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

Document Type: Policy, Procedure

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. 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.** Kadlec medication error reports are reviewed for safety problems arising from sound-alike or look alike drug names. 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, Tall- Man lettering is used when available.
2. The 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.

### PROCEDURE:

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

##### Intravenous Pressor and Inotropic Infusions

- a. Infusion concentrations are standardized
- b. Safe dose limits are programmed into Smart Pump Technology IV Pumps

- c. 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 – Most orders are submitted through the EMR in a treatment plan.
- b. Most orders from Kadlec Clinic Hematology and Oncology are submitted via our EMR.
- c. The information content of each chemotherapy order is validated by two pharmacists and two RNs.
- d. On order entry, product dosing safety guidelines display to the pharmacist.
- e. A pharmacist visually confirms medication additive precision of every compounded infusion
- f. Prescribers may be contacted by phone for immediate order clarification needs
- g. Vinca alkaloids (e.g., vincristine, vinblastine, vinorelbine):
  - 1. Adults:
    - a. Due to risk for inadvertent intrathecal administration, vinca alkaloids are dispensed in IV bags (e.g., mini-bags) to prevent inadvertent intrathecal administration through a syringe.
    - b. Adequate labeling will be applied to warn against intentional or inadvertent intrathecal administration.
    - c. The patient must not be left unattended while a vinca alkaloid is being administered.
    - d. Generally these are administered over 5-10 minutes.

#### **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 orders are entered via our EMR (CPOE) and are entered per standard dosing 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. 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. Dosing safety limits are programmed into Smart Pump Technology IV Pumps

#### **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.

### **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 laboratory monitoring standards.
- d. With adult patients, pharmacists monitor 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 into 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/dispensed 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. 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 usually premixed and concentration is standardized
- f. IV Bolus and administration set up is double checked by two caregivers

**Insulin (All varieties)**

- a. Dose, route, and brand check verification warnings display for pharmacists on order entry
- b. Clinical evaluation of the patient has been incorporated into the dose administration process
- c. IV infusion concentrations are standardized. All treatment regimens are protocol based and incorporate CPOE prescribing safety guidelines.
- d. IV infusion dosing safety limits are programmed into Smart Pump Technology IV Pumps
- e. The EndoTool computerized dose management system is utilized to administer IV insulin therapy to Adult inpatients- except for Obstetrics as ordered by a provider.

**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 EPIC is once weekly

**Nitroprusside**

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

**Medication Double Check**

Refer to policy and procedure # 600.03.02

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

Ambisome- ABELCET- Amphotericin B

Amiodarone Premixed IV Infusion - Nicardipine Premix IV Infusion (Look alike bags)

CeFAZolin - CefTRIAXone

CEREBYX – CeleBREX – CeleXA

CISplatin – CARBOplatin (PLATINOL – PARAPLATIN)

ePHEDrine- EPINEPHrine

Heparin- HESPAN

HydrOXYzine/HydrALAZINE

KEPPRA – KEFLEX

Levaquin- levETIRAcetam  
Liposomal DOXOrubicin (DOXIL) – DOXOrubicin Hydrochloride  
Metoprolol TARTRATE - Metoprolol SUCCINATE  
MetFORMIN – MetroNIDAZOLE  
Morphine – HYDROmorphone  
PAXIL – PLAVIX  
RisperiDONE (RisperDAL – rOPINIRole (REQUIP)  
TAXOL - TAXOTERE  
Trazodone – tramadol  
Valcyclovir-Valganciclovir  
VINBLASTINE-VINCRISTINE  
ZEBETA - ZETIA - ZESTRIL  
ZYPREXA - ZYRTEC  
ZYVOX - ZOVIRAX

## Attachments

No Attachments

## Approval Signatures

Approver	Date
Kirk Harper: CNO	02/2020
Heather Shipman: Executive Assistant	02/2020
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## Applicability

WA - Kadlec Regional Medical Center