


Name of Policy: High Alert Medications Policy Number: 3364-100-70-13 Approving Officer: Chief Operating Officer, Chair of Pharmacy & Therapeutics Responsible Agent: Administrative Director Pharmacy Services Scope: University of Toledo Medical Center		 Effective date: Original effective date: 7/13/2026	
Key words: High alert , look-alike , sound-alike , LASA , high risk			
<input type="checkbox"/>	New policy proposal	<input type="checkbox"/>	Minor/technical revision of existing policy
<input checked="" type="checkbox"/>	Major revision of existing policy	<input type="checkbox"/>	Reaffirmation of existing policy

(A) Policy statement

The Pharmacy and Therapeutics Committee has ~~reviewed~~ [reviews](#) 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~~ [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~~ [have](#) deemed to be high risk or high alert include the following categories:

- ❖ Opioids/Sedatives
- ❖ Chemotherapeutic Agents
- ❖ Anti-thrombotics
- ❖ Insulin
- ❖ Electrolytes/Total Parenteral Nutrition (TPN)
 - ~~Potassium(Chloride and Phosphate salts)~~
 - ~~Hypertonic saline~~
 - ~~Magnesium sulfate~~
 - ~~Calcium salts~~
- ❖ Vasoactive ~~medications, (such as Intravenous beta blockers, vasopressors, and antiarrhythmics)~~

- ❖ Other ~~(such as oral hypoglycemic and neuromuscular blockers)~~ individual medications as outlined in ; see Pharmacy Procedure 084-IPP High Alert Medications
- ❖ Formulary look-alike-sound-alike medications ~~for specific drugs~~

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~~ 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, including electronic dose/rate change calculations.

~~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. Administration requires a second nurse double-check.~~
- ❖ ~~Nursing staff must be qualified to administer IV chemotherapy, as outlined in policy 3364-110-05-02.~~
 - ❖ 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 (in a manner that is consistent with Policy 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 (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 ~~p~~Pharmacy ~~d~~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.~~

❖ Narcotic epidurals ~~Epidurals~~ must be ordered ~~on the standard UTMC epidural~~ through a standard computerized 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 Vasoactive continuous infusions ~~agents~~ are to be administered ~~as~~ continuous infusions with using guardrails on the smart pumps when available and with the correct settings for the level of care.
- ❖ Standard order sets for intravenous ~~vasopressors~~ vasoactive medications contain ~~standard~~ administration instructions consistent with the requirements of regulatory bodies as outlined in policy 3364-100-70-10, comments regarding adjustments by which the infusion rate should be adjusted, frequently 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~~ concentrations are established for continuous infusions.
- ✦ Standard concentrations and guardrails are programmed into the smart pump technology library.
- ✦ 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 and administration.
- ✦ 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~~ Toledo Health Pharmacotherapy Clinic is available to provide continuity and transition of care to patients who require long-term 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 the ordering, dosing, and administration of thrombolytics. Pharmacy ~~is responsible for responding responds~~ to stroke alerts ~~by and~~ and will compound ing thrombolytic medication as needed per 047-IPP.

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[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 electronic record is unavailable or unable to be used~~ [available for standard dosing and administration of electrolytes.](#)
 - ❖ 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.](#)
 - [Exception: 23.4% sodium chloride may be stored in an isolated, locked compartment within the automatic dispensing cabinet in critical care areas for emergent use by specialized providers per pharmacy restriction procedure RM-05.](#)
 - ❖ 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, [except in accordance with pharmacy procedure RM-05.](#)
 - [Pharmacy Procedure: Caps/Clinimax TPN Procedure: 013-IPP](#)
 - [Pharmacy Procedure: TPN Procedure: RM-69](#)

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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 pPharmacy controlled substance safe.
- ❖ High Alert Medications may be identified in the ADC with “Alert” stickers or LASA stickers

<p>Approved by:</p> <p>_____</p> <p>Daniel Barbee Chief Executive Officer</p> <p>_____</p> <p>Date</p> <p>_____</p> <p>Holly Smith Administrative Director Pharmacy Services</p> <p>_____</p> <p>Date</p> <p>_____</p> <p>Russell Smith Chief Operating Officer</p> <p>_____</p> <p>Date</p> <p>_____</p> <p>Alastair T Hoyt, MD, FAANS Chair of Pharmacy & Therapeutics Committee</p> <p>_____</p> <p>Date</p> <p><i>Review/Revision Completed by:</i> <i>Pharmacy</i></p>	<p>Policies Superseded by This Policy:</p> <ul style="list-style-type: none">• 7-70-13 <p>Initial effective date: 7/13/2005</p> <p>Review/Revision Date:</p> <p>8/10/2005 11/26/2008 4/27/2011 4/1/2014 4/1/2017 2/1/2018 6/15/2020 8/1/2023 3/20/2026</p> <p>Next review date: 3/2029</p>
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