Bactrim (Trimethoprim/Sulfamethoxazole)

- **Mechanism of action**
  - inhibit enzymes in the bacterial production of tetrahydrofolic acid (THF)
- **Spectrum of Activity**
  - Effective against many **aerobic** Gram + and Gram - bacteria including:
    - MRSA (esp. community-acquired strains)
  - Pathogens typically resistant to Bactrim
    - Pseudomonas aeruginosa
    - Bacteroides fragilis (and most other anaerobes)
    - PCN resistant Strep pneumonia
- **Pharmacodynamics/pharmacokinetics**
  - highly bactericidal against many bacteria
  - Bactrim accumulates in serum when creatinine clearance is < 30 mL/min- necessitating a dose adjustment
    - give 50% of the dose if the creatinine clearance is b/w 15-30 mL/min
- **Dosing**
  - Oral single-strength tablet - 80 mg TMP/400 mg SMX
  - Oral double strength table - 160 mg TMP/800 mg SMX
- **Adverse effects/caution**
  - hemolysis - in patients with glucose-6-phosphate dehydrogenase deficiency
  - hypoglycemia - esp in patients on a sulfonylurea medication
  - hyponatremia
  - Elevated INR level in patients taking Warfarin
  - GI distress - nausea, vomiting