


<b>Name of Policy:</b>	<u>High alert medications</u>	  <b>Effective Date:</b> 10/1/2023  Initial Effective Date: 7/13/2005
<b>Policy Number:</b>	3364-100-70-13	
<b>Department:</b>	Hospital Administration	
<b>Approving Officer:</b>	Senior Hospital Administrator, Chair of Pharmacy & Therapeutics	
<b>Responsible Agent:</b>	Director of Pharmacy	
<b>Scope:</b>	The University of Toledo Medical Center and its Medical Staff	
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Minor/technical revision of existing policy <input type="checkbox"/> Major revision of existing policy <input checked="" type="checkbox"/> Reaffirmation of existing policy		

**(A) Policy Statement**

The Pharmacy and Therapeutics Committee has reviewed the hospital formulary and trend analysis of medication errors to determine a list of high-risk/high alert medications. Additional input is incorporated from such organizations as the Institute for Safe Medications Practices (ISMP), United States Pharmacopoeia (USP) and other national databases reporting information on the use of medications.

**(B) Purpose of Policy**

To provide the highest quality pharmaceutical care with the minimum number of medication errors and the lowest patient risk. Medications that the Pharmacy and Therapeutics Committee (P&T) has deemed to be high risk or high alert include the following categories:

- ❖ Opioids/Sedatives
- ❖ Chemotherapeutic Agents
- ❖ Anti-thrombotics
- ❖ Insulin
- ❖ Electrolytes/Total Parenteral Nutrition (TPN)
  - i. Potassium (Chloride and Phosphate salts)
  - ii. Hypertonic saline
  - iii. Magnesium sulfate
  - iv. Calcium salts
- ❖ Vasoactive (such as intravenous beta-blockers, vasopressors, and antiarrhythmics)
- ❖ Other (such as oral hypoglycemic and neuromuscular blockers); see Pharmacy Procedure 084-IPP High Alert Medications for specific drugs
- ❖ Formulary look-alike-sound-alike medications

Comprehensive medication lists for each category are available in pharmacy procedure 084-IPP: High Alert Medications.

**(C) Procedure**

The following processes will be employed in the handling of high-alert medications including, but are not limited to, the following:

### INSULIN

- ❖ Long acting insulin is drawn up by pharmacy and provided in unit of use.
- ❖ Intravenous insulin is administered and monitored per standard approved order sets.  
*Policy: Nursing Policy Administration of Intravenous Medication 3364-110-5-02*  
*Pharmacy Procedure: Ordering U-500 Regular Insulin 046-IPP*

### CHEMOTHERAPY AGENTS

- ❖ Dose Calculations are checked by two RN's.
- ❖ Nursing staff must be qualified to administer IV chemotherapy.
- ❖ Emergency Medications and equipment is available for immediate intervention.
- ❖ Order entry and calculations are checked by two pharmacists, product compounding viewed by pharmacist as part of verification process
- ❖ Orders must be written by attending physician or a fellow. No Verbal orders are allowed (Policy 3364-100-70-07).  
*Policy: Nursing Policy Admin. of Intravenous Medication 3364-110-5-02*  
*Nursing Policy Qualifications for Nurses to Administer IV Antineoplastic Chemotherapy 3364-110-5-08*  
*Nursing Policy Administration of Antineoplastic Chemotherapy 3364-110-5-07*  
*Nursing Policy Admin. Of chemotherapy with a Known Potential for Hypersensitivity Reactions 3364-110-5-09*  
*Hospital Policy 3364-100-70-07 Ordering of Anti-Neoplastic Agents*  
*Pharmacy Procedure: Antineoplastic Agents 009-IPP*  
*Safety Manual HM 08-005*

### OPIOIDS/SEDATIVES

- ❖ Standard order sets are available for sedative agents in critical care areas.
- ❖ Use and administration of agents are restricted as appropriate and for appropriate durations (e.g. dexmedetomidine)
- ❖ Standard procedures are in place for intravenous administration of sedative agents.
- ❖ Opiates and all other controlled substances shall be maintained under locked storage in both the Pharmacy Department and patient care units.
- ❖ Documentation and reconciliation of controlled substance usage will follow all applicable state and federal standards.
- ❖ There are standard PRN (as needed) indications for opioids for pain when ordered in the electronic prescriber order entry system.
- ❖ Epidurals must be ordered on the standard UTMC epidural order set.
- ❖ Epidurals and Patient-Controlled Analgesics (PCAs) will be double checked by a second nurse prior to administration  
*Pharmacy Procedure: Dexmedetomidine (Precedex): RM-22*  
*Nursing Policy Administration of Intravenous Medication 3364-110-5-02*  
*Policy: Pharmacy Controlled Substances 3364-133-04*  
*Pharmacy Policy 3364-133-75 Automated dispensing cabinets*  
*Pharmacy Policy 3364-133-103 PRN indications*  
*Nursing Cervical/Lumbar/Thoracic Epidural Infusion of local anesthetics and or opioids for pain management*

### VASOACTIVE

- ❖ Vasopressin for code blue administration is handled and delivered by pharmacy.
- ❖ Vasopressive agents are to be administered as continuous infusions with guardrails on the smart pumps when available and with the correct settings for the level of care.
- ❖ Standard order sets for intravenous vasopressors contain standard comments regarding adjustments by which the infusion rate should be adjusted, frequency by which titration rates should be made, and the maximum

infusion rate. Approved order sets are available for complex titrations. Medications will only be infused on units with appropriately trained staff.

- ❖ There are approved procedures for pharmacists to order digoxin concentrations and make appropriate adjustments in response.

*Pharmacy Procedure: Digoxin: RM-39*

*Pharmacy Procedure: IV Drip Locations: RM-58*

*Nursing Policy 3364-110-05-02 Administration of Continuous Intravenous Infusions*

#### ANTITHROMBOTICS

- ❖ Standard Concentrations are established for continuous infusions.
- ❖ Standard concentrations are programmed into the smart pump technology.
- ❖ Prefilled IV bags are purchased when available.
- ❖ Number of concentrations of Heparin are minimized.
- ❖ All continuous intravenous infusions are administered using programmable pumps in order to provide consistent and accurate dosing.
- ❖ Appropriate laboratory values will be monitored as clinically appropriate
- ❖ Education regarding anticoagulant therapy is provided to prescribers, staff, patients, and families.
- ❖ Approved protocols for the initiation and maintenance of anticoagulant therapy are used.
- ❖ Argatroban use is restricted to specific clinical indications and is ordered, monitored, and adjusted according to approved order sets.
- ❖ Guidelines are available for dosing of oral antithrombotics, peri-operative management and management of bleeding in patients on oral antithrombotics
- ❖ There is a University of Toledo Anticoagulation Clinic service that will provide continuity of care to patients who require anticoagulation, to enhance patient care through education, monitoring, and close follow-up, and to reduce adverse events associated with anticoagulation therapy.
- ❖ Standard order sets and programs are in place to decrease medication errors
- ❖ There are established procedures for administering alteplase. Pharmacy is responsible for responding to stroke alerts by and compounding medication as needed.

*Pharmacy Policy 3364-133-79: Warfarin Dosing Consult Service*

*Pharmacy Procedure: Anticoagulant Orders and Anticoagulant Monitoring: 037-IPP*

*Pharmacy Procedure: Tenecteplase Administration for Ischemic Stroke: 047-IPP*

*Pharmacy Procedure: Argatroban: RM-06*

#### ELECTROLYTES/TOTAL PARENTERAL NUTRITION (TPN)

- ❖ Electronic standard order sets are used, if the electronic record is unavailable or unable to be used standard paper order sets are use
- ❖ TPN will be dosed by a clinical dietician in accordance with American Society for Parenteral and Enteral Nutrition criteria for appropriateness.
- ❖ Concentrated electrolyte solutions are only stored in the Pharmacy Department.
- ❖ Hypertonic saline is administered only in approved critical care areas in appropriate areas and according to standardized order sets with appropriate monitoring.
- ❖ Concentrated electrolyte vials are not to be dispensed to patient care units.

*Pharmacy Procedure: CAPS/Clinimix TPN Procedure: 013-IPP*

*Pharmacy Procedure: TPN Procedure: RM-69*

#### OTHER HIGH-ALERT MEDICATIONS

- ❖ Appropriate auxiliary labels are applied to neuromuscular blockers specifying their high alert status and they are in separated, lidded storage locations.
- ❖ Investigational drugs are managed per pharmacy procedure and other institutional research guidelines and/or policies.

*Pharmacy Procedure: Investigational Drugs: 003-IPP*

LOOK-ALIKE-SOUND-ALIKE MEDICATIONS (LASA)

- ❖ Whenever possible barcoding technology is utilized in the filling, checking, and administration of medications to reduce risk of LASA errors.
- ❖ Products are segregated in the automated dispensing cabinets (ADC).
- ❖ Controlled substances are segregated from non-controlled stock in the Pharmacy controlled substance safe.
- ❖ High Alert Medications may be identified in the ADC with “Alert” stickers or LASA stickers

<p><b>Approved by:</b></p> <p><u>/s/</u> <u>10/01/2023</u> Russell Smith, PharmD, FACHE Senior Hospital Administrator Date</p> <p><u>/s/</u> <u>10/02/2023</u> Alastair T Hoyt, MD, FAANS Chair of Pharmacy &amp; Therapeutics Committee Date</p> <p><i>Review/Revision Completed By:</i> <i>HAS</i> <i>Chief of Staff</i> <i>Pharmacy</i></p>	<p><b>Review/Revision Date:</b> 8/10/2005 11/26/2008 4/27/2011 4/1/2014 4/1/2017 2/1/2018 6/15/2020 8/1/2023</p> <p><b>Next Review Date:</b> 8/1/2026</p>
<p><b>Policies Superseded by This Policy:</b> 7-70-13</p>	