RECOMMENDED ANTIBIOTIC THERAPY

(Adapted from nationally published guidelines and/or the Sanford Guide to Antimicrobial Therapy)

All doses are for patients with normal renal function. For information on dosing in patients with renal dysfunction, please see "Antibiotic Dosage Treatment Table"

Suspected Source	First Line Antibiotics	Alternative Antibiotics	Alternative for Penicillin Allergic Patients
Pneumonia – Community Acquired in ICU (Patient **not** at risk for *Pseudomonas aeruginosa*)*	**Azithromycin** 500mg IV (over 1 hour) every 24 hours plus **Ceftriaxone** 1g IV (over 30 min) every 24 hours	**Moxifloxicin**† 400mg IV (over 1 hour) every 24 hours plus **Ceftriaxone** 1g IV (over 30 min) every 24 hours	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours plus **Moxifloxicin**† 400mg IV (over 1 hour) every 24 hours
Pneumonia – Community Acquired in ICU (Patient at risk for *Pseudomonas aeruginosa*)*	**Cefepime** 1-2g IV (over 30 minutes) every 8-12 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Azithromycin** 500mg IV (over 1 hour) every 24 hours	**Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Azithromycin** 500mg IV (over 1 hour) every 24 hours	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Azithromycin** 500mg IV (over 1 hour) every 24 hours
Pneumonia – Healthcare Associated/Ventilator Acquired in ICU (**No** known risk factors for multi-drug resistant pathogens+)	**Ceftriaxone** 1g IV (over 30 min) every 24 hours **or** **Moxifloxicin**† 400mg IV (over 1 hour) every 24 hours	**Ampicillin/sulbactam** 3g IV (over 30 minutes) every 6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	N/A
Pneumonia – Healthcare Associated/Ventilator Acquired in ICU (With known risk factors for multi-drug resistant pathogens+)	**Cefepime** 1-2g IV (over 30 minutes) every 8-12 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours	**Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours plus **Tobramycin** 5-7mg/kg IV (over 30 minutes) every 24 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours

* Risk factors for Pseudomonas aeuroginosa: (1) structural lung disease (i.e. bronchiectasis) (2) broad-spectrum antibiotic therapy lasting greater than 7 days within the past month (3) alcoholism (4) chronic steroid therapy consisting of greater than 10mg of prednisone daily or equivalent

†Moxifloxicin should be avoided, or used with caution, in patients equal to or greater than 65 years of age with electrolyte abnormalities, known cardiovascular compromise or receiving other medications that may prolong the QTc interval

+ Risk factors for multi-drug resistant pathogens: (1) antimicrobial therapy in the preceeding 90 days (2) Current hospitalization of 5 days or more (3) High frequency of antibiotic resistance in the community or specific hospital unit (4) Presence of risk factors for HCAP: [(a) Hospitalization of 2 days or more in the preceeding 90 days (b) Residence in a nursing home or extended care facility (c) Home infusion therapy (d) Chronic dialysis (e) Home wound care (f) Family member with multi-drug resistant pathogen] (5) Immunosuppressive disease and/or therapy

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Suspected Source	First Line Antibiotics	Alternative Antibiotics	Alternative for Penicillin Allergic Patients
Urinary Tract Infection	**Ciprofloxicin** 400mg IV (over 1 hour) every 12 hours **or** **Ampicillin** 1g IV (over 30 minutes) every 6-8 hours plus **Gentamycin** 1mg/kg IV (over 30 minutes) every 8 hours **or** **Ceftriaxone** 1g IV (over 30 min) every 24 hours	**Ampicillin/sulbactam** 1.5g IV (over 30 minutes) every 6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	N/A
Complicated Urinary Tract Infection/Indwelling Urinary Catheter	**Ampicillin** 1g IV (over 30 minutes) every 6-8 hours plus **Gentamycin** 1mg/kg IV (over 30 minutes) every 8 hours **or** **Cefepime** 2g IV (over 30 minutes) every 8 hours	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 6 hours	N/A
Intraabdominal Infection – Mild to moderate infection	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	**Cefazolin** 1g IV (over 30 minutes) every 8 hours plus **Metronidazole** 500mg IV (over 1 hour) every 8 hours **or** **Ciprofloxicin** 400mg IV (over 1 hour) every 12 hours plus **Metronidazole** 500mg IV (over 1 hour) every 8 hours	N/A
Intraabdominal Infection – High severity infection	**Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours **Or** **Imnipenem/cilastin** 500mg IV (over 30 minutes) every 6 hours	**Cefepime** 2g IV (over 30 minutes) every 8-12 hours plus **Metronidazole** 500mg IV (over 1 hour) every 8 hours	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours plus **Metronidazole** 500mg IV (over 1 hour) every 8 hours
Indwelling Line Sepsis – Immunocompetent Host	**Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours	**Linezolid** 600mg IV (over 1 hour) every 12 hours (only for vancomycin hypersensitivity or intolerance)	N/A

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Suspected Source	First Line Antibiotics	Alternative Antibiotics	Alternative for Penicillin Allergic Patients
Skin or Soft Tissue Infection – Cellulitis	**Penicillin G** 2-4 million units IV (over 30 minutes) every 4-6 hours **or** **Nafcillin** 1-2g IV (over 30 minutes – 1 hour) every 4 hours	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Clindamycin** 600mg IV (over 1 hour) every 8 hours **or** **Doxycycline** 100mg IV (over 1 hour) every 12 hours	N/A
Skin or Soft Tissue Infection – Cellulitis with diabetes, decubitus, venous stasis or arterial insufficiency ulcers	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	**Imipenem/cilastin** 500mg IV (over 30 minutes) every 6 hours	**Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours
Skin or Soft Tissue Infection – Incisional surgical site infection –Intestinal or genital tract	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	N/A	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours
Skin or Soft Tissue Infection – Incisional surgical site infection –Nonintestinal – Trunk and extremities	**Cefazolin** 1g IV (over 30 minutes) every 8 hours **or** **Ciprofloxicin** 400mg IV (over 1 hour) every 12 hours	N/A	N/A
Skin or Soft Tissue Infection – Incisional surgical site infection –Axillary or perineum	**Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	N/A	**Nonformulary -Aztreonam** 2g IV (over 30 minutes) every 8 hours
Skin or Soft Tissue Infection – Necrotizing infection of the skin, fascia and muscle (including Fournier Gangrene and Gas Gangrene)	**Piperacillin/tazobactam** 3.375g IV (over 30 minutes) every 4-6 hours plus **Clindamycin** 600-900mg IV (over 1 hour) every 8 hours plus **Ciprofloxicin** 400mg IV (over 1 hour) every 12 hours **or** **Ampicillin/sulbactam** 1.5-3g IV (over 30 minutes) every 6 hours plus **Clindamycin** 600-900mg IV (over 1 hour) every 8 hours plus **Ciprofloxicin** 400mg IV (over 1 hour) every 12 hours	**Imipenem/cilastin** 500mg IV (over 30 minutes) every 6 hours **or** **Ertapenem** 1g IV (over 30 minutes) every 24 hours	Omit beta-lactam for penicillin allergic patients. May substitute an aminoglycoside for Ciprofloxicin.
Skin or Soft Tissue Infection – Necrotizing infection of the skin, fascia and muscle (including Fournier Gangrene and Gas Gangrene)- *Clostridium* infection	**Clindamycin** 600-900mg IV (over 1 hour) every 8 hours **or** **Penicillin G** 2-4 million units IV (over 30 minutes) every 4-6 hours	N/A	N/A

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Suspected Source	First Line Antibiotics	Alternative Antibiotics	Alternative for Penicillin Allergic Patients
Meningitis – 1-50 years of age	**Ceftriaxone** 2g IV (over 30 min) every 12 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours plus **Dexamethasone**	**Nonformulary – Meropenem** 2g IV (over 30 minutes) every 8 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours plus **Dexamethasone**	N/A
Meningitis – Greater than 50 years of age or alcoholic	**Ampicillin** 2g IV (over 30 minutes) every 4 hours plus **Ceftriaxone** 2g IV (over 30 min) every 12 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours plus **Dexamethasone**	**Nonformulary – Meropenem** 2g IV (over 30 minutes) every 8 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours plus **Dexamethasone**	N/A
Meningitis – Device related or post neurosurgery	**Cefepime** 2g IV (over 30 minutes) every 8 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours	**Nonformulary – Meropenem** 2g IV (over 30 minutes) every 8 hours plus **Vancomycin** 15mg/kg IV (over 1 hour) every 12 hours	N/A