

Sharp Healthcare Treatment Guidelines for Empiric Sepsis Treatment Based on Suspected Source

Selecting Antimicrobial Agent(s) - Review pathogen history - Review for recent exposure to antimicrobial agents	MDRO Risk Factors (Consider ID Consultation*) - Prior history of MDROs - IV antibiotics within past 90 days, hospital stay ≥5 days
All regimens included in the sepsis antibiotic recommendations are considered safe alternatives in patients with penicillin allergy, including Type I allergic reaction (i.e. anaphylaxis) unless denoted otherwise (see Policy 43008 Cephalosporin administration to Penicillin-allergic Patients).	

*Particularly for patients with history of carbapenem-resistant organisms (e.g. KPC, CRE) given high associated mortality, the recommended regimens below may or may not provide adequate coverage for such organisms.

Suspected Source	Sepsis/Severe Sepsis	Septic Shock or Other Specific Risk Factors
Community acquired pneumonia (CAP)	Ceftriaxone 2g IV q24h + Azithromycin 500mg IV q24h	<i>Pseudomonas risk</i>¹: Cefepime 2g IV q8h + Azithromycin 500mg IV q24h +/- Tobramycin 7mg/kg IV x1 if septic shock <i>MRSA risk</i>²: add Vancomycin^{3,4} IV or Linezolid 600mg IV q12h
Nosocomial Pneumonia HAP/VAP	Cefepime 2g IV q8h + [Vancomycin ^{3,4} IV or Linezolid 600mg IV q12h]	<i>If septic shock</i>: Cefepime 2g IV q8h + [Vancomycin^{3,4} IV or Linezolid 600mg IV q12h] +/- Tobramycin IV 7mg/kg x1 <i>ESBL hx</i>: Meropenem 500mg IV q6h + [Vancomycin^{3,4} IV or Linezolid 600mg IV q12h]
Urinary tract	Ceftriaxone 2g IV q24h	<i>ESBL hx (w/in 6 mo)</i>: Ertapenem 1g IV q24h <i>ESBL hx (w/in 6 mo) and septic shock</i>: Meropenem 500mg IV q6h
Intra-abdominal	Ceftriaxone 2g IV q24h + Metronidazole 500mg IV q12h	<i>Septic shock</i>: Zosyn 4.5g IV q8h <i>Septic shock and PCN allergy</i>: Cefepime 2g IV q8h + Metronidazole 500mg IV q12h <i>ESBL hx</i>: Meropenem 500mg IV q6h
Cellulitis	Cefazolin 2g IV q8h	<i>Septic shock</i>: Zosyn 4.5 g IV q8h + Linezolid 600mg IV q12h <i>Septic Shock and PCN allergy</i>: Cefepime 2g IV q8h + Linezolid 600mg IV q12h
Abscess	Vancomycin ^{2,3} IV or Linezolid ³ 600mg IV q12h	
Necrotizing Skin and Soft Tissue including fasciitis, Gas Gangrene	Zosyn 4.5g IV q8h + Linezolid 600mg IV q12h	
Diabetic Foot/Wound/Ulcer	Unasyn 3g IV q6h OR Ceftriaxone 2g IV q24h + Metronidazole 500mg IV q12h	<i>Pseudomonas and MRSA risk factors</i>⁵: Zosyn 4.5g IV q8h + [Vancomycin³ IV or Linezolid 600mg IV q12h] <i>Pseudomonas and MRSA risk factors and PCN allergy</i>: Cefepime 2g IV q8h+ Metronidazole 500mg IV q12h+ [Vancomycin³ IV or Linezolid 600mg IV q12h] <i>ESBL hx</i>: Meropenem 500mg IV q6h + [Vancomycin³ IV or Linezolid 600mg IV q12h]
Unknown Source	Zosyn 4.5g IV q8h + Vancomycin ³ IV	<i>PCN allergy</i>: Cefepime 2g IV q8h + Vancomycin³ IV +/- Metronidazole 500mg IV q12h <i>ESBL hx</i>: Meropenem 500mg IV q6h + Vancomycin³ IV
OB/GYN	Zosyn 4.5g IV q8h +/- [Clindamycin 900mg IV q8h or Linezolid 600mg IV q12h] ^{6,7}	<i>PCN allergy</i>: Cefepime 2g IV q8h + Metronidazole 500mg IV q12h +/- [Clindamycin 900mg IV q8h or Linezolid 600mg IV q12h]^{6,7} <i>ESBL hx</i>: Meropenem 500mg IV q6h +/- [Clindamycin 900mg IV q8h or Linezolid 600mg IV q12h]^{6,7}

¹ Prior respiratory isolation of *Pseudomonas*, IV ABX in last 90 days, structural lung disease

² If MRSA isolated from clinical site (not just from nares) the last year; consider for post-influenza pneumonia, cavity pneumonia, empyema

³ For patients with allergic reactions (excluding vancomycin infusion reaction) to vancomycin or a history of vancomycin resistant enterococcus (VRE), substitute with Daptomycin 6mg/kg IV q24h for non-respiratory infections. For respiratory infections, substitute with Linezolid 600mg IV Q12H. For patients with red man syndrome to vancomycin, please re-challenge with vancomycin slow infusion +/- premedication.

⁴ Consider de-escalating if no MRSA identified

⁵ *Pseudomonas* risk factors: moist appearance +/- pus, significant water or warm tropical exposure, hx from deep cultures. MRSA risk factors: known colonization or prior hx, IVDU, recent healthcare exposure, environmental exposure (incarcerated, military, child care centers, contact sports, sharing sharp objects), IV abx in past 6 months

⁶ Add linezolid or clindamycin for anti-toxin effect if suspected severe streptococcal infection or presence of toxic shock syndrome. Treatment of anti-toxin effect is for a duration of 48-72 hours of clinical hemodynamic stability.

⁷ Consider adding doxycycline 100 mg IV/PO q 12h for septic abortion or retained products of conception. Doxycycline may be considered when there is a need for coverage of atypical pathogens (i.e. *Mycoplasma* or *Ureaplasma*) in the following clinical settings (1) early (< 22 weeks gestational age) spontaneous abortion who undergo surgical uterine aspiration, (2) induced surgical abortion at any gestational age, or (3) lack of clinical improvement while on appropriate antibiotics.