Long Term Care Highlights

North Dakota Department of Health
Division of Health Facilities

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Special points of interest:

- Did you know that in 1974 nursing facilities became the only health care institutions required to obtain the services of a consultant pharmacist?
- The most frequent cause of preventable problems in medication errors was failure of caregivers to adequately monitor residents (49%).
- Learn the recommended storage temperatures for some medications.

Medication Errors in Nursing Homes

By Lucille Torpen, R.N.

The National Coordinating Council for Medication Error Reporting and Prevention (NCC MERP) defines a 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." In other words, a medication error is any deviation from an order for a drug as prescribed by a licensed clinician, such as a physician, physician's assistant, or nurse practitioner. The error can be one of planning (for example, if an improper dosage is selected) or one of execution (the prescriber's intentions are misunderstood). Errors can be made at any point during the process of prescribing and executing a prescription.

The more medications a resident is taking, the greater the chance of interactions and the greater the risk of errors. Although only a small number of medications errors actually cause adverse drug events, as many as 50 percent of adverse drug events are caused by errors. Their consequences such as falls and fractures, malnutrition, dehydration, incontinence, delirium, and behavior problems cannot be ignored. A medication error may or may not result in an adverse drug event, which is an injury to a resident resulting from the medical intervention itself, not from the underlying condition for which the intervention was prescribed.

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Medication Errors in Nursing Homes (cont)

Types of Errors

The most frequent cause of preventable problems was failure of caregivers to adequately monitor residents (49%). This most often involved inadequate lab monitoring of drug therapies or failure or delay in responding to symptoms or signs of drug toxicity, including failure to respond to symptoms such as nausea, vomiting and anorexia that may suggest digoxin toxicity.

The second most frequent cause of preventable injuries was erroneous drug orders (47%). Ordering the wrong dosage, such as excessive dose for an elderly patient, were the most common problems of this type, followed by ordering drugs with harmful interactions. Third was choosing the wrong drugs, including using an antidepressant with anticholinergic properties for a resident known to experience side effects from such drugs and a long-acting benzodiazepine for a resident with drug-related sedation. Psychoactive drugs (antipsychotics, antidepressants, sedatives and hypnotics) were the medications most often associated with preventable adverse events, including oversedation, confusion, hallucinations, delirium, falls and bleeds. They were also among the most commonly prescribed medications. More than 36 percent of the residents used antidepressants, 24 percent used sedatives/hypnotics and 17 percent used antipsychotics.

The appropriate use of medication involves multiple professionals from different disciplines. An error can occur at any stage of the process – prescribing, dispensing, or administering a medication, or monitoring the effects of a medication.

Ongoing Problem

The response to the problem of medication errors is not new, but is a continuation of a response that started years ago. In 1974 nursing facilities became the only health care institutions required to obtain the services of a consultant pharmacist who was charged with medication regimen reviews to which physicians were required to respond.

The regulations also provided surveyors with an investigative protocol to review the potential for ADRs (Adverse Drug Reactions). Investigators are instructed to ask specific questions, including: Was the risk for ADRs identified? Did the benefit of a drug outweigh the risk? Is the drug in use a valid therapeutic intervention? Was the ADR identified, was it reported, and what was the response?

Physicians and facilities must be prepared not only to answer these questions, but also to show documented evidence that supports their answers. According to guidance to surveyors in the State Operations Manual (SOM; Appendix Q), failure to protect a resident from undue medication consequences and/or failure to provide medications as prescribed can lead to a finding of immediate jeopardy.

The 1987 OBRA regulations did succeed in reducing the use of inappropriate antipsychotic medications in nursing facilities. There is also some evidence to suggest that errors in dispensing and administration of medications are lower in long term care facilities than in hospitals. But there is no evidence to date that the regulations had any impact on reduction of medications errors related to prescribing and monitoring.

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Medication Errors in Nursing Homes (cont)

Strategies for Improvement

- Educating doctors and other health care professionals about giving certain medications to elderly patients
- Better surveillance and reporting systems for adverse drug events.
- Systems-based prevention strategies to prevent ordering and monitoring errors in drug therapy. This refers to computer-based ordering systems, which can alert a prescribing physician to potential problems such as a patient's poor kidney function, allergies, or a dangerous interaction with another drug the patient is taking.

References:
National Institutes of Health, Adverse Drug Events in Nursing Homes: Common and Preventable. August 9, 2000.
American Medical Directors Association: Reducing Medication Errors in Nursing Homes. April 2003.

Fire Safety Requirements for Certain Health Care Facilities; Amendment

Interim final rule with comment period published in the Federal Register on March 25, 2005. Comments will be accepted until 5 p.m. May 24, 2005. Please locate a copy of these regulations and determine the impact they will have on your facility. Send comments to the address listed in the Federal Register Volume 70 No. 57 page 15229. These regulations address smoke detectors in resident rooms and alcohol-based hand sanitizers in the corridors.

Storage of Medications Requiring Refrigeration

By Joyce Johnson, R.N.

Maintaining medication refrigerators at the proper temperature is essential for safe storage of medications. Often, surveyors are finding medication refrigerator temperatures below the recommended guidelines for the medications stored there.

Diabetes Care, published by the American Diabetes Association; January 2004, Volume 27, Supplement 1, states: "Vials of insulin not in use should be refrigerated. Extreme temperatures (<36F). . . should be avoided to prevent loss of potency, clumping, frosting, or precipitation. Specific storage guidelines provided by the manufacturer should be followed."

The recommended storage temperatures for individual medications are printed on the manufacturer's label. If your medication refrigerator temperatures fall outside the recommended guidelines, a pharmacist should be consulted before using the medications.

The following medications are commonly stored in facility refrigerators (this list is not all inclusive): (continue on page 4)

Certified Nurse Aide Facts of the Day

Certified nurse aides must pass both an approved written and an approved skills test **from the same test vendor** in order to receive their certified nurse aide card from the North Dakota Department of Health. In addition, a CNA who has successfully completed both tests is eligible to work in a nursing home **only** after her name has been added to the North Dakota certified nurse aide registry.

Storage of Medications Requiring Refrigeration (cont.)

Medication:	Recommended storage temperature:
Tuberculin Purified Protein Derivative	35-46 degrees
Influenza vaccine	35-46 degrees
Lantus Insulin	36-46 degrees
Novalog Insulin	36-46 degrees
Forteo	36-46 degrees
Pneumococcal vaccine	36-46 degrees
Miacalcin spray	36-46 degrees
Desmopressin	36-46 degrees
Hepatitis B vaccine	36-46 degrees
Neurontin oral solution	36-46 degrees
Albuterol solution	36-77 degrees
Novalin insulin	Do not freeze
Humulin insulin	Do not freeze
Humalog insulin	Do not freeze
Lorazepam injectable	Do not freeze
Theophylline liquid	Do not freeze

RAI Update

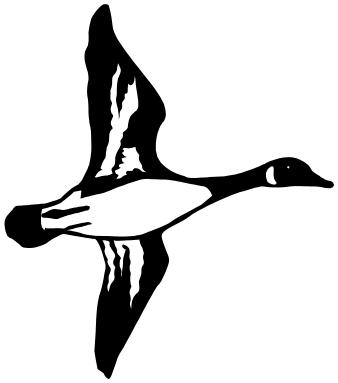
By Patricia Rotenberger, R.N.
State MDS Coordinator

The Centers for Medicare Medicaid Services (CMS) released its latest revisions to the Long Term Care Facility Resident Assessment Instrument (RAI) User's manual March 28, 2005. These revisions will be effective May 1, 2005. The updates can be found on this CMS website: www.cms.hhs.gov/quality/mds20/default.asp?

The new revisions include clarifications for electronic signatures, examples for ADL functioning in section G, nutritional problems in section K, skin conditions in section M, and trained nurse in respiratory therapy in section P.

This revision corrects typographical errors and clarifies several other areas of the manual. The MDS coordinators in your facilities need to be aware of these revisions.

The next Basic RAI Training workshop is May 10 and 11, 2005 in Bismarck, N.D. Brochures will be sent to all facilities about three weeks prior to the conference. For questions, please call Pat Rotenberger at 328-2364.



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