

FORMULARY

Evan Steere, PharmD

The following therapeutic interchanges were reviewed for triennial updates and changes approved. Click on the category to link to the current version of the interchanges.

Medication Class	Comments / Considerations
Long-Acting Beta Agonists	No substantial changes required
Angiotensin Receptor Blockers	
Non-Sedating Antihistamines	
Non-Sedating Antihistamine Combinations	
Phosphate Binders	
Selective Serotonin Reuptake Inhibitors	
Angiotensin Converting Enzyme Inhibitors	
Antimuscarinics for Overactive Bladder	
Insulin Glargine 300 units/mL (Toujeo)	
Proton Pump Inhibitors	
Glucagon-Like Peptide 1 Receptor Agonists	Added conversions FROM oral semaglutide (Rybelsus®) TO liraglutide (Victoza®). Albiglutide (Tanzeum®) was removed from the market and deleted from the interchange.

Have a medication needing Houston Methodist formulary review? [Click here and complete a request form](#)

Proton Pump Inhibitors Use Stewardship

Tania Baigi, PharmD

Proton pump inhibitors (PPI) are among the most used medications in hospitalized patients though several reports have shown a large percentage of patients ([up to 65% in some reports](#)) lack evidence-based indications therapy. Overuse is associated with are several risks, including but not limited to *Clostridium difficile* infection, spontaneous bacterial peritonitis, fractures and hypomagnesemia.

To better steward PPI use, in 2017 HM medical staff approved [a policy](#) allowing pharmacists to discontinue PPI therapy in the absence of an appropriate indication.

An analysis from May 1, 2021 to November 30, 2021 across HM showed regular opportunities for discontinuation. Following the results of the report, the policy was renewed and the pharmacy procedure to discontinue PPI therapy per standing order was updated to include more contemporary [meta-analysis](#) reporting the impact of pharmacy-driven interventions on reducing the proportion of patients receiving non-indicated acid suppressive therapy.

MEDICATION ORDERING

Amaris Fuentes, PharmD

IV Tacrolimus Continuous Quality Improvement

A CQI review was completed on the use of IV tacrolimus, and the following updates were approved to improve use:

- expand BPA for sublingual tacrolimus conversion to trigger at order verification
- update tacrolimus IV epic orders to indicate use based on population (e.g. BMT or SOT)

Hyperinsulinemia Euglycemia Therapy

An order set for the management of refractory beta-blocker or calcium channel blocker toxicity was approved. The order set includes pertinent high-dose insulin orders, dextrose infusions, electrolyte management, and nursing and monitoring orders.

Use of this order set will be restricted to ICU areas and should be executed in conjunction with consultation with poison control for management of overdoses.

Insulin for Hypertriglyceridemia

An order set for insulin therapy for hypertriglyceridemia was approved to include insulin, dextrose, electrolyte management, and associated nursing and monitoring orders. Use of this order set is restricted to ICU areas.



MEDSAFETY MATTERS!

Amaris Fuentes, PharmD

ISMP Medication Safety Newsletter Links: [Acute Care Newsletter](#) & [NurseERR Newsletter](#)

Survey on Disrespectful Behaviors in Healthcare

Recent ISMP newsletters provide a national insight on the unfortunate practice of disrespectful behaviors. Top line findings from a survey of ~1000 care providers include:

- 40% reported that disrespectful behaviors affected the way they handled questionable med orders
- 51% reported asking a colleague to intervene to avoid a discussion with another team member
- 47% admitted feeling pressure to accept orders, dispense products, or administer drugs despite safety concerns

Disrespectful behaviors pose a clear patient safety risk and range from direct aggressive remarks or actions to subtle behaviors that create unpleasant work environments. At Houston Methodist, ICARE values are rooted in the care provided to patients and our interactions with each other on healthcare teams. At Houston Methodist all of us are encouraged to speak up in the name of patient safety and [Stop the Line](#).

ANTICOAGULATION USE SAFETY

Patti Romeril, PharmD



Prothrombin Complex Concentrate (PCC / Kcentra®) Dosing Update

Based on recent evidence and new recommendations from the [American College of Cardiology](#) regarding management of bleeding in patients on oral anticoagulants, the PCC weight-based dosing order set in epic for “Reversal for Anticoagulant-Induced Life-threatening Bleeding due to Vitamin K antagonist (VKA)” for will be updated. A fixed-dose strategy aims to reduce door-to-needle time and ensure timely reversal in emergent situations. Follow-up laboratory monitoring within the order set contains preselected orders for CBC, PT, INR and aPTT every six hours for 24 hours with the first draw one hour after reversal.

Current Order Set	Revised Order Set
INR between 2–3.9: <ul style="list-style-type: none"> • Give PCC (Kcentra®) 25 units/kg • Max 2,500 units INR between 4–6: <ul style="list-style-type: none"> • Give PCC (Kcentra®) 35 units/kg • Max 3,500 units INR > 6 <ul style="list-style-type: none"> • Give PCC (Kcentra®) 50 units/kg • Max 5,000 units 	For all indications: <ul style="list-style-type: none"> • Give PCC (Kcentra®) 1500 units • Repeat INR within 60 minutes For weight >100kg, INR >7.5 or ICH (intracranial hemorrhage): <ul style="list-style-type: none"> • Give PCC (Kcentra®) 2000 units • Repeat INR within 60 minutes If INR >2 AND hemostasis not achieved <ul style="list-style-type: none"> • Consider additional 500 to 1000 units

NEWSLETTER STAFF

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System P&T Committee Roster is available [here](#).

ANTIMICROBIAL STEWARDSHIP

Sage Greenlee, PharmD & Emily Allen, PharmD

Appropriate Antibiotic Dosing Support Tools

Ceftriaxone dosing guidance: An indication-based dosing table will be added to ceftriaxone orders in Epic to aid in provider decision making and address challenges with prescribing the most appropriate dose and dosing interval of ceftriaxone based on a patient's indication and weight.

Microbiology Testing Updates

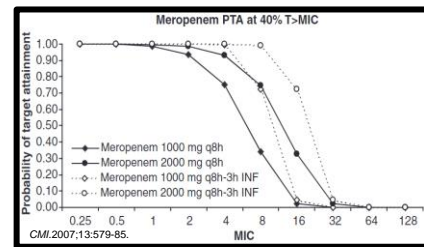
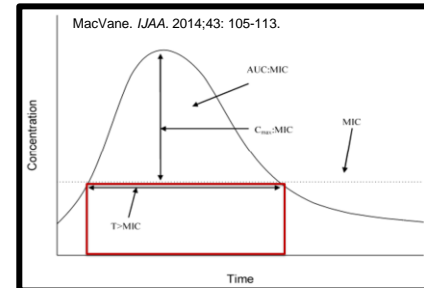
The antimicrobial stewardship and microbiology teams have updated *automatic* reflex testing pathways which are required for certain antimicrobials that are not present on the automatic susceptibility testing panels. These tests require a manual set up and will result within 24 hours of automatic susceptibility testing results if the cultures meet certain criteria. Cefiderocol and eravacycline testing will automatically reflex if the criteria to the right are met. A provider may request testing even if the patient falls outside of the defined *automatic* reflex criteria.

Cefiderocol	Eravacycline
<p>All cultures that result in:</p> <ul style="list-style-type: none"> Carbapenem resistant <i>Enterobacterales</i> sp. isolates resistant to meropenem/vaborbactam and ceftazidime/avibactam <i>Pseudomonas</i> sp. isolates resistant to ceftolozane/tazobactam and ceftazidime/avibactam <i>Acinetobacter</i> sp. isolates resistant to meropenem <i>Stenotrophomonas</i> sp. isolates resistant to SMX/TMP 	<p>Blood/urine cultures will <u>not</u> be reflexed. <u>Other cultures:</u></p> <ul style="list-style-type: none"> Carbapenem resistant <i>Enterobacterales</i> sp. <i>Acinetobacter</i> sp. isolates resistant to meropenem <i>Enterococcus</i> sp. isolates resistant to vancomycin <i>Stenotrophomonas</i> sp. isolates resistant to SMX/TMP

Extended Infusion Antimicrobials

Beta-lactam antimicrobials work best when concentrations at the site of infection are maintained above minimum inhibitory concentration (MIC) between 40-70% of the dosing interval. Maximizing the time above MIC becomes more important with severe infections but can be more difficult with more resistant organisms. Extended infusion (EI) administration increases the time above MIC and probability of target attainment, [improves clinical success rates, and reduces mortality](#).

[Cefepime](#), [meropenem](#), and [piperacillin/tazobactam](#) will have prolonged infusion order options in Epic. Critically ill or [immunocompromised](#) patients, or patients with organisms harboring elevated MICs or multidrug resistance are candidates for EI among other risk-factors. Cefepime and meropenem will be administered over 3 hours and piperacillin/tazobactam will be administered over 4 hours. Epic dosing tables will be available to assist decision making. Reach out to your antimicrobial stewardship pharmacists or infectious diseases providers if you have questions about who may benefit from this dosing strategy.



Sanford Guide Access Available to all HM Employees



The HM Antimicrobial Stewardship Blue Book content is paired with the Sanford Guide content and available free of charge to all employees. Access the resource:

- On mobile app: Register at <https://register.sanfordguide.com/> from any computer *on our network*
 - On the web: Visit <https://webedition.sanfordguide.com/> from any computer *on the network*
- A tutorial may be found at <https://www.youtube.com/watch?v=xy4bvgZhotQ>

For technical assistance, contact [Sanford Guide directly](#): 540.987.9480 (M-F, 9-5 Eastern)

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