

### **LEARNING OBJECTIVES: HEART FAILURE.**

1. Apply the pathophysiology of heart failure (HF) to the rationale for specific drug therapies for HF with reduced ejection fraction (EF) and HF with preserved EF.
2. Evaluate the clinical signs and symptoms of HF, and determine the need for referral to a higher level of care.
3. Given a patient case, categorize a patient's HF into the appropriate New York Heart Association functional class and American Heart Association HF stage.
4. Design both a nonpharmacologic and a pharmacologic treatment plan based on a patient's HF stage.
5. Distinguish between HF interventions that provide symptomatic benefit, reduce hospitalizations, and/or prolong survival.
6. Justify the need for pharmacist involvement in optimizing medication management of HF in an ambulatory setting.

### **LEARNING OBJECTIVES: PHARMACOTHERAPY CONSIDERATIONS BEFORE AND AFTER CARDIAC SURGERY.**

1. Construct an effective pharmacotherapy plan for outpatients in anticipation of elective cardiothoracic surgery.
2. Devise drug therapy regimens aimed at optimizing long-term outcomes for patients after surgical coronary revascularization.
3. Design a treatment plan for preventing thrombotic complications after valve replacement surgery.
4. Develop a pharmacotherapy plan for a patient after a mechanical circulatory support device implant, considering both the complications related to long-term device support and the physiologic effect of mechanical circulatory unloading on other chronic diseases.
5. Compose a post-cardiac transplant pharmacotherapeutic strategy that includes immunosuppression and infection prophylaxis.
6. Design a management plan for the comorbidities present in cardiac transplant recipients.

### **LEARNING OBJECTIVES: CLINICAL PHARMACY SERVICES IN CARDIOLOGY.**

1. Distinguish between types of clinical pharmacist-provided cardiology services.
2. Justify the development of clinical pharmacist-provided cardiology services.
3. Compose a plan to develop a new cardiology service managed by pharmacists.
4. Analyze the metrics used to measure outcomes related to the implementation of a clinical pharmacy cardiology service.
5. Assess the available pharmacist credentials applicable to clinical pharmacy specialists in cardiology.