

ANMC Antibiotic Guidelines for Gastrointestinal Infection

High Risk/Severe Criteria	Suspected Pathogens	Cultures
<ul style="list-style-type: none"> Albumin <2.5 Age >70 yo Immunocompromised state Severe sepsis/septic shock 	Polymicrobial process: Enterobacteriaceae <i>Enterococcus sp.</i> Anaerobes (including <i>Bacteroides sp.</i>) *Anaerobes are less significant for biliary sources unless bile duct to bowel anastomosis or fistula present	<ul style="list-style-type: none"> Routinely obtaining cultures is not recommended for community-acquired infections. Cultures SHOULD be obtained in patients with nosocomial infection or who require operation for prior treatment failure

Antibiotic Selection

	Mild-Moderate Risk	High Risk/Severe	Duration of Therapy
Extra-biliary Source <ul style="list-style-type: none"> Appendicitis Diverticulitis Bowel perforation with peritonitis 	Preferred therapy: <ul style="list-style-type: none"> Cefazolin 2gm IV q8hr PLUS Metronidazole 500mg IV q8hr Type I PCN Allergy: <ul style="list-style-type: none"> Levofloxacin 500mg IV q24hr PLUS Metronidazole 500mg IV q8hr 	Preferred therapy: <ul style="list-style-type: none"> Piperacillin/Tazobactam 3.375gm IV q8hr (extended infusion over 4 hours) Type I PCN Allergy: <ul style="list-style-type: none"> Levofloxacin 500mg IV q24hr PLUS Metronidazole 500mg IV q8hr 	<ul style="list-style-type: none"> Adequate surgical source control achieved*: 4 days Retained focus of infection <ul style="list-style-type: none"> Guided by clinical response Consider ID consult Uncomplicated diverticulitis: 5 days
Biliary Source <ul style="list-style-type: none"> Cholecystitis Cholangitis 	Preferred therapy: <ul style="list-style-type: none"> Cefazolin 2gm IV q8hr Type I PCN Allergy: <ul style="list-style-type: none"> Levofloxacin 500mg IV q24hr <p>*If bilio-enteric anastomosis present add metronidazole 500mg IV/PO q8h</p>	Preferred therapy: <ul style="list-style-type: none"> Piperacillin/Tazobactam 3.375gm IV q8hr (extended infusion over 4 hours) Type I PCN Allergy: <ul style="list-style-type: none"> Levofloxacin 500mg IV q24hr PLUS Metronidazole 500mg IV q8hr 	<ul style="list-style-type: none"> Uncomplicated: ≤ 24 hours Non-operative (uncomplicated) management: 5 days Complicated: 7-14 days <ul style="list-style-type: none"> Delayed clinical response Inadequate source control* Consider ID consult

Pediatric Dosing	IV to PO Conversion
<ul style="list-style-type: none"> Cefazolin 30 mg/kg/dose IV q8hr Cephalexin 10 mg/kg/dose PO q6hr Ciprofloxacin 15 mg/kg/dose PO q12hr Levofloxacin 10 mg/kg/dose IV q24hr (q12hr if <5 yo) Metronidazole 10 mg/kg/dose IV/PO q8hr Piperacillin/Tazobactam 50 mg/kg/dose (piperacillin) IV q6hr <p>*Pediatric abx selection is the same as adults, dosing is provided here for reference.</p>	<ul style="list-style-type: none"> Cefazolin 2g IV q8hr → Cephalexin 1g PO TID Levofloxacin 500mg IV q24hr → Levofloxacin 500mg PO q24hr Metronidazole 500mg IV q8hr → Metronidazole 500mg PO q8hr Piperacillin/Tazobactam → Depends on clinical scenario; consider antimicrobial pharmacy or infectious diseases consultation

Comments:

- Due to *E.coli* resistance >10%, empiric quinolone use alone is cautioned in high-risk/severe cases
 - ANMC *E.coli* susceptibility for 2016: Cefazolin 95%; Cefoxitin 86%; Ciprofloxacin 84%; Levofloxacin 84%; Cefepime 100%; Piperacillin-Tazobactam 97%
 - Ampicillin-sulbactam is not recommended for use because of high rates of resistance among community-acquired *E. coli* (60% susceptibility for ANMC 2016) and *B. fragilis*
- *Source control as determined by operative surgeon (as defined per IDSA: single procedure or series of procedures that eliminate infectious foci, control factors that promote ongoing infection, and correct or control anastomatic derangements to restore normal physiologic function)
- Empiric coverage of *Enterococcus* or *Candida* is NOT recommended for mild-moderate community-acquired intra-abdominal infections
 - Empiric Enterococcal tx is recommended for health-care associated infections with previous cephalosporin therapy, immunocompromised patients, and those with valvular heart disease or prosthetic intravascular materials.
- Bowel injuries from penetrating, blunt, or iatrogenic trauma repaired w/in 12hr or other intraoperative contamination of the operative field by enteric contents should be treated w/ abx for ≤24hrs.
- Use of ursodeoxycholic acid and/or antibiotics for the prevention of biliary stent occlusion or infection is NOT routinely recommended.
- Need for antibiotics in mild, outpatient diverticulitis disease remains controversial
- Aminoglycosides are not recommended for routine use in adults with community acquired intra-abdominal infection because of the availability of less toxic agents demonstrated to be at least equally effective but may be necessary in high risk/severity patients with Type I PCN or Cephalosporin allergy.

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