Baptist Health
Antimicrobial Stewardship Program

# Antibiotic Selection and Order Set Guidance

Empiric selection of antibiotics is an important task, with the goal of ensuring therapy is active against suspected pathogens. However, this goal must be balanced with evidence that:

**Broader antibiotic therapy is associated with an increased risk for *C. difficile* infection, emergence of antibiotic resistance, and increased mortality in sepsis.**

Examples of unnecessarily broad therapy include using antibiotics that target methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant Enterococci (VRE), *Pseudomonas aeruginosa*, or extended-spectrum beta-lactamase (ESBL) producing Enterobacterales when there is a low likelihood of a patient having an infection caused by one of these organisms.

For patients with community-onset sepsis, Rhee et al. found that over two-thirds of patients received antibiotics for resistant organisms when only 1 in 8 patients had a resistant Gram-positive organism and 1 in 8 had a resistant Gram-negative organism isolated. It is, therefore, important to consider patient specific risk factors for resistance when initiating antibiotics and remember:

## BROADER is NOT BETTER

Considering the source of infection is also essential in making informed antibiotic choices. To help, **Baptist Health has treatment protocols available to guide you through antibiotic selection for commonly encountered infectious disease states.** These protocols promote **evidence-based** antibiotic selection and consider patient specific risk factors and local resistance patterns to help ensure each patient is receiving optimal empiric therapy.

**Infectious Disease Treatment Order Sets available in Epic:**

- Adult **Intra-abdominal Infection** Focused
- ***Clostridioides difficile* Infection** Treatment
- **Pneumonia** Treatment Focused
- **Skin and Soft Tissue Infection** Treatment Protocol
- **Urinary Tract Infection** Treatment Protocol

For patients with sepsis, the **Adult Sepsis Bundle** also includes recommendations to optimize empiric antibiotic selection for the following disease states:

- Unknown source of infection
- Abdominal source
- Community acquired pneumonia
- Hospital acquired pneumonia
- Urinary tract infection
- Diabetic foot wound or severe non-purulent necrotizing infection
- Cellulitis
- Central line source
- Acute Meningitis

Rhee C, Kadri SS, Dekker JP, et al. Prevalence of Antibiotic-Resistant Pathogens in Culture-Proven Sepsis and Outcomes Associated With Inadequate and Broad-Spectrum Empiric Antibiotic Use. JAMA Netw Open. 2020 Apr 1;3(4):e202899.