

Medication Safety Alert

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Focus on ... **High Alert Medications**

As described by the FDA, "High-Alert Medications" are those most likely to cause significant harm to patients of any age, even when used as intended by the prescriber. While errors in these medications are not more common than in others, high-alert medications more commonly cause harm and their adverse reactions are usually more serious, especially in the geriatric population.

Some classes of medications often used in long term care designated as high-alert include:

Medication Class	Factors in Risk of Possible Adverse Reactions
Antipsychotics	Falls. Lethargy. Delirium. Movement symptoms.
Antibiotics	Multiple drug interactions with warfarin. Aminoglycoside renal toxicity. Allergic reactions. Culture information not available upon initiation.
Anticoagulants	Narrow therapeutic range. Many drug and food interactions. Complex dosing.
Insulins, highly concentrated Insulins, and other antidiabetic agents	Hypoglycemia. Complex dosing. Concomitant use of multiple agents. Look-alike, sound-alike confusion with insulins. Pharmacokinetics differs by insulin type. Hyperglycemia and death when under-dosed.
Levothyroxine	Narrow therapeutic range. Confusion with doses written in milligrams (mg) and micrograms (mcg).
Methotrexate	Weekly dosing regimens when used to treat arthritis are often misunderstood as daily orders.
Opiates	Calculation errors. IV to oral dose conversions. Concentrated dosage forms. Respiratory depression. Constipation. Confusion.
Sedatives	Multiple indications. Exaggerated sedation. Hypotension. Increased risk of falls.

Preventing harm from high-alert medications is not just dependent on order and dispensing accuracy. Improved medication management and rapid identification of adverse drug events is necessary to minimize serious patient harm.

Some Patient Safety Strategies for High-alert Medications:

- ! Nursing staff should use drug-drug interaction information and other drug communication sheets sent by the pharmacy to decide if there is a need for additional monitoring and care planning.
- ! Nursing staff and pharmacists should contact the prescriber whenever orders are unclear.
- ! Never accept a blanket re-instatement of previous or transfer orders. Completely re-write and validate all orders.
- ! Always include a reason for use to complete a medication order.
- ! Read back telephone orders to the prescriber or nurse after it has been reduced to writing to eliminate sound-alike confusion. Verify strengths and frequencies, especially in complex orders.
- ! Pharmacists and pharmacy technicians should recognize the list of high-risk medications and have doses and dose calculations double checked before dispensing.
- ! Nurses and Medication Aids should have prepared doses of high alert medications double checked before administration to the patient/resident.
- ! Alert the prescriber as soon as abnormal drug blood levels or lab test results such as INR's and glucose levels are received to determine if new orders are medically necessary.
- ! Remind prescribers when opiates are initiated for opiate-naïve patients to reduce the risk of respiratory depression.
- ! Facility staff should check with a pharmacist for potential drug-drug interactions BEFORE removing antibiotics from the emergency drug supply and initiating therapy.
- ! Avoid unapproved abbreviations in medication orders and develop a list of look-alike, sound-alike medications used in your facility or health care organization.