Selecting Antimicrobial Agent(s)	MDRO Risk Factors (Consider ID Consultation*)
• Review pathogen history • Review for recent exposure to antimicrobial agents	• Prior history of MDROs • Residence in LTAC/SNF

Severe or Type 1 PCN Allergy: edema, bronchospasm, laryngospasm, anaphylaxis, immediate urticaria.
Severe PCN allergy is **NOT** a contraindication to receiving 3rd-4th generation cephalosporins as true cross-reactivity is likely <1% as suggested by current data. Studies have demonstrated safe use of higher generation cephalosporins in patients with severe PCN allergies including anaphylaxis. Cross-reactivity with carbapenems is also likely minimal.

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

Suspected Source	Preferred Empiric Regimen	PCN Allergy, including Severe or Type 1
Community acquired pneumonia (CAP)	Ceftriaxone 2 g IV Q24H + Doxycycline[1] 100 mg IV Q12H	Ceftriaxone 2 g IV Q24H + Doxycycline[1] 100 mg IV Q12H
CAP with Pseudomonas Risk[2]	Cefepime 2 g IV Q8H + Doxycycline[1] 100 mg IV Q12H	Cefepime 2 g IV Q8H + Doxycycline[1] 100 mg IV Q12H
Nosocomial Pneumonia HCAP/HAP/VAP	Cefepime 2 g IV Q8H + Vancomycin[3] per pharmacy	Cefepime 2 g IV Q8H + Vancomycin[3] per pharmacy
Nosocomial Pneumonia, MDRO Risk	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy
Urinary Tract	Ceftriaxone 2 g IV Q24H +/- Gentamicin per pharmacy	Ceftriaxone 2 g IV Q24H +/- Gentamicin per pharmacy
Urinary Tract, MDRO Risk	Meropenem 1 g IV Q8H	Meropenem 1 g IV Q8H
Intra-abdominal	Piperacillin/tazobactam 4.5 g IV Q8H	Cefepime 2 g IV Q8H + Metronidazole 500 mg IV Q8H + Vancomycin[3] per pharmacy
Intra-abdominal, MDRO Risk	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy
Skin and Soft Tissue	Ceftriaxone 2 g IV Q24H + Vancomycin[3] per pharmacy	Ceftriaxone 2 g IV Q24H + Vancomycin[3] per pharmacy
Diabetic Foot	Piperacillin/tazobactam 4.5 g IV Q8H + Vancomycin[3] per pharmacy	Cefepime 2 g IV Q8H + Metronidazole 500 mg IV Q8H + Vancomycin[3] per pharmacy
Skin and Soft Tissue, Diabetic Foot, or Wound, MDRO Risk	Meropenem 1 g IV Q8H + Vancomycin[2] per pharmacy	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy
Necrotizing Skin and Soft Tissue including fasciitis, Gas Gangrene	Piperacillin/tazobactam 4.5 g IV Q8H + Vancomycin[3] per pharmacy + Clindamycin[3] 900 mg IV Q8H	Levofloxacin 750 mg IV Q24H + Vancomycin[3] per pharmacy + Clindamycin[4] 900 mg IV Q8H
Unknown Source	Piperacillin/tazobactam 4.5 g IV Q8H + Vancomycin[3] per pharmacy	Cefepime 2 g IV Q8H + Vancomycin[3] per pharmacy +/- Metronidazole 500 mg IV Q8H
Unknown Source, MDRO Risk	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy	Meropenem 1 g IV Q8H + Vancomycin[3] per pharmacy

MDRO=Multi-drug resistant organisms (e.g. ESBL, AmpC, etc). PCN=penicillins. LTAC=long-term acute care facility. SNF=skilled nursing facility.

[1] Doxycycline will also provide MRSA activity (covers ≥90% of isolates at SHC) and may be associated with less CDI vs. azithromycin
[2] Patients with structural lung disease (e.g. cystic fibrosis, bronchiectasis, etc), recurrent COPD exacerbations treated with antibiotics and/or systemic steroids, etc.
[3] For anti-toxin effect if suspected severe streptococcal infection or presence of toxic shock syndrome