HOUSTON Methodist LEADING MEDICINE

HOUSTON METHODIST
PHARMACY & THERAPEUTICS NEWS
March 2023

FORMULARY UPDATES

Laura M. Blackburn, PharmD

The following medications were **ADDED** to Formulary:

Medication	Pharmacologic Class and Indication	Formulary Action and Considerations

Elahere® (Mirvetuximab soravtansine-gynx)	• Antibody-drug conjugate
	  • Folate receptor alpha (FRα)-directed monoclonal antibody (IgG1 subtype)
	  • Small molecule anti-tubulin agent DM4 (a maytansine derivative)
	• Ovarian cancer, platinum-resistant, folate-receptor alpha positive (epithelial ovarian, fallopian tube, or primary peritoneal cancer)
		• Restricted to FDA approved indication AND screened for FRα expressing tumor with FDA approved companion diagnostic test, VENTANA FOLR1 (FOLR1-2.1) RxDx Assay
		• Restricted to outpatient setting with prior financial approval

The following medications were **REMOVED** from Formulary after a review of medications that have been discontinued from the market, have seen little to no use at HM, or with a lack of clinical evidence to support continued formulary status was conducted.

Medication	Pharmacologic Class / Use	Reason / alternatives
Ammonia spirits (aromatic)	• Respiratory stimulant	• No available products on the market with no release date
Belladonna/ opium suppositories	• Opioid analgesic combination, antispasmodic • Pain associated with ureteral spasm	• Discontinued by manufacturer December 2022 • Formulary alternatives may include NSAIDs, lidocaine, hyoscyamine sulfate
Cevimeline hydrochloride (Evoxac®)	• Cholinergic agonist • Xerostomia	• No longer manufactured • Formulary alternative may include pilocarpine
Doxercalciferol (Hectorol®) capsules	• Vitamin D analog • Treatment of hyperparathyroidism in patients with CKD Stage 3 or 4 and dialysis-dependent CKD	• Drug shortage since August 2022 • Calcitriol has equivalency to doxercalciferol in controlling serum parathyroid hormone levels • Formulary alternative may include calcitriol
Lidocaine 2% topical jelly tubes	• Topical analgesic used for controlling pain in procedures involving the urethra and intubation	• The manufacturer has closed the facility and discontinued the product • Formulary alternatives may include Sagent Glydo® topical jelly 2% prefilled syringes (6 mL and 11 mL) or Uro-Jet® prefilled syringes (on shortage)

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.

Medication Policy Review

Medication Policy Reviews

RXCLIN 169 Pharmacy Consult to Monitor Pulmonary Hypertension Mediations

- New delivery devices for prostacyclin products have become available and Tyvaso DPI™ was added to formulary so this policy was updated accordingly. The pharmacist's responsibilities include a review of PAH medication therapy in accordance with organizational restrictions and REMS requirements including but not limited to: Medication indication, dosing, review of drug interactions, and assessment of the monitoring plan to ensure safe and efficacious results

RXMED TI 128 Therapeutic Interchange Intravenous Neurokinin (NK1) Inhibitors

- Triennial review with no changes. Formulary agent for injectable product is fosaprepitant inj. Prescriptions for oral aprepitant may be provided to the patient in advance of bariatric surgery.

FORMULARY UPDATES CONTINUED

Laura M. Blackburn, PharmD

Medication	Pharmacologic Class / Use	Rationale
Gentamicin 0.3% ophthalmic ointment (Gentak®)	• Aminoglycoside antibiotic • Ophthalmic infections	• The sole manufacturers for each product discontinued production. • Formulary alternatives may include erythromycin 0.5% ophthalmic ointment, polymyxin B-Trimethoprim ophthalmic solution, polymyxin B-Bacitracin ophthalmic ointment, ofloxacin 0.3% ophthalmic solution, ciprofloxacin 0.3% ophthalmic solution, bacitracin 500 units/gram ophthalmic ointment, azithromycin 0.01% ophthalmic solution
Levofloxacin 0.5% ophthalmic solution	• Fluoroquinolone antibiotic • Bacterial conjunctivitis • Corneal ulcers	
Protriptyline hydrochloride **Trimipramine maleate (Surmontil®)**	• Tricyclic antidepressant, tertiary amine • Treatment of depression	• No purchases noted since 2016 • The NICE Guideline recommends against the use of tricyclic antidepressants (TCAs) • American Psychological Association guidelines do not include a recommendation regarding TCA place in therapy in relation to other antidepressants • Formulary alternatives: amitriptyline, imipramine, doxepin, desipramine, nortriptyline
Quinidine gluconate 324 mg ER tablets	• Class Ia antiarrhythmic agent • Pharmacologic conversion of atrial fibrillation/flutter • Maintenance of normal sinus rhythm in paroxysmal atrial fibrillation/flutter • Ventricular arrythmias	• In the case of quinidine used to prevent or defer recurrence of atrial flutter/fibrillation, the best available data come from a meta-analysis. In the patients studied in these trials, the mortality associated with the use of quinidine was more than three times as great as the mortality associated with the use of placebo. • Meta-analysis showed that in patients with various non-life-threatening ventricular arrhythmias, the mortality associated with the use of quinidine was consistently greater than that associated with the use of any of a variety of alternative antiarrhythmics
Saquinavir (Invirase®)	• Antiretroviral, protease inhibitor • Management of HIV-1 infection	• No longer manufactured as of 2018 • Formulary alternatives: atazanavir, darunavir, fosamprenavir, indinavir, lopinavir-ritonavir, nelfinavir, ritonavir, tipranavir
Streptomycin sulfate inj	• Aminoglycoside antibiotic • Treatment of brucellosis, endocarditis, mycobacterial infection, plague, tuberculosis, tularemia	• Sporadic purchase history over the last few years at only one entity • Formulary alternatives: amikacin and gentamicin
Tranylcypromine (Parnate®) sulfate	• Monoamine oxidase inhibitor • Treatment of depression	• Last purchased January 2021 • Formulary alternatives: selegiline
Tolcapone (Tasmar®)	• COMT inhibitor • Antiparkinson agent	• Last purchased in 2016 • US Boxed Warning: risk of potentially fatal acute fulminant liver failure • Formulary alternatives: carbidopa/levodopa or entacapone

HOUSTON METHODIST PAIN GUIDE UPDATED

The HM System Pain Guide has been updated for 2023 and is available for providers. Link here or scan the code below for access. The guide has resources for PCA dosing, opioid analgesic equivalencies, opioid reversal for discharge / outpatient prescribing and information on use of non-opioid therapies for pain management.

MEDICATION SAFETY & POLICY

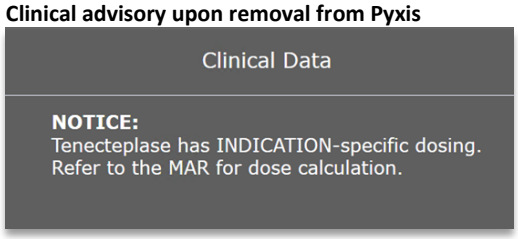
Amaris Fuentes, PharmD

Alteplase Conversion to Tenecteplase for Acute Ischemic Stroke—Safety Considerations

Safety considerations were reviewed as part of an approved plan to transition from alteplase to tenecteplase for management of acute ischemic stroke. The change of the HM preferred thrombolytic for acute ischemic stroke is supported by clinical data demonstrating efficacy, and the conversion presents several operational efficiencies with drug preparation and administration timeliness. The change will have favorable pharmacoeconomic implications as well. The following were outlined as safety management tools for the use of these agents.

Tenecteplase 50 mg (5 mg/mL vial) kit

Clinical advisory upon removal from Pyxis



- **Nomenclature: use "tenecteplase" and "alteplase"; not using "tPA"**
  - FDA and ISMP have issued warnings about mix-ups when using "tPA"
  - References to "tPA" removed from electronic resources & forms
  - Education regarding avoidance of "tPA"
- **Packaging for Code Stroke response**
  - Tenecteplase box will be placed in a bag and may include a stroke dosing card depending on entity processes
- **Storage/Automated Dispensing Cabinet Management**
  - Both alteplase and tenecteplase will be available on override
  - Alteplase will require a second witness to override providing a double-check step
  - Clinical advisories for each agent in automated dispensing cabinets
  - Separation of storage in automated dispensing cabinets
- **Policy updates**
  - Addressing safety concerns and use of mitigation strategies
  - System_PCPS 126 High Risk High Alert Medications
  - System_PCPS136 Look-Alike, Sound-Alike Medications
- **Education**
  - Ongoing throughout April through LMS and in-person sessions
  - Audiences: nursing, physicians, pharmacists

Tenecteplase for acute ischemic stroke go-live: Tuesday, May 16th

Patient Controlled Analgesia (PCAs) CQI

An evaluation was conducted on use of PCA within our hospitals. Most PCA orders started in PACU/OR and transferred to med-surg floors. Documentation issues were noted related to PCA specific requirements and sedation assessments. Instances of opioid tolerant PCA use were also noted patient with no prior exposure to opioids. A system PCA policy will be developed to ensure consistency of PCA ordering and monitoring along with documentation optimization. An attestation to confirm opioid tolerant status will be prompted prior to placing opioid tolerant PCA orders. Additional high-dose PCA options will be made available April 4th for use among palliative care or chronic pain management patients.

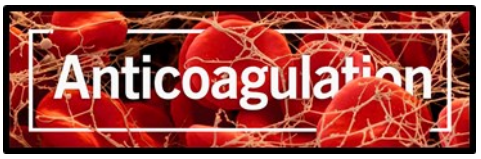
Continuous Renal Replacement Therapy (CRRT) Electrolyte Replacement Protocol CQI

An evaluation was conducted on the CRRT electrolyte replacement protocol. Overall compliance with the protocol was very high (~90%). However, repeat lab timing compliance and efficacy of doses provided in achieving electrolyte targets was very low. Changes made to the protocol will increase replacement doses for potassium, phosphate, and magnesium. Also, order to repeat electrolyte levels will be changed from 1-hr post administration to 2-8 hrs based on the severity of the deficiency. Emphasis to incorporate oral replacement will also be directed by the protocol instructions.

Pulmonary Arterial Hypertension (PAH) Therapy Banner

Upon review of safety event reporting, a PAH therapy banner was approved to provide notification to care teams for use of IV prostacyclin therapy with the goal of minimizing delays or interruptions of therapy.

ANTICOAGULATION USE SAFETY



Patti Romeril, PharmD

Vitamin K Use CQI Review

Sonya Sial, PharmD (PGY1 Pharmacy Resident)

A HM use review found a high proportion of SQ/IV vitamin K use was inconsistent with national guidelines and HM order set recommendations. To promote use of the order set and take advantage of the guidance within the order set, the radio buttons for the indication of vitamin K have been updated. The name of the order set will change to: ***Reversal of Warfarin Anticoagulation (Non-emergent procedure/surgery or supratherapeutic INR +/- non-life-threatening bleed)***. The flow of options will guide prescribers to the appropriate dose and monitoring for the intended use.

Enoxaparin Therapeutic Anticoagulation Review

Eileen Sullivan, PharmD (PGY1 Pharmacy Resident)

Assessment of 2,477 patients ordered therapeutic enoxaparin doses showed overall dosing was appropriate in 84% of patients. The majority of inappropriate doses were underdosing situations (65%). Anti-Xa monitoring for at-risk populations was frequent when a pharmacist was consulted. Nomogram-based dose adjustments were effective overall, but slightly underestimated the dose change need based on repeat level results. As a result of the review, a pre-selected pharmacy consult will appear for in Epic for high-risk patients (e.g. Patients with weight less than 45Kg, over 150Kg, age greater than 74 or pregnancy).

ANTIMICROBIAL STEWARDSHIP

Shivani Patel, PharmD

Epic Antibiotic Ordering Optimizations

Gentamicin and Tobramycin EPIC Orders Radio Button Optimization

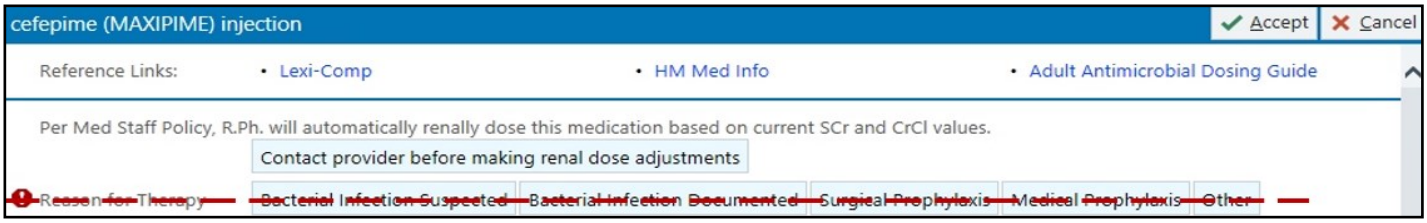
Because gentamicin and tobramycin are dosed as mg/kg, the gentamicin and tobramycin Epic order items were approved to be changed to reflect radio buttons with weight-based dosing as opposed to flat dosing conventions (e.g. 60, 80, 100, mg etc.) The revised defaults will be as follows:

- Gentamicin: 1mg/kg/dose, 1.5mg/kg/dose, 5mg/kg/day and 7mg/kg/day
- Tobramycin: 1.5mg/kg/dose, 5mg/kg/day, 7mg/kg/day

A frequency radio button for every 24 hours will be added for gentamicin and tobramycin

Epic "Reason For Therapy" Button Removal

To reduce unneeded clicks when ordering medications in Epic, the "Reason for Therapy" selection will be removed.



Providers will continue to select the "Indication" for antibiotics needed for CMS compliance and reflects best practices. The list of "Indications" will reflect options most appropriate and needed for care of HM populations. Some changes:

- ENT changed to ENT / Dental Infection
- Sepsis changed to Sepsis of unknown source

The changes will also modify selection descriptions to remove abbreviations and write-out the names:

- Vascular changed to Cardiovascular
- SSTI changed to Skin and soft tissue infection

NEWSLETTER STAFF

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