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## High Alert Medications and Spelled-Alike, Sound-Alike Drug Products -- Safety Enhancement Measures, 699.38.00

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### POLICY:

**A high alert medication is defined as a drug that bears a heightened risk of causing significant patient harm if used in error.** When a formulary drug product or medication group is designated high alert, a utilization safety plan is implemented to mitigate patient injury risks. Formulary medications and medication groups with high risk designations are summarized in the accompanying procedure statement. The list is reviewed and updated annually by the Pharmacy Director and the Patient Safety Nurse. Assignment decisions are based upon 1.) Medical Center Quality Review Reports and, 2.) External reference sources (The ISMP, Joint Commission Sentinel Event Alerts, etc.).

**Drug products with names that may be confused when handwritten or names that sound similar when verbalized are categorized as look-alike, sound-alike medications.** When two or more formulary drug products fit into an enhanced risk look-alike or sound-alike name category, at least one of the following error prevention measures is implemented. (The pharmacy may implement other supplemental prevention measures as needed to mitigate dispensing error risks.)

1. Within the clinical information system, an order entry warning is appended to the members of each look-alike, sound-alike drug family. The problem is summarized and prescribers and pharmacists are cautioned to use extra caution when reviewing handwritten prescriptions, entering medication orders, or checking dispensed dosage forms.
2. The McKesson Med Carousel system with bar code scan product identification technology is used to store and pick most medications. Alphabetic shelf deployment practices are generally not utilized. Stocking placement restrictions within Automated Drug Cabinets (ADC) may also be implemented to eliminate potential product selection mistakes at the point of care.

A listing of current look-alike, sound-alike formulary medications are presented in the accompanying procedure statement. The list is reviewed and updated annually by the Pharmacy Director and the Patient Safety Nurse. Assignment decisions are based upon 1.) Medical Center Quality Review Reports and, 2.) External reference sources (The ISMP, Joint Commission Sentinel Event Alerts, etc.).

## **PROCEDURE:**

### **High Alert Medication Groups and Safety Enhancement Measures**

#### **Intravenous Pressor and Inotropic Infusions**

- a. Infusion concentrations are standardized
- b. Usage is limited to cardiac unit and critical care setting (except for low dose dopamine infusions)
- c. Safe dose limits are programmed into Smart Pump Technology IV Pumps
- d. All CPOE orders must be entered per clinical information system safety protocol. All pressor infusion titration orders must specify full max / min dosing guidelines and present detailed patient monitoring directions.

#### **Chemotherapeutic Agents – Oral and Parenteral**

- a. No verbal orders accepted – all orders must be submitted in a standardized order format using a written or printed form.
- b. Required information content standards have been implemented and are audited periodically
- c. Most orders from Columbia Basin Hem/Onc Clinic are submitted via their CPOE system.
- d. The information content of each chemotherapy order is validated by two pharmacists and two RNs.
- e. On order entry, product dosing guidelines display to the pharmacist.
- f. A pharmacist visually confirms medication additive precision of every compounded infusion
- g. Prescribers may be contacted by cell phone for immediate order clarification needs

#### **Concentrated Electrolyte Injections (Potassium, Sodium, and Magnesium)**

- a. House wide policy and procedure (607.12) limits availability outside of the pharmacy and establishes extra handling safety precautions.
- b. The majority of CPOE orders are entered per clinical information system safety protocol.

#### **Dextrose – Hypertonic**

- a. No floorstock solutions exceeding 10% concentration are stocked outside of the pharmacy.
- b. All infusion concentrations exceeding 10% are prepared and labeled by pharmacy

#### **Epidural Infusions**

- a. All infusions are administered via a specialized epidural pump
- b. Specialized nursing competency training is mandated
- c. Premixed bupivacaine and fentanyl infusions (at standardized concentrations) are utilized for most patients

#### **Glycoprotein lib/IIIa Inhibitors + Bivalirudin**

- a. Clinical information system order entry protocols are established for each agent
- b. All infusion strengths are standardized
- c. Dosing safety limits are programmed into Smart Pump Technology IV Pumps
- d. All Abciximab infusions (which require specialized compounding skills) are prepared by pharmacy

### **Liposomal Drug Formulations**

- a. All infusion preparation occurs within the pharmacy

Prescribing safety guidelines are established within the clinical information system.

### **Sedation Agents – Intravenous**

- a. Policy and Procedure statement 613.3 establishes house wide utilization safety standards for these drugs
- b. Only credentialed providers or nurses with competency certification may administer these agents.

### **Neuromuscular Blocking Agents**

- a. Stocking of these agents is limited to anesthesia automated drug cabinets, adult critical care automated drug cabinet(s), the neonatal ICU automated drug cabinet, and rapid intubation kits only.
- b. Except in anesthesia drug trays, a "neuromuscular blocking agent" warning label is placed on every vial cap.

### **Total Parenteral Nutrition Solutions**

- a. Adult and pediatric TPN orders must be reviewed and re-entered daily. All TPN orders are entered into the patient EHR by a computerized order entry protocol.
- b. All Neonatal TPN orders are entered by neonatologists or specialized nurse practitioners.
- c. Adult TPN orders standardize solution formulas, set blood glucose control targets, and enforce minimum laboratory monitoring standards.
- d. With adult patients, pharmacists monitor daily lab results and initiate prescription changes when formula adjustment is needed.
- e. Pharmacy compounding personnel complete training and competency maintenance exercises to maintain compliance with USP Chapter 797 (Sterile Compounding Guidelines).
- f. To provide extra sterility protection, all TPN additives are injected to container through a 5 micron filter needle.
- g. The Baxa Exacta Mix automated compounding system (with multiple error avoidance features) is utilized during all solution preparation activities.

### **High Alert Medications (Specific Drugs) and Safety Enhancement Measures**

#### **Amiodarone (Intravenous)**

- a. Loading dose and maintenance infusion concentrations are standardized
- b. Prescribing safety guidelines are established within the clinical information system.
- c. Safe dose limits are programmed into Smart Pump Technology IV Pumps
- d. Except in patient code emergencies, all infusions are prepared within the pharmacy

#### **Low Molecular Weight Heparin**

- a. Standardized order sets are encouraged (for common indications) to prevent dosing errors
- b. On first dose Automated dispensing cabinet removals, nurses are required to confirm that the patient is not also receiving unfractionated heparin therapy.
- c. Most treatment protocols standardize on one agent (Enoxaparin).

- d. Prescribing safety guidelines are incorporated within the clinical information system.

#### **Heparin (Un-fractionated)**

- a. A weight based infusion protocol is utilized for most treatment indications
- b. Prescribing safety guidelines are incorporated within the clinical information system.
- c. On first dose automated dispensing cabinet removals, nurses are required to confirm that the patient is not also receiving low molecular weight heparin (enoxaparin)
- d. Dosing safety limits are programmed into Smart Pump Technology IV Pumps
- e. Infusions are premixed and concentration is standardized
- f. IV bolus and continuous drip administration set up is double checked by two providers.

#### **Insulin (All varieties)**

- a. Dose, route, and brand check verification warnings display for pharmacists on order entry
- b. Prior to administration, individual injectable insulin dose and initial IV set up and bag changes are doubled checked by two RNs.
- c. Clinical evaluation of the patient has been incorporated into the dose administration process
- d. IV infusion concentrations are standardized. All treatment regimens are protocol based and incorporate cpoe prescribing safety guidelines.
- e. Standardized order sets are encouraged
- f. IV infusion dosing safety limits are programmed into Smart Pump Technology IV Pumps
- g. The EndoTool computerized dose management system is utilized for administer IV insulin therapy to Adult Critical Care and Cardiac unit patients.

#### **Lidocaine Intravenous**

- a. Dosing safety limits are programmed into Smart Pump Technology IV Pumps
- b. Infusions are premixed and concentration is standardized
- c. Prescribing safety guidelines are incorporated within the clinical information system.

#### **Methotrexate Oral (for non-oncology treatment indications)**

- a. Prescribing safety guidelines are incorporated within the clinical information system. The default scheduling frequency within Horizon's Meds Manager is once weekly

#### **Nesiritide**

- a. Dosing safety limits are programmed into Smart Pump Technology IV Pumps
- b. A clinical information system cpoe protocol (with incorporated safety guidelines) is utilized. Pharmacy prepares all infusions.

#### **Nitroprusside**

- a. Dosing safety limits are programmed into Smart Pump Technology IV Pumps
- b. Infusion concentration is standardized
- c. A clinical information system cpoe protocol (with incorporated safety guidelines) is utilized.

Add reference to Extravasation

**General Care Double Check (excludes ICU, OR and PACU)**

Refer to policy and procedure # 600.03.02

Two-provider double check is required for all doses including bolus doses or any bag change for the following:

- IV Heparin
- Insulin (all forms)
- Intravenous Pressors
- Intravenous Digoxin
- Argatroban
- Lepirudan
- Chemo Therapy Infusion

**KRMC LOOK-ALIKE, SOUND-ALIKE MEDICATIONS:**

Actos – Actonel  
Ambisome- Abelcet- Amphotericin B  
Cerebyx – Celebrex – Celexa  
Cisplatin – Carboplatin (Platinol – Paraplatin)  
Coumadin – Avandia  
Duragesic 25mcg – Duragesic 75mcg Ephedrine- Epinephrine  
Heparin- Hesperan  
Hydroxizine/Hydralazine  
Keppra – Kaletra – Keflex  
K-Phos Neutral – Neutra Phos K  
Lamotrigine-Lamivudine – Ludiomil – Labetalol – Lomotil  
Liposomal Doxorubicin (Doxil) – Doxorubicin Hydrochloride  
Metformin – Metronidazole  
Morphine – Hydromorphone  
Neulasta – Neumega  
Paxil – Plavix  
Risperidone (Risperdal – Ropinrole (Requip)  
Taxol - Taxotere  
Trazadone – Tramadol  
Wellbutrin SR – Wellbutrin XL  
Zebeta - Zetia - Zestril  
Zyprexa - Zyrtec  
Zyvox - Zovirax

**Attachments:**

No Attachments