C.S. MOTT CHILDREN'S HOSPITAL
MICHIGAN MEDICINE

# TIER II (CRITERIA) RESTRICTED ANTIMICROBIALS IN PATIENTS ON PEDIATRIC SERVICES

**Use of certain antimicrobial agents is restricted at Michigan Medicine. Agents are classified as Tier 1 or Tier 2 agents depending on whether Antimicrobial Stewardship Team (AST) approval is required prior to dispensing.**

## TIER 2 RESTRICTED ANTIMICROBIALS

The following agents may be used without antimicrobial stewardship (AST) approval if the following criteria are met. Prescribers must call for AST approval if they wish to use these agents for indications not listed, or for durations exceeding those listed below. Limited durations are provided for select antibiotics to ensure access to these antibiotics in life-threatening situations; however, use beyond these initial periods must meet a criterion without time restriction, or providers must call AST for ongoing approval. If an antimicrobial is subject to a time-limited approval, and a new criterion is met during the initial limited time period (e.g., suspected sepsis, now with an organism pending identification), the time limit is re-applied from the start of the most recently met criterion.

UMHHC Policy 07-01-015 ("Use of Infectious Diseases Restricted Antimicrobials")

All treatment guidelines are available on the Antimicrobial Stewardship webpage

| Restricted Antimicrobials | | |
|---|---|---|
| Aztreonam | Ciprofloxacin | Piperacillin-tazobactam |
| Cefepime | Levofloxacin | Vancomycin |
| Ceftazidime | Nafcillin | |

| Restricted Med | Pre-Approved Reasons for Use |
|---|---|
| Aztreonam | • Febrile neutropenia in patients with severe[1] penicillin or cephalosporin allergy (in combination with vancomycin)<br><br><u>48 hours only:</u><br>• Patient with severe[1] penicillin or cephalosporin allergy and one of the following:<br>  ○ Suspected sepsis<br>  ○ Documented gram-negative infection, pending identification and susceptibilities |
| Cefepime | • Monotherapy for febrile neutropenic patients<br>• Exacerbation of lung disease in patients with cystic fibrosis who have documented Pseudomonas in cultures<br><br><u>48 hours only:</u><br>• Suspected sepsis in patients with increased risk of resistant gram-negative infections (including *Pseudomonas aeruginosa*), as evidenced by meeting one of the following criteria:<br>  ○ Presence of implanted catheter, such as central venous catheter (CVC)<br>  ○ Presence of tracheostomy<br>  ○ >72 hours of hospitalization (in past 90 days)<br>  ○ Immunocompromised<br>• Suspected hospital/ventilator-associated pneumonia<br>• Suspected ventricular shunt infection<br>• Documented gram-negative infection, pending identification and susceptibilities |
| Ceftazidime | • Exacerbation of lung disease in patients with cystic fibrosis for organisms resistant to cefepime |
| Ciprofloxacin | • Treatment of intra-abdominal infections in combination with metronidazole in patients with severe[1] penicillin or cephalosporin allergy<br>• Oral treatment of inflammatory bowel disease flare |
| Levofloxacin | • Community-acquired pneumonia in patients with cephalosporin allergy or severe penicillin allergy who are not eligible for clindamycin (see Pediatric CAP guideline)<br>• Oral treatment of febrile neutropenia<br>• Prophylaxis in oncology/BMT patients per protocol |
| Nafcillin | • Documented or suspected meningitis involving methicillin-susceptible staphylococci<br>• Documented or suspected endocarditis involving methicillin-susceptible staphylococci |
| Piperacillin-tazobactam | • Exacerbation of lung disease in patients with cystic fibrosis<br>• Patients with moderate to severe necrotizing enterocolitis (stage IIb, IIIa, IIIb)<br>• Treatment of typhlitis (neutropenic enterocolitis)<br><br><u>7 days only:</u><br>• Post-op prophylaxis for patients undergoing laryngotracheal reconstruction |

| Restricted Med | Pre-Approved Reasons for Use |
|---|---|
| Vancomycin | • Febrile neutropenia in patients with severe[1] penicillin or cephalosporin allergy (in combination with aztreonam)<br>• Pediatric cardiothoracic surgery patients with open surgical chest wounds; vancomycin should be discontinued 48 hours after chest closure<br>• Exacerbation of lung disease in patients with cystic fibrosis who have documented MRSA in cultures<br>• PO/PR for *C. difficile* infection:<br>  ○ All patients with severe or complicated disease per institutional guideline<br>  ○ Mild-moderate disease AND metronidazole allergy, pregnant/nursing, on warfarin, failure to improve after 3-5 days of metronidazole, or second or greater recurrence<br><br><u>48 hours only:</u><br>• Suspected sepsis<br>• Severe/complicated community-acquired pneumonia (per Pediatric CAP guideline)<br>• Suspected hospital/ventilator-associated pneumonia<br>• Suspected bacterial meningitis or ventricular shunt infection<br>• Suspected necrotizing enterocolitis (per NEC guideline)<br>• Documented gram-positive infection, pending identification and susceptibilities<br>• Febrile neutropenia in patients with soft tissue infection, including tunnel or exit site infection of catheter |

[1]Severe penicillin allergy is defined by urticaria, angioedema, or anaphylaxis, see β-lactam Allergy Evaluation and Empiric Therapy Guideline.

| | | | |
|---|---|---|---|
| Antimicrobial Subcommittee Approval: | 06/2018 | Originated: | Unknown |
| CW Executive Committee Approval: | N/A | CW Operations Subcommitte Approval: | N/A |
| P&T Approval: | 12/2017 | Last Revised: | 06/2018 |
| Revision History: | | | |