# Adult Initial Empiric Therapy in Sepsis Patients

<table>
<thead>
<tr>
<th>Possible Source of Infection</th>
<th>Common Organisms</th>
<th>Suggested Therapy (All drugs to be given IV)</th>
<th>Alternative Therapies (All drugs to be given IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empiric (Unknown Source)</td>
<td></td>
<td>Piperacillin/tazobactam 4.5g* + Vancomycin 15mg/kg#</td>
<td>Penicillin allergy (Not IgE-mediated): Cefepime 2g* + Vancomycin 15mg/kg#</td>
</tr>
<tr>
<td>Community Acquired Pneumonia (CAP)</td>
<td>Streptococcus pneumoniae Haemophilus influenzae Legionella pneumophilia Mycoplasma pneumoniae Chlamydia pneumoniae</td>
<td>Ceftriaxone 1g + Azithromycin 500mg</td>
<td>Penicillin allergy (IgE-mediated): Levofloxacin 750mg*</td>
</tr>
<tr>
<td>Nosocomial Pneumonia (HCAP, HAP, VAP)</td>
<td>S. aureus (including MRSA) S. pneumoniae Gram-negative bacilli Pseudomonas aeruginosa</td>
<td>Piperacillin/tazobactam 4.5g* + Vancomycin 15 mg/kg# ± Levofloxacin 750mg**</td>
<td>Penicillin allergy (Not IgE-mediated): Cefepime 2g* + Vancomycin 15mg/kg# ± Levofloxacin 750mg***</td>
</tr>
<tr>
<td>Intra-abdominal Infections – Mild to Moderate Community Acquired</td>
<td>EnterobacteriaceaeAnaerobes</td>
<td>Ceftriaxone 1g + Metronidazole 500mg</td>
<td>Penicillin allergy (IgE-mediated): Levofloxacin 750mg* + Metronidazole 500mg</td>
</tr>
<tr>
<td>Intra-abdominal Infections – Severe Community Acquired OR Healthcare Associated</td>
<td>Enterobacteriaceae Pseudomonas aeruginosaAnaerobes</td>
<td>Piperacillin/tazobactam 3.375g*</td>
<td>Penicillin allergy (Not IgE-mediated): Cefepime 2g* + Metronidazole 500mg</td>
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<tr>
<td>Urosepsis – Community Acquired</td>
<td>E. coli</td>
<td>Ceftriaxone 1g</td>
<td>Penicillin allergy (IgE-mediated): Gentamicin 5mg/kg*</td>
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<td>Urosepsis – Healthcare Associated</td>
<td>Enterobacteriaceae Pseudomonas aeruginosa</td>
<td>Piperacillin/tazobactam 3.375g*</td>
<td>Penicillin allergy (Not IgE-mediated): Cefepime 2g*</td>
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* = Double coverage for pseudomonas and other MDRO
# = Requires dosage adjustment in renal impairment
† = Dose based on ideal body weight or adjusted body weight in obese patients
IgE-mediated = immediate reactions including anaphylaxis, urticaria, angioedema, shortness of breath, etc.
Not IgE-mediated = delayed reactions including rash, itching, unknown, etc.
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| Skin, Soft Tissue Infection – Mild to Moderate Cellulitis (non-purulent, low risk for MRSA) | S. aureus  
Streptococcus species | Cefazolin 1g*                                                       | Penicillin allergy (IgE-mediated):  
Clindamycin 600mg                                                     |
| Skin, Soft Tissue Infection – Severe Cellulitis (purulent, at risk for MRSA)                  | S. aureus (including MRSA)  
Streptococcus species | Vancomycin 15mg/kg*                                                  | Penicillin allergy (Not IgE-mediated):  
Vancomycin 15mg/kg* + Cefepime 2g + Metronidazole 500mg |
| Skin, Soft Tissue Infection – Immunocompromised/diabetic foot infection                        | S. aureus (including MRSA)  
Streptococcus species  
Enterobacteriaceae  
Pseudomonas aeruginosa  
Anaerobes | Vancomycin 15mg/kg* + Piperacillin/tazobactam 3.375g#                | Penicillin allergy (IgE-mediated):  
Vancomycin 15mg/kg* + Levofloxacin 750mg + Metronidazole 500mg |
| Skin, Soft Tissue Infection – Necrotizing Fasciitis                                           | S. pyogenes  
S. aureus (including MRSA)  
Vibrio vulnificus  
Aeromonas hydrophila  
Clostridium species | Vancomycin 15mg/kg* + Piperacillin/tazobactam 3.375g# + Clindamycin 600mg | Penicillin allergy (Not IgE-mediated):  
Vancomycin 15mg/kg* + Cefepime 2g + Clindamycin 600mg |
| Bacterial Meningitis                          | S. pneumoniae  
Neisseria meningitidis  
H. influenzae  
Listeria monocytogenes | Vancomycin 15mg/kg* + Ceftriaxone 2g ± Ampicillin 2g* (if Listeria suspected) | Penicillin allergy (IgE-mediated):  
Vancomycin 15mg/kg* + Levofloxacin 750mg ± TMP/SMX 5mg/kg* (if Listeria suspected) |
| Suspected Catheter related infection (including hemodialysis patients)                        | S. aureus (including MRSA)  
Enterobacteriaceae  
Pseudomonas aeruginosa | Vancomycin 15mg/kg* + Gentamicin 7mg/kg*                                | Acute renal failure:  
Vancomycin 15mg/kg* + Piperacillin/tazobactam 3.375g# |
| Suspected Gram-Negative Multi-Drug Resistant Organism (MDRO)                                 | Extended Spectrum β-lactamase (ESBL)  
Piperacillin/tazobactam 4.5g* + Gentamicin 7mg/kg*†† |                                                                                   | Penicillin allergy (Not IgE-mediated):  
Cefepime 2g + Gentamicin 7mg/kg*†† |
|                                              |                                                      |                                                                                   | Penicillin allergy (IgE-mediated):  
Aztreonam 2g + Gentamicin 7mg/kg*†† |
|                                              |                                                      |                                                                                   | ESBL Suspected:  
Meropenem 1g ± Gentamicin 7mg/kg*†† |

Recommendations based on spectrum of activity, national guidelines, side effect profile, and drug cost

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Approved by P&T Committee 12/2016