

Pathogen-Directed Therapy for Pneumonia

Where a pathogen is microbiologically identified, directed antimicrobial therapy should be used.

Note: Doses may require adjustment in renal insufficiency.

Organism	Preferred Agent	Alternative/Severe allergy
<i>Streptococcus pneumoniae</i> Penicillin MIC <4 ug/mL Penicillin MIC ≥4 ug/mL	penicillin G 2 million units IV q4h OR amoxicillin 500-1000 mg PO TID <i>Based on susceptibility results</i> ceftriaxone 1 g IV q24h OR moxifloxacin 400 mg IV/PO daily	azithromycin ¹ OR doxycycline 100 mg PO BID OR moxifloxacin 400 mg PO/IV daily
<i>Haemophilus influenzae</i> Amoxicillin-susceptible Amoxicillin-resistant	amoxicillin 500 mg PO TID amoxicillin-clavulanate 875 mg PO BID	azithromycin ¹ OR doxycycline 100 mg PO BID
<i>Mycoplasma pneumoniae</i> <i>Chlamydophila pneumoniae</i>	azithromycin ¹	doxycycline 100 mg PO BID
<i>Staphylococcus aureus</i> MSSA MRSA	cloxacillin 2 g IV q4h vancomycin ²	clindamycin 450 mg PO TID OR vancomycin ² linezolid 600 mg PO/IV BID
<i>Pseudomonas aeruginosa</i>	piperacillin-tazobactam 4.5 g IV q6h <i>If susceptibility confirmed:</i> ceftazidime 2 g IV q8h OR ciprofloxacin 750 mg PO BID	aminoglycoside ³ OR ciprofloxacin 750 mg PO BID
Gram-negative enteric bacilli	ceftriaxone 1 g IV q24h <i>If ESBL: meropenem 500 mg IV q6h</i> <i>If susceptibility confirmed:</i> ciprofloxacin 500 mg PO BID OR cotrimoxazole DS 1-2 tabs PO BID	aminoglycoside ³ <i>If susceptibility confirmed:</i> ciprofloxacin 500 mg PO BID OR cotrimoxazole DS 1-2 tabs PO BID
<i>Legionella</i>	moxifloxacin 400 mg PO/IV daily	azithromycin 500 mg PO/IV q24h ¹

Doses may require adjustment for renal insufficiency

¹ Azithromycin duration is 500 mg for 3 days, or 500 mg once followed by 250 mg for 4 days. Longer durations only indicated in *Legionella* infection.

² For vancomycin dosing, refer to “Vancomycin Dosing and Therapeutic Monitoring” in the ASP Handbook.

³ For aminoglycoside dosing, refer to “Aminoglycoside Dosing and Therapeutic Monitoring” in the ASP Handbook.