

Module Goals

Learning Objectives

A. Understand pathophysiology of disease states (KNOW):

A1. Describe biochemical and physiological function of important body organs;

A2. Identify causative agent/processes for relevant diseases;

A3. Explain how body functions differ biochemically and physiologically between health and the diseased state;

A4. Describe patient clinical presentation in disease states, including signs, symptoms and pertinent laboratory and diagnostic findings

B1. Describe the classification of drugs;

B2. Explain modern and conventional drug discovery/design concepts for relevant drugs, including prescription and over-the-counter (OTC) drugs, and herbals and dietary supplements;

B3. Explain the relevant concepts of drug receptor/enzyme interactions and identify key molecular structural components required for the interactions;

B4. Develop understanding of the physiochemical properties, stereochemistry and structure-activity relationships (SAR) of drugs;

B. Examine how drugs exert their effects (KNOW & INTEGRATE)

B5. Identify targets for drugs and how the interaction of drugs with their targets produces effects;

B6. Explain the mechanism of action, use and adverse effects of drugs and drug classes used in treating disease states;

B7. Analyze the dose-response relationship for important drugs related to disease states;

B8. Differentiate between drugs within a class based on factors related to absorption, distribution, metabolism and elimination (ADME) and pharmacodynamics response.

B9. Identify and explain important drug-drug interactions, both how they occur and strategies to manage

C. Use knowledge in foundational areas in the care of patients (USE)

C1. Explain how drugs may be used to normalize physiological function or could manage risk factors associated with common disease states;

C2. Determine which drug(s) or drug classes would be appropriate therapy for a disease state, including drugs which are not approved for or not regulated as standard therapies;

C3. Select an appropriate drug or drug class based on specific patient characteristics;

C4. Select routes of administration and mode of drug delivery based on desired therapy outcomes;

C5. Identify sources of intra- and inter-patient variability in drug response;

C6. Apply the patient care process to identify and solve medication-related problems;

C7. Know and utilize clinical practice guidelines to optimize the approach to common disease states

D1. Differentiate risk/benefits between potential drug therapies for given patients or populations of patients;

D2. Examine/evaluate literature related to management of a specific patient with one or more disease states and treated with one or more drugs;

D3. Evaluate patient outcomes related to specific disease state therapies;

D4. Develop strategies to monitor and modify drug therapy plans for individual patients;

D. Assimilate the attitudes, component skills, and problem solving strategies required to optimize pharmacotherapy (USE)

D5. Decide when to use lifestyle interventions to prevent or manage health conditions, either with drug therapy or in place of it;

D6. Decide when the risks of a drug therapy or therapies outweigh the benefits, and consider when non-pharmacologic options are preferable;

D7. Value how patient belief systems and culture, health literacy, and access to resources may impact their care;

D8. Propose team based approaches to drug selection and patient management;

D9. Describe strategies to address pharmacotherapy needs at the individual and population level.