



This course supports the assessment for Pathopharmacological Foundations for Advanced Nursing Practice. The course covers 5 competencies and represents 3 competency units.

## Introduction

### Overview

In Pathopharmacological Foundations for Advanced Nursing Practice, you will gain application skills by examining syndromes rather than looking at body systems independently. The course includes pathophysiologies, the associated pharmacological treatments, and social and environmental impacts. Most students will need at least 6–8 weeks to accomplish the process-oriented competencies in the course.

You are encouraged to look now at the performance assessment associated with this course. Then you can organize your notes and study habits and be prepared to advance quickly through the performance assessment.

Pathopharmacological Foundations for Advanced Nursing Practice is an integrated examination of five common and important disease processes:

- asthma
- heart failure
- obesity
- traumatic brain injury
- depression

These processes are relevant to advanced nursing practice because of their prevalence and impact on the healthcare system and the health of the nation.

### Competencies

This course provides guidance to help you demonstrate the following 5 competencies:

- **Competency 7002.1.1: Pathophysiology**  
The graduate evaluates high volume, high impact disease processes, including associated pharmacological interventions and implications for advanced practice.
- **Competency 7002.1.2: Evaluation of Pharmaceutical Impact**  
The graduate analyzes pharmaceutical impacts, including physiological, psychological, financial, and lifestyle factors on the selected disease processes.
- **Competency 7002.1.3: Managing Care Transitions**  
The graduate evaluates salient pharmacological issues in managing patient care transitions.
- **Competency 7002.1.4: Salience**  
The graduate distinguishes between general information and relevant assessment findings to manage and minimize pathologies and risk factors to promote optimal patient outcomes.
- **Competency 7002.1.5: Care Management**



The graduate integrates relevant patient and population data to develop pathopharmacological management strategies for populations.

### **Nursing Dispositions Statement**

Please review the [Statement of Nursing Dispositions](#).

## **Preparing for Success**

The information in this section is provided to detail the resources available for you to use as you complete this course.

### **Learning Resources**

The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to manually enroll in or independently acquire other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

#### **Automatically Enrolled Learning Resources**

You will be automatically enrolled at the activity level for the following learning resources. Simply click on the links provided in the activities to access the learning materials.

#### **VitalSource E-Texts**

The following textbooks are available to you as e-texts within this course. You will be directly linked to the specific readings required within the activities that follow.

- McCance, K.L., Huether, S.E. (2014). [\*Pathophysiology: The biologic basis for disease in adults and children \(7<sup>th</sup> ed.\)\*](#). St. Louis, Missouri: Mosby Elsevier. ISBN: 978-0-323-08854-1
- Frandsen, G. & Pennington, S.S. (2013). [\*Abrams' clinical drug therapy: Rationales for nursing practice. \(10<sup>th</sup> ed.\)\*](#). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins Print ISBN: 9781609137113, 1609137116

*Note: These e-texts are available to you as part of your program tuition and fees, but you may purchase hard copies at your own expense through a retailer of your choice. If you choose to do so, please use the ISBN listed to ensure that you receive the correct edition.*

#### **Other Learning Resources**

You will use the following learning resources for this course.

#### **WGU Library E-Reserves**

This course utilizes resources located in the WGU Library E-Reserves, with articles available for you to download. For instructions on how to access WGU Library E-Reserves, see the "[Accessing WGU Library E-Reserves](#)."

Specific titles and links to these resources will be provided as needed in the activities.

#### **Nursing Standards**



You will be able to access Nursing Professional Standards as they apply to your program through the WGU Library. Please access these documents at the following website:

- [WGU Library Nursing E-Reserves](#)

## Topics and Pacing

This course overview suggests a balanced pacing structure for completion of the required learning activities for Pathopharmacological Foundations for Advanced Nursing Practice.

- Introduction
- Preparing for Success
  - Learning Resources
  - Topics and Pacing
- Pathophysiology
  - Pathophysiology
- Evaluation of Pharmaceutical Impact
  - Evaluation of Pharmaceutical Impact
- Saliency
  - Saliency
- Managing Care Transitions
  - Managing Care Transitions
- Case Management
  - Case Management
- Final Steps
- Course Support

Follow the instructions under each topic in the course of study to assure successful preparation and completion of the required performance assessment.

Watch the following video: [Course Communities Walkthrough](#)

*Note: To download this video, right-click the following link and choose "Save as...": [download video](#).*

## Pathophysiology

Pathophysiology is the study of pathological changes in organ system function. It can be defined as the general study of the physical, biochemical, and mechanical manifestations of disease and their relation to underlying abnormalities or physiological disturbances. Pathophysiology attempts to explain the processes in the body that result in the manifestation of signs and symptoms of a disease.

## Pathophysiology

This topic addresses the following competency:

- **Competency 7002.1.1: Pathophysiology**  
The graduate evaluates high volume, high impact disease processes, including



associated pharmacological interventions and implications for advanced practice.

This topic highlights the following objectives:

- Identify key pathophysiology and pathological processes in selected disease processes.
- Recognize diagnostic features, signs, and symptoms of selected disease processes.
- Identify the inflammatory mechanisms involved in disease processes.
- Evaluate the state of the science related to the selected disease processes.
- Indicate how environmental, socioeconomic, and genetic/genomics factors impact the disease process.

### **Review: Genes, Environment, and Common Diseases**

Review the influence of genetics and environment for common diseases.

Review the following resources as they relate the five disease processes you will focus on in this course (asthma, heart failure, obesity, traumatic brain injury, and depression)

- [chapter 5 \(“Genes, Environment, and Common Diseases”\)](#) in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*
- [HealthyPeople.gov: Genomics](#)
- [Diseases and Conditions: Traumatic brain injury](#)

### **Asthma-Read: Background Information**

Review basic pathophysiologic background information about asthma by responding to the following prompts as you read the materials listed below:

- Identify anatomical structures associated with the lower respiratory tract and their functions.
- Explain how the nervous system regulates airflow in the lower respiratory tract and how the process can be modified by drugs.

Read the following chapters in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- [chapter 8 \(“Adaptive Immunity”\)](#)
- [chapter 35 \(“Alterations of Pulmonary Function”\)](#)

### **Asthma-Explore: Guidelines**

Identify key pathological processes and recommended treatments.

Explore the following article for resources to find information on diseases and processes:

- [Diagnosis and management of asthma – Statement on the 2015 GINA Guidelines](#)

### **Asthma-Begin: Case Study: Part 1**

Read the following case study:



- [Asthma Case Study](#)

As you apply what you've learned to an asthma case study, answer the following prompts:

- Describe the course of the disease and include the effects on other body systems.
- Consider the pediatric patient in the scenario. What are the possible short-term and long-term effects that poorly treated asthma could have on his body systems?

### **Heart Failure-Read: Background Information**

Review basic pathophysiologic background information about heart failure as you read the following chapters in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- [chapter 31 \("Structure and Function of the Cardiovascular and Lymphatic Systems"\)](#)
- [chapter 32 \("Alterations of Cardiovascular Function"\)](#)

### **Heart Failure-Explore: WebMD**

While heart deterioration is part of the aging process, certain disease process can accelerate decreased cardiac function. Review the following contributors to heart failure. Describe briefly how they decrease cardiac function. Review your understanding of preload and afterload. Categorize the disease process into preload or afterload categories for the following conditions:

- coronary artery disease (CAD)
- mitral stenosis
- chronic hypertension
- diabetes mellitus

Search [WebMD](#) for reliable information that will help you address the instructions above.

### **Heart Failure-Begin: Case Study**

Apply what you've learned to the following case study:

- [Heart Failure Case Study](#)

As you read the case study, answer the following prompts:

- Describe the pathophysiology of cardiac disease across the lifespan.
- Consider the pediatric patient in the scenario. What are specific cardiac issues with diagnosing and treating teenagers?

### **Obesity-Define: Obesity**

In your notes, explain the clinical diagnosis of obesity. You may want to add to or change this definition as you work through the sections in this course related to obesity. You can begin your definition by searching for information on the following website:

- [Endocrine Facts and Figures: Obesity](#)

### **Obesity-Review: Etiology**



Review the following section about the etiology of obesity in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- “Obesity” (pages 1447-1450) in [chapter 41 \(“Alterations of Digestive Function”\)](#)

**Obesity-Read: Alterations of Hormonal Regulation**

You should already have a comprehensive understanding of the pathophysiological mechanisms of disease processes based on your previous studies and experiences.

As you read, scan for key principles. Make sure you understand how various organ systems are impacted by metabolic disorders. For example, you should be able to identify the pathophysiological effects of metabolic disorders on endocrine, cardiovascular, renal, and digestive systems.

Read the following chapter in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- [chapter 22 \(“Alterations of Hormonal Regulation”\)](#)

**Obesity-Complete: Case Study Part 1**

Read the following case study and write your recommendations for the patient:

- [Obesity Case Study](#)

After you have compiled your recommendations for this patient, read the suggestions in the following section of the case study:

- Suggestions, Obesity Case Study: Part 1

**Obesity-Read: Health Disparities**

Read the following section of the CDC’s [Health Equity Resource Toolkit for State Practitioners Addressing Obesity Disparities](#):

- “Scope of the Problem” (pp. 9–12)

**Traumatic Brain Injury?Read: Trauma**

Review basic pathophysiologic background information about TBI as you read the following section in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- “Trauma” section (pages 581-590) of [chapter 18 \(“Disorders of the Central and Nervous Systems and Neuromuscular Junction”\)](#)

**Traumatic Brain Injury-Read: Chapter 17**

Many body systems may present symptoms that result from TBI. Note the multiple and varied symptoms that may lead you to suspect TBI as you read the following chapter



in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- pages 525-582 in [chapter 17](#) (“Alterations in Cognitive Systems, Cerebral Hemodynamics, and Motor Function”)

### **Traumatic Brain Injury-Summarize: Pathophysiology**

Explore the following resources to differentiate characteristic symptoms of mild TBI and severe TBI:

- [Diagnosing & Treating Brain Injury](#)

### **Depression-Read: General Audience Resources**

Read the following resources, which give a comprehensive overview of depression for non-professional audiences:

- [NIMH: Depression](#)

### **Depression-Read: Nursing Resources**

Review the overall characteristics and forms of depression from a more professional nursing perspective.

Read the following sections in *Pathophysiology: The Biologic Basis for Disease in Adults and Children*:

- pages 337–359 in [chapter 11](#) (“Stress and Disease”)
- pages 443–465 in [chapter 15](#) (“Structure and Function of the Neurologic System”)
- pages 647–664 in [chapter 19](#) (“Neurobiology of Schizophrenia, Mood Disorders, and Anxiety Disorders”)

## **Evaluation of Pharmaceutical Impact**

Evaluation of pharmaceutical impact is defined as the investigation of the pharmacodynamic and pharmaceutical impacts (including physiological, psychological, financial, and lifestyle factors) on selected disease processes and patients.

### **Evaluation of Pharmaceutical Impact**

This topic addresses the following competency:

- **Competency 7002.1.2: Evaluation of Pharmaceutical Impact**  
The graduate analyzes pharmaceutical impacts, including physiological, psychological, financial, and lifestyle factors on the selected disease processes.

This topic highlights the following objectives:

- Identify the drug classes typically used to treat selected disease processes.
- Identify how drugs affect the mechanisms of disease processes.
- Identify the anticipated effect of the drugs used for treating the selected disease



processes.

- Evaluate current treatment trends in pharmacotherapeutics related to treatment for the selected disease processes.
- Identify possible complementary and alternative therapies for the selected disease processes.
- Identify potential interactions among prescribed and over-the-counter medications that a patient may be using.
- Analyze factors that impact the effectiveness of pharmaceutical agents.
- Examine any special considerations for drug therapy for special patient populations.
- Identify medications used to treat the selected disorders with high risk for misuse or abuse.

### **Asthma-Read: Background Information**

Review basic pharmacological background information about asthma.

Read the following chapters in *Abrams' Clinical Drug Therapy: Rationales for Nursing Practice* by Frandsen and Pennington:

- [Chapter 27 Drug Therapy to Enhance the Adrenergic Response](#)
- [Chapter 46 Drug Therapy for Myasthenia Gravis and Alzheimer's Disease](#)
- [Chapter 29 Drug Therapy for Nasal Congestion](#)
- [Chapter 30 Drug Therapy to Decrease Histamine Release and Allergic Response](#)
- [Chapter 31 Drug Therapy for Asthma and Bronchoconstriction](#)
- [Chapter 43 Drug Therapy for Addison's Disease and Cushing's Disease](#)

### **Asthma-Complete: Case Study Part 1**

Review part 1 of the following case study to evaluate the pharmaceutical impact:

- [Asthma Case Study](#)

Answer the following questions:

- How do medications treat this disease?
- The patient was started on a high-flow nasal cannula at 100% oxygen.
  - Does this decrease his respiratory rate?
  - Does this increase his oxygen saturation?
  - How do his lungs sound on auscultation?
  - Does he have wheezing?
  - Is there evidence of rhonchi?
- The patient's initial arterial blood gas indicates a low pH, high CO<sub>2</sub>, and low oxygen content.
- Determine how his lungs are functioning.
- What do you expect to find?
- How has his elevated CO<sub>2</sub> levels affected his neurological status?
- Would you expect his brain functioning to change before and after the PICU treatment?
- Describe what you would expect from his heart sounds.





- Describe how his chest X-ray would look.
- What would you expect from the patient's appearance once treatment has stabilized him? Breathing, heart rate, skin appearance, and comfort level?
- Would he likely maintain proper renal output while on antibiotic and antiviral medications? (Some antibiotics, particularly Vancomycin, can cause renal shutdown or renal insufficiency, as evidenced by bloody urine.)
- Would you expect his urine to be proper in color and consistency?
- Given the type of treatment provided to the patient, what would you expect from his fluid status?

### **Heart Failure-Review: Drugs**

Review mechanisms of drug action in heart disease throughout *Abrams' Clinical Drug Therapy: Rationales for Nursing Practice* by Frandsen and Pennington. Especially review carefully the following chapters:

- [Chapter 8 Drug Therapy for Dyslipidemia](#)
- [Chapter 24 Drug Therapy for Heart Failure](#)
- [Chapter 26 Drug Therapy for Angina](#)
- [Chapter 25 Drug Therapy for Dysrhythmias](#)

### **Heart Failure-Complete: Case Study Part 2**

Continue to apply what you've learned to the following case study:

- [Heart Failure Case Study](#)

As you read the case study, answer the following questions:

- When taking a patient history, what specific questions would you ask the patient about medication use?
- Describe polypharmaceutical use/abuse and how it relates to cardiac issues in adolescents.
- What "drugs" could lead to cardiac issues in young people?

After you have compiled your recommendations for this patient, read the suggestions in the following section of the case study:

- [Suggestions, Heart Failure Case Study: Part 2](#)

### **Obesity-Complete: Case Study Part 2**

Refer back to the following case study:

- [Obesity Case Study](#)

Suppose that you have performed and ordered the necessary tests and found that the patient's blood glucose level is 140 and her ketones are negative. How would you treat her?



You may want to answer this as you work through the other activities for this topic. After you have compiled your recommendations for this patient, read the suggestions in the following section of the case study:

- Suggestions, Obesity Case Study: Part 2

### **Obesity-Explore: Clinician Perspective**

Review the objectives highlighted in the topic description for this topic (“Evaluation of Pharmaceutical Impact: Obesity”). With these objectives in mind, spend time researching the pharmaceutical impact of obesity using the following website:

- [American Family Physician: Obesity](#)

Which has more influence on your confidence in the findings: the website you find them on, or the date that an article or guideline was published?

### **Obesity-Search: Guidelines for Treating Patients**

The AHRQ guideline document listed below includes different treatment plans. Search the document to find the treatments that include pharmacotherapy. Make a chart comparing those recommendations with the drug therapies in the readings from the previous activity. Include the side effects and contraindications of each pharmacotherapy.

Read the following guideline:

- [American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery medical guidelines for clinical practice for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient](#)

### **Traumatic Brain Injury-Search: Drug Therapies**

Search in *Abrams' Clinical Drug Therapy: Rationales for Nursing Practice by Frandsen and Pennington* to find answers to the following questions:

- What body defense makes brain injury particularly resistant to drug therapy?
- What drug class reacts unexpectedly to this body defense?
- What is a particular danger in using exogenous vasopressin for acute care of brain injury patients?

You might start with the following two chapters:

- [Chapter 54 Drug Therapy for Depression and Mood Stabilization](#)
- [Chapter 47 Drug Therapy for Parkinson's Disease and Anticholinergics](#)

## **Saliency**

Saliency is the state or condition of being prominent. It allows the practitioner to distinguish



between general information and relevant assessment findings to manage and minimize pathologies and risk factors in order to promote optimal patient outcomes.

## **Salience**

This topic addresses the following competency:

- **Competency 7002.1.4: Salience**

The graduate distinguishes between general information and relevant assessment findings to manage and minimize pathologies and risk factors to promote optimal patient outcomes.

This topic highlights the following objectives:

- Evaluate the patient's current health status with regard to physical function, pharmacological therapies, and disease processes.
- Prepare a plan of intervention for adverse drug reactions to determine that nurses are recognizing changing signs and symptoms and intervening appropriately.
- Identify the key components of disease status that may impact the patient's quality of life.
- Develop cost-effective, patient-centered strategies to optimize outcomes for patients with similar pathologies.

## **Asthma-Read: Patient-Centered Care**

Read the following article:

- [Patient-centered care and its effect on outcomes in the treatment of asthma](#)

This article examines research regarding finding the best practices for patients with asthma. It includes an examination of provider practices, as well as barriers to compliance.

As you read the article, identify specific instances that call for the providers to be alert to the full impact of their care and care plans. Attending to the patient as a whole person within a physical, social, and lifestyle environment requires remaining alert to many factors, whether they are obvious and salient or more obscure.

## **Asthma-Begin: Case Study Part 2**

Read part 2 of the following case study:

- [Asthma Case Study](#)

Answer the following questions:

- Summarize the key indicators affecting treatment (consider the patient's health status before, during, and after treatment.)
  - Consider physical function, pharmacological therapies, and the disease process.
  - Review treatment options and identify which treatments increased efficacy of



outcomes.

- Summarize the standard asthma treatment pathway used in the case study and efficacy of care of the child in this scenario, who is presenting in the ER with moderate to severe asthma symptoms.
- Based on your observations, what could have been done by the family or healthcare providers to reduce severity and recurrence of the child's asthma symptoms short-term and long-term? Develop an asthma management plan.

### **Heart Failure-Complete: Case Study**

Continue to apply what you've learned to the following case study to consider inpatient care:

- [Heart Failure Case Study](#)

As you review the case study, consider if the nurse attended to following patient issues:

- How has her fast heart rate affected her neurological status? A heart beating too fast will affect oxygen circulation to the brain and other organs.
- How does her heart sound?
- How do her lungs sound?
- How is she able to move?
- Is she able to sit up?
- If she is permitted to eat, does she have any problems with fine motor skills?
- Is she completely off sedation medication? If so, what signs of withdrawal do you expect to see, if any?
- How are her kidneys functioning?

Review the following section of the case study:

- Heart Failure Case Study: Part 1

### **Obesity-Complete: Case Study Part 3**

Refer back to the following case study:

- [Obesity Case Study](#)

Complete the following:

- Evaluate the patient's current health status with regard to physical function, pharmacological therapies, and disease processes (obesity and also any comorbid conditions). What are the key components of obesity that impact this woman's quality of life?
- As the nurse for this patient, describe how you would incorporate emerging genetic/genomic evidence in providing advanced nursing care. How would you use the information you know about obesity to develop an appropriate care plan for the patient?
- Explain how polypharmaceutical use/abuse relates to obesity.
- Prepare a plan of intervention that will minimize adverse drug reactions for the patient.



How would you recognize any changing signs and symptoms and intervene appropriately if she did have an adverse reaction to a drug?

After you have compiled your recommendations for this patient, read the suggestions in the following document:

- [Suggestions, Obesity Case Study: Part 3](#)

### **Traumatic Brain Injury-Watch: Living with a Traumatic Brain Injury**

The following 30-minute video shows the dramatic range of effects and how TBI affects quality of life for four different patients:

#### [Living with a Traumatic Brain Injury](#)

While you watch, make notes about

- the education that you'll need to give your patients about expected issues they will likely face in day-to-day living,
- possible coping mechanisms that these patients have used, and
- the roles and specialties of the various members of the care team who are involved in creating and managing the care plan.

## **Managing Care Transitions**

The term *care transitions* refers to the movement of patients between their healthcare provider and the hospital setting as their condition and care changes during the course of an acute or chronic illness.

### **Managing Care Transitions**

This topic addresses the following competency:

- **Competency 7002.1.3: Managing Care Transitions**  
The graduate evaluates salient pharmacological issues in managing patient care transitions.

This topic highlights the following objectives:

- Indicate ways in which different members of the healthcare team contribute to pharmacotherapeutic management when patients transition from one care setting to another.
- Identify essential aspects of medication reconciliation when a patient transitions from one inpatient care setting to another.
- Identify essential aspects of medication reconciliation when a patient transitions from an inpatient care setting to outpatient care.
- Identify essential components of a drug management plan for patients as they are dismissed from hospital care to a home setting.



- Identify essential components of a drug management plan for patients as they are dismissed from hospital care to a home setting.

### **Read: Medication Management**

Using the [ASHP-APhA Medication Management in Care Transitions Best Practices](#) booklet, respond to the following prompts:

- What is unique about the medication management plan for patients with asthma when they are transitioning to home or self-care?
- Describe the consequences if a medication management plan is not completed.

### **Asthma-Continue: Case Study Part 2**

Read part 3 of the following case study:

- [Asthma Case Study](#)

Prior to the patient discharge home, you will need to consider the following questions:

- What are the typical over-the-counter (OTC) medications the patient's parents might give him? Why?
  - How could the OTC meds react with and/or interfere with his prescribed medications?
  - What are the potential side effects of these medications?
- Are healthy bowel sounds expected early in treatment or after discharge?
- Is he likely to develop diarrhea (antibiotics especially, with prolonged use, may cause a condition that requires treatment)?
- What medications will he be discharged home with?
- How could the patient's care continue for best healthcare outcomes? Provide examples.
- As you plan for this patient to go home, review the parent question results in the case study and determine how to prevent further exacerbations of this disease.

### **Heart Failure-Plan: Care Transitions**

Review the following websites for information about planning care transitions and care management for a heart failure patient:

- [IHI: "Good Heart Failure Care Follows Patients Home"](#)
- [Right at Home: "Hospital System Reduced Heart Failure Readmissions with Better Care Transitions"](#)

### **Heart Failure-Complete: Case Study Care Transitions**

Describe a plan for discharge for the patient in the following case study:

- [Heart Failure Case Study](#)

Include pertinent information you would discuss with her parents. Consider the following issues:



- What medications would this patient be discharged with?
- Why is it important to understand what other medications or alternative treatments the patient is taking?
- What teaching must occur?
- How would you include talking about not sharing each other's medications?
- How has her fast heart rate affected her neurological status?

Read the suggestions in the following section of the [Heart Failure Case Study](#):

- Suggestions, Heart Failure Case Study: Part 4

### **Obesity-Complete: Case Study Part 4**

Refer back to the following case study:

- [Obesity Case Study](#)

Consider how you would help this patient receive the treatment she needs:

- How do you approach this young woman, who believes she is not at risk of developing any diseases, who does not believe that her blood sugar is “too high,” and who does not have any desire to see a physician?
- How do you approach this same young woman who wants to change herself for the better?
- How can you help with care transitions? How would different members of the healthcare team contribute to the health outcomes of this patient?
- How do you incorporate other issues, physical or not, into helping this young woman become more healthy?
- What can you teach the patient about obesity as the nurse?
- How do you educate and promote change with your client?
- How would you ensure that medication is handled appropriately as the patient transitions from one healthcare setting to another?
- Based on what you have learned throughout the case study how would you create a plan for this client to assist her with their disease? Include a drug management plan for the patient.

You may want to review the information you have studied in earlier topics as you answer these questions. After you have compiled your recommendations for this patient, read the suggestions in the following section of the case study:

- Suggestions, Obesity Case Study: Part 4

## **Care Management**

Care Management refers to a set of evidence-based, integrated clinical care activities that are tailored to individual patients. It ensures that each patient has his or her own coordinated plan of care and services. The care plan, which is developed collaboratively by the patient and



healthcare providers, is designed and implemented to optimize each patient's health status and quality of life.

## **Care Management**

This topic addresses the following competency:

- **Competency 7002.1.5: Care Management**

The graduate integrates relevant patient and population data to develop pathopharmacological management strategies for populations.

This topic highlights the following objectives:

- Identify the pharmacological treatment of patients with similar disease processes from diagnosis and prognosis to post-treatment.
- Indicate likely outcomes of pathopharmacological treatments for populations with selected disease processes.
- Justify the course of pathopharmacological interventions for populations with selected disease processes.
- Identify the socioeconomic impact of selected disease processes with regard to a specific population.
- Evaluate available financial resources for managing care in a specific patient population.
- Identify potential gaps in care related to the adequacy of fiscal resources for managing care in a specific patient population.

### **Asthma-Search: Best Practices**

Review asthma disease processes. Research best practices for the management of the disease.

Consider following patient populations and the similarities of disease manifestations as it pertains to asthma.

- pediatric
- young adults
- smokers
- individuals with comorbid respiratory conditions such as chronic obstructive pulmonary disease (COPD), heart disease, etc.

Search the following resources:

- [Agency for Healthcare Research and Quality \(AHRQ\): 2015 National Healthcare Quality and Disparities Report](#)
- [Medscape](#)

### **Asthma-Search: Local Resources**

Locate state and local agencies and resources in the area where you practice for referral of patients with asthma or pulmonary disorders.





## **Asthma-Apply: Population Case Management**

The incidence of asthma increases in areas high in environmental triggers or in populations with genetic predispositions.

Review your notes and the following case study:

- [Asthma Case Study](#)

Answer the following questions:

- What are the most common classes of medications prescribed for asthma?
- Conduct an Internet search to look for standards of care for asthma.
- What organizations determine standards of practice (i.e., Department of Health, CDC, WHO, etc.)?
- What is the social impact of asthma?
  - How does asthma affect the patient, their family, and communities?
- What is the overarching cost of unmanaged care?
- Consider environmental, financial, social, and political implications.
- What happens when there is a medication shortage or natural disaster?
- If parents will not stop smoking, what will most likely happen with the child's asthma? Why?
- In what ways can regular care from a primary care physician change the short-term and long-term expected health outcomes for this child?
- What are the ethics related to this child's long-term care?
- What happens if the financial burden to care for this child becomes too great for the family or the state?
- What happens without medications if the body weakens?
- What if there is no longer any Medicare or Social Security?
- What choices for medical care and treatment will be offered ten years from now?
- What do you expect the long-term outcome to be for the child in the case study?
- When the child becomes an adult and is no longer under parental guardianship, what happens if he is too debilitated from his long-term asthma to be able to work?

## **Heart Failure-Explore: Resources for Long-Term Planning for Patients**

The following resources provide ideas about care planning in your practice:

- [The American Heart Association: Circulation: ACC/AHA Practice Guidelines](#)

## **Obesity-Explore: Patient Education Materials**

Explore the resources available from the National Heart, Lung, and Blood Institute:

- [Obesity Education Initiative \(OEI\)](#)

## **Traumatic Brain Injury-Explore: CDC Website**

Review the following CDC website. Note especially the risk groups. How do preventive



strategies differ for different risk groups?

- [Injury Prevention & Control: Traumatic Brain Injury](#)

### **Traumatic Brain Injury-Explore: Research**

Explore the following two websites and note the progress that research is adding to TBI care:

- [NINDS Traumatic Brain Injury Information Page](#)

### **Depression-Recommend: Care Management**

Review the following depression guidelines from the AHRQ. Create a recommended treatment and care management team for a patient that you might see in your practice.

- [AHRQ: Practice guideline for the treatment of patients with major depressive disorder](#)

## **Final Steps**

Congratulations on completing the activities in this course! This course has prepared you to complete the assessment associated with this course.