OUR LADY OF THE LAKE REGIONAL MEDICAL CENTER			
Policy Manual:	**Pharmacy**	**Section:**	Medication Use, Storage and Handling
Title:	**Medications: High Alert Medications**	**Policy Reference #:**	PH-03-10
		Supersedes #:	PH-09-07-O
Date of Origination:	05/23/2006	**Last Date Reviewed:**	05/07/2018
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PURPOSE:

To provide standardized medication safety policies for "high alert" medications identified by the Institute for Safe Medication Practices (ISMP).

DEFINITIONS:

High-alert Medications: medications that bear a higher risk of causing significant patient harm when they are used in error.

Independent double check: for the purpose of this policy, shall mean two authorized personnel separately checking the accuracy of the following against the prescriber's order.

Authorized prescriber: for the purpose of this policy, "authorized prescriber" shall mean a practitioner recognized by Our Lady of the Lake Regional Medical Center (OLOL) as having privileges to write orders for medications within the scope of their clinical practice at OLOL.

POLICY:

I. The following medications are considered high-alert at Our Lady of the Lake Regional (OLOL)
   a. Vasopressors
      i. Epinephrine
      ii. Norepinephrine
      iii. Phenylephrine
   b. Insulin (all formulations)
   c. Alteplase (TPA; excludes catheter occlusion doses)
   d. Opioids for Injection
      i. Morphine
      ii. Hydromorphone
      iii. Fentanyl, sufentanil, remifentanil
      iv. Meperidine
      v. PCA
      vi. Epidural
   e. Intrathecal Medications
   f. Concentrated electrolytes for injection
      i. Potassium chloride, potassium phosphate, potassium acetate

ii. Sodium Chloride solutions greater than 0.9%

g. Heparin Infusions
h. Neuromuscular blockers
i. Chemotherapy
    i. Vinca alkaloids
        1. Vincristine
        2. Vinblastine
        3. Vinorelbine
    ii. Methotrexate

II. The following methods shall be utilized, where appropriate, to prevent harm associated with the use of high-alert medications:

a. Development of order sets, pre-printed order forms, and protocols to standardize prescribing and monitoring

b. Use of standardized concentrations, dosage strengths, and dosage forms to minimize variability

c. Use of pre-mixed and unit-dosed medications whenever possible

d. Use of programmable pumps to administer continuous and intermittent infusions

e. Perform independent double checks after preparation and prior to administration
    i. Factors to be identified during the independent double check include
        1. Right patient identification per our organization's policy
        2. Right drug (verified against current order)
        3. Right dose of drug (verified against current order and infusion pump; mathematical calculations, strength or concentration must be verified)
        4. Right route of administration
        5. Right time of administration

f. Limit prescriptive authority to authorized providers

g. Restrict the use of certain high-alert medications to appropriate nursing units

h. Utilize barcode scans during the following medication processes (where automation present): IV compounding, repackaging, dispensing, loading and refilling in automated dispensing cabinets

i. All defined "High Alert" medications should be labeled as such in the Electronic Medical Record in a face up manner to the administering provider

j. Limit the storage of high-alert medications to areas with personnel trained for safe preparation and administration.

III. Readers of this policy should refer to the attached High Alert Restrictions reference document for detailed instructions for handling high-alert medications.

REFERENCES

MM 01.01.03 EP1. The hospital identifies, in writing, its high-alert and hazardous medications. *The Joint Commission Medication Management Standards*

MM 01.01.03 EP2. The hospital has a process for managing high-alert and hazardous medications. *The Joint Commission Medication Management Standards*

MM 01.01.03 EP3. The hospital implements its process for managing high-alert and hazardous medications. *The Joint Commission Medication Management Standards* Meds Requiring Special Monitoring Protocol

High Alert Medications Restrictions *(see High-Alert Policy PH-03-10)*													
Drug(s)	Actions to Prevent Errors												Comments
	Prescribing				Preparation & Dispensing				Administration & Monitoring			Storage	
	Authorized prescriber	Order Set	Protocol	Standard Dose	Standard Conc.	Standard Form	Double-check	Labeling	Infusion Pump	Double-check	Patient care unit restrictions	Unit storage restriction	
Alteplase (excludes cathether occlusion doses)					●				●		●	●	a. Standard concentrations: see protocol b. Restricted patient care units: see Meds Requiring Special Monitoring document c. Orders require starting dose and continuous rate d. Infusion pump must be used to administer
Epinephrine, Norepinephrine Phenylephrine infusions					●				●		●	●	a. Standard concentrations: see protocol b. Restricted patient care units: *see Meds Requiring Special Monitoring document,* exception: code blue situations c. Orders require starting dose and titration d. Infusion pump must be used to administer e. Storage Bins will be marked as “high alert”
Insulin infusion			●		●				●	●	●		a. Insulin infusion titration protocol must be utilized b. Restricted patient care units: *see Meds Requiring Special Monitoring document* c. Standard concentration: see protocol d. Infusion pump required for administration e. Independent double check: two nurses prior to administration
Insulin pens										●		●	a. Insulin vials will be stored separately. Different formulations will be stored separately. b. Storage bins will be “red” and marked as “high alert” c. Independent double check: two nurses prior to administration d. Bedside Barcode Scanning (BCMA) should be used to verify product
Methotrexate (all formulations)				●			●	●	●	●		●	a. Standard dose: oral methotrexate will default to weekly dosage. b. Independent double check: two pharmacists before dispensing IV

													c. Label to include "Cytotoxic" d. Infusion pump required for administration of IVPB and continuous infusions e. Independent double check: two nurses prior to administration f. Storage restrictions: main and satellite pharmacies
Morphine, hydromorphone, fentanyl, meperidine inj.				●								●	a. Stored separately in Pyxis b. Meperidine restricted to treatment of rigors c. Max single dose of hydromorphone is 2mg (exception: end of life care)
Morphine, hydromorphone, fentanyl infusions/ PCAs		●	●		●				●	●		●	a. Stored separately in Pyxis b. Electronic order sets and standard protocol must be used c. Standard concentration: see protocol d. Infusion pump must be used to administer e. Fentanyl Infusion must be secured in LockBox during administration e. Two nurses must verify order and pump settings (see NMA016)
Sufentanil, alfentanil, remifentanil inj.	●										●	●	a. Stored separately in Pyxis b. Authorized prescriber: Anesthesiologists, CRNAs c. Restricted patient care units: OR d. Pop-up will generate in Pyxis stating “High Alert”
Vecuronim, rocuronium, cisatracurium, atracurium, succinylcholine	●				●				●		●	●	a. Authorized prescriber: physicians authorized to perform deep sedation, residents, CRNAs b. Storage Restrictions: OR, ICU, RSI Kits c. Standard concentration: see protocol d. Infusion pump required for infusion e. Storage Bins will be marked as “high alert” in Pyxis
Intrathecals (methotrexate, cytarabine, baclofen, betamethasone, penicillin G)	●					●	●	●		●	●		a. Authorized prescribers: medical oncologists, interventional radiologists b. Independent double check: two pharmacists before dispensing c. Syringe size ≤ 10mL d. Label to include "Caution: For Intrathecal Use Only" e. Only preservative-free formulations used for preparation.
Potassium vials (chloride, phosphate, acetate)												●	a. Storage restrictions: main and satellite pharmacies, OR Perfusion trays b. Storage Bins will be marked as “High Alert”
Potassium riders (chloride,					●				●				a. Standard concentration: see protocol b. Infusion pump required for infusion

phosphate, acetate)													
Heparin injections and infusions (exclude flushes/locks)				●	●				●				a. Heparin infusion titration protocol must be utilized b. Infusion pump required for continuous or intermittent infusion c. Storage restrictions: main and satellite pharmacies d. Standard concentrations: see protocol e. Storage Bins will be marked as “high alert”
Sodium chloride >0.9% inj. (e.g. 3%, 14.6%, 23.4%)					●				●	●			a. Storage restrictions: main and satellite pharmacies, TNCC, SICU b. Infusion pump required for continuous or intermittent infusion c. Two nurses must verify order and pump settings d. Storage Bins will be marked as “high alert”
Vincristine, vinblastine, vinorelbine **(non-intrathecal)**	●					●	●	●	●	●		●	a. Authorized prescriber: medical oncologist b. Independent double check by two pharmacists before dispensing c. Vincristine and vinblastine can only be prepared and dispensed in a minimum volume of 10mL of 0.9% sodium chloride injection delivered in a minimum of a 20mL syringe or minibag d. Vinorelbine can only be prepared and dispensed in a minimum volume of 20mL of 0.9% sodium chloride delivered in a minimum of a 30mL syringe or minibag e. Syringe or minibag labeled "Fatal if given by other routes", "For IV Use Only" f. Syringes must also be packaged in overwrap, labeled "Do not remove covering until moment of injection." g. Independent double check by two registered nurses prior to administration h. Use of an infusion pump for administration i. Storage restrictions: main and satellite pharmacies