# Wake Forest Baptist Health

**Empiric Antibiotic Recommendations for Adults with Sepsisa,b,c**

Sepsis is currently defined as life-threatening organ dysfunction (ie, increased SOFA score ≥ 2 points) caused by a dysregulated host response to infection (no longer defined as just SIRS due to infection). (JAMA. 2016;315(8):801-810) Septic patients are sufficiently ill to require admission or transfer to the intensive care unit. Appropriate antibiotics should be given within 1 hour to patients with septic shock in possible. Obtain cultures before the first antibiotic dose whenever possible without undue delay in treatment. Antibiotic therapy should be re-assessed and de-escalated based on laboratory results and patient response. A CAUSE representative is available to assist in antibiotic selection or interpretation of microbiology studies (6494).

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| |  |  |  | | --- | --- | --- | | Pneumonia | | | |  | Treatment | If Severe Penicillin Allergy | | Community-acquired PNA1  (CAP) | Ceftriaxone  **PLUS**  Azithromycin | Moxifloxacin or levofloxicn2  **PLUS**  Vancomycin | | Hospital-acquired  (developed after >2 days of hospitalization) or  Ventilator-associated PNA  (HAP or VAP) | Vancomycin **PLUS** Amikacin  **PLUS EITHER**  Cefepime  **OR**  Piperacillin/tazobactam | Vancomycin **PLUS** Amikacin  **PLUS EITHER**  Ciprofloxacin  **OR**  Meropenem |   1See WFBH CAP guide for recommended treatments when Pseudomonas or MRSA risk factors present.  2Based on inpatient formulary   |  |  |  | | --- | --- | --- | | Skin and Soft Tissue Infections | | | |  | Treatment | If Severe Penicillin Allergy | | Necrotizing Fasciitis | Piperacillin/tazobactam  **PLUS** Clindamycin  **PLUS** Vancomycin | Meropenem **OR** Aztreonam  **PLUS** Clindamycin  **PLUS** Vancomycin | | Fournier’s Gangrene | Piperacillin/tazobactam  **PLUS** Vancomycin | Vancomycin **PLUS Either**  Meropenem **OR**  [Contact ID or CAUSE] | | Diabetic Foot or Cellulitis  Associated with Peripheral Vascular Disease | Vancomycin **PLUS EITHER**  [Cefepime **PLUS**  Metronidazole] **OR** Piperacillin/tazobactam | Vancomycin **PLUS EITHER**  Meropenem **OR**  [Ciprofloxacin **PLUS**  Metronidazole] | | Toxic Shock Syndrome | Vancomycin **PLUS**  Clindamycin | Vancomycin **PLUS**  Clindamycin | | Cellulitis | Vancomycin | Vancomycin |  |  |  | | --- | --- | | Abdominal Infections1 | | | Treatment | If Severe Penicillin Allergy | | Piperacillin/tazobactam  **OR**  [Cefepime **PLUS** Metronidazole] | Meropenem **OR**  [Ciprofloxacin **PLUS**  Metronidazole **PLUS** Amikacin] |   1For hospital/healthcare-associated infections, consider adding Micafungin if Candida risk factors (upper GI perforation, recurrent bowel perforations, surgically treated pancreatitis, prolonged courses of broad-spectrum ABX, heavy colonization with Candida) and/or Vancomycin if MRSA risk factors (eg, MRSA colonized) | |  |  |  | | --- | --- | --- | | Meningitis | | | |  | Treatment | If Severe Penicillin Allergy | | Community-onset1 | Ceftriaxone **PLUS**  Vancomycin1,2 | [Moxifloxacin or meropenem] **PLUS**  Vancomycin1,2 | | Post-neurosurgical/ Healthcare-associated | Cefepime **PLUS**  Vancomycin | Vancomycin  **PLUS**  Meropenem |   1**ADD** ampicillin (**OR** trimethoprim-sulfamethoxazole for PCN allergy) if >50 years old, cancer, diabetes, or immunosuppressed. If purulent LP (visible purulence or WBC>50), run ME panel on CSF ASAP & direct antimicrobials accordingly  2Give dexamethasone prior to ABX if causative pathogen is *S. pneumoniae* or unknown   |  |  | | --- | --- | | IV Catheter-Related Infections | | | Treatment1 | If Severe Penicillin Allergy1 | | Cefepime **PLUS**  Vancomycin | Vancomycin **PLUS Either**  Meropenem **OR** [Ciprofloxacin **PLUS** Amikacin] |   1Consider adding Micafungin for septic patients with following characteristics: Total Parenteral Nutrition, current use of broad-spectrum ABX, solid organ transplant, femoral catheterization, colonization due to Candida species at multiple sites   |  |  |  | | --- | --- | --- | | Urinary Tract Infections1 | | | |  | Treatment | If Severe Penicillin Allergy | | Community Acquired & No  Significant Comorbidities | Ceftriaxone | Meropenem **OR**  Aztreonam | | Nursing Home-Acquired,  Health Care-Associated, or Elderly Patient | Cefepime **OR** Piperacillin/tazobactam | Meropenem **OR**  [Amikacin **PLUS** Ciprofloxacin] |   1Warning: Asymptomatic bacteriuria is common. If unclear whether urinary tract is source of sepsis, treat as if sepsis of unknown source (see below)   |  |  | | --- | --- | | Sepsis of Unknown Source | | | Treatment | If Severe Penicillin Allergy | | Vancomycin  **PLUS**  Amikacin **PLUS**  Piperacillin/tazobactam **OR** Cefepime | Vancomycin **PLUS Either**  [Ciprofloxacin **PLUS** Amikacin] **OR**  [Meropenem ± Amikacin] |  |  |  | | --- | --- | | Burn Unit Patients with Sepsis from Any Source | | | Treatment | If Severe Penicillin Allergy | | Vancomycin **PLUS** Cefepime | Vancomycin **PLUS** Meropenem | |

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.

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

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