

Medication Administration In-Service

Provided by ClinicalConcepts 

Tag F759: Medication Errors. The facility must ensure that its medication error rates are not 5% or greater

Tag F760: The facility must ensure that its' residents are free of any **significant medication errors**.

“Medication Error” means the observed or identified preparation or administration of medications which is **not** in accordance with:

1. The **prescriber’s order**;
2. **Manufacturer’s specifications** (not recommendations) regarding the preparation and administration of the medication or biological; or
3. **Accepted professional standards** and principles which apply to professionals providing services.

“Significant medication error” means one which causes the resident discomfort or jeopardizes his or her health and safety.

“Medication error rate” is determined by calculating the percentage of medication errors observed during a medication administration observation, both significant and non-significant. This includes the total number of observations or “opportunities for errors” and includes all the doses the survey team observed being administered *plus the doses ordered but not administered*. The medication pass error rate must be less than 5% and must be free of significant errors, or the facility will receive a deficiency.

Three general guidelines determine whether a medication error is significant or not:

1. **Resident Condition** - The resident’s condition is an important factor to take into consideration. For example, a diuretic (fluid pill) erroneously administered to a dehydrated resident may have serious consequences, but if administered to a resident with a normal fluid balance may not. If the resident’s condition requires rigid control, such as with strict intake and output measurement, daily weights, or monitoring of lab values, a single missed or wrong dose can be highly significant;
2. **Drug Category** - If the medication is from a category that usually requires the resident to be titrated to a specific blood level, a single medication error could alter that level and precipitate a reoccurrence of symptoms or toxicity. This is especially important with a medication that has a Narrow Therapeutic Index (NTI) (i.e., a medication in which the therapeutic dose is very close to the toxic dose). Examples of medications with NTI include: phenytoin (Dilantin), carbamazepine (Tegretol); warfarin (Coumadin); digoxin (Lanoxin); theophylline (Theo-Dur); lithium salts (Eskalith, Lithobid); and
3. **Frequency of Error** - If an error is occurring repeatedly, there may be more reason to classify the error as significant. For example, if a resident’s medication was omitted several times, it may be appropriate, depending on consideration of resident condition and medication category, to classify that error as significant.

Examples of Medication Errors:

Unauthorized Medication (Medications administered without a physician’s order):

Medication:	Significant or Not Significant:
Warfarin 4 mg	S
Amoxicillin 500 mg	S
Allopurinol 100 mg	NS
Ferrous Sulfate 325 mg	NS

Omission:

<i>Medication:</i>	<i>Significant or Not Significant</i>
<i>Metoprolol Succinate 100mg daily</i>	<i>S</i>
<i>Furosemide 40mg twice daily</i>	<i>S</i>
<i>Ibuprofen 400mg three times daily</i>	<i>NS</i>
<i>Trazodone 25 mg at bedtime</i>	<i>NS</i>
<i>Artificial Tears 2 drops in both eyes three times daily</i>	<i>NS</i>
<i>Fiber Supplement 1 packet twice daily</i>	<i>NS</i>
<i>Multivitamin once daily</i>	<i>NS</i>
<i>Warfarin 4 mg daily</i>	<i>S</i>
<i>Amoxicillin 500 mg three times daily x 10 days</i>	<i>S</i>

Wrong Dose:

<i>Medication:</i>	<i>Significant or Not Significant:</i>
<i>Digoxin 0.125 mg daily ordered, 0.25 mg given</i>	<i>S</i>
<i>Morphine 20 mg/ml oral liquid 0.25 ml ordered, 0.5 ml given</i>	<i>S</i>
<i>Calcium Carbonate 600 mg ordered, 500 mg given</i>	<i>NS</i>

Wrong Route of Administration:

<i>Medication:</i>	<i>Significant or Not Significant:</i>
<i>Neomycin and Polymyxin B Ear Drops 4 to 5 drops to left ear ordered, given four times a day Left Eye</i>	<i>S</i>

Wrong Dosage Form:

<i>Medication:</i>	<i>Significant or Not Significant:</i>
<i>Dilantin Kapseals 100 mg three Kapseals by mouth at bedtime ordered, given Prompt Phenytoin 100 mg three capsules by mouth at bedtime (Parke Davis Kapseals have an extended rate of absorption. Prompt phenytoin capsules do not).</i>	<i>S</i>
<i>Docusate Sodium Liquid 100mg twice daily ordered, capsule given</i>	<i>NS</i>

Wrong Medication:

<i>Medication:</i>	<i>Significant or Not Significant:</i>
<i>Vibramycin ordered, Vancomycin given</i>	<i>S</i>
<i>Oscal ordered, TUMS given</i>	<i>NS</i>

Wrong Time:

<i>Medication:</i>	<i>Significant or Not Significant:</i>
<i>Oxycodone 5mg 2 Tabs 20 min. before painful treatment 2 Tabs given after treatment</i>	<i>S</i>
<i>Losartan 50mg daily at 8 a.m. given at 9:30 am</i>	<i>NS</i>

Medication Errors Due to Failure to Follow Manufacturers Specifications or Accepted Professional Standards:

1. **Failure to “Shake Well” or Mix a Suspension:** The failure to “shake” a medication that is labeled “shake well” may lead to a diluted dose or overly concentrated dose depending on the product and the elapsed time since the last “shake.” Some medications, for example phenytoin, require correct preparation to achieve the desired therapeutic effect.

Examples of oral suspensions: Dilantin, Carafate, Tegretol, Theophylline, ... Please note the dose of these medications should always be measured with an oral syringe.

Examples of eye drop suspensions: Prednisolone, Cortisporin, ...

Examples of ear drop suspensions: Cortisporin, ...

2. **Crushing Medications:** The crushing of tablets or capsules for which the manufacturer instructs to “do not crush” requires further investigation by the surveyor. *The regulations currently state to crush each medication separately for administration. If all the medications are being crushed together, a statement is needed on the physician’s orders as to why it is OK for that specific resident to crush all the medications together.*
3. **Giving Adequate Fluids with Medications:** Administering medications without adequate fluid when the manufacturer specifies that adequate fluids be taken with the medication. Taking medications with inadequate fluid may interfere with the medication working properly. Most medications can be taken with water, but there are exceptions, as further explained below. If the resident declines to take adequate fluid, the facility is not at fault so long as they made a good faith effort to offer fluid, and provided any assistance that may be necessary to drink the fluid. Additionally, the facility should look for evidence that the IDT considered other medication options or routes of administration for residents who decline to take adequate fluids or who are fluid restricted. For example, the surveyor would count fluids consumed during meals or snacks (such as coffee, juice, milk, soft drinks, etc.) as fluids taken with the medication, as long as they have consumed within a reasonable time of taking the medication (e.g., within approximately 30 minutes). Medications that are recommended to be given with adequate fluid include, but are not limited to:
 - Bulk laxatives (e.g., Metamucil, Fiberall, Serutan, Konsyl, Citrucel) must be mixed with 4 to 8 ounces of water
 - Alendronate—should be taken with 6-8 ounces of plain water only.
 - Potassium supplements (solid or liquid dosage forms) should be administered with or after meals with a full glass (e.g., approximately 4 - 8 ounces of water or fruit juice). This will minimize the possibility of gastrointestinal irritation and saline cathartic effect.
4. **Medications that must be taken with food or antacids:** The administration of medications without food or antacids when the manufacturer specifies that food or antacids be taken with or before the medication is considered a medication error. The most commonly used medications that should be taken with food or antacids are the Nonsteroidal Anti-Inflammatory Drugs (NSAIDs). There is evidence that older individuals living with multiple diagnoses are at greater risk of gastritis and GI bleeds. *Some other medications must be given with food according to the manufacturer’s specifications include Lopressor (metoprolol tartrate), Coreg (carevidilol), Glucophage (metformin).*
5. **Nutritional and dietary supplements** are not regulated by the FDA and are not considered medications. Any errors that occur with these products are not considered medication errors.

6. **Medications Administered into the Eye:** Facility staff must follow the manufacturer's product information for administration instructions. Facility staff must verify the eye(s) into which eye medication will be administered. When observing the administration of eye drops, confirm that the medication makes full contact with the lower conjunctival sac, so that the medication is washed over the eye when the resident closes eyelid; the eye drop(s) should not fall onto the cornea and the tip of the eye drop bottle should not touch any portion of the eye. *The time for optimal eye drop absorption is approximately 3 to 5 minutes.*

7. **Multi-Dose Inhalers (MDIs):**

- a) Shake the container well;
- b) Position the inhaler in front of or in the resident's mouth. Alternatively, a spacer or valved holding chamber may be used
- c) If more than one puff is required (whether the same medication or a different medication), follow the manufacturer's product information for administration instructions including the acceptable wait time between inhalations. NOTE: If the person administering the medication follows all the procedures outlined above, and there is an isolated failure to administer the medication because the resident is unable to understand the procedure (for example, a resident with dementia), this should not be counted as a medication error. If the facility staff repeatedly fail to administer the inhaler due to circumstances related to the resident's condition, then the surveyor would cite a medication error.
- d) *The resident must rinse the mouth out with water and spit (do not swallow) after steroid inhaler use. Examples of steroid inhalers include Advair Discus, AeroBid, Alvesco, Asmanex, Dulera, Flovent, Pulmicort, QVAR, Symbicort, ...*

8. **Timing Errors:** If a medication is prescribed before meals (AC) and administered after meals (PC), will always count as a medication error. Likewise, if a medication is prescribed PC and is given AC, it is counted as a medication error. *It is a wrong time error if the medication is administered 60 or more minutes earlier or later than its scheduled time of administration, but only if that wrong time error can cause the resident discomfort or jeopardize the residents' health and safety.*

Examples of medications that must be given before meals (on an empty stomach) according to the manufacturer's specifications: Prilosec (Omeprazole), Nexium (Esomeprazole), Prevacid (Lansoprazole), Dexilant (Dexlansoprazole), Aciphex, Carafate (Sucralfate), Reglan (Metoclopramide), Glucotrol (Glipizide), Insulin, Actonel, Fosamax, Boniva, ...

Counting a medication with a long half-life (e.g., digoxin) as a wrong time error when it is 15 minutes late is improper because this medication has a long half-life (beyond 24 hours) and 15 minutes has no significant impact on the resident. The facility must have a policy stating when the scheduled administration times are. Residents have the right to choose health care schedules consistent with their interests and preferences.

The adjustment of medication administration times, to meet the individual needs and preferences of residents, must be considered by the nursing home. However, medication administration scheduling must still consider physician prescription, manufacturer's guidelines, and the types of medication, including time-critical medications. Some medications require administration within a narrow window of time to ensure resident safety or achieve a therapeutic effect while other medications are not affected by a more flexible schedule.

9. **Sublingual Medications:** If the resident persists in swallowing a sublingual tablet (e.g., nitroglycerin) despite efforts to train otherwise, the facility should endeavor to seek an alternative.

10. Insulin Administration:

- a) Remember to clean the glucometer and use proper administration techniques (e.g., clean injection site, rotate sites, prime insulin pens prior to use).
- b) Insulin should be stored in the refrigerator until opening. Once opened, the insulin should be dated and initialed and is good for 28 to 42 days (depending on the type of insulin).
- c) Rapid acting insulin (e.g., Novolog, Humalog) must be administered no sooner than 15 minutes before the resident eats or with meals.
- d) Short acting insulin (e.g., Novolin, Humulin) should be administered 30 to 60 minutes before meals (onset of action is about 30 minutes).
- e) Long acting insulin (e.g., Lantus, Levemir) don't have a peak. They are generally administered in the evening but may be administered any time during the day. Please note these insulins are a suspension and should not be mixed with any other kind of insulin.

11. Medications Administered Per Tube:

- a) Check the placement of the naso-gastric or gastrostomy tube in accordance with the facility's policy on this subject.
- b) Flush the enteral feeding tube with at least 30 ml of preferably warm water before and after medications are administered.
- c) The administration of enteral nutrition formula and administration of Dilantin (*Suspension*) should be separated to minimize interaction. The surveyor should look for appropriate documentation and monitoring if the two are administered simultaneously. If the facility is not aware that there is a potential for an interaction between the two when given together and is not monitoring for outcome of seizures or unwanted side effects of Dilantin, then the surveyor will write an administration a medication error.

12. **Transdermal Patches:** Swab area with alcohol or water, date and initial patch. Remember to rotate sites! Consider patch removal a part of the administration process. (Exelon patch: do not apply patch in same site more than once in 14 days).

The surveyor will reconcile the surveyor's record of observation with physician or prescribing practitioner orders. For each medication on the surveyor's record of observation, determine if the medication was administered:

- o According to a valid prescriber's order(s);
- o To the correct resident;
- o At the correct time;
- o In the correct dose;
- o By the correct route; and
- o According to correct accepted standards of practice and manufacturer's specifications.

Tips for Proper Medication Administration:

1. **Read the MAR** and medication label. The information on the MAR, physician's orders, and medication label should match.
2. **Start and end the med pass on time** (1 hour before to 1 hour after the scheduled time).
3. **Clean and stock the med cart** before the med pass
4. **Keep the med cart visible** by the nurse or locked always.
5. **Keep med cart keys** with you always.
6. **Cover the MAR** when not in use.
7. **Keep the narcotics book** on the med cart and take it with you on the med pass. Sign the narcotics book before any narcotic is given.
8. **Document** the refusal or withholding of any medication per facility policy.
9. **Initial the MAR *after*** the medication is given.
10. **Remember to wash hands** before direct patient contact and between each patient.
11. **Identify the resident** before any medication is given.
12. **Ensure** the resident's rights and privacy are maintained.
13. **Remain** with the resident until the medications are swallowed (including bulk laxatives, updrafts).
14. **Administer** only oral medications in the dining room.
15. **Keep** medications, needles, and anything residents could potentially harm themselves with off the top of the med cart when it is unattended.
16. **Plan** before the med pass. The surveyor(s) will want to see different routes of administration (e.g., eye drops, inhalers, oral medications, per tube administration). Generally, the nurse can pick who the surveyor watches (hint: pick the easy ones).

(Revised 7/19/18)