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**GREATER NEW YORK HEALTH CARE FACILITIES ASSOCIATION**

519 8<sup>th</sup> Avenue, 16<sup>th</sup> Floor, New York, NY, 10018

Phone: 212-643-2828 Fax: 212-643-2956 [www.gnyhcfa.org](http://www.gnyhcfa.org)

## **MEMO 14-53**

**TO: Administrator, DNS, Medical Director, and QA Committee**

**FROM: Mary Gracey-White RN, Director of Quality Assurance and Clinical Compliance**

**DATE: July 15, 2014**

**RE: Medication Safety**

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Medication errors and adverse drug events continue to be a quality of care issue for nursing homes. On behalf of our members, GNYHCFA is participating in a Medication Safety Workgroup convened by the NYSDOH. The goal of the workgroup is to conduct a root cause analysis regarding medication errors including those resulting in Immediate Jeopardy citations, and to develop guidance to prevent and reduce medication errors.

The Federal regulation 483.25 Medication Errors requires the facility to ensure:

1. Be free of medication error rates of 5 percent or greater.
2. Residents are free of any significant medication errors.

A medication error is the observed preparation or administration of drugs or biologicals which is not in accordance with:

1. Physician's orders;
2. Manufacturer's specifications regarding the preparation and administration of the drug or biological;
3. Accepted professional standards and principles which apply to professionals providing services. Accepted professional standards and principles include the various practice regulations in each State, and current commonly accepted health standards established by national organizations, boards, and councils.

Recent deficiencies, including Immediate Jeopardy, cited under F332, F333 have included medications not being available from pharmacy for new/readmissions, as well as residents with new medication orders and medications that were not given that were available in facility emergency boxes. In these situations resulting in immediate Jeopardy citations, physicians were not

notified. Other medication errors were noted in the area of "high-risk" medications, including insulin and diabetic management, anticoagulants, antidepressants, anticonvulsants and cardiac treatment.

Some Common Sense Approaches/ Best Practices include:

- Ensure that your facility has a clear and sound policy regarding the administration of coumadin. A best practice recommendation is that each resident receiving coumadin has an order when the next INR is due as well as a method of tracking/monitoring INR results on a flow sheet or MAR. Documentation should include physician notification and follow up.
- Make sure your facility has a clear and sound policy regarding finger stick monitoring and emergency treatment for hypoglycemia. Finger stick monitoring should be monitored by both nurses and PMD. This includes a review of whether frequent finger stick monitoring is indicated as part of resident's diabetic management plan. Long term residents may not require as frequent finger sticks or coverage for finger sticks except when experiencing an unstable medical condition. A review by the physician in conjunction with the RN should be done to ensure diabetic management plan be individualized for each resident utilizing an electronic emar or flow sheet it is easy to download finger stick results for all residents. This should be done on a regular basis
- Have a system in place to check med carts for vials not dated/labeled or discontinued medications. All medication vials should have a label with the resident's name. Having loose vials in the medication cart can lead to serious and sometimes fatal medication errors.
- Pay close attention to Vendor Pharmacy Reports and ensure that they are followed up on and that corrections are made as indicated.
- Review each resident's drug regime for unnecessary medications.
- Group medications by category to allow a full picture when reviewing the medication administration record. All diabetic meds should be listed under finger sticks. All anti-hypertensive medication can be listed after one another, along with necessary monitoring i.e. blood pressure, pulse and any parameters as ordered by physician.
- Ensure that there is a system in place to identify drugs that are not being given due to low blood pressure and/or pulse. These drugs may no longer be warranted or a smaller dose may be needed.
- Attention must be taken to the allotted time frame for medication administration. Is the nurse able to complete the med pass within the allotted time? Can adjustments be made to facilitate medication administration, i.e. eye drops be administered at night and in early morning when the resident is in bed. Review inhalers and nebulizer treatment times to optimize medication administration times. Monitor the

times that medications are given. Facilities can conduct a Quality Improvement activity to improve the medication administration process, thereby promoting medication safety. Involve facility Pharmacy Consultant in this QI process.

A key component to medication safety is **medication reconciliation at all transitions of care**. Reconciliation is imperative with both electronic medical records and traditional paper medical records. In addition, facilities must develop and implement policies and procedures regarding unavailable medications and physician notification for follow up and alternatives as indicated. We have attached some tools that will assist you in initiating quality improvement activities and education to promote medication safety. As part of our commitment to assist members, GNYHCFA also offers onsite in-service regarding medication administration. Please contact the Association if you need further information.

Topic: SAMPLE POLICY/PROCEDURE: **Unavailable Medications**

Policy: The resident will receive necessary medications as ordered by the PMD. When the medication is not available the PMD will be notified. The PMD will adjust medication regime accordingly.

Procedure:

1. The nurse is responsible to notify the PMD when a resident's medication is unavailable.
2. The nurse will indicate on the E-Mar that the drug was not given, (DNG) and that the PMD was notified.
3. The nurse must notify the RN Supervisor. The nurse must notify the pharmacy.
4. The nurse must document in the Progress Notes that the medication is unavailable and that the PMD has been notified and when indicated the directive for alternate administration time ordered.
5. The Nurse will input a single dose order on the MAR if the unavailable medication is to be given at an alternate time as ordered by PMD.
6. The RN Supervisor is responsible to contact pharmacy if there are any problems regarding delivery of the medication.
7. The nurse must document on the 24 Hour Report Sheet that the medication is missing to allow for follow up and resolution by the oncoming shifts.
8. All missing medications will be reviewed by IDT at the morning meeting for follow-up resolution.
9. The PMD will be requested to order an alternative drug and /or change the time of administration as deemed necessary.
10. When a medication is unavailable for more than one dose the DNS/Designee is to be notified and pharmacy and PMD will be contacted to identify the root cause of problem. When necessary the PMD will order and alternative medication.

**AUDIT FOR COMPLAINE WITH FACILITY POLICY REGARDING  
UNAVAILABLE MEDICATIONS**

RESIDENT	MEDICATION	DNG/M D NOTIFIED ON E-MAR	NOTE IN CHAR T	ALTERNATE TIME FOR ADMINISTRA TION	DOCUMEN TED 24HOUR REPORT	PHARMA CY CALLED	DNS NOTIFIED IF 2 <sup>ND</sup> DOSE WAS UNAVAILA BLE

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

# DRUG SAFETY TOOLKIT FOR NURSING HOMES

## FOCUS: MEDICATION RECONCILIATION

Miscommunication of critical information during admission and care transitions has a high potential for placing residents at risk for medication errors and potential harm.\* This toolkit is designed to help your organization address factors that contribute to the difficulty of medication management, such as care transitions and unknown resident medication histories. Materials provided here can help prevent adverse events by improving medication reconciliation processes, including efforts to ensure an accurate medication list for each resident.

**MEDICATION RECONCILIATION** - the process of creating the most accurate list possible of all medications a patient is taking and comparing that list against the physician's admission, transfer, and/or discharge orders. Identifies and resolves any discrepancies, with the end result of improving patient safety.

The toolkit focuses on education and increased resident involvement to promote ongoing medication reconciliation in a person-centered care process. Implementing this process will allow providers and residents to work as a team to help:

- Reduce the risk of adverse drug events
- Improve resident-provider communication
- Promote ongoing resident involvement
- Identify and prevent potential problems

\*Georgia K, Kinney K, Pace A, et al. Ensuring medication reconciliation. *Patient Safety & Quality Healthcare*. November/December 2007; Available at: [www.psqh.com/novdec07/medication.html](http://www.psqh.com/novdec07/medication.html). Accessed December 30, 2010.

## CHECKPOINTS FOR MEDICATION RECONCILIATION

Each time a patient or resident moves from one setting to another offers a key opportunity to improve safety through medication reconciliation.

Common medication reconciliation checkpoints include:



### ADMISSION

Check to ensure that all medication orders are complete and accurate.



### MONTHLY RECONCILIATION

At end of each calendar month, compare the next month's physician order sheets and medication administration records (MARs) with the prior month's physician orders and MARs.



### TRANSFER (Includes intra-facility transfers as well as transfers from other care settings.)

Compare medication lists, current orders and transfer orders.



### DISCHARGE

Compare current orders with the discharge orders and home medication list. Educate the patient, caregiver and/or the next provider.

### STEPS FOR EACH CHECKPOINT:

1. Review medication history/previous medication orders against new orders plans of care, and MARs.
2. Identify and reconcile any differences.
3. Engage the resident by soliciting input and providing clarification and education.

## STEPS OF MEDICATION RECONCILIATION

The resources on the next page can help your facility address the three steps of medication reconciliation: verification, clarification, and reconciliation.

### 1. Verification

Data collection and resident involvement

### 2. Clarification

Clinical guidelines and recommendations

### 3. Reconciliation

Communication and education

Be sure to keep in mind that medication reconciliation is an ongoing process; verification, clarification, and reconciliation should all be performed routinely.

# ISMP's List of High-Alert Medications

**H**igh-alert medications are drugs that bear a heightened risk of causing significant patient harm when they are used in error. Although mistakes may or may not be more common with these drugs, the consequences of an error are clearly more devastating to patients. We hope you will use this list to determine which medications require special safeguards to reduce the risk of errors. This may include strategies such as standardizing the ordering, storage,

preparation, and administration of these products; improving access to information about these drugs; limiting access to high-alert medications; using auxiliary labels and automated alerts; and employing redundancies such as automated or independent double-checks when necessary. (Note: manual independent double-checks are not always the optimal error-reduction strategy and may not be practical for all of the medications on the list).

Classes/Categories of Medications
adrenergic agonists, IV (e.g., <b>EPINEPHRINE</b> , phenylephrine, norepinephrine)
adrenergic antagonists, IV (e.g., propranolol, metoprolol, labetalol)
anesthetic agents, general, inhaled and IV (e.g., propofol, ketamine)
antiarrhythmics, IV (e.g., lidocaine, amiodarone)
antithrombotic agents, including: <ul style="list-style-type: none"> <li>■ anticoagulants (e.g., warfarin; low-molecular-weight heparin, IV unfractionated heparin)</li> <li>■ Factor Xa inhibitors (e.g., fondaparinux)</li> <li>■ direct thrombin inhibitors (e.g., argatroban, bivalirudin, dabigatran etexilate, lepirudin)</li> <li>■ thrombolytics (e.g., alteplase, reteplase, tenecteplase)</li> <li>■ glycoprotein IIb/IIIa inhibitors (e.g., eptifibatide)</li> </ul>
cardioplegic solutions
chemotherapeutic agents, parenteral and oral
dextrose, hypertonic, 20% or greater
dialysis solutions, peritoneal and hemodialysis
epidural or intrathecal medications
hypoglycemics, oral
inotropic medications, IV (e.g., digoxin, milrinone)
insulin, subcutaneous and IV
liposomal forms of drugs (e.g., liposomal amphotericin B) and conventional counterparts (e.g., amphotericin B desoxycholate)
moderate sedation agents, IV (e.g., dexmedetomidine, midazolam)
moderate sedation agents, oral, for children (e.g., chloral hydrate)
narcotics/opioids <ul style="list-style-type: none"> <li>■ IV</li> <li>■ transdermal</li> <li>■ oral (including liquid concentrates, immediate and sustained-release formulations)</li> </ul>
neuromuscular blocking agents (e.g., succinylcholine, rocuronium, vecuronium)
parenteral nutrition preparations
radiocontrast agents, IV
sterile water for injection, inhalation, and irrigation (excluding pour bottles) in containers of 100 mL or more
sodium chloride for injection, hypertonic, greater than 0.9% concentration

Specific Medications
epoprostenol (Flolan), IV
magnesium sulfate injection
methotrexate, oral, non-oncologic use
opium tincture
oxytocin, IV
nitroprusside sodium for injection
potassium chloride for injection concentrate
potassium phosphates injection
promethazine, IV
vasopressin, IV or intraosseous

**Background**

Based on error reports submitted to the ISMP National Medication Errors Reporting Program, reports of harmful errors in the literature, and input from practitioners and safety experts, ISMP created and periodically updates a list of potential high-alert medications. During October 2011-February 2012, 772 practitioners responded to an ISMP survey designed to identify which medications were most frequently considered high-alert drugs by individuals and organizations. Further, to assure relevance and completeness, the clinical staff at ISMP, members of our advisory board, and safety experts throughout the US were asked to review the potential list. This list of drugs and drug categories reflects the collective thinking of all who provided input.

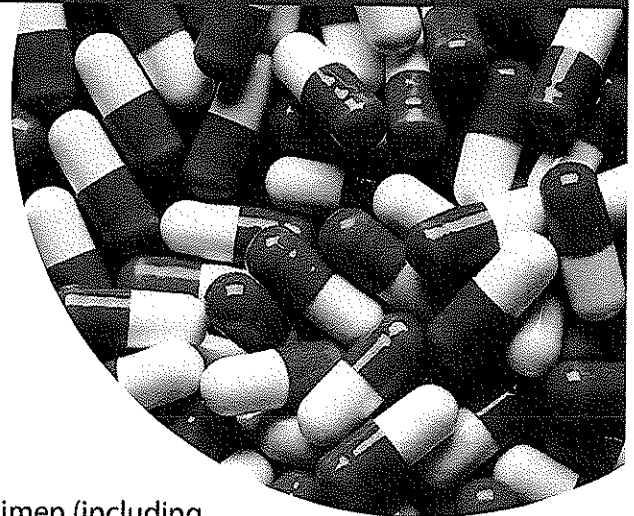
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# PRESCRIBING PRINCIPLES FOR THE ELDERLY

## RISK FACTORS

### FOR ADVERSE DRUG EVENTS IN ELDERLY PATIENTS

- $\geq 6$  concurrent chronic diagnoses
- $\geq 12$  doses of medications per day
- $\geq 9$  medications (including OTC)
- Recent transfer from the hospital
- Age  $\geq 85$  years
- Prior adverse drug reaction
- Low body weight or BMI  $< 22\text{kg/m}^2$
- Creatinine clearance  $< 50\text{ mL/min}$



## PRESCRIBING PRINCIPLES

1. At each encounter, assess your patient's current drug regimen (including prescription, OTC, and alternative medications) before prescribing a new medication.
2. Determine if any current medications are on the Beers List and could be gradually switched to an alternative, safer therapy.
3. For medications that have no alternative, monitor your patient closely for adverse effects.
4. Prescribe as few drugs as possible. Consider if one drug could be prescribed to treat two conditions. When choosing medication, consider the least frequent dosing interval.
5. Avoid adding new drugs to treat side effects of current medications.
6. "Start low and go slow" with new medications, and increase only as needed.
7. Discuss potential side effects and treatment adherence with patients and caregivers.
8. Decide if drug therapy is needed or if a non-drug alternative exists.
9. Determine how often medications on the Beers List, such as diazepam, are used in your elderly patients through chart review or an electronic health record. Develop systems or reminders to decrease the use of these medications.
10. Understand the side effect profile and pharmacokinetic properties of medications prescribed to elderly patients.
11. Discontinue medications without a known benefit or clinical indication. Recommend disposal of old medications.
12. If a patient develops a new or unexplained medical problem, consider an adverse drug event (ADE) as a potential cause.
13. Work as an interdisciplinary team (physician, pharmacist, and nurse) to optimize patient outcomes and improve safety.
14. Provide patients with written information about their medications, and remind patients to carry a list of their medications with them at all times.

Sources: Fick DM, Cooper JW, Wade WE, et al. Updating the Beers Criteria for potentially inappropriate medication use in older patients. *Arch Intern Med.* 2003; 163: 2716-2724; Fouts M, Hanlon J, Pieper C, et al. Identification of elderly nursing facility residents at high risk for medication-related problems. *Consult Pharm.* 1997; 12: 1103-1111; Novielli K, Koenig J, White E, et al. Individualized prescribing for the elderly. *Pharmacy & Therapeutics.* September 2001; Suppl. (26): 1-29; AMA. The physician's role in medication reconciliation. 2007. Available at: [www.ama-assn.org/go/makingstrides](http://www.ama-assn.org/go/makingstrides). Accessed November 11, 2010.



# DRUGS TO AVOID WITH Elderly Patients

A 2001 study using the Beers criteria in a Medicare-managed population found that 23 percent of patients in the study were prescribed potentially inappropriate medications. Post this reference chart as a reminder of medications that may be unsuitable for your older patients. To learn more about an Ohio KePRO quality improvement initiative focused on potentially inappropriate medications and drug-to-drug interactions, please contact Bonnie Holloper or Sue Ferrante at 1.800.385.5080.

DRUG CLASS		GENERIC	BRAND	JUSTIFICATION	ALTERNATIVES
<b>PRESCRIPTION MEDICATIONS</b>					
Tricyclic Antidepressants	Amitriptyline (and all product combinations) with daily doses $\geq$ 25 mg	Elavil <sup>®</sup> , Limbitrol <sup>®</sup> , Triavil <sup>®</sup>		Strong anticholinergic effects (such as dry mouth, constipation, and vision disturbances), sedation properties, and increased risk for falls	Depression: SSRI, SNRI, nortriptyline, desipramine; Neuropathic pain: gabapentin (Neurontin <sup>®</sup> ) or pregabalin (Lyrica <sup>®</sup> ); Sleep: short-acting benzodiazepine or low-dose Ambien <sup>®</sup> , Sonata <sup>®</sup> , Lunesta <sup>®</sup> , or Rozerem <sup>®</sup>
Central Alpha-Agonists	Clonidine	Catapres <sup>®</sup>		Potential for orthostatic hypotension and CNS adverse effects	HCTZ, ACE inhibitors, ARBs, CCB, beta-blockers
Skeletal Muscle Relaxants	Cyclobenzaprine Carisoprodol	Flexeril <sup>®</sup> , Soma <sup>®</sup>		Most muscle relaxants are poorly tolerated by elderly patients due to anticholinergic adverse effects, sedation, and weakness. At doses tolerated by elderly patients, their effectiveness is questionable.	Tizanidine <sup>®</sup> (Zanaflex <sup>®</sup> ) - somnolence 50%. Use with caution.
Benzodiazepines (long-acting)	Diazepam	Valium <sup>®</sup>		These drugs have a long half-life in elderly patients (often several days) and produce prolonged sedation and increased risk for falls and fractures.	Anxiety: Low-dose short-acting benzodiazepine or SSRI; Sleep: short-acting benzodiazepine or low-dose Ambien <sup>®</sup> , Sonata <sup>®</sup> , Lunesta <sup>®</sup> , or Rozerem <sup>®</sup>
Estrogens	Estrogen, conjugated	Premarin <sup>®</sup> , Cenestin <sup>®</sup> , Prempro <sup>®</sup> , Premphase <sup>®</sup>		Evidence of carcinogenic (breast and endometrial cancer) potential; lack of cardioprotective effect in older women	No alternatives available
GI-antispasmodics	Hyoscyamine	Levsin <sup>®</sup> , Levsinex <sup>®</sup>		GI-antispasmodic drugs are highly anticholinergic and have uncertain effectiveness. Avoid, especially for long-term use.	No alternatives available
Calcium Channel Blockers	Nifedipine (short-acting)	Procardia <sup>®</sup> , Adalat <sup>®</sup>		Potential for hypotension and constipation	Other CCBs, HCTZ, ACE inhibitors, ARBs, beta-blockers
Antiemetics/Antihistamines	Promethazine	Phenergan <sup>®</sup>		Anticholinergic effects, sedation, and confusion	Ondansetron (Zofran <sup>®</sup> )
Opiate Agonists	Propoxyphene HCl (and all product combinations)	Darvon <sup>®</sup> , Darvon-N <sup>®</sup> , Darvocet <sup>®</sup>		Offers few analgesic advantages over acetaminophen. Accumulation of a toxic metabolite in elderly which causes psychosis.	Tramadol (Ultram <sup>®</sup> ) or codeine
<b>OVER-THE-COUNTER MEDICATIONS</b>					
H2-Antagonist	Cimetidine	Tagamet <sup>®</sup>		CNS effects such as sedation and confusion; significant drug-drug interactions	Any other H2-antagonist or a PPI
Antihistamines	Diphenhydramine (and all product combinations)	Benadryl <sup>®</sup>		May cause confusion and sedation. Should not be used as a hypnotic. If treating emergency allergic reaction, use smallest dose possible.	Allergy: Fexofenadine (Allegra <sup>®</sup> ) or Loratidine (Claritin <sup>®</sup> ); Sleep: use short-acting benzodiazepine or low-dose Ambien <sup>®</sup> , Sonata <sup>®</sup> , Lunesta <sup>®</sup> , or Rozerem <sup>®</sup>

Sources: Fick DM, Waller JL, Maclean JR, et al. Potentially inappropriate medication use in a Medicare managed care population. *J Managed Care Pharm.* 2001; 7: 407-413; Fick D, Cooper J, et al. Updating the Beers criteria for Potentially Inappropriate Medication Use in Older Patients. *Arch Intern Med.* 2003; 163: 2715-2724; Safe Prescribing in the Oklahoma Elderly. Available at: [www.ohiokepro.org/spsskel](http://www.ohiokepro.org/spsskel). Accessed August 28, 2008.

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