### Empiric Antibiotics of Choice for Common Clinical Entities

#### Suggested Duration of Antimicrobial Therapy for Common Infections

<table>
<thead>
<tr>
<th>Infection</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia CAP</td>
<td>5-7 days</td>
</tr>
<tr>
<td>HCAP</td>
<td>7 days</td>
</tr>
<tr>
<td>VAP or infections due to pseudomonas or other NFGNR</td>
<td>10-14 days</td>
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#### General Considerations

4. IV and PO formulations are equally bioavailable for Fluconazole, Levofloxacin, Ciprofloxacin, Metronidazole, Azithromycin. Use PO formulations when possible.

5. Avoid redundant anaerobic coverage, no need for Metronidazole for patients on Piperacillin/Tazobactam or Ampicillin/Sulbactam unless you are also treating C. difficile.

6. Generally there is no need to “double cover” pseudomonas infection while awaiting complete susceptibility information except in neutropenic patients or in patients with suspected resistance.

### Site of Infection

#### Uncomplicated, “Spontaneous” Cellulitis

**Skin and Soft Tissue**

- *Staphylococcus aureus* (20-35%)
- *Enterococcus* (5-15%)
- *β-hemolytic strep, GNR’s, anaerobes* (less common)

#### Necrotizing Fasciitis

- *Staphylococcus*, *B. hemolyticus drain, GNRs, anaerobes* including *Clostridium*

#### Skin Abscess

- *MRSA, MSSA* (MRSA, MSSA)

#### Bone and Joint

- *Staphylosis, acute* (hematogenous)

#### Septic Arthritis

- *Staphylococcus*, *Strep species* (15-20%)

#### CNS Bacterial Meningitis

- *Community Acquired* (10-20%)

#### Post Neurosurgical

- *Pseudomonas, Staph aureus E and Enterococci, GNR* (8-10%)

#### Upper Respiratory

- *Staph aureus (hematogenous)*

### Site of Infection

#### Community-Acquired (CAP)

**Pneumonia**

- *Staph aureus (endocarditis)*

#### Hospitalized patients with CAP

- *Staph aureus* plus *Vancomycin* (500mg q8h) or *Levofloxacin* alone (750mg q24h)

#### ICU patients with CAP

- *Staph aureus* plus *Vancomycin* or *Pip/Tazo* plus *Levofloxacin* or *Ceftazidime* +/– *Vancomycin* (if GIC is suspected)

#### Necrotizing Fasciitis

- *Staph aureus* or *Vancomycin* plus *Clindamycin*

#### Skin Abscess

- *MRSA, MSSA* (MRSA, MSSA)

### Site of Infection

#### Lower Respiratory

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**Infection** | **Duration** |
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### Gram Negative Rods

<table>
<thead>
<tr>
<th>Antimicrobial</th>
<th>Citrobacter freundii complex</th>
<th>Citrobacter koseri</th>
<th>Enterobacter cloacae complex</th>
<th>Escherichia coli, ESBL (urine)</th>
<th>Klebsiella oxytoca</th>
<th>Klebsiella pneumoniae</th>
<th>Klebsiella pneumoniae, ESBL</th>
<th>Proteus mirabilis</th>
<th>Pseudomonas aeruginosa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cefazolin</td>
<td>61%</td>
<td>37%</td>
<td>2%</td>
<td>59%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>78%</td>
<td>100%</td>
</tr>
<tr>
<td>Cefaclor</td>
<td>61%</td>
<td>37%</td>
<td>4%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>100%</td>
</tr>
<tr>
<td>Cefdinir</td>
<td>61%</td>
<td>37%</td>
<td>6%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>Cefpodoxime</td>
<td>61%</td>
<td>37%</td>
<td>6%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>Cefprozil</td>
<td>61%</td>
<td>37%</td>
<td>6%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>Cefuroxime axetil</td>
<td>61%</td>
<td>37%</td>
<td>6%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
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</tr>
<tr>
<td>Loracarbef</td>
<td>61%</td>
<td>37%</td>
<td>6%</td>
<td>99%</td>
<td>99%</td>
<td>99%</td>
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A valid statistical analysis should include 30 or more isolates, organisms with less than 30 isolates are listed for informational purpose only.

* Cefazolin predicts results for the oral agents—Cefaclor, cefdinir, cefpodoxime, cefprozil, cefuroxime axetil and loracarbef when used for therapy of uncomplicated UTI’s due to E. coli, K. pneumoniae, and P. mirabilis.

### Gram Positive Organisms

<table>
<thead>
<tr>
<th>Antimicrobial</th>
<th>Enterococcus faecalis (99%)</th>
<th>Enterococcus non faecalis (92%)</th>
<th>Staph. epidermidis</th>
<th>Staph. aureus (Total)</th>
<th>Staph. aureus (MRSA)**</th>
<th>Staph. aureus (MSSA)**</th>
<th>Strept. pneumoniae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piperacillin</td>
<td>399</td>
<td>99%</td>
<td>29</td>
<td>62%</td>
<td>31%</td>
<td>63%</td>
<td>71%</td>
</tr>
<tr>
<td>Tazobactam</td>
<td>322</td>
<td>94%</td>
<td>26</td>
<td>72%</td>
<td>40%</td>
<td>50%</td>
<td>87%</td>
</tr>
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<td>Piperacillin &amp; Tazobactam</td>
<td>321</td>
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### Comments:

1. Data are obtained from MIC and disk diffusion testing methods.
2. Shaded rows = number of organisms isolated.
3. Non-shaded rows = % susceptible
4. MRSA/methicillin resistant Staph aureus: In 2015, 250 of 832 (30%) outpatient Staph aureus isolates were MRSA In 2014, 301 of 730 (41.2%) outpatient Staph aureus isolates were MRSA. Thus, there was a 11.2% decrease in outpatient MRSA prevalence year over year.
4. ESBL: In 2015, 207 of 2490 (8.3%) of inpatient and outpatient E coli isolates produced extended spectrum beta lactamases (ESBL) versus 6.8% in 2014 and 5% in 2013. 8.0% of outpatient and 9.8% of inpatient E. coli isolates were ESBL producers (versus 5.1% and 12%, respectively for 2014).