3.22: Glossary

**Antagonistic Interactions:** Concurrent administration of two drugs causes harmful effects such as a decrease of drug activity, decreased therapeutic levels due to increased metabolism and elimination, or increased potential for toxicity due to decreased metabolism and elimination. An example of an antagonistic interaction is taking antacids with antibiotics, causing decreased absorption of the antibiotic.

**Antifungal:** Medications that are used to treat fungal infections. For example, nystatin is used to treat Candida Albicans, a fungal infection.

**Antiviral:** Medications used to treat viral infections. For example, Tamiflu is used to treat influenza.

**Bactericidal:** Antimicrobial drugs that kill their target bacteria.

**Bacteriostatic:** Antimicrobial drugs that cause bacteria to stop reproducing but may not ultimately kill the bacteria.

**Black Box Warnings:** The strongest warnings issued by the Federal Drug Administration (FDA) that signify the drug carries a significant risk of serious or life-threatening adverse effects.

**Broad-Spectrum Antimicrobial:** An antibiotic that targets a wide variety of bacterial pathogens, including both gram-positive and gram-negative species.

**Clostridium Difficile (C-diff):** Clostridium difficile causes pseudomembranous colitis, a superinfection that can be caused by broad spectrum antibiotic therapy.

**Culture:** A test performed on various body substances for the presence of bacteria or fungus.

**Dose Dependent:** A more significant response occurs in the body when the medication is administered in large doses.
to provide a large amount of medication to the site of infection for a short period of time.

**Gram-Positive:** Gram-positive bacteria are classified by the color they turn after a chemical called Gram stain is applied to them. Infections caused by Streptococcus and Staphylococcus bacteria are examples of gram-positive infections.

**Gram-Negative:** Gram-negative bacteria are classified by the color they turn after a chemical called Gram stain is applied to them. Escherichia Coli (also known as E. Coli) is an example of a gram-negative infection.

**Gram Stain:** A test used to quickly diagnose types of bacterial infection. Gram-positive and gram-negative bacteria stain differently because their cell walls are different. Identification of bacteria as gram positive or gram negative assists the healthcare provider in selecting an appropriate antibiotic to treat the infection.

**Half-Life:** The rate at which 50% of a drug is eliminated from the bloodstream.

**Indications:** The use of a drug for treating a particular condition or disease. The FDA determines if there is enough evidence for a labeled indication of a drug. Providers may also prescribe medications for off-label indications if there is reasonable scientific evidence that the drug is effective, but these uses have not been approved by the FDA.

**Mechanism of Action:** The way in which a drug affects microbes at the cellular level.

**Methicillin-Resistant S. Aureus (MRSA):** An infection caused by Methicillin-resistant Staphylococcus aureus that is difficult to treat because it exhibits resistance to nearly all available antibiotics.

**Narrow-Spectrum Antimicrobial:** An antibiotic that targets only specific subsets of bacterial pathogens.

**Pathogen:** An organism causing disease to its host.

**Prototype:** A common individual drug that represents a drug class or group of medications having similar chemical structures, mechanism of actions, and modes of action.

**Resistance:** A characteristic of bacteria when sensitivity analysis is performed demonstrating lack of effective treatment by a particular antibiotic.

**Sensitivity Analysis:** A test performed in addition to a culture to select an effective antibiotic to treat a microorganism.

**Superinfection:** A secondary infection in a patient having a preexisting infection. C-diff and yeast infections as a result of antibiotic therapy are examples of superinfections.

**Synergistic Interaction:** Concurrent drug administration producing a synergistic interaction that is better than the efficacy of either drug alone. An example of synergistic drug combinations is trimethoprim and sulfamethoxazole (Bactrim).

**Time Dependent:** Time dependency occurs when greater therapeutic effects are seen with lower blood levels over a longer period of time.

**Vancomycin-Resistant S. Aureus (VRSA):** An infection caused by Vancomycin-resistant Staphylococcus aureus that is difficult to treat because it exhibits resistance to nearly all available antibiotics.