**Wake Forest Baptist Health**

**Empiric Antibiotic Recommendations for Adults without Sepsisa,b,c**

Unless otherwise specified, it is assumed that the pt is ill enough to require hospital admission. Obtain cultures before the first ABX dose whenever possible without undue delay in treatment. ABX therapy should be re-assessed and de-escalated based on laboratory results and patient response. A CAUSE representative is available to assist in ABX selection or interpretation of microbiology studies (6494).

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| **Respiratory Tract Infections** |
|  | Treatment | If Severe Penicillin Allergy |
| Community-acquired PNA1 | Ceftriaxone plus Azithromycin1 | Moxifloxacin or levofloxacin1,2 |
| Hospital-acquired (developed after >2 days of hospitalization) or Ventilator-associated PNA3 | Vancomycin **PLUS EITHER**Cefepime**OR**Piperacillin-tazobactam3 | Vancomycin **PLUS EITHER**Ciprofloxacin**OR**Meropenem3 |
| Acute bacterial exacerbation of COPD – if ABX needed4 | Amoxicillin/clavulanate **OR**Doxycycline **OR**Azithromycin | Doxycycline **OR**Azithromycin |

1See WFBH CAP guide for recommended tx when Pseudomonas or MRSA risk factors are present2Based on inpatient formulary3Add amikacin if hospital stay >7 days or hx of resistant gram-negative pathogens from resp CX4Consider using anti-Pseudomonas ABX if history of Pseudomonas from respiratory CX

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| **Abdominal Infections** |
|  | Treatment | If Severe Penicillin Allergy |
| Community-Acquired intra-abdominal infection (IAI) – Low Risk1 | Ceftriaxone **PLUS**Metronidazole | [Ciprofloxacin **PLUS** Metronidazole]  |
| Community-Acquired IAI – High Risk1 | [Cefepime PLUS Metronidazole]**OR**Piperacillin/tazobactam | [Ciprofloxacin **PLUS** Metronidazole] **OR**Meropenem |
| Healthcare/Hospital-Associated IAI | Same as High Risk CA-IAI **PLUS** Vancomycin if MRSA risk factors **AND/OR**Micafungin if Candida risk factors (upper GI perforation, recurrent bowel perforations, surgically treated pancreatitis, prolonged courses of broad-spectrum ABX, heavy colonization w/ Candida) |
| Cholecystitis | Antibiotics not indicated |
| Pancreatitis – acute treatment2 | ABX not indicated even for necrotic pancreatitis unless infected |
| Pancreatitis – Infected2 | [Cefepime PLUS Metronidazole]**OR** Piperacillin/tazobactam | [Ciprofloxacin **PLUS** Metronidazole] **OR** Meropenem |
| Spontaneous bact. peritonitis  | Ceftriaxone | Ciprofloxacin |
| Febrile bloody diarrhea | Ciprofloxacin **OR** TMP-SMX3 | Ciprofloxacin **OR** TMP-SMX3 |

1Ex. of high risk: malignancy, multiple co-morbidities, inadequate source control, suspicion of resistant pathogens2Infection should be suspected in pts with necrosis in whom CT scan reveals gas in the collection or who deteriorate &/or have ongoing SIRS after 7-10 days of hospitalization. Consider CT-guided FNA to determine if necrosis is infected and to guide ABX decisions.3Add PO Vancomycin for empiric treatment of *C. difficile* if recent antibiotic exposure

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| **Meningitis** |
|  | Treatment | If Severe Penicillin Allergy |
| Community-acquired1 | Ceftriaxone **PLUS**Vancomycin1,2 | [Moxifloxacin **OR** Meropenem]**PLUS** Vancomycin1,2 |
| Post-neurosurgical/ Healthcare-associated | Cefepime **PLUS**Vancomycin | Vancomycin  **PLUS**Meropenem **OR** Aztreonam |

1**ADD** ampicillin (**OR** trimethoprim-sulfamethoxazole for PCN allergy) if >50 years old, neutropenic, or otherwise immunosuppressed. If purulent LP (visible purulence or WBC>50), run ME panel on CSF ASAP & direct antimicrobials accordingly2Give dexamethasone prior to ABX if causative pathogen is *S. pneumoniae* or unknown |

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| **Skin and Soft Tissue Infections** |
|  | Treatment | If Severe Penicillin Allergy |
| Cellulitis |  |  |
|  Orbital | Vancomycin **PLUS** Ceftriaxone1  | Vancomycin **PLUS**Ciprofloxacin1  |
|  Facial | Vancomycin | Vancomycin |
|  Extremities: not purulent  & no IV drug abuse  | Cefazolin | Clindamycin |
|  Extremities – purulent or IV drug abuse2 | Vancomycin | Vancomycin |
|  Associated with bite wound | Ampicillin-sulbactam |  Moxifloxacin **OR** Doxycycline |
| Furuncle, boils | TMP-SMX **OR** Doxycycline | TMP-SMX **OR** Doxycycline |
| Diabetic Foot or CellulitisAssociated with Peripheral Vascular Disease – NO Pseudomonas risk3 (add vancomycin for MRSA risk4) | Ampicillin-sulbactam**OR**[Ceftriaxone **PLUS** Metronidazole] | Ciprofloxacin **PLUS**Clindamycin |
| Diabetic Foot or CellulitisAssociated with Peripheral Vascular Disease – WITH Pseudomonas risk3 (add vancomycin for MRSA risk4) | [Cefepime **PLUS**Metronidazole]**OR**Piperacillin-tazobactam | Ciprofloxacin **PLUS**Clindamycin |
| Compound fracture  | Cefazolin5 | Clindamycin **PLUS**Gentamicin |
| Osteomyelitis | Obtain culture before giving antibiotics unless patient unstable. Most reliable CX obtained intra-operative (during I & D) or by bone biopsy. Superficial swab CXs have limited usefulness. |

1Add metronidazole if possible intracranial involvement or chronic sinusitis or odontogenic source2If IV drug abuse, rule out septic thrombophlebitis3Pseudomonas risk: macerated wound, significant water exposure, previous positive culture, life/limb-threatening infection, puncture through a shoe4MRSA risk: purulent infection, MRSA colonized/previous infection, IV drug abuse, resident of LTC facility, hemodialysis, hospitalization w/in 90 previous days5Add gentamicin if environmental contamination

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| **Urinary Tract Infections** |
|  | Treatment | If Severe Penicillin Allergy |
| Cystitis (outpatient treatment) |  |  |
| CrCl ≥30 ml/min | Nitrofurantoin | Nitrofurantoin |
| CrCl <30 ml/min | Cefdinir | TMP-SMX **OR** Ciprofloxacin |
| Pyelonephritis | Ceftriaxone | Ciprofloxacin **OR** Aztreonam |
| Prostatitis | Ciprofloxacin | Ciprofloxacin |
| IV Catheter-Related Infection |
|  | Treatment | If Severe Penicillin Allergy |
| Absence of gram-negative (GNR) risks factors (see cell below) | Vancomycin | Vancomycin |
| GNR risks (Critically ill, immuno-compromised, femoral catheter, known focus of GNR infection) | Vancomycin **PLUS**Cefepime | Vancomycin **PLUS EITHER**Meropenem **OR** [Ciprofloxacin **PLUS** amikacin] |

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 aRefer to Febrile Neutropenia algorithm for patients with neutropenia.

 bExamples of severe penicillin allergy include anaphylaxis, shortness of breath, angioedema, immediate hives, or similar life-threatening events. There is a slight risk of cross reaction when giving meropenem to these patients. Weigh the risk of this reaction versus the risk of inadequate anti-bacterial coverage when choosing alternative ABX for these patients.

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 cConsider colonization with multi-resistant organisms, previously infecting organisms, and prior ABX therapy within the previous 3 months when prescribing empiric ABX.