

Pharmacy and Therapeutics Committee News October 2022

Titratable Infusion Orders

In an effort to ensure compliance with TJC standards, titratable infusion order sentences have been modified to eliminate all range orders. This provides clear guidance to nursing on how to adjust medication infusion rates to achieve desired goals of therapy. Although standard parameters have been built into Cerner order sentences, providers may customize as needed.

Medication	State	Initial Infusion Rate	Titration Increments	Weaning
Example 1	Current	5 mcg/min	5 - 20 mcg/min q 3 min	5 – 15 mcg/min q 15 min until off
	Future	5 mcg/min	10 mcg/min q 3 min	10 mcg/min q 1 min until off

Pediatric Hypoglycemia Protocol

MHC has adopted a system-wide hypoglycemia protocol for pediatric patients. This is the second step in systemizing hypoglycemia treatment protocols. The adult protocol was completed in August, and work is being done to align neonatal hypoglycemia protocols. Key changes include defining age ranges for various IV dextrose replacement formulations and weight based dosing recommendations to align with current PALS guidelines. Nursing education and power plan changes will accompany this update, with implementation targeted for end of October.

Bivalent COVID-19 Booster Vaccines

Pfizer-BioNTech bivalent booster vaccines are available for any inpatients requiring booster doses (i.e. individuals 12 years of age and up who received their last dose of ANY COVID-19 vaccine at least 2 months ago). Only bivalent vaccines should be utilized for booster doses. Monovalent vaccine is still available for eligible patients who have not yet completed a primary series.

Current Drug Shortages

Active critical shortages:

- Local anesthetics with and without epinephrine
- Belladonna and opium suppositories
- Dextrose 20% infusion and 25% pediatric syringe
- Neomycin tablets
- Physostigmine injection
- Sufentanil
- Valproate injection
- Magnesium citrate

Resolved/stable shortages:

- Bumetanide injection
- Lorazepam/diazepam injection
- Dobutamine
- Gentamicin

See current list:

<https://sharepoint16.mhc.net/RX/Formulary/Formulary%20Documents/MMC%20Drug%20Shortages.pdf>

Formulary Changes: IV Iron

Sodium ferric gluconate was added to formulary as the preferred IV iron formulation for inpatient iron replacement.

Indications for IV iron replacement include:

- Contraindication or intolerance of oral iron
- Need for urgent correction of iron deficiency anemia (IDA) or rapid recovery of iron stores
- Malabsorption disorder
- Chronic bleeding
- Severe IDA with Hgb < 8gm/dL
- Patients taking erythropoietin
- Heart failure with reduced ejection fractions with iron deficiency
- Patients who refuse RBC transfusion

A number of IV iron formulations exist and are equally efficacious when given in equivalent doses of elemental iron. All carry the risk of infusion reactions, with iron dextran and ferumoxytol carrying black box warnings, and this risk is enhanced when given in higher doses or at faster infusion rates. All are indicated for IDA in adults with and without CKD, and iron sucrose and sodium ferric gluconate are approved for patients on dialysis. Key differences between formulations are in dosage and administration and cost.

Iron sucrose ranked as the 8th highest drug spend at MMC in FY22 at nearly \$180,000. Sodium ferric gluconate is available at less than half the cost of iron sucrose. While iron sucrose is FDA approved in non-dialysis dependent patients at single doses of 200mg up to a cumulative dose of 1000mg over a 14 day period, MMC has successfully utilized an off-label expedited protocol of 500mg daily x2. Sodium ferric gluconate is FDA approved at single doses of 125mg up to a cumulative dose of 1000mg, but single doses of 250mg have been successfully given.

With this formulary addition, iron sucrose will be reserved for use in pregnancy, children between 2-6 years of age, those with documented intolerance to sodium ferric gluconate, and patients with severe iron deficiency anemia AND planned discharge within 24-48 hours. For the latter, the only regimen available to order will be 500mg daily x2. Any orders for lower doses will be automatically interchanged to sodium ferric gluconate unless contraindications exist.