PHARMACY & THERAPEUTICS
UPDATE
METHODIST
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Critical Drug Shortages

On-going shortages and strategies to minimize the impact to patient care for drugs with limited availability

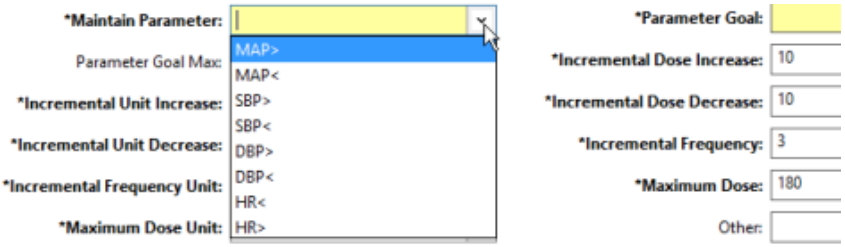
Shortage:	***Hydralazine injectable***
Action:	*consider beta-blocker, ACEI, etc*
Shortage:	***Famotidine oral and injectable***
Action:	*consider PPI*
Shortage:	***Lidocaine, Bupivacaine injection with and without epinephrine***
Action:	*alternative concentrations, sizes*

In this Issue

If you have any questions or concerns, please contact the NMH Pharmacy Purchasing Department: 402-354-4304.

Cerner Vasopressor/Cardiac Infusion Ordering –Titration Goal Required

Beginning November 2, Cerner entry of vasopressors and cardiac medication infusions will be modified to **require providers to designate a goal of therapy.** Previously, default goals were entered which were not specific to the patient's clinical situation/diagnosis. Providers will be asked to select a monitoring parameter as well as target/goal within the Cerner order. Providers may also enter a "goal max" to provide an upper value/limit of the selected parameter. Parameters will be displayed as follows:



The other required parameters of the titratable order will remain defaulted but are modifiable. These defaults include: the initial/starting rate of the medication, incremental dose/units that the medication may be increased and/or decreased, frequency of the incremental dose changes, and the maximum rate. *Providers should be prepared to provide parameters for phone orders as the order can't be entered as complete without them.*

These order elements are required to comply with The Joint Commission's guidelines for safe prescribing of medications. Orders for "titrate" are not acceptable and require clarification. If you have any questions, please notify the pharmacy department at 354-4343.

Formulary Modifications/Deletions

- **Bacitracin injectable** – manufacturer deletion due to FDA request based on product risks versus benefit analysis of the drug's labeled indication (pneumonia and empyema in infants); ophthalmic and topical products are not affected
- **Morphine 1mg/ml, 5mg/ml PCA** – manufacturer deletion; NMH may compound locally if patient unable to tolerate hydromorphone PCA
- **Regular Insulin Sliding Scale powerplan** – removed Cerner powerplan for safety reasons; providers may use Novolog sliding scale powerplan; regular insulin will remain available for use when needed

2020-21 ACIP Influenza Guidelines

Methodist and Women's Hospitals patient vaccination campaign will began September 22. Admitted patients are automatically screened to receive the seasonal influenza vaccine unless they have been vaccinated this season, have a contraindication to vaccination, or decline vaccination. The vaccine will be administered the day following hospital admission. Patients ≥65 years will receive Fluad (adjuvanted quadrivalent influenza vaccine) and those <65 will be receiving Flulaval (quadrivalent influenza vaccine)

The 2020-2021 quadrivalent influenza egg-based vaccine virus strains include: influenza A/Guangdong-Maonan/SWL1536/2019 (H1N1)pdm09-like virus, influenza A/Hong Kong/2671/2019 (H3N2)-like virus, an influenza B/Washington/02/2019 (Victoria lineage)-like virus, and (for quadrivalent egg-based vaccines) an influenza B/Phuket/3073/2013 (Yamagata lineage)-like virus.

Seasonal influenza Vaccination Recommendations

- ✓ **All persons aged ≥6 months who do not have contraindications should be vaccinated annually.**
- ✓ **For healthy children aged 6 months through 8 years who have no contraindications or precautions:**
  - Not previously vaccinated: require 2 doses administered at least 4 weeks apart
  - Previously vaccinated with 2 or more influenza doses before July 1, 2020 (doses need not to have been given during the same or consecutive seasons): 1 dose needed
- ✓ **CDC approved LAIV4 (Flumist) vaccine may be used during the 2020-21 influenza season**
- ✓ **There is no preference for one vaccine over another among the recommended, approved injectable influenza vaccines.**

Contraindications and Precautions for Use of *Inactivated* Influenza Vaccine:

- ✓ Moderate or severe acute illness with or without fever is a precaution, not a contraindication, for inactivated influenza vaccine.
- ✓ Acutely ill patients with COVID-19 may be considered for vaccination when no longer acutely ill (NMH interpretation: at discharge or at a later date)
- ✓ History of Guillain-Barré syndrome within 6 weeks following a previous influenza vaccine.
- ✓ A previous severe allergic reaction to influenza vaccine, regardless of the component suspected of causing the reaction, is a contraindication to future receipt of the vaccine.
- ✓ Additional contraindications/precautions for live LAIV4 vaccine include: concomitant aspirin or salicylate containing therapy in children and adolescents, children age 2-4 diagnosed with asthma or wheezing/respiratory issue within preceding 12 months, immunocompromised due to any cause, close contacts and caregivers of severely immunocompromised persons who require a protected environment, pregnancy, persons with communication between the cerebrospinal fluid (CSF) and oropharynx, nasopharynx, nose, or ear or any other cranial CSF leak; cochlear implants, active receipt of influenza antiviral medication within the previous 48hr; other underlying medical conditions that might predispose to complications after wild-type influenza infection (eg COPD, CV disease (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders including diabetes, Asthma in persons ≥ 5 years old.

Special Consideration Regarding Egg Allergy:

- ✓ Persons who have experienced only hives after exposure to egg may receive any licensed, recommended, age-appropriate influenza vaccine that is otherwise appropriate to recipient's health status
- ✓ Persons reporting symptoms other than hives, such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention, may also receive any licensed and recommended influenza vaccine that is otherwise appropriate to recipient's health status
  - For these persons, egg-based vaccines should be administered in an inpatient or outpatient medical setting and supervised by a health care provider who is able to recognize and manage severe allergic conditions.

https://www.cdc.gov/mmwr/volumes/69/rr/rr6908a1.htm?s_cid=rr6908a1_w

FDA Warnings

***High Dose Diphenhydramine*:** Health care providers should be aware of the "Benadryl Challenge" in adolescents where excessive amounts of diphenhydramine is taken to induce hallucinations or an altered mental state. Adverse effects of high doses may include CNS depression, anticholinergic symptoms, arrhythmias, seizures, and potentially death. There have been reports of teen hospitalizations and death associated with ingestion of high doses.

https://www.fda.gov/drugs/drug-safety-and-availability/fda-warns-about-serious-problems-high-doses-allergy-medicine-diphenhydramine-benadryl

Benzodiazepine Boxed Warning/Labeling Updated: Labeling will be updated to include risks of abuse, misuse, addiction, physical dependence, and withdrawal reactions as the FDA felt current labeling didn't provide adequate warnings about the medications' serious risks and harm which then may contribute to inappropriate use. Health care providers should consider risks versus benefits when prescribing, especially when prescribed with opioids or other CNS depressants. If use is deemed necessary, consider prescribing lower doses, short therapy durations, and gradual tapering to minimize withdrawal reactions.

https://www.fda.gov/drugs/drug-safety-and-availability/fda-requiring-boxed-warning-updated-improve-safe-use-benzodiazepine-drug-class

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