HOUSTON Methodist LEADING MEDICINE

HOUSTON METHODIST
# PHARMACY & THERAPEUTICS NEWS
January & February 2025

# FORMULARY UPDATES

The following medications and classes were reviewed

## Imetelstat (Rytelo™) ADDED to Formulary

**Category:** Antineoplastic agent, Telomerase Inhibitor

**Formulary restrictions:** Restricted to FDA—labeled indications with prescribing restricted to hematology/oncology physicians. Patients must be in the outpatient treatment setting and have prior financial approval.

**Rationale:** High unmet need for patients with low to intermediate risk myelodysplastic syndrome and limited treatment options.

## Axatilimab (Niktimvo™) ADDED to Formulary

**Category:** Colony stimulating factor-1 receptor (CSF-1R) directed monoclonal antibody used for chronic graft-versus-host disease (cGvHD)

**Formulary restrictions:** Restricted to FDA—labeled indications with prescribing restricted to hematology/oncology physicians. Patients must be in the outpatient treatment setting and have prior financial approval.

**Rationale:** High unmet need for patients with refractory or recurrent active cGvHD and limited treatment options.

## Cangrelor (Kangreal®) ADDED to Formulary

**Category:** Non-thienopyridine P2Y12 antagonist used as an adjunct to percutaneous coronary intervention (PCI)

**Formulary restrictions:** Restricted to ordering by physicians for patients that require continued P2Y12 therapy in the setting of intolerance or contraindication to use of oral P2Y12 inhibitors.

**Rationale:** Increasing literature available to support the use of cangrelor in populations at HM for a variety of indications

## Nirsevimab-alip (Beyfortus™) Restriction Criteria Revised

**Category:** Respiratory syncytial virus (RSV) directed monoclonal antibody

**Restrictions:** Updated to include use in all infants admitted to the NICU

## Prothrombin complex concentrate, human-lans (Balfaxar®) NOT ADDED to Formulary

**Category:** 4-factor prothrombin complex concentrate, non-activated

**Rationale:** Limited data on Balfaxar® use across all HM populations where prothrombin complex concentrate, human (Kcentra®) is used

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

# Policy Updates

**RXCLIN 139 Pharmacy Consult for Ticagrelor**

Triennial review changes include the addition of mandatory soft stop questions at the point of ordering to assure safe prescribing. This allowed for retirement of the pharmacy consult. Additional safeguards for appropriate use will be managed through alert monitoring.

**RXCLIN 142 Pharmacy Consult to manage Warfarin**

Warfarin INR fallout data collected over a year was analyzed to identify trends and opportunities. Many warfarin patients had a change in INR greater than 0.7 one day prior to their peak INR reading. The pharmacy warfarin policy and order set were adjusted to allow low-dose vitamin K (1mg PO) administration as an option when the INR rises by 1.0 or more to reduce fallouts.

# Epic Updates

**Alvimopan (Entereg)**

The alvimopan build was updated in 2024 to include instructions to discontinue use once bowel function returns. Nursing instructions direct to hold the medications, and pharmacists are authorized to discontinue the order after the first post-op bowel movement.

Upon administration, the last documented bowel movement from the I/O flowsheet now appears in the medication administration box, similar to how antihypertensives display the last recorded blood pressure and heart rate.

Alvimopan remains a REMS monitored therapy.

# MEDICATION SAFETY UPDATES

## SMSC 2025 Charter

The System Medication Safety Committee Charter will continue the focus on Barcode Medication Administration Compliance, Alaris Guardrail Utilization and Interoperability, and Medication Reconciliation Discrepancy/Error.

## Tranexamic Acid Best Practices

Following ISMP recommendations, system–wide efforts are underway to align EPIC optimization for ***nebulized*** medications, such as tranexamic acid, that are more commonly administered via different routes like intravenously. Tranexamic Acid has been added to the High-Risk Medication Policy and the Look Alike/Sound Alike Policy.

## Irritant/Vesicant List Addition to the High-Risk Medication Policy

To ensure safe use and best practices around irritant and vesicant administration, verbiage in the High-Risk Medication Policy (PCPS126) has been updated and a reference document has been added as an appendix denoting medications that can be given via peripheral IV, midline, and central line.

## EPIC Custom IVF Builder Updates

Separate custom IV fluid builds for central and peripheral line administration have been approved as distinct ERXs. Further optimizations include fluid/nutrition warnings for osmolarity and electrolyte administration rates with frequency defaulting to once for review and renewal.

## Vasopressin Dose Warnings

The adult alert threshold for vasopressin has been lowered from the current 0.9 units/min to > 0.07 units/min in order to align with the usual dosing range (0.01—0.04 units/min) and the package insert maximum of 0.07—0.1 units/min depending on indication.

## Evaluation of Continuous Infusion Neuromuscular Blocking Agents

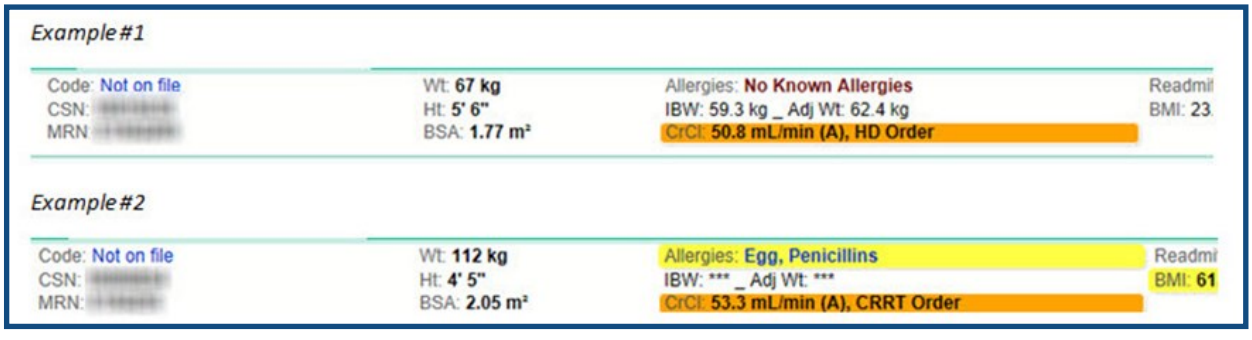
A review of the current NMBA agents revealed a need to improve monitoring compliance. The following changes will be implemented: keep default weight as IBW (ABW if less than IBW) for dosing, add rocuronium to continuous infusion order sets, re-categorize the protocols into nurse titrated and intensivist managed, remove indication-based selection, create NMBA titration instruction chart, reword general "nursing communication" with Train-of-four (TOF) instructions, add monitoring frequency for BIS to nursing communication and keep default 72-hour expiration for NMBA orders.

## CRRT Electrolyte Replacement Protocol Quality Review

A review of the current protocol lead to the following recommendations, keep current replacement amounts for K, Mg, and Ca and lab monitoring recommendations, add radio buttons for nephrologists to choose q6h, q8h, q12h lab monitoring for patients on CRRT, and remove labs from other order set sections. Furthermore, the following comment was added to ensure safe repletion of potassium and phosphate "If using potassium phosphate replacements please contact pharmacy for assistance, 1 mmol of potassium phosphate contains 1.5 mEq of Potassium".

## Patient Dialysis Status Visibility

The dialysis status and type will now be displayed alongside CrCl along with a look back and forward of 72 hours (as seen below). This will be a great tool to help assess the most appropriate dosing strategies for this patient population.



# MEDICATION SAFETY UPDATES

### Tenecteplase for Pulmonary Embolism

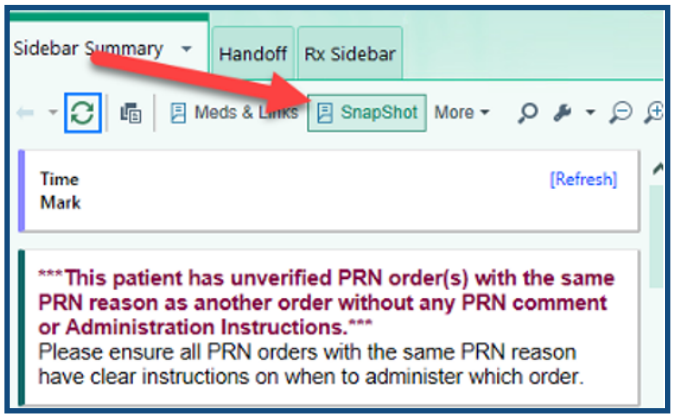
Tenecteplase is a viable thrombolytic option for pulmonary embolism with hemodynamic instability or cardiac arrest, offering faster reconstitution and administration compared to alteplase. The "Alteplase for Pulmonary Embolism" order set was renamed, "Thrombolytics for Pulmonary Embolism" and tenecteplase dosing was added for enhanced safety.

### Updates to Duplicate Therapy and DDI Warning Suppression by Phase of Care

In order to ensure consistency with phase of care alert suppression for PACU/Phase II phase of care, mirroring of duplicate warnings and DDI alert suppression was approved.

### Non-Interruptive Duplicate PRN Warnings for Pharmacists: Sidebar Summary

A pharmacist workflow enhancement in Epic is part of an initiative to further reduce duplicate PRN order verifications. The change involves the addition of a non-interruptive warning for pharmacists. Located in the sidebar summary, this alert will highlight in red when a potential duplicate PRN therapy exists upon verification or in the current medication list. Multiple orders for the same pain level without clear instructions as to which therapy to administer are not allowed. This enhancement improves the pharmacists ability to recognize these potential duplicates before verification.

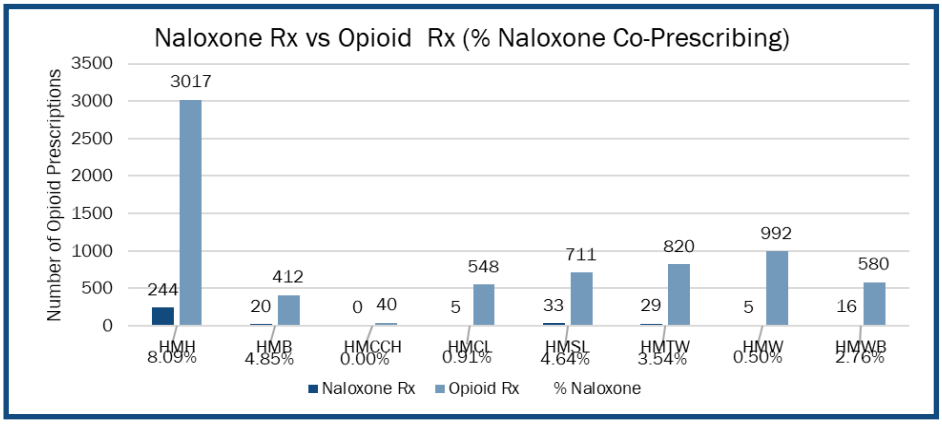



# PAIN MANAGEMENT COMMITTEE

Tatjana Ramos, PharmD

### Naloxone Discharge BPA System-wide Expansion

Rates of naloxone prescribing at discharge for patients being discharged with prescriptions for opioids and benzodiazepines or an opioid and muscle relaxer (specifically carisoprodol and baclofen) are low. An epic alert is in place now system-wide. The alert is coupled with a reminder to provide a prescription for naloxone as a safeguard for potential overdose.




### FLACC for Use in Adult Patients

System PCPS 169: Pain Management Policy Addendum will be updated to expand the use of FLACC pain assessment tool for adult patients. The FLACC assessment is a behavioral scale for pain assessment assessing: **F**acial expression, **L**eg movement, **A**ctivity level, **C**rying, **C**onsolability with each domain rated on a scale of 0-3 with lower ratings reflecting less discomfort.

### Pain Re-assessment for Sleeping Patients

A system-wide policy update has been approved to guide documentation of pain reassessment within 60 minutes if patient is sleeping after PRN pain medication is administered. Designation of "Unable to assess – Patient Asleep" or "S" option is proposed to be added to dropdown in Epic Flowsheets Pain Assessment tab and in Tableau Compliance Logic.

### Pharmacy Consult to Monitor Pain Management—Policy Retirement

Due to the implementation of multiple electronic surveillance safeguards through Vigilanz and other interventions, the System_RXCLIN 128 Pharmacy Consult to Monitor Pain Management will be retired.

HOUSTON METHODIST
PHARMACY & THERAPEUTIC NEWS

# ANTIMICROBIAL STEWARDSHIP

Shivani Patel, PharmD

## Microbiology Department BCID Implementation and ID Consult Recommendations

The BioFire FilmArray Blood Culture Identification (BCID2) Panel is an FDA-approved multiplex PCR assay that rapidly detects a number of commonly-identified bloodstream pathogens and resistance markers allowing for rapid, empiric antimicrobial selection. Currently there is no guidance for interpretation of results, and infectious diseases specialists review all results. The Antimicrobial Stewardship Program has made guidance documents on the interpretation of the results from the panel along with antimicrobial recommendations and important comments for consideration.

**Biofire® FilmArray® Blood Culture Identification (BCID2) Panel Interpretation Guidance**

The BioFire® FilmArray® Blood Culture Identification Panel (BCID2) leverages multiplex polymerase chain reaction (PCR) assays to rapidly identify 30 bacteria and yeast and 10 antimicrobial resistance markers (Table 1) directly from positive blood cultures. BCID2 provides actionable information faster than traditional microbiologic methods to guide empiric antimicrobial therapy, enabling earlier adjustments to targeted antimicrobial therapy. The BCID2 panel has an overall sensitivity of 99.2% and specificity of 99.6% for the detection of microorganisms on the panel compared to culture. Empiric recommendations below derive from the latest institutional antibiograms. **Once final susceptibility results are available, further de-escalation or antimicrobial tailoring may be appropriate depending on the organism.**

**Considerations when interpreting BCID2 results:**

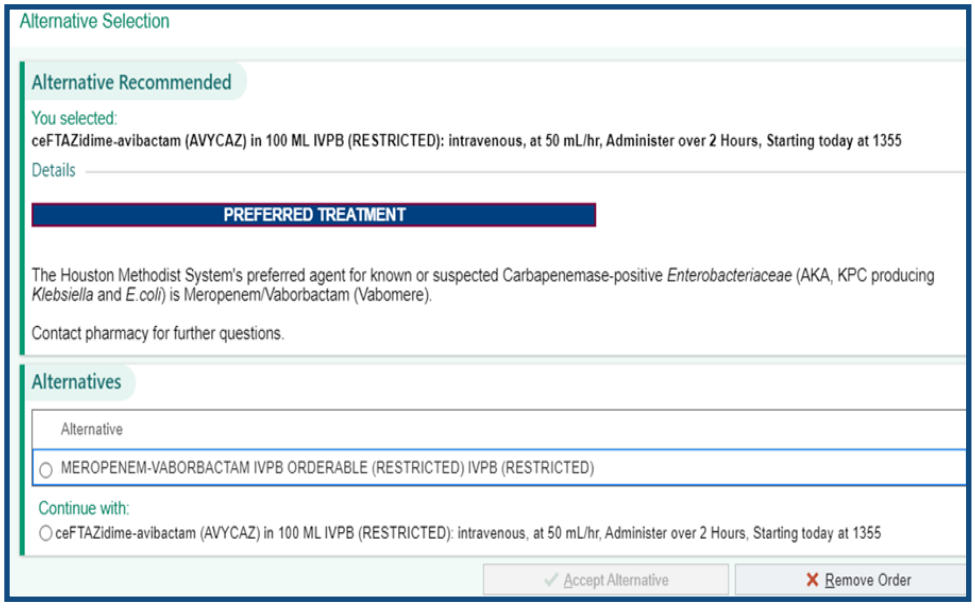
- Patient-specific factors such as clinical status, drug allergies, and prior cultures and antimicrobial resistance profiles must be considered.
- Certain infections may be polymicrobial and include other pathogens outside the bloodstream (e.g. intra-abdominal infections) where additional antimicrobial coverage may be needed until cultures at the site of infection have resulted.
- The BCID2 may be negative (NOT DETECTED), which indicates an organism has been identified that does not have a species/ genus PCR target on the panel. Identification of these organisms requires traditional microbiologic methods.
- Commonly encountered organisms that will not be identified by BCID2 (not all-inclusive) include blood culture contaminants (e.g. *Micrococcus* spp., *Bacillus* spp., *Corynebacterium* spp.), *Clostridium* spp., non-*fragilis Bacteroides* spp. (e.g. *B. vulgatus*, *B. thetaiotaomicron*), *Citrobacter* spp., non-*aeruginosa Pseudomonas* spp., non-*baumannii Acinetobacter* spp., and *Candida* spp. not listed below (e.g. *Candida dubliniensis*).
- The absence of detection of Gram-negative resistance markers does not exclude the possibility of other resistance mechanisms not detected by the panel. If multiple Gram-negative organisms are detected by the BCID2, resistance targets cannot be specifically linked to an organism.
- All BCID2 results are reviewed by the local ASP Team. For questions related to interpretation or management, contact your local ASP/ID pharmacist or consider Infectious Diseases consultation.

**Table 1: List of Pathogens and Resistance Genes Detected**

| Gram-Positive Pathogens | Gram-Negative Pathogens | Yeast | Gram Negative Resistance Genes |
|---|---|---|---|
| *Enterococcus faecalis* | *Acinetobacter calcoaceticus-baumannii complex* | *Candida albicans* | **ESBL** |
| *Enterococcus faecium* | *Bacteroides fragilis* | *Candida auris* | CTX-M |
| *Listeria monocytogenes* | *Enterobacterales* | *Candida glabrata* | **Carbapenemases** |
| *Staphylococcus spp.* | *Enterobacter cloacae complex* | *Candida krusei* | KPC |
| *Staphylococcus aureus* | *Escherichia coli* | *Candida parapsilosis* | OXA-48-like |
| *Staphylococcus epidermidis* | *Klebsiella aerogenes* | *Candida tropicalis* | IMP |
| *Staphylococcus lugdunensis* | *Klebsiella oxytoca* | *Cryptococcus neoformans/gattii* | NDM |
| *Streptococcus spp.* | *Klebsiella pneumoniae group* | | VIM |
| *Streptococcus agalactiae (Group B)* | *Proteus spp.* | | **Colistin resistance** |
| *Streptococcus pneumoniae* | *Salmonella spp.* | | Mcr-1 |
| *Streptococcus pyogenes (Group A)* | *Serratia marcescens* | | **Gram-Positive Resistance Genes** |
| | *Haemophilus influenzae* | | **Methicillin-Resistance** |
| | *Neisseria meningitidis* | | *mecA/C* |
| | *Pseudomonas aeruginosa* | | *mecA/C and MREJ* (MRSA) |
| | *Stenotrophomonas maltophilia* | | **Vancomycin-Resistance** vanA/B (VRE) |

## Meropenem-Vaborbactam Preferred use for KPC Enterobacteriaceae

At Houston Methodist,92.2% of carbapenem resistant organisms (CRO) and carbapenem resistant Enterobacterales (CRE) are non-carbapenemase-producing Enterobacterales. Among CROs and CREs, approximately 70% produce the carbapenemase KPC.




Meropenem-Vaborbactam, a beta-lactam/beta-lactamase inhibitor combination, is recommended by IDSA guidelines for KPC-producing Enterobacteriaceae. While resistance is rare, it is not active against NDM- or OXA-48 -producing organisms, nor against meropenem-resistant *P aeruginosa* or *A baumannii* .

Meropenem-Vaborbactam will now be the preferred agent for known or suspected KPC-producing carbapenem resistant Enterobacterales. It will not be used for infections caused by NDM- or OXA-48-producing organisms, *P. aeruginosa*, or *A. baumannii*

NEWSLETTER STAFF
Editor-in-Chief: Michael G. Liebl, PharmD
Managing Editor: Laura M. Blackburn, PharmD
System P&T Committee Roster is available to view here.