EMPIRIC ADULT ANTIMICROBIAL GUIDELINES – NORTHERN MICHIGAN 2024-2025

Infection	Preferred	Alternatives
Streptococcal Pharyngitis (based on strep screen or culture)	• Penicillin VK 500mg BID x 10 d, or • Amox 500mg BID or 1gm QD x 10 d	• Cephalexin 500mg BID x 10 d, or • Azithromycin (Zpak)
Acute Bacterial Sinusitis (Symptoms typically > 10 days)	• Abx not usually required • Amox/clav 875/125 mg BID x 5 d	Doxycycline 100 mg BID x 5 d
Chronic Sinusitis	Value of antibiotics uncertain. Consider ENT/Allergy consult	
Acute otitis media (Abx generally recommended for adults, but not always required for pediatrics – see peds guideline)	Amox/clav 875/125 mg BID x 5-10 d* *5-7 d for mild-mod, 10 d for severe	• Cefdinir 300 mg BID x 5-10 d • Cefuroxime 500 mg BID x 5-10 d • Amoxicillin 1 gm TID x 5-10 d
Acute Bronchitis (Usually viral)	**No antibiotics** - Consider testing for Pertussis, Chlamydia, Mycoplasma, and/or common circulating viruses such as RSV or COVID-19	
Acute exacerbation COPD Consider antibiotics when ≥2 of 3 symptoms are present: 1.) dyspnea, 2.) sputum volume/viscosity, 3.) sputum purulence	Outpatient • Azithromycin 500mg daily x 3 d or • Cefuroxime 500 mg BID x 5 d Inpatient • Ceftriaxone 1 gm daily (empiric), de-escalate based on sputum culture & clinical response (5-day duration)	• Amox/clav 875/125 mg BID x 5 d • Levofloxacin 750 mg x 3-5 d Consider stopping antibiotics at 48-72 hrs if rapid clinical response
Community-Acquired Pneumonia (CAP) *Pseudomonas* and MRSA are rare pathogens. Highest risk factor is recent colonization in previous 6 months.	Outpatient • Amoxicillin 1 gm TID x 5 d, or Cefuroxime 500 mg BID x 5 d, + Azithromycin or Doxycycline x 5 d Inpatient • Ceftriaxone 1 gm daily x 5 d + Azithromycin 500mg daily x 3 d	• Levofloxacin 750mg daily x 5 d Procalcitonin WNL may assist in stopping antibiotics early before planned end date in all pneumonia
Hospital-acquired Pneumonia (HAP) & Ventilator associated Pneumonia (VAP) • Antibiotics should target MSSA & *Pseudomonas* • MRSA pneumonia is uncommon • No need for MRSA activity if MRSA nasal swab is negative	Cefepime 2 gm Q8hr x 5-7 d Add MRSA Coverage (Vancomycin or Linezolid 600mg Q12hr x 5-7 d) if any present: • IV antibiotics within 90 days • Septic shock • Need for ventilator support due to pneumonia	Pip-tazo 4.5gm Q8hr 4hr INF x 5-7d MRSA coverage criteria (left): Add Vancomycin or Linezolid 600mg Q12hr x 5-7 d
Aspiration Pneumonia (Anaerobic bacteria are uncommon in the absence of empyema or lung abscess)	**Witnessed event does not require antibiotics.** Consider monitoring for 48hr prior to starting antibiotics.	• Ampicillin/Sulbactam 3 gm Q6h x 5d • Ceftriaxone 1 gm daily x 5d
Diverticulitis– uncomplicated	**No antibiotics** in the absence of sepsis, perforation, obstruction, or abscess	
Peritonitis, intra-abd abscess, pelvic abscess, complicated diverticulitis If no/inadequate source control, duration depends on response.	• Ceftriaxone 2 gm Q24hr + Metronidazole 500mg Q8-12hr • Pip-tazo 4.5 gm Q8H 4hr INF Duration: 5 days after adequate source control i.e. OR drainage.	Levofloxacin 750 mg Q24hr + metronidazole 500mg Q8-12hr • Duration: 5 days after adequate source control i.e. OR drainage.
Asymptomatic Bacteriuria	**No antibiotics,** unless pregnant or urologic procedure with mucosal bleeding ***Urine culture not indicated in the absence of urinary symptoms***	
UTI, cystitis – uncomplicated (non-pregnant females, no obstruction or catheters)	• Nitrofurantoin monohydrate / macrocrystals 100mg BID x 5 d or • TMP-SMX DS BID x 3 days, or • Cephalexin 500mg BID x 7 d	• Fosfomycin 3 gm x 1 dose, or • Gentamicin 5 mg/kg IVPB x 1 Cipro/Levofloxacin not recommended

Infection	Preferred	Alternatives
UTI, cystitis – complicated* Without sepsis or bacteremia *Male, urinary catheter present or removal within the last 48 hours, recent GU instrumentation, anatomic abnormality or obstruction, pregnancy or other significant co-morbid conditions such as uncontrolled diabetes or immunosuppression	Empiric therapy should take into account previous urine cultures. Oral regimens: • Nitrofurantoin 100 mg BID • TMP-SMX 1 DS BID • Cephalexin 500 mg QID or 1 gm TID • Fosfomycin 3gm Q48hr x 3 doses Preferred IV if patient cannot take PO: • Ceftriaxone 1 gm daily, or Cefazolin 1 gm Q8hr	History of MDRO, or not responding to PO abx: • Pip-tazo 4.5 gm Q8hr • Cefepime 2gm Q8hr <u>Duration</u>: 7 days usually appropriate. Up to 10-14 if delayed response. As low as 3 days in women <65 yrs after catheter removal.
UTI, pyelonephritis-uncomplicated (healthy non-pregnant female)	Ceftriaxone 1 gm Q24hr, with step-down to TMP-SMX (if susceptible) x 7-14 d	• TMP-SMX 1 DS BID x 7-14 d • Ciprofloxacin 500 mg BID x 7 d • Levofloxacin 750 mg QD x 5 d
UTI, complicated cystitis or pyelonephritis with sepsis or bacteremia	• Cefepime 2gm Q8hr or Pip-tazo 4.5 gm Q8hr empirically, with stepdown to either Ceftriaxone 2gm daily, Cipro/Levofloxacin, or TMP-SMX 1 DS BID • 7-day duration if the following criteria are met: 1.) enteric Gram negative (i.e. E. coli, Klebsiella), 2.) non-pregnant, 3.) immunocompetent, 4.) without ongoing obstruction, and 5.) clinical response at 48-72 hours. • Consider ID consult for *Pseudomonas* bacteremia, Gram positive bacteremia, immunocompromised, or circumstances with abscess or ongoing obstruction.	
Clostridioides difficile colitis Initial episode	• Fidaxomicin 200 mg PO BID x 10 d ($$$$$, but less recurrence rates) • Vancomycin 125 mg PO QID x 10 d ($, higher rate of recurrence)	
Clostridioides difficile colitis Recurrence	<u>1st recurrence*</u>: Fidaxomicin 200 mg BID x 10 d, Alt: Vancomycin pulse/taper <u>2nd or subsequent recurrence*</u>: ID and/or GI consult *Consider Bezlotoxumab to prevent further recurrence in high-risk patients	
Clostridioides difficile colitis Fulminant (hypotension or shock, ileus, megacolon)	Vancomycin 500mg PO QID + Metronidazole 500 mg IVPB Q8H until gut is functioning	ID and/or GI Consult
Purulent Cutaneous Abscess – (mild-moderate), I&D, culture	• TMP-SMX DS BID x 7 d or • Doxycycline 100mg PO BID x 7 d	Linezolid 600 mg PO BID x 7 d
Cellulitis – Non-purulent (mild – moderate) • Bilateral erythema more likely stasis dermatitis than cellulitis	• Pen VK 500 mg QID x 5-7 d or • Cephalexin 500mg QID x 5-7 d (consider 1 gm TID for wt. >90kg)	Doxycycline 100mg BID x 5-7 d
Diabetic Foot Infection (OP) • Duration: 1 to 2 weeks depending on severity	Amox/clav 875/125 mg BID + (TMP-SMX DS BID or Doxycycline 100mg BID if MRSA suspected)	TMP-SMX DS BID +/- Metronidazole 500 mg TID
Diabetic Foot Infection (IP) • If stable, hold Abx until deep cultures obtained	• Ampicillin/sulbactam 3gm IV Q6hr • Add vancomycin* if MRSA suspected *Duration depends on clinical findings	Ceftriaxone 2gm QD + Metronidazole 500mg Q8hr (Add Vancomycin* if MRSA suspected)
Dog, Cat, Human Bite • Give tetanus booster if last dose was >5 years ago • If deep structure, I&D and use IV • Consider rabies PEP	• Amox/Clav 875/125 mg BID x 7 d (OP) • Ampicillin/sulbactam 3gm IVPB Q6H x 7 d if soft tissue only (IP)	TMP-SMX DS BID or Doxycycline 100 mg BID + metronidazole 500 mg TID x 7d

After 48 hours of antimicrobial therapy, reassess for appropriateness and opportunities for de-escalation