HOUSTON Methodist LEADING MEDICINE

HOUSTON METHODIST
PHARMACY & THERAPEUTICS NEWS
October 2023

FORMULARY UPDATES

Laura M. Blackburn, PharmD

The following medications were ADDED to formulary

Medication	Formulary Updates
Sulbactam-durlobactam (Xacduro)	Restricted to Infectious Diseases providers and patients with either: • History of carbapenem-resistant Acinetobacter baumannii (CRAB) and active infection • Known active Acinetobacter species pending susceptibilities • Active CRAB
Lecanemab-irmb (Leqembi)	• Restricted to Neurology providers • Restricted to FDA indications for use in patients not on therapeutic anticoagulation • Restricted to use in the outpatient infusion center with prior financial approval
Anakinra (Kineret)	• Restricted to inpatient use only • Restricted to Hematology/Oncology, Critical Care prescribers • Restricted to indication of cytokine release syndrome (CRS), immune effector cell-associated neurotoxicity syndrome (ICANS), hemophagocytic lymphohistiocytosis/macrophage activation syndrome (HLH/MAS)

To request a medication for formulary review, **click here**

The following therapeutic interchanges were approved or updated

Class	Updates
Partial Opioid Agonists	Butorphanol to its equivalent dose of nalbuphine
Corticosteroid Oral Solution	PrednisONE oral *solution* to equivalent prednisoLONE oral *solution*
Ketorolac Ophthalmic Solution	Ketorolac 0.4% ophthalmic solution to ketorolac 0.5% ophthalmic solution
Rabies Vaccine	Imovax® Rabies vaccine to RabAvert® Rabies vaccine (same dose)
MMR Vaccine	M-M-R®II to Priorix®
GI Cocktail	GI Cocktail (lidocaine/aluminum/magnesium hydroxide/simethicone) will convert to Maalox Plus (aluminum/magnesium hydroxide /simethicone)
3rd Generation Oral Cephalosporins	All orders for alternative 3rd generation oral cephalosporins will be converted to Cefdinir based on renal function.

Have a medication-related, cost-saving idea? **Submit your idea here**

The *Pharmacy & Therapeutics News* is dedicated to providing the most current information regarding medication-use policy and formulary issues. Each issue details recently approved actions from the system P&T committee as well as relevant patient safety, pharmacotherapy and drug distribution updates. Entity representatives to the system P&T committee structure can be found here.

HM Guidelines for Pharmaceutical Representatives

HM policy defines boundaries for industry representatives and interactions with HM providers and staff within the hospital's non-physician office areas.

Key elements in the policy:

- Vendor representatives must meet required credentialing registration requirements
- Representative's activities are confined to non-patient care areas
- Interactions with physicians are limited to scheduled appointments. Unscheduled visits are not allowed.
- Vendor representatives may not promote non-formulary agents within the hospital without prior review and authorization by pharmacy management. Promotion of products beyond the scope of HM approved criteria is in direct violation of policy.
- Failure to comply may result in actions against the representative including reporting to the representatives supervisor and/or restricting facility access.
- HM staff may report inappropriate vendor conduct to the entity Director of Pharmacy for escalation.

MEDSAFETY MATTERS!

Amaris Fuentes, PharmD

ISMP Medication Safety Newsletter Links: Acute Care & NurseERR & Community/Ambulatory

Safe Use of Opioid-Concurrent Prescribing eCQM (electronic Clinical Quality Measure)

In recent years, CMS developed eCQMs that can be electronically extracted from electronic health records (EHR) and/or health information technology (IT) systems to measure the quality of health care provided. Hospitals are required to report three, self-selected eCQMs in addition to the Safe Use of Opioids—Concurrent Prescribing.

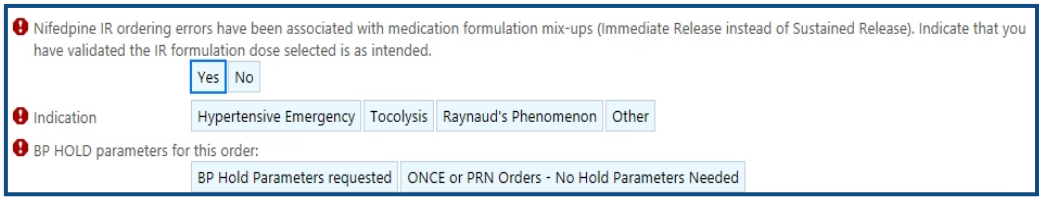
The safe opioid use eCQM tracks inpatients prescribed OR continuing (1) two or more opioids OR (2) an opioid and a benzodiazepine at discharge out of all patients over 18 years of age prescribing a new or continuing opioid or benzodiazepine at discharge. The measure excludes patients with cancer or those receiving palliative or hospice care. While there is no specified target rates, dashboards are available in Epic for review of each HM hospital-specific eCQM rate and efforts should be taken to reduce the rate of combination prescribing when possible.

As noted in last month's newsletter, use of daily opioids > 50 Morphine Milligram Equivalents (MME) and concomitant use of benzodiazepines or other CNS depressants increases the risk of opioid adverse effects, particularly respiratory depression. Patients should be assessed during their hospitals stay and at discharge for continued need for multiple opioid prescriptions and/or concomitant benzodiazepine use. Consideration should be given to use non-opioid analgesics and de-prescribing long-term benzodiazepines if alternatives exist. For patients where opioid use is necessary, consider a naloxone prescription to safeguard the transition to home.

MEDICATION SAFETY

Nifedipine Immediate Release (IR) Safety

Nifedipine IR can result in symptomatic hypotension, reflex tachycardia, increased risk of adverse events (acute MI, arrhythmias, stroke). Appropriate indications for use include hypertensive emergency, particularly in obstetrics, tocolysis, and Raynaud's phenomenon. Errors were identified when nifedipine *IR* was ordered instead of nifedipine *SR*. Epic orders are now updated to denote "IR" vs "SR" formulations clearly. An additional precaution statement noting the risk with inappropriate use of nifedipine IR requires a response and selection of the indication to reduce the risk of a formulation mix-up.



Intranasal Medication Administration for Neonates and Pediatrics

Intranasal medication delivery is a noninvasive means of administering medications with the use of a mucosal atomizer device (MAD) and is used as a preferred method of medication delivery in certain pediatric management scenarios. PCPS165 Intranasal Medication Administration for Pediatric & Neonatal Patients was reviewed noting exclusions for use, procedures for administration, monitoring requirements, appropriate medications & volume for using the route of administration. Medications allowed for this route of administration include midazolam, fentanyl, ketamine, naloxone, and lidocaine. The associated Intranasal Medication Order Set will be optimized to include instructions for administration, updates to medication order names to specific intranasal routes, and will be expanded for use and visibility in neonatal ICU areas.

MEDICATION PRESCRIBING

Update on Medication Samples

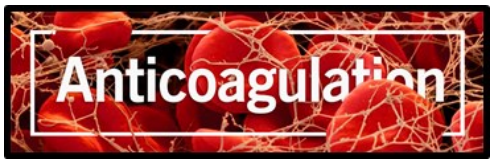
System policy RXP&T 117 Medication Samples was approved to ensure patient safety and to consolidate several entity-level policies on the subject. The policy states that medication samples are not permitted to be stored in Houston Methodist patient care areas, excluding physician private clinics and offices. Physicians may not supply sample medications to the patient's bedside as a routine practice. Under extenuating circumstances, medication samples brought into the hospital by the patient can be processed as a patient's own medication, according to PCPS310 Medications Brought from Home (more on that below). Otherwise, the samples are to be returned to a family member or sequestered with valuables. In emergent and/or extenuating circumstances, use of medication samples supplied by the physician may be utilized only after approval from the Director of Pharmacy or designee.

Routine Practice of Using Medications Brought From Home is Still Discouraged

As a general rule, Patients Taking their Own Medication (PTOM) (or home-supplied) medications is highly discouraged. Medication from the hospital's supply assures the most appropriate environmental control of the medication (e.g. storage conditions), reduces opportunity for adulteration, and allows tracking of the pedigree of a medication in the supply chain. Using HM supply further reduces the opportunity for duplication of payment from payers already billed the cost of a medication by default. From a safety perspective, medications brought from home should not be self-administered as these situations may lead to medication overdosing.

However, to avoid interruptions in therapy as a result of a medication not being available on formulary or due to other drug shortage situations, there are exceptions where it is permissible to use the patient's home supply. Therefore, Houston Methodist allows the use of patients' own medications only under the conditions specified in policy. The PTOM practice should not be utilized when equivalent formulary products are available.

ANTICOAGULATION USE SAFETY



Michael Sirimaturos, PharmD

Bivalirudin Protocol for Mechanical Circulatory Support Devices

Bivalirudin is an intravenous direct thrombin inhibitor which is commonly used as an alternative to heparin for patients undergoing percutaneous coronary intervention or cardiac surgery who have a suspicion of or known Heparin Induced Thrombocytopenia (HIT). Historically, providers only had an option in EPIC to select bivalirudin for the indication of HIT with a standard dose of 0.1 mg/kg/hr, PTT goal range 50-90 seconds, and PTT monitoring q 3 hrs x 2 before advancing to daily if levels were therapeutic. More recently, bivalirudin has been increasingly used for patients on mechanical circulatory support (MCS) devices (i.e., ECMO, LVAD, TandemHeart®, IABP, Impella®, Protek RVAD, etc.) for device-related anticoagulation as an alternative to unfractionated heparin.

Patients on MCS devices typically require a lower starting dose, have a more narrow therapeutic PTT goal ranges, and require more frequent monitoring than is recommended with the existing protocol for HIT. Therefore, a new pharmacy dosing protocol was developed for the MCS indication. Providers are able to order a "Pharmacy consult to manage bivalirudin (Angiomax)" and select the indication of HIT or MCS. The MCS indication selection will default to 0.05 mg/kg/hr and include a standardized PTT goal range specific to the MCS device (i.e., ECMO = PTT 50-80 seconds; all other MCS devices = PTT 60-80 seconds). PTT monitoring for MCS indications will change from q 3 hrs x 2, to q 12 hrs x 2, then to q 24 hrs if levels are therapeutic.

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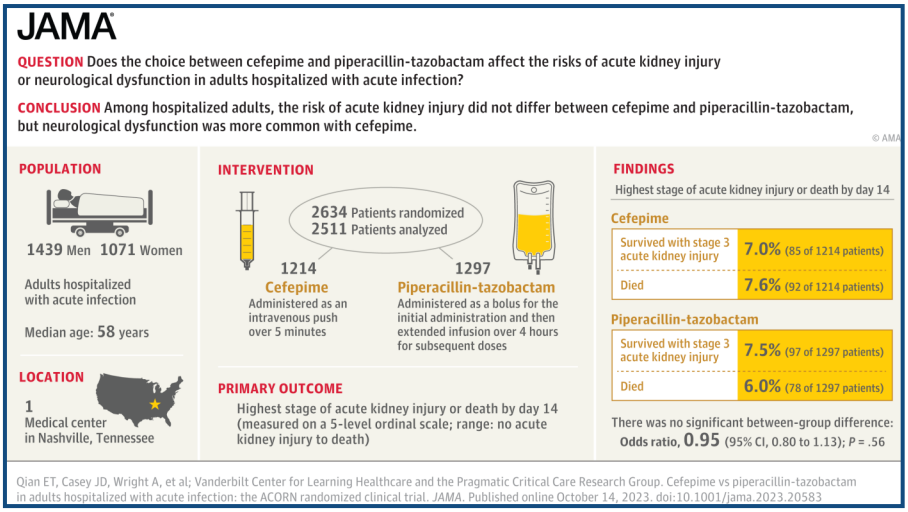
ANTIMICROBIAL STEWARDSHIP

Shivani Patel, PharmD

New Evidence Update: Cefepime vs Piperacillin-Tazobactam in Adults Hospitalized With Acute Infection — The ACORN Randomized Clinical Trial

A potential increased risk of Acute Kidney Injury (AKI) from combined piperacillin-tazobactam plus vancomycin compared with other β-lactam agents has caused a shift from the empirical use of piperacillin-tazobactam among prescribers.

Meta-analyses of observational studies reported that vancomycin + piperacillin-tazobactam increased the rate of AKI. More recent data suggests the increases in serum creatinine level reflect inhibition of tubular secretion of creatinine and does not reflect kidney injury.



The ACORN Trial found no difference in the risk of acute kidney injury between cefepime and piperacillin-tazobactam, but neurological dysfunction was more common with cefepime. Of note, 77.2% of patients in this trial received concomitant vancomycin for a median of 2 days.

Antibiotic Drug Shortage Update: Clindamycin

Clindamycin injectable in all preparations is currently on backorder from all manufacturers due to manufacturing delays. The current on hand inventory for HM system is approximately 3 weeks and there is inconsistent product being received through allocations.

Most common indications for clindamycin use at HM include:

- Surgical prophylaxis
- Skin and soft tissue infections (SSTI)
- Head, neck, and orofacial Infections
- Pneumonia

Due to limited supplies, clindamycin IV will be restricted to the following indications:

- Invasive Group A Streptococcal infection
- Suspected or known necrotizing fasciitis

Please order *oral* clindamycin or an alternative recommendation from the table.

Indication for Antibiotic	Clinical Alternative to IV Antibiotic
Anerobic Coverage in SSTI	Metronidazole 500mg IV/PO q8h
Aspiration Pneumonia	Ampicillin/Sulbactam 3g IV q6h Ceftriaxone 1-2g IV q24h PLUS Metronidazole 500mg IV/PO q8h
Chorioamnionitis Post cesarean delivery	Metronidazole 500 mg IV Q8H
Intrapartum Group B Streptococcus Prophylaxis Penicillin Allergy	Low risk: Cefazolin High risk: Vancomycin 20 mg/kg IV Q8H
Head, Neck, and Orofacial Infections	Ampicillin/Sulbactam 3g IV q6h Cefazolin 1-2g IV q8h PLUS Metronidazole 500mg IV/PO q8h
Empiric Coverage for MRSA Infections	Vancomycin Dosing per Pharmacy Bactrim DS 1-2 tabs PO q12h Doxycycline 100mg PO q12h
Skin and Soft Tissue Infections	Vancomycin Dosing per Pharmacy Bactrim DS 1-2 tabs PO q12h
Surgical Prophylaxis	Vancomycin 15 mg/kg IV X 1 dose
General Principles: • PO Clindamycin is highly bioavailable and can be interchanged for the IV formulation with similar efficacy • Clindamycin use should be avoided for the treatment of bloodstream infections, intra-abdominal infections, and in septic patients as monotherapy.	

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System P&T Committee Roster is available to view here.

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