

Beta-lactamase Inhibitor

Combination Antibiotics

- **Beta-lactamase Inhibitors**

- inhibit the activity of beta-lactamase, but have little intrinsic antimicrobial activity
 - Examples - Clavulanate, sulbactam, tazobactam, avibactam

- **Antibiotic Medications**

- **Amoxicillin - Clavulanate (Augmentin)**

- only available oral
- covers many gram + (non-MRSA), gram - (no pseudomonas coverage), and anaerobes
- initial antibiotic often given for bite wounds

- **Piperacillin - Tazobactam (Zosyn)**

- only available IV
- covers many gram + (non-MRSA), gram - (including pseudomonas), and anaerobes

- **Ampicillin - Sulbactam (Unasyn)**

- only available IV
- covers most strains of *S. aureus* (non-MRSA) and beta-lactamase-producing *H. influenzae*
- covers some Enterobacteriaceae and anaerobes (including *Bacteroides fragilis*)
- covers against many strains of *Acinetobacter baumannii*

- **Ceftazidime - Avibactam (Avycaz)**

- only available IV
- covers most Enterobacteriaceae (including those that produce AmpC beta-lactamase, ESBL, some *Klebsiella pneumoniae* and OXA-type carbapenemases- carbapenem-resistant Enterobacteriaceae- CRE)
- *Indicated for:*
 - Complicated Intra-Abdominal Infections (cIAI)
 - Complicated Urinary Tract Infections (cUTI), including Pyelonephritis
 - Hospital-acquired Bacterial Pneumonia and Ventilator-associated Bacterial Pneumonia (HABP/VABP)