing the medications not catch the error? How did Ms. Doe linger for so long with gradually increasing symptoms of untreated hypothyroidism, yet no one put two and two together?

Ms. Doe’s death was the result of a breakdown in communication at every level of care being provided to her. This incident highlighted the need for a policy to ensure transfer orders are being transcribed properly and checked for errors.

Sentinel Event
Ms. Doe suffered an avoidable “sentinel event.” According to The Joint Commission, a sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. This serious injury specifically includes loss of limb or function. The Joint Commission uses root cause analysis to determine how a sentinel event occurred.

Root cause analysis does not capture the entire picture of all the errors that potentially create a sentinel event. One response to this has been the advent of “cascade analysis,” which defines the overall story of what went wrong as an “incident,” and the individual mistakes within the incident as “errors.” If an incident involves multiple errors, it is termed a “cascade.”

In this instance, the proximal error was the first or underlying error of the LVN’s failure to transcribe the admitting orders correctly. There was a cascade of errors afterward that contributed to Ms. Doe’s premature death. The facility had no policy in place to safeguard the transcription of admission orders. They also had no policy in place to check those orders against the most recent MAR, if a patient was a readmitted resident. Thereafter, each time Ms. Doe was assessed or administered medications, the cascade of errors grew. Each time she was assessed by the nurse practitioner, the cascade of errors grew. No one appeared to acknowledge the fact that Ms. Doe required levothyroxine but was not receiving it — even though the diagnosis of hypothyroidism was present in multiple locations in the chart, including on the admitting history and physical examination and on the facility’s diagnosis list for Ms. Doe.

Cascade analysis shows that Ms. Doe’s scenario comprised multiple human errors, all based on a lack of communication and indication to detail. The initial communication error was the failure to properly transcribe Ms. Doe’s medication orders. Thereafter, each clinician who came in contact with her also failed to assess and evaluate her comprehensively.

Medication Errors
The National Coordinating Council for Medication Error Reporting and Prevention defines “medication error” as “any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer. Such events may be related to professional practice, health care products, procedures, and systems, including prescribing, order communication, product labeling, packaging, and nomenclature, compounding, dispensing, distribution, administration, education, monitoring and use.”

Adverse drug events, of which omission of an ordered medication is included, represent the most clinically significant and costly medication problem in nursing homes. Adverse drug events are estimated to contribute to 93,000 deaths per year and cost upward of $4 billion in excess health care costs. Transcription-related errors were 72.4 per month at one university medical center using a manual entry system of orders. That number was reduced to 2.2 per month after implementing a computerized provider order entry (CPOE). Clearly, medication reconciliation at the time of transitions of care remains a critical priority for health care institutions.

Best Practices
Transcription is a source of many medication errors. Contributing factors include incomplete or illegible prescriber orders, incomplete or illegible nurse handwriting, use of abbreviations, and lack of familiarity with drug names. Omission is a particularly dangerous medication error and generally results from being rushed and/or being interrupted during the transcription process. To avoid such errors,

- Complete the transcription process in a quiet, well-lit area, away from distractions. If you are transcribing orders in a busy environment, there is a higher likelihood that you may make an error.
- Implement a system to check the medication administration record document against active orders, whether the MAR is manually documented or computer generated.
- Implement a second check system for the transcription.
- If the patient is a readmit, compare the proposed current medications to the MAR from the prior residency to ensure daily, required medications are being continued or any long-standing medications are discontinued if there is a valid reason.
- Call the prescriber if any discrepancies are found and clarify the continuation or discontinuation of hospital medications.
- Have pharmacists review the list of medications prescribed for patients being transferred to the SNF. Pharmacists can help identify omitted or non-indicated medications and dosing errors.

Ms. Doe’s death related to the failure to provide levothyroxine was eminently preventable. Her death served as a wake-up call to facility staff and management about the importance of taking just a few extra minutes during the transfer process to ensure resident safety. Had the LVN not been interrupted or had taken the time to compare her orders with Ms. Doe’s previous MAR, the order may not have been omitted. In this instance, those few minutes were the difference between life and death.