Northwestern Medicine
Marianjoy Rehabilitation Hospital

Antibiotic Prescribing Guidelines

Empiric antimicrobial guidelines are based on the most likely organisms responsible for infection, Marianjoy susceptibilities, and prevalence of resistant organisms. Therapy may need to be adjusted once identification and susceptibility are determined.

Diagnosis/Suspected Infection	Preferred therapy	Alternative**	Comments
Stool			
C. difficile antibiotic set (adult)	A. No prior history (Mild/moderate disease) 1. Vancomycin 125 mg PO QID x 10 days B. First & Subsequent **Recurrence** 1. Vancomycin 125mg oral liquid taper: -125mg po QID x 14 days -125mg po TID x 7 days -125mg po BID x 7 days -125mg po DAILY X 7 days -125mg po QODAY x 14 days C. **Severe CDI** (WBC ≥ 15 or Scr ≥ 1.5) Vancomycin 125mg po QID x 10 days D. **Fulminant CDI** (WBC ≥ or Scr ≥ 1.5 AND hypotension, shock, ileus, or toxic megacolon) Vancomycin 500mg po q6h Metronidazole 500mg IV q8h If ileus, vancomycin enema 500mg q6h E. **Secondary Prophylaxis** (high risk patients who require subsequent antibiotics for the duration of antibiotic treatment & continue for 5 days after antibiotic therapy is discontinued then stop) Vancomycin 125mg po daily F. **Primary Prophylaxis-** do not start vancomycin course due to lack of benefits	Consult ID to determine if patient at high risk of relapse and consider Fidaxomicin if financially feasible for the patient.	**High risk Definition:** 1. Over 65 years old **or** 2. Significant immunocompromise **And** 3. Hospitalized for severe CDI in past 3 months 4. Or per ID recommendation **Bezlotoximab** is nonformulary, explore outpatient options Fulminant C. difficile infection with ileus presence: Vancomycin 500 mg in 100 mL normal saline per rectum every 6 hours as retention enema **AND** IV metronidazole 500mg every 8 hours • There are insufficient data at this time to recommend extending the length of anti–*C. difficile* treatment beyond the recommended treatment course C. difficile Infection Guideline

Diagnosis/Suspected Infection	Antimicrobial Therapy	Alternative**	Comments
UTI (Urinary tract infection)			
Asymptomatic bacteriuria- No evidence of signs/symptoms of infection in urinary tract. (Urinalysis with evidence of pyuria WITHOUT clinical symptoms including fever >100.4F, urgency, frequency, costovertebral pain, suprapubic tenderness, dysuria)	No antibiotic treatment		Should only be treated in pregnant women or patients undergoing urologic procedures with anticipated mucosal bleeding --other patients should be evaluated on a case-by-case basis. See IDSA guidelines for Asymptomatic Bacteriuria Guidelines
Cystitis-uncomplicated ❖ Positive urinary signs and symptoms in a healthy woman with anatomically and functionally normal urinary tract	Nitrofurantoin 100mg PO BID x 5 days, effective in CrCl > 30 mL/min	1.TMP/SMX (Bactrim) Double Strength 160/800mg PO BID x 3 days 2. Cephalexin 500 mg PO BID x 5 days	Consider testing urethritis for gonorrhea, chlamydia, and trichomonas. See IDSA guidelines for Cystitis Guidelines
Complicated Indwelling catheter related/ Complicated UTI ❖ Positive urinary signs and symptoms associated with factors increasing colonization and decreasing efficacy of therapy: - Anatomic or functional abnormality of urinary tract - Male - Immunocompromised host - Multi-drug resistant bacteria - Recent ICU hospitalization - Recurrent UTI ≥ 3 occurrences per year - Reinfection ≥ 2 weeks	TMP/SMX (Bactrim) Double Strength 160/800mg PO BID x 7 days	1.Cephalexin 500mg PO QID 2. Cefazolin 1g or 2g IVPB Q8h, 1g for <100kg, 2g ≥ 100kg 3. Gentamicin Pharmacy to dose Duration: 7 days	See IDSA guidelines for catheter-related UTIs (recommended to d/c or change catheter) Complicated UTI Guidelines
Pyelonephritis (complicated UTI)	TMP/SMX (Bactrim) Double Strength 160/800mg PO BID x 14 days	1.cefazolin 1g-2g IVPB Q8h, 1g for < 100kg, 2g ≥ 100kg Or 2. Gentamicin Pharmacy to dose Duration: 14 days	See IDSA guidelines for Complicated UTI Guidelines Patients at increased risk of enterococci infections: elderly, urinary obstruction and post instrumentation

Candiduria (Symptomatic)	1. Remove or replace catheter **AND** 2. Fluconazole 200mg PO Daily x 14 days Fluconazole-resistant *Candida* spp.: Consult ID for alternatives	See IDSA guidelines for candidiasis, Candidiasis Guidelines Micafungin, liposomal Amphotericin and voriconazole have **poor renal excretion** and are NOT considered effective against fungal UTI
Candiduria (Asymptomatic)	Remove indwelling bladder catheter whenever feasible. No antifungal treatment unless at high risk of dissemination^.	^High risk of dissemination: neutropenic patients, very low-birth-weight infants < 1500g, those undergo urologic manipulation, refer to Candidiasis Guidelines for antibiotic dosing

Anatomic site /diagnosis	Preferred therapy	Alternative**	Comments
LUNG			
Pneumonia—Hospital Acquired pneumonia (HAP) No history of severe penicillin/beta-lactam allergy (rash)	Piperacillin/Tazobactam 3.375g IVPB Q8h x 7 days If risk of MRSA^, may add: Vancomycin IV Pharmacy to dose*, provider must specify indication & stop date	Cefepime 2g IVPB Q8h x 7 days If risk of MRSA^, may add: Vancomycin IV Pharmacy to dose*, provider must specify indication & stop date	HAP/VAP Guidelines *During Pharmacy off hours, Vancomycin 1 GM IV x 1 then Pharmacy to dose ^MRSA risk factors: IV antibiotics in past 90 days, illicit IV drug use, or on central line. Stop Vancomycin if MRSA not isolated within 72 hours.
Pneumonia—Hospital Acquired pneumonia (HAP) History SEVERE penicillin/beta-lactam allergy (**anaphylaxis**) or MDROs	Aztreonam 2g IVPB Q8h **PLUS** Vancomycin IV Pharmacy to dose*, provider must specify indication & stop date May add for aspiration: Metronidazole 500mg IVPB Q8h Duration: 7 days	**Consult ID**	HAP/VAP Guidelines *During Pharmacy off hours, Vancomycin 1 GM IV x 1 then Pharmacy to dose ^MRSA risk factors: IV antibiotics in past 90 days, illicit IV drug use, or on central line. Stop Vancomycin if MRSA not isolated within 72 hours.

Anatomic site /diagnosis	Preferred therapy	Alternative**	Comments
SKIN/BONE			
Central line catheter infection (CLABSI)	Remove line (if Coagulase-negative Staphylococcal spp., S. aureus MSSA and MRSA) **PLUS** Vancomycin IV Pharmacy to dose*, provider must specify indication & stop date	If concern for gram-negative, add piperacillin/tazobactam 3.375g IVPB Q8H If on TPN, add fluconazole 400mg IVPB daily	Intravascular Catheter Related Infection Guidelines *During Pharmacy off hours, Vancomycin 1 GM IV x 1 then Pharmacy to dose
Cellulitis- Nonpurulent Group A Streptococcal spp., Group B, C, G Streptococcal spp. (S. aureus is uncommon in absence of abscess, necrosis, or purulent drainage)	Cephalexin 500mg PO QID x 5 days	TMP/SMX (Bactrim) Double Strength 1 tablet PO BID if < 80kg or 2 tabs PO BID for >/= 80kg x 5 days or Doxycycline 100mg PO BID x 5 days	SSTI Guidelines
Cellulitis- Purulent Cellulitis with purulent exudates or at risk of MRSA (associated with penetrating trauma, evidence of MRSA infection elsewhere, nasal colonization with MRSA, injection drug use, purulent drainage, or SIRS)	Mild: perform incision and drainage Moderate: Perform incision and drainage **PLUS** TMP/SMX (Bactrim) Double Strength 1 tablet PO BID if < 80kg or 2 tabs PO BID for >/= 80kg x 10 days Severe: Perform incision and drainage **PLUS** Vancomycin IV Pharmacy to dose*, provider must specify indication & stop date	Mild: perform incision and drainage Moderate: Perform incision and drainage **PLUS** doxycycline 100mg PO BID x 10 days Severe: Perform incision and drainage **PLUS** linezolid 600mg PO BID (Linezolid is a restricted antibiotic, consult ID)	SSTI Guidelines Culture and sensitivities are indicated for de-escalation. *during Pharmacy off hours, Vancomycin 1g IVPB x 1 then Pharmacy to dose
Acute on chronic osteomyelitis	Bone biopsy and/or tissue biopsy is strongly recommended **prior** starting antibiotics. Vancomycin IV Pharmacy to dose, provider must specify indication & stop date		

Reference: IDSA Guidelines

Anatomic site /diagnosis	Preferred therapy	Alternative**	Comments
Sepsis			
Sepsis of Unknown Origin* ❖ Obtain blood cultures before giving antibiotics doubles the rate of pathogen recovery	Piperacillin/tazobactam 3.375g IVPB Q8H (extended infusion applies) **PCN allergy-Non-Anaphylaxis (rash):** Cefepime 2g IVPB Q8H **AND** if intra-abdominal source suspected, may add Metronidazole 500mg IVPB Q8H If MRSA risk, may add: Vancomycin 20mg/kg x 1 then Vancomycin IV Pharmacy to dose*, provider to specify indication & stop date (for after hours, give 1g x 1 for weight < 150kg, give 1g x 2 for weight ≥ 150kg, then pharmacy to dose)	**For SEVERE penicillin allergy (anaphylaxis) or history of MDRO:** Aztreonam 2g IVPB Q8h **AND** Vancomycin 20mg/kg x 1 then Vancomycin IV Pharmacy to dose*, provider to specify indication & stop date (for after hours, give 1g x 1 for weight < 150kg, give 1g x 2 for weight ≥ 150kg, then pharmacy to dose) If intra-abdominal source suspected, may add Metronidazole 500mg IVPB Q8H	Sepsis and Septic Shock Guidelines *ID on consult or Hospitalist on consult will also be ordered for management of Sepsis of Unknown Origin *Empiric combination therapy should not be administered for more than 3-5 days. De-escalation to the most appropriate single therapy should be performed as susceptibility profile is known *Duration of therapy typically 7-10 days; longer courses may be appropriate in the following patients: - slow clinical response - undrainable foci of infection - bacteremia with S. aureus - fungal and viral infections or Immunologic deficiencies neutropenia

Reference: CDC, IDSA