

VOLUME 1

NURSING

A **Concept-Based** Approach to Learning

Third Edition



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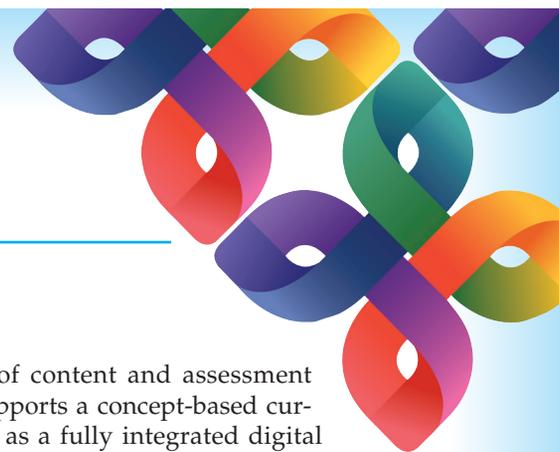
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Pearson's Concepts Solution

Nursing: A Concept-Based Approach to Learning is the number one choice for schools of nursing that use a concept-based curriculum. It is the *only* true concept-based learning solution and the *only* concepts curriculum developed from the ground up as a cohesive, comprehensive learning system. The three-volume series, along with MyLab Nursing, provides everything you need to deliver an effective concept-based program that teaches students to think like a nurse and develops practice-ready nurses.

Nursing: A Concept-Based Approach to Learning, Third Edition, represents the cutting edge in nursing education. This uniquely integrated solution provides students with a

consistent design of content and assessment that specifically supports a concept-based curriculum. Available as a fully integrated digital experience or in print format, this solution meets the needs of today's nursing student.

Starting with the cover, our goal for the Third Edition is to help students learn the essential knowledge they will need for patient care. The cover, a Möbius strip, represents the relationships among the concepts and how they are all interconnected. By understanding important connections of concepts, students are able to relate topics to broader contexts.

What Makes Pearson's Solution Different?

As demonstrated with the previous two editions of *Nursing: A Concept-Based Approach to Learning*, Pearson's program has successfully met the needs of tens of thousands of students and instructors in concept-based education programs. The Third Edition builds on our commitment to excellence: Every page, every word, every feature has been examined—all to help enhance the learning and teaching process. The result is an integration of content and features that *you*, our customer, have asked for and that you will not find anywhere else.

Pearson's program includes:

- Everything instructors and students need in one package: all concepts, all exemplars, all assessment tools.
- Content designed by instructional designers for conceptual learning that includes learning and enabling objectives for every main section and measurable outcomes for each.
- Content that covers the lifespan from pregnancy and birth, through childhood and adolescence, and into young adulthood and middle and old age.

Why Teach Concept-based Learning?

University and college nursing programs across the United States have begun evaluating how their programs can meet the needs of today's nursing students. The vast array of new knowledge in the "information age" has left nursing students feeling overwhelmed by the quantity of knowledge and skills they must gain in order to become practicing nurses. In light of this, many programs are moving to the model of concept-based learning in an effort to meet the challenges facing nursing students and new nurses today. Aside from creating a streamlined approach in response to content overload/saturation in nursing education, there are a multitude of reasons for nursing programs to consider a concept-based program.

This model provides the impetus for educators to transition away from traditional methods of faculty-centered teaching and passive learning toward active, focused,

participative, and collaborative teaching and learning. Pearson's *Nursing: A Concept-Based Approach to Learning*, Third Edition, is designed to assist nursing faculty in providing students with a broader perspective while promoting a deeper understanding of content across the lifespan in a focused, participative, and collaborative learning environment.

What are the benefits of conceptual learning? Some of the often-referenced benefits of conceptual learning in nursing programs are that it:

- Focuses on problems
- Fosters systematic observations
- Fosters understanding of relationships
- Focuses on nursing actions and interprofessional efforts
- Challenges students to be excellent learners.

Organization and Structure of the Third Edition

The basic structure of the Second Edition was retained for the Third Edition. There are:

- Five parts:
 - I: The Biophysical Modules (in the Individual Domain)
 - II: The Psychosocial Modules (in the Individual Domain)
 - III: Reproduction (in the Individual Domain)
 - IV: The Nursing Domain
 - V: The Healthcare Domain
- Fifty-one concepts
- One hundred fifty-eight exemplars

The Concepts were chosen after surveying numerous concept-based curricula and finding the common elements. Some Concepts were added or revised in response to requests by users. The result is a comprehensive set of Concepts that cover the essentials of nursing education.

The Exemplars were chosen based on selected national models and initiatives such as those of the Institute of Medicine, *Healthy People 2020*, The Centers for Disease Control and Prevention, The Joint Commission, the National Institutes of Health, the National Institute of Mental Health, the NCLEX Test Plan, The Centers for Medicare and Medicaid, the Occupational Safety and Health Administration, and Quality and Safety Education for Nurses, among others. Prevalence rates were considered for the biophysical and psychosocial exemplars, with more common disorders prioritized over less common ones. Certain Exemplars were

chosen because they lend themselves to teaching across concepts or across the lifespan. In the Third Edition, some Exemplars that focused on a particular stage of the lifespan, such as Diabetes in Children, have been folded into the Lifespan Considerations of another exemplar. Now there are two separate Exemplars on diabetes: one focusing on type 1 diabetes mellitus and the other focusing on type 2 diabetes mellitus. In the Third Edition, nine new/expanded Exemplars have been added:

- Cystic Fibrosis
- Delirium
- Environmental Quality
- Nurse Safety
- Patient Safety
- Sexual Dysfunction
- Traumatic Brain Injury
- Type 1 Diabetes Mellitus
- Type 2 Diabetes Mellitus

For the Third Edition, as shown in the Module Outline and Learning Outcomes listed at the beginning of each module, each main section has a dedicated learning outcome. Our editorial and instructional design teams worked to create consistent, accurate, challenging, achievable, and measurable objective statements based on objective-driven design practices to better engage students, improve performance, increase student gains, and promote deep learning.

Module Outline and Learning Outcomes

The Concept of Acid–Base Balance

Normal Acid–Base Balance

1.1 Analyze the physiology of normal acid–base balance.

Alterations to Acid–Base Balance

1.2 Differentiate alterations in acid–base balance.

Concepts Related to Acid–Base Balance

1.3 Outline the relationship between acid–base balance and other concepts.

Health Promotion

1.4 Explain the promotion of healthy acid–base balance.

Nursing Assessment

1.5 Differentiate common assessment procedures and tests used to examine acid–base balance.

Independent Interventions

1.6 Analyze independent interventions nurses can implement for patients with alterations in acid–base balance.

Collaborative Therapies

1.7 Summarize collaborative therapies used by interprofessional teams for patients with alterations in acid–base balance.

Acid–Base Balance Exemplars

Exemplar 1.A Metabolic Acidosis

1.A Analyze metabolic acidosis as it relates to acid–base balance.

Exemplar 1.B Metabolic Alkalosis

1.B Analyze metabolic alkalosis as it relates to acid–base balance.

Exemplar 1.C Respiratory Acidosis

1.C Analyze respiratory acidosis as it relates to acid–base balance.

Exemplar 1.D Respiratory Alkalosis

1.D Analyze respiratory alkalosis as it relates to acid–base balance.

Structure and Features of the Concepts

The Concepts feature a consistent design throughout the program. This allows students to anticipate the learning they will experience. Special features, which students can use for learning and review, recur in each Concept. The basic structure of the Concepts is shown below with visuals and annotations describing the content. Note that each **red heading** has a corresponding learning outcome.

Normal Presentation ... Each Concept starts with a review of normal, healthy function, including subsections on Physiology Review and Genetic Considerations where appropriate.

Physiology Review

Genetic Considerations

Alterations ... The second section of each Concept focuses on alterations, including subheads on Alterations and Manifestations, Prevalence, and Genetic Considerations and Risk Factors. A standard feature in this section is the Alterations and Therapies table.

Alterations and Manifestations

Prevalence

Genetic Considerations and Risk Factors

Alterations and Therapies			
Oxygenation			
ALTERATION	DESCRIPTION	MANIFESTATIONS	INTERVENTIONS AND THERAPIES
Hypoxemia	Decreased level of oxygen	<ul style="list-style-type: none"> Chest wall in-drawing (early manifestation) Cyanosis (late manifestation) 	<ul style="list-style-type: none"> Identify and treat the underlying cause. Administer oxygen if O₂ saturation level falls below 90%.
Dyspnea	Labored breathing or shortness of breath	<ul style="list-style-type: none"> Clearly audible, labored breathing; anxiety Distressed facial expression Nasal flaring 	<ul style="list-style-type: none"> Identify and treat the underlying cause. Administer oxygen if O₂ saturation level falls below 90%.
Apnea	Absence of breathing	<ul style="list-style-type: none"> Lack of respiratory effort that can lead to respiratory arrest 	<ul style="list-style-type: none"> Identify and treat the underlying cause. Administer respiratory stimulants, as appropriate.
Tachypnea	A respiratory rate greater than 20 breaths per minute for children and adults, 60 breaths per minute for an infant	<ul style="list-style-type: none"> Excessive rapid breathing Rapid breathing at rest Shallow breathing 	<ul style="list-style-type: none"> Identify and treat the underlying cause.
Orthopnea	Difficulty breathing when lying down	<ul style="list-style-type: none"> Dyspnea while lying down 	<ul style="list-style-type: none"> Identify and treat the underlying cause. Elevate the head, neck, and chest while sleeping.
Pneumothorax	Lung collapse caused by the collection of free air within the pleural space	<ul style="list-style-type: none"> Chest pain Shortness of breath 	<ul style="list-style-type: none"> Identify and treat the underlying cause. Observe the patient. Use needle decompression or chest tube insertion. Surgery

Case Studies

Each Concept contains a three-part unfolding case study to help students apply what they are learning to a sample patient.

Case Study » Part 1

Dennis Welborn is a 52-year-old Caucasian man who visits his primary care physician with complaints of severe pain in his back and abdomen and painful urination with hematuria. As the nurse working at the clinic, you take Mr. Welborn's medical history and make a preliminary assessment. Mr. Welborn is 6'2" tall and weighs 265 pounds. His vital signs include temperature 100.8°F oral, pulse 95 bpm, respirations 22/min, and BP 140/92 mmHg. Mr. Welborn rates his back and abdominal pain as 9 on a scale of 0–10, and his midline abdominal pain level is a 7 when he is urinating. When asked about his diet, Mr. Welborn admits that as a widower, he often eats out with coworkers for lunch and picks up fast food on the way home for his evening meal. He usually drinks three cups of coffee in the morning and diet soda throughout the afternoon and evening. When he gets heartburn, he chews several antacid tablets for relief. An abdominal assessment reveals a distended bladder. Mr. Welborn states he delays urination as long as possible because of the pain. When he does urinate, he has noticed that he has a weak stream and continues to feel the urge to urinate when he has finished. The medical care provider orders lab tests, so a

blood and urine sample are obtained for analysis. Mr. Welborn is transferred to the radiology department to have an abdominal x-ray. The x-ray reveals a large stone (1.2 cm) in Mr. Welborn's proximal right ureter, and the urinalysis indicates the presence of small calcium crystals, RBCs, and bacteria. The blood test also detects high blood calcium levels.

Clinical Reasoning Questions Level I

1. What risk factors does Mr. Welborn have for developing urinary calculi?
2. Other than a distended bladder, what findings might you discover?
3. How many?

Clinical Reasoning Questions Level II

4. What

5. What

6. Refer

ment

Case Study » Part 3

After 3 days in the hospital, Mr. Welborn is discharged to home. His urinary catheter has been removed, and he states that he can urinate without pain. However, the nephrostomy tube remains in place. In addition, his IV morphine has been discontinued, and he now receives acetaminophen (1000 mg q6h). With consistent ambulation and discontinuation of morphine, Mr. Welborn had two bowel movements before discharge.

Clinical Reasoning Questions Level I

1. What methods can you teach Mr. Welborn to help prevent future renal calculi?
2. Describe the patient teaching you will provide Mr. Welborn about caring for his nephrostomy tube.
3. What assessment should be performed on Mr. Welborn before discharge?

Clinical Reasoning Questions Level II

4. What medications might the healthcare provider prescribe for Mr. Welborn upon discharge?
5. What follow-up appointments should you schedule for Mr. Welborn? Why?
6. How would a referral to a nutritionist benefit Mr. Welborn?

Case Study » Part 2

Mr. Welborn's physician consults with a urologist, who suggests that Mr. Welborn be admitted to the hospital for a percutaneous nephrolithotomy. The urologist prescribes intravenous (IV) morphine for pain and schedules the surgery for 8:00 the next morning. The procedure is successful, without complications, and a urinary catheter and nephrostomy tube are put in place during surgery to drain urine. Postoperative pain is again managed with IV morphine, and Mr. Welborn states that his pain is manageable. He is confined to bed until 1 day postsurgery. The day after surgery, Mr. Welborn reports that he did not have his normal morning bowel movement. When he sat on the toilet, he was unable to defecate, and he was afraid to push too hard because of his surgery. He was also unable to have a bowel movement the previous morning because of anxiety about the surgery, and his abdomen is feeling full. Abdominal assessment reveals diminished bowel sounds and dullness to percussion.

Clinical Reasoning Questions Level I

1. What factors may have contributed to Mr. Welborn's constipation?
2. What independent nursing interventions can you implement to help Mr. Welborn eliminate feces?
3. What patient teaching can you provide to help Mr. Welborn prevent constipation in the future?

Clinical Reasoning Questions Level II

4. What effects might Mr. Welborn's constipation have on his urinary problems?
5. What complications may develop as a result of Mr. Welborn's constipation? What assessments should you perform to detect these complications?
6. What side effects of the percutaneous nephrolithotomy may Mr. Welborn experience related to his urinary system?

Concepts Related to Immunity		
CONCEPT	RELATIONSHIP TO IMMUNITY	NURSING IMPLICATIONS
Comfort	Painful conditions, such as swelling and skin reactions, often occur during immune response.	<ul style="list-style-type: none"> Assess related symptoms, such as edema, rash, malaise, loss of appetite, and trouble sleeping. Be alert to topical and latex allergies that could worsen symptoms. Anticipate: Additional assessments, comfort measures
Infection	Patients with alterations in immunity can experience acute or chronic infections.	<ul style="list-style-type: none"> Assess area of suspected infection (see Infection Assessment section in the module on Infection). Educate patients regarding the importance of immunizations and encourage their use. Educate patients regarding the importance of avoiding situations that could increase exposure to infection. Practice standard precautions, proper hand hygiene, and aseptic/sterile technique with all procedures. Assess complete blood count (CBC) results; be alert for elevated WBC count.
Inflammation	Movement of fluid and cells to the site of injury or infection causes inflammation during an immune response.	<ul style="list-style-type: none"> Assess for fever, skin warmth and redness, edema, and generalized pain. Be alert for abscess formation, purulent exudate, and increased WBC count. Anticipate: Aspirin, antipyretics, cold packs
Managing Care	Patients with alterations in their immune system can greatly benefit from participating in managed care and have more positive health outcomes.	<ul style="list-style-type: none"> Assess the needs of patients to identify actual or potential problems related to care. Advocate for patients in relation to their care needs.

Concepts Related to ... Enhanced for the Third Edition, the Concepts Related to section and feature are designed to help students make linkages between and among different Concepts.

Health Promotion ... New to the Third Edition is a focus on health promotion, one of the foundations of nursing. Many Health Promotion sections include a Patient Teaching feature. Examples of subsections include:

- Modifiable Risk Factors
- Care in the Community

Patient Teaching

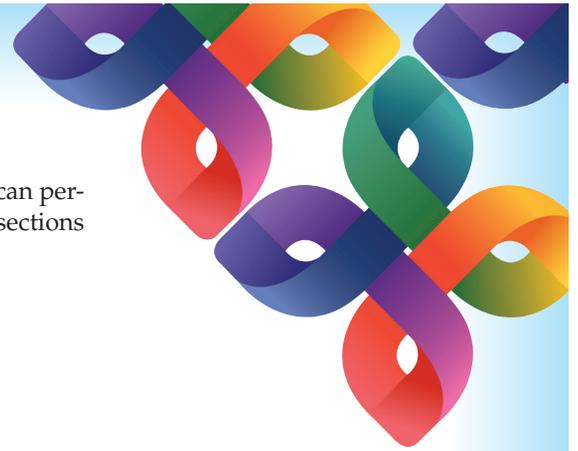
Health Promotion for Cancer Prevention: Modifiable Risk Factors

- Discourage smoking or use of other tobacco products.** Emphasize the importance of patients protecting children and themselves from exposure to tobacco smoke. This is one of the most important health decisions an individual can make.
- Encourage patients, especially children, to consume a healthy diet.** This should include a minimum of five servings of fruits and vegetables daily as well as whole grains, iron-rich foods, and foods that are rich in vitamin B₁₂. Teach patients to limit their consumption of processed meats; drink alcohol in moderation; and choose fewer high-calorie foods.
- Explain the importance of maintaining a healthy weight and being physically active.** Physical activity helps to control weight. Together, these factors may lower the risk for various types of cancer.
- Teach patients effective ways to protect themselves from ultraviolet radiation.** Early excessive exposure to sun and one or more severe sunburns during childhood increase the chances of skin cancers developing in adulthood. Patients who work outdoors, athletes, coaches, and others who spend time outside regularly should use sunscreen daily (SPF 15 or greater), regardless of the climate in which they live. Emphasize the importance of avoiding midday sun, when the sun's rays are strongest. Instruct patients to cover exposed skin and wear a hat with a wide brim. They should avoid tanning beds and sunlamps.
- Explain the importance of avoiding risky behaviors.** Practicing risky behaviors such as needle sharing or unsafe sexual contact can increase the risk of developing certain cancers.
- Suggest that patients have their homes tested for radon and explore their exposure to harmful chemicals.** Patients may be exposed to hazardous substances in the home or in the workplace.
- Stress the importance of getting immunizations, receiving regular medical care, and doing self-examinations.** By protecting against certain viral infections, immunizations can decrease the risk of some cancers. Regular screenings and self-examinations increase the chances of early detection of cancer, allowing for a better chance of successful treatment (Mayo Clinic, 2015a).

Oxygenation Assessment			
ASSESSMENT/METHOD	NORMAL FINDINGS	ABNORMAL FINDINGS	LIFESPAN OR DEVELOPMENTAL CONSIDERATIONS
Nasal Assessment			
Inspect the nose symmetry.	The nose should be midline and symmetrical.	<ul style="list-style-type: none"> Asymmetry indicates trauma or surgery. 	<ul style="list-style-type: none"> Nasal flaring in the neonate may be indicative of respiratory compromise.
Inspect nasal cavity using a flashlight.	The septum should fall midline and be intact. The mucosa of the nares should be pink and moist without drainage. Both nares should be patent.	<ul style="list-style-type: none"> Redness and/or swelling is observed. Deviated septum narrows or occludes one naris. Foreign bodies may be found in the nares, especially of infants, toddlers, and preschoolers. Purulent or watery nasal drainage is present. Pale turbinates are seen. 	<ul style="list-style-type: none"> Nasal passages of neonates and small children are smaller than those of adults. Ensuring a clear nasal cavity may decrease the risk for respiratory compromise, as neonates and infants are nasal breathers.
Respiratory Rate Assessment			
Count respiratory rate for one full minute, counting one inspiration and one expiration as one breath.	Normal respiratory rate is eupnea (see Table 15-1 for developmental impact on rate).	<ul style="list-style-type: none"> Bradypnea Tachypnea Apnea Cheyne-Stokes respirations 	<ul style="list-style-type: none"> A child's respiratory rate is higher than that of an adult's. Rely on both sight and touch to obtain an accurate respiratory rate. Neonates are sporadic breathers so short periods of apnea (less than 15 seconds) are expected.
Assess quality of breathing: determine regularity in timing. Assess depth of inspiration. Observe effort to breathe.	The I:E ratio is normally 1:2. The cycle of inspiration and expiration should be followed by a resting period in which the sensors of the respiratory system will initiate the next cycle. Normal breathing is referred to as eupnea.	<ul style="list-style-type: none"> Shortness of breath Dyspnea Orthopnea 	<ul style="list-style-type: none"> Infants and children have softer chest walls and depend more heavily on the diaphragm to breathe. Therefore, they exhibit what is known as "seesaw" breathing, an indicator of severe distress. In older adults, lifestyle choices such as smoking can affect the quality of breathing, as can the development of respiratory diseases.
Inspection of Thoracic Cavity			
Anteroposterior diameter is half the transverse diameter.	Normal ratio is 1:2. (See Figures 15-5 and 15-6)	<ul style="list-style-type: none"> Anteroposterior equals transverse thoracic diameter measurements, called a barrel chest. 	<ul style="list-style-type: none"> Rapid growth early in life, the plateau in young adulthood, and decline in later life can affect normal ratios.

Nursing Assessment ... Restructured for the Third Edition, this section covers everything the new nurse needs to know about assessing patients. It includes information on:

- Observation and Patient Interview
- Physical Examination
- Diagnostic Tests



Independent Interventions ... Emphasizes interventions that nurses can perform on their own, without an order from the healthcare provider. Examples of subsections include:

Prevent Infection

Promote Safety

Sleep Hygiene

Medications		
Antimicrobial Agents		
CLASSIFICATION AND DRUG EXAMPLES	MECHANISMS OF ACTION	NURSING CONSIDERATIONS
<p>Antibiotics</p> <ul style="list-style-type: none"> ■ Amino-glycosides ■ Macrolides ■ Tetracyclines ■ Cephalosporins ■ Penicillins ■ Sulfonamides ■ Fluoroquinolones <p>Drug examples: Cefaclor, erythromycin, penicillin, tobramycin, trimethoprim-sulfamethoxazole</p>	<p>Antibiotics may be used prophylactically to prevent infection or used to treat existing bacterial infection. A specific antibiotic is chosen on the basis of the pathogen causing the infection.</p>	<ul style="list-style-type: none"> ■ Teach patients the importance of taking the entire prescribed amount. ■ Encourage adequate fluid intake. ■ Monitor for signs of allergic reaction. ■ Assess renal and hepatic function and vital signs.
<p>Antifungal</p> <p>Drug examples: Amphotericin B, anidulafungin, caspofungin acetate, flucytosine, micafungin, fluconazole, nystatin</p>	<p>These drugs are selective for fungal plasma membranes. They inhibit ergosterol synthesis.</p>	<ul style="list-style-type: none"> ■ Carefully monitor the patient's condition. ■ Use cautiously in patients with renal impairment and severe bone marrow suppression as well as patients who are pregnant. ■ Closely monitor kidney function (intake and output, BUN, creatinine, daily weights). ■ Monitor serum electrolytes.
<p>Antipyretic, Analgesic</p> <p>Drug example: Acetaminophen</p>	<p>These drugs relieve pain and reduce fever.</p>	<ul style="list-style-type: none"> ■ Monitor temperature. ■ Assess pain level. ■ Teach proper administration.
<p>Antipyretic, Analgesic, Anti-inflammatory</p> <p>Drug examples: Aspirin, ibuprofen</p>	<p>These drugs reduce fever and inflammation, in addition to relieving pain.</p>	<ul style="list-style-type: none"> ■ Monitor temperature. ■ Assess pain level. ■ Teach proper administration.

Collaborative Therapies ... Each Concept includes an overview of relevant therapies that require collaboration with the interprofessional team. A Medications feature covers the most common drugs used to treat alterations. Examples of subsections include:

Surgery

Pharmacologic Therapy

Nonpharmacologic Therapy

Complementary Health Approaches

REVIEW The Concept of ... As in the Second Edition, each Concept ends with a review that includes linking questions, a list of relevant skills from Volume 3, and a short case study with questions so students can apply their knowledge.

REVIEW The Concept of Elimination

RELATE Link the Concepts

Linking the concept of elimination with the concept of infection:

1. What changes in urinary elimination indicate the presence of a UTI?
2. List the effects viral gastroenteritis has on bowel elimination.

Linking the concept of elimination with the concept of communication:

3. How can therapeutic communication be beneficial when assessing patients with urinary or bowel elimination problems?
4. Describe the importance of accurate documentation when caring for a hospitalized patient with urinary or bowel elimination problems.

READY Go to Volume 3: Clinical Nursing Skills

- SKILL 1.10 Abdomen: Assessing
- SKILL 2.25 Rectal Medication: Administering
- SKILLS 4.1–4.5 Elimination: Assessment—Collecting Specimens
- SKILLS 4.6–4.16 Elimination: Bladder Interventions
- SKILLS 4.17–4.23 Elimination: Bowel Interventions
- SKILLS 4.24–4.27 Elimination: Dialysis
- SKILL 6.1 Hand Hygiene: Performing

REFER Go to Pearson MyLab Nursing and eText

- Additional review materials
- MiniModule: Anatomy and Physiology of Urinary Elimination

REFLECT Apply Your Knowledge

Tony Norwinski is a 7-year-old boy in the second grade. He and his 4-year-old sister, Nyla, live at home with their mother, Diane Norwinski.

Ms. Norwinski is a single parent who works in the cafeteria at the high school. Tony has a problem with wetting the bed occasionally and is too embarrassed to discuss it with anyone. Ms. Norwinski thinks Tony wets the bed because of emotional problems caused by his father leaving them when he was so young. Ms. Norwinski does not want to try anything new to help with the bedwetting because she is afraid it will cause Tony more embarrassment and emotional upset. They try not to talk about the bedwetting because Ms. Norwinski thinks it will make matters worse for Tony and prolong the problem.

Today, both children have an appointment for an annual physical examination with the nurse practitioner prior to starting the new school year. Tony is soft spoken and reserved when questioned about his general health. Ms. Norwinski is a good historian and offers complete answers about Tony's health history. The nurse notices the odor of urine on Tony's undergarments during the initial assessment. When questioned, Tony looks at his mother and does not answer. Ms. Norwinski looks away and does not answer right away. The nurse remains silent, waiting for a response to the questions.

After a period of silence, Ms. Norwinski reassures Tony and answers the nurse's questions about the odor. Though embarrassed, Tony appears to trust the nurse because he helps his mother explain about the bedwetting.

1. What therapeutic communication techniques could the nurse use to facilitate a full disclosure of the problem?
2. What are some questions the nurse could ask Tony and his mother to obtain the most pertinent information about Tony's situation? What nursing diagnosis would best describe the priority problem?
3. List four other possible nursing diagnoses the nurse may want to incorporate in the plan of care.

Structure and Features of the Exemplars

The structure of the Exemplars is picked up from the Second Edition. Note that each Exemplar has one main learning outcome with multiple enabling objectives.

Overview ... Sets the stage for the Exemplar and often includes information on the prevalence of the disorder.

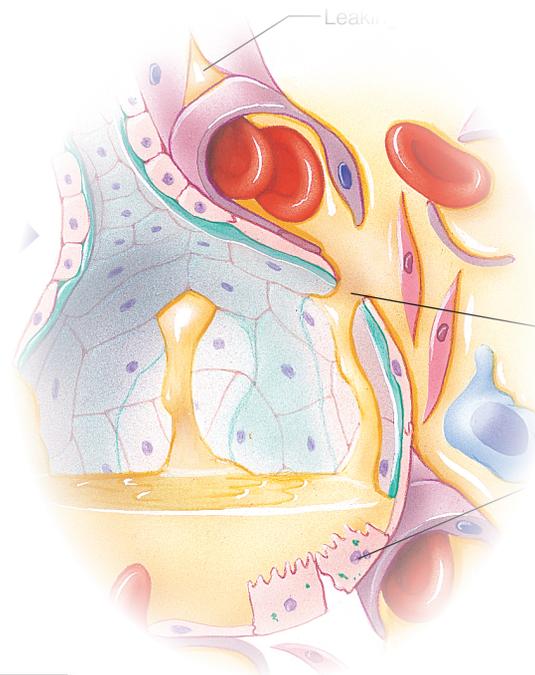
Pathophysiology and Etiology ... Describes not only the pathophysiology and etiology of the disorder, but also risk factors and prevention methods.

Pathophysiology

Etiology

Risk Factors

Prevention



Clinical Manifestations and Therapies		
Chronic Obstructive Pulmonary Disease		
ETIOLOGY	CLINICAL MANIFESTATIONS	CLINICAL THERAPIES
Bronchitis	<ul style="list-style-type: none"> ■ Chronic cough with mucus production ■ Dyspnea ■ Tachycardia ■ Narrowed airway passages ■ Wheezing ■ Air trapping 	<ul style="list-style-type: none"> ■ Smoking cessation ■ Bronchodilators ■ Corticosteroids ■ Fluids to thin secretions ■ Elevating the head of the bed ■ Low-flow oxygen ■ Monitoring of ABGs and oxygen ■ Mechanical ventilation if patient cannot meet oxygen demands
Emphysema	<ul style="list-style-type: none"> ■ Air trapping ■ Possible wheezing ■ Dyspnea ■ Barrel chest ■ Pursed-lip breathing ■ Posturing 	<ul style="list-style-type: none"> ■ Oxygen administration as needed ■ Pursed-lip breathing technique ■ Patient education of posture changes to improve ventilation ■ Low-flow oxygen ■ Monitoring of ABGs and oxygen ■ Mechanical ventilation if patient cannot meet oxygen demands ■ Nutritional assessment and increased calorie intake
Cardiac dysfunction	<ul style="list-style-type: none"> ■ Chest pain ■ Poor perfusion ■ Arrhythmias, particularly premature ventricular contractions ■ Hypertension ■ Cardiac hypertrophy ■ Congestive heart failure 	<ul style="list-style-type: none"> ■ Medications: <ol style="list-style-type: none"> a. Positive inotropics b. Calcium blockers c. Antiarrhythmic medications d. Diuretics e. Nitrites f. Antihypertensives ■ Monitoring of exercise tolerance ■ Holter monitoring ■ Antiembolism stockings to improve venous return ■ Fluid restrictions if cardiac dysfunction not medically managed

Clinical Manifestations

... Includes information on clinical manifestations the nurse might see in a patient with the disorder. The Clinical Manifestations and Therapies feature is an excellent tool for review.

Collaboration ... Outlines interprofessional interventions and therapies appropriate for patients with the disorder.

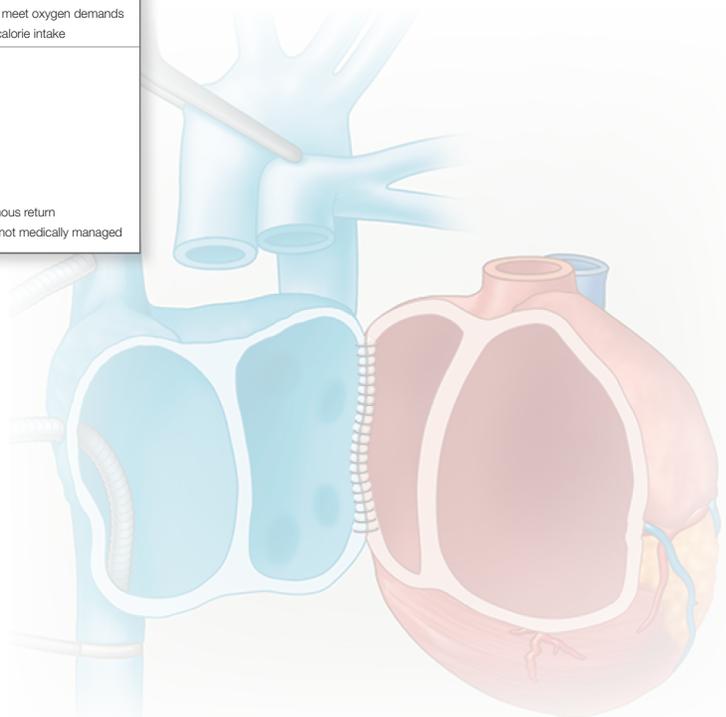
Diagnostic Tests

Surgery

Pharmacologic Therapy

Nonpharmacologic Therapy

Complementary Health Approaches

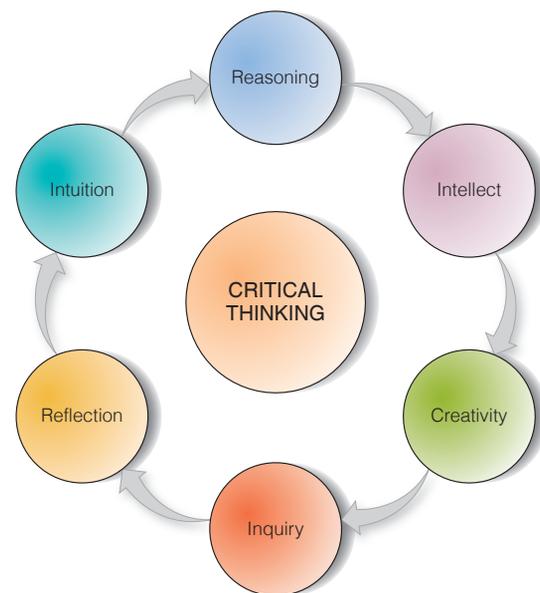


Lifespan Considerations ... New to the Third Edition, all specifics relevant to the lifespan are gathered in one section. Lifespan Considerations are provided as appropriate for both Concepts and Exemplars. Examples of subsections include:

- Considerations for Infants
- Considerations for Children and Adolescents
- Considerations for Pregnant Women
- Considerations for Older Adults

Nursing Process ... A detailed look at the nursing process helps students put together all of the content in the exemplar and learn the essentials of providing care to patients with the disorder.

- Assessment
- Diagnosis
- Planning
- Implementation
- Evaluation



REVIEW Exemplar ... As in the Second Edition, each exemplar ends with a Review that includes linking questions and a short case study with questions to help students apply their knowledge.

REVIEW Benign Prostatic Hyperplasia

RELATE Link the Concepts and Exemplars

Linking the exemplar of BPH with the concept of sexuality:

1. What communication strategies would the nurse use to discuss the impact BPH will have on sexuality without making an older man feel uncomfortable?
2. How can you assess his concerns, fears, and knowledge regarding the impact of BPH on his sexuality?

Linking the exemplar of BPH with the concept of infection:

3. What pathophysiology of BPH could increase the risk of UTIs?
4. What nursing interventions will reduce the risk of UTIs?

READY Go to Volume 3: Clinical Nursing Skills

REFER Go to Pearson MyLab Nursing and eText

- Additional review materials

REFLECT Apply Your Knowledge

Clifford Allen is a middle manager for a small manufacturing company where he has worked for the last 20 years. Overall, Mr. Allen is in good health, although he has been undergoing treatment recently for BPH. He has a history of depression, for which he does not seek treatment because he fears the social stigma connected to the diagnosis. Mr. Allen has been considering retiring within the next few years so he and his wife can travel, but mostly to escape his stressful work environment. He enjoys bowling and is involved in activities at church. He and his wife go for a walk each evening after supper.

One evening while bowling, he notices that his bladder feels somewhat full. Mr. Allen calls to make an appointment to see his urologist for a follow-up examination. He has been taking finasteride (Proscar) for the last 6 months but does not believe it has been particularly effective. He still has trouble urinating and believes that his symptoms are worse than before he started taking the drug. When he sees the urologist 2 weeks later, he reports that he often feels his bladder is full after voiding, he has difficulty starting his stream of urine, and his stream is weak once started. He gets up frequently at night to void. His score on the AUASI is 28, which has increased from his score of 18 six months ago. The urologist confirms that the medication has not been effective and schedules further tests, including uroflowmetry, check postvoid residual, a PSA blood test, and a urinalysis. Results from the uroflowmetry and postvoid residual test show a significant obstruction of urinary flow. The serum PSA is negative, and the urinalysis is consistent with bladder inflammation. A TURP is recommended in the upcoming weeks.



1. To determine Mr. Allen's understanding of the procedure, what will the nurse want to ask him upon admission to the surgical center?
2. What teaching will the nurse prepare regarding postoperative self-care?
3. Design a nursing plan of care for this patient postoperatively.

Additional Features

Additional features found throughout the program include numbered tables, figures, and boxes that contain content presented in visual formats, and the following highlighted features: Safety Alert, Stay Current, Evidence-Based Practice, Nursing Care Plan, Focus on Diversity and Culture, and Focus on Integrative Health.

Nursing Care Plan

A Patient with Asthma

Sarah Mitchell is a 35-year-old working mother with moderate persistent asthma. Her known triggers are allergies to dust mites, cockroach feces, grass and tree pollens, and some molds. She takes immunotherapy once a week and takes maintenance medications daily. She works as a full-time preschool teacher.

Ms. Mitchell calls her allergist's office asking to be seen because she is having a bad asthma flare. She reports having to

use her rescue inhaler every 3–4 hours, that her chest is very tight, and that she is having trouble breathing. She has used her home peak flow meter three times since late yesterday and has been in the yellow zone each time. She did not sleep last night because of her asthma symptoms.

ASSESSMENT	DIAGNOSES	PLANNING
<p>The nurse, Clancy O'Hara, admits Ms. Mitchell when she arrives at the allergist's office. During the health history Ms. Mitchell confirms she is compliant with her medication regimen. She takes a LABA in combination with a low-dose corticosteroid, a daily antihistamine, and montelukast. In checking Ms. Mitchell's medical record, Nurse O'Hara notes that the patient is maintaining her scheduled immunotherapy appointments. Ms. Mitchell reports that she is not aware of any unusual allergy exposure but says that several of her students have a cold this week.</p> <p>On physical examination, Nurse O'Hara notes that Ms. Mitchell's vital signs are as follows: T 37°C (98.6°F); P 96 bpm; R 36/min; BP 128/86 mmHg. Other assessment data include needing to pause frequently while speaking, use of accessory muscles for respirations, and scattered wheezes audible over both lung fields with stethoscope. ABG results are pH 7.32, PaO₂ 88 mmHg, PaCO₂ 47 mmHg, and HCO₃⁻ 38 mEq/L. Pulses are strong and equal bilaterally, and the patient expectorates a small amount of white mucus into a tissue.</p>	<ul style="list-style-type: none"> Ineffective Breathing Pattern related to exacerbation of asthma Impaired Gas Exchange related to bronchoconstriction and mucus in airways Fatigue related to ineffective sleep pattern Activity Intolerance related to inadequate oxygenation <p>(NANDA-I © 2014)</p>	<p>Together Nurse O'Hara and Ms. Mitchell agree on the following outcomes:</p> <ul style="list-style-type: none"> The patient's breathing will return to the green zone within 24 hours. The patient's need for her rescue inhaler will decline within 3 days and return to baseline within 1 week. The patient will maintain baseline respiratory rate and pattern sufficient to meet her ADLs within

IMPLEMENTATION

Ms. Mitchell's provider prescribes a higher-dose inhaled steroid to use 10–15 minutes after she uses her LABA. The provider also gives Ms. Mitchell a short, tapered course of prednisone. Ms. O'Hara initiates the following implementations:

- Teaches Ms. Mitchell how to properly self-administer medications and about possible side effects associated with steroid use, including those that should be reported immediately
- Explains the importance of taking the steroid as ordered and not stopping the medication suddenly
- Provides strategies for managing fatigue, including a handout with written instructions

- Teaches Ms. Mitchell hydration in asthma
- Observes Ms. Mitchell's breathing pattern
- Reviews signs and symptoms of asthma
- Schedules follow-up evaluation but only if she sees improvement

Many exemplars contain **Nursing Care Plans**, and additional ones can be found in the Pearson eText in MyLab Nursing. The Nursing Care Plans follow the nursing process with sections on assessment, diagnosis, planning, implementation, and evaluation. They end with a series of Critical Thinking questions.

Multisystem Effects of Cystic Fibrosis

Respiratory

- Viscous, sticky mucus
- Respiratory infections
- Chronic cough
- Chronic sinusitis
- Bronchiectasis
- Pneumonia
- Cysts
- Fibrosis
- Pneumothorax

Neurologic

- Depression
- Anxiety

Cardiovascular

- Clubbing of fingers and toes
- Cyanosis

Gastrointestinal

- Chronic diarrhea
- Nutritional deficiencies
- Obstructed pancreatic ducts
- Blocked bile ducts
- Gallstones
- Abdominal pain
- Bowel obstruction/intussusception

Reproductive

- Delayed puberty
- Blockage or absence of vas deferens
- Decreased fertility (men and women)
- Pregnancy complications

Musculoskeletal

- Delayed growth and development
- Osteopenia
- Osteoporosis
- Fractures

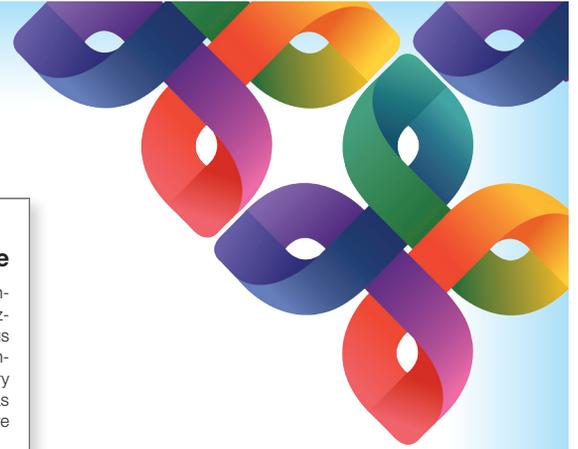
Integumentary

- Salty skin

Metabolic Processes

- Diabetes

The **Multisystem Effects** features have been redesigned for the Third Edition. Each one highlights the effects that a disorder has on various systems of the body.



Focus on Integrative Health Chronic Obstructive Pulmonary Disease

Complementary health approaches may be useful to help manage symptoms of COPD. Dietary measures, such as minimizing intake of dairy products and salt, may help reduce mucus production and keep mucus more liquefied. Be sure to recommend measures to replace the protein and calcium in dairy products to help maintain nutritional balance. Hot herbal teas with peppermint may act as expectorants to help relieve chest congestion.

Patients may be interested in trying complementary health approaches to assist them in quitting smoking. While additional studies are needed to evaluate the effectiveness of complementary health approaches for use in quitting smoking, current research suggests that acupuncture and hypnotherapy may be effective in promoting smoking cessation (Tahiri et al., 2012). Likewise, Hasan et al. (2014) found that hypnotherapy may be more effective than NRT for promotion of smoking cessation.

Focus on Diversity and Culture Assessing for Cyanosis

When assessing for cyanosis, normal assessment findings vary depending on the individual's normal skin tones. For example, in a white or light-skinned individual, cyanosis due to hypoxemia most often manifests as a bluish discoloration of the lips, oral mucosa, and nail beds. Among dark-skinned individuals, cyanosis may be difficult to detect and may actually cause the skin to appear darker. Typical manifestations of cyanosis in dark-skinned individuals include pallor or an ash-gray discoloration of the skin surrounding the mouth. Conjunctivae appear gray or blue-tinged among dark-skinned individuals. Among patients whose normal skin tone is yellowish, cyanosis may manifest as a gray-green skin discoloration (Sommers, 2011).

For the most part, care of patients from different cultures is covered in the basal text. **Focus on Diversity and Culture** features are used only for unique situations of which the nurse should be aware.

Focus on Integrative Health boxes highlight the use of complementary health approaches in addition to traditional nursing practice.

SAFETY ALERT Chronic cough and sputum are not normal occurrences. An individual experiencing chronic cough and sputum beyond 3–4 days should consult with a healthcare professional. Individuals with a smoking history as well as chronic cough and sputum production should have PFTs to determine lung function.

Each **Safety Alert** provides critical information the nurse needs to know to keep patients and staff safe.

» Stay Current: Visit the Safe to Sleep website at <https://www.nichd.nih.gov/sts/Pages/default.aspx> to learn more about SIDS prevention.

The **Stay Current** feature provides a weblink (which is a hot link in the eText) to a website that will keep students informed on the most recent updates.

The goal of the **Evidence-Based Practice** features is to show students the necessity of evidence driving practice. Each starts with a problem, delves into the research, presents implications for the nurse, and ends with critical thinking questions for the student.

Evidence-Based Practice

Compliance with Safe to Sleep Recommendations

Problem

Compared to previous recommendations for preventing SIDS, current recommendations are more complex. For example, the Safe to Sleep guidelines address not only infant positioning but also maintaining a safe sleep environment and abstaining from co-sleeping (bed sharing). The increased complexity of the recommendations may lead to decreased parental compliance with current guidelines for the prevention of SIDS (Goodstein, Bell, & Krugman, 2015).

Evidence

The Safe to Sleep recommendations include supine positioning during sleep, using a firm sleep surface, breastfeeding, room sharing without co-sleeping, routine immunizations, and the use of a pacifier. Items that should be avoided include soft bedding, toys, layered clothing, and crib bumpers (USDHHS, 2015). Research suggests that parental adherence to current recommendations for the prevention of SIDS is significantly increased when nurses model the behaviors that are reflective of all current guidelines for preventing SIDS and obtain parental signatures on a document acknowledging receipt of education related to current guidelines (Goodstein et al., 2015).

Implications

Nurses should demonstrate endorsement of all current recommendations for reducing SIDS-related deaths, including modeling and implementing all recommendations as soon as the infant is clinically stable and up to discharge. Nurses working with parents of newborns must provide additional patient teaching and follow-up, as well as ensuring that parents understand the teaching. All parents should receive documented education on safe infant sleep practices, including voluntary acknowledgement forms indicating that education has been provided with regard to the specific current guidelines (Goodstein et al., 2015).

Critical Thinking Application

1. Identify barriers to educating parents and caregivers about current recommendations for preventing sleep-associated deaths.
2. Describe methods for evaluating parental understanding of the current guidelines for prevention of SIDS.

MyLab Nursing

MyLab Nursing is an online learning and practice environment that works with the text to help students master key concepts, prepare for the NCLEX-RN exam, and develop clinical reasoning skills. Through a new mobile experience, students can study *Nursing: A Concept-Based Approach to Learning* anytime, anywhere. New adaptive technology with remediation personalizes learning, moving students beyond memorization to true understanding and application of the content. MyLab Nursing contains the following features:

Dynamic Study Modules ... New adaptive learning modules with remediation that personalize the learning experience by allowing students to increase both their confidence and their performance while being assessed in real time.

The top screenshot displays the Pearson MyLab Nursing interface for a 'Pregnancy Demo' module. The page is titled 'INTRODUCTION' and contains text about ensuring the best possible outcome for a pregnancy. Below the text is a list of learning objectives: 'Perform a comprehensive prenatal assessment', 'Assess maternal assessment data for psychosocial needs as they relate to the preference and comparison', 'Recognize maternal cultural and spiritual needs', and 'Implement strategies to promote health'. A small image shows a nurse and a pregnant woman.

The bottom screenshot shows a 'QUESTION' and 'ANSWER' interface. The question asks: 'A pregnant client asks the nurse when the glucose tolerance test will be performed to screen for gestational diabetes. The nurse responds that this test is usually done between how many weeks gestation?'. The answer choices are: '24 and 28 weeks gestation', '12 and 16 weeks gestation', '16 and 20 weeks gestation', '20 and 24 weeks gestation', and 'I DON'T KNOW YET'. A 'submit' button is visible.

NCLEX-Style Questions ... Practice tests with more than 3000 NCLEX-style questions of various types build student confidence and prepare them for success on the NCLEX-RN exam. Questions are organized by Concept and Exemplar.

The top screenshot shows a 'Study Plan' for '9.1 Summarize the essential components of a prenatal history'. The question is: 'The nurse has been asked to teach a class to the staff about prioritizing clients in the event of an emergency evacuation. Which client is the lowest priority to evaluate?'. The answer choices are: 'A newly admitted client who walked into the unit', 'A client who has successfully delivered and is stable', 'A client in an OR suite undergoing a C-Section', and 'A laboring client who is dilated 4 cm and 60% effaced'. A 'Check Answer' button is visible.

The bottom screenshot shows the 'Study Plan' page for 'MNL for Maternal/Neonatal early demo 2017'. It lists recommended sections with 'Practice' and 'Quiz Me' buttons: '9.1 Summarize the essential components of a prenatal history', '9.2 Define common obstetric terminology found in the history of maternity patients', '9.3 Predict the normal physiologic changes a nurse would expect to find when performing a physical assessment of a pregnant client', and '9.4 Calculate the estimated date of birth using the common methods'.

Resources

Instructor Resources

Instructor Resource Manual—with lecture outlines, large / small group, individual, and clinical activities

Classroom Response PowerPoints

Lecture Note PowerPoints

Image bank

Test bank

Student Resources

The following resources are available for course adoption or student purchase:

Concept Connections in Nursing app—available through the App store or Google Play

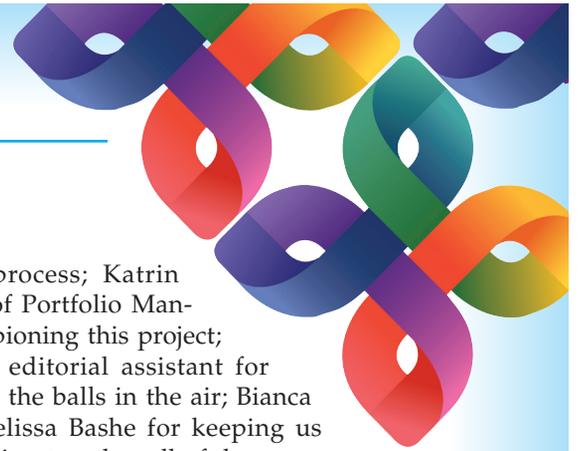
Comprehensive Review for NCLEX-RN app—9780134376325

RealEHRprep with iCare

The screenshot displays the RealEHRprep with iCare interface. The main window shows a case study titled "Homework: Case Study: Chest Pain & MI (John Lockart)". The score is 0 of 1 pt, and the HW Score is 0% of 10 pts. The case scenario describes a 49-year-old male with chest pain and other symptoms. Below the scenario are multiple-choice questions. To the right, there is a patient information panel for Clifford Nibh Allen, including vital signs, clinical reminders, active problems, active medications, and appointments.

Neighborhood 2.0

The screenshot shows the Neighborhood 2.0 interface. The top section displays "The Neighborhood" with character portraits for Reyes Household (Reyes, Angelo, Rachel) and other characters. Below this, there is an episode description for Rachel, a 38-year-old Hispanic woman. The bottom section shows a grid of character profiles for various families: ALLEN, BLEY, JAMES, JOHNSON, MARTIN & JAMES, OCAMPO, REYES, RILEY, RILEY & HOLMES, and ROSS & JARAMILLO. There are also icons for "HEALTH CONNECTIONS CLINIC", "HOSPITAL", "PUBLIC SCHOOL", and "SENIOR CENTER".



Acknowledgments

We would like to extend our heartfelt thanks to more than 80 instructors from schools of nursing across the country who have given their time generously during the past few years to help us create this concept-based learning package. The talented faculty on our Concepts Editorial Board and all of the Contributors and Reviewers helped us to develop this Third Edition through a variety of contributions and by answering myriad questions right up to the time of publication. *Nursing: A Concept-Based Approach to Learning*, Third Edition, has benefited immeasurably from their efforts, insights, suggestions, objections, encouragement, and inspiration, as well as from their vast experience as faculty and practicing nurses.

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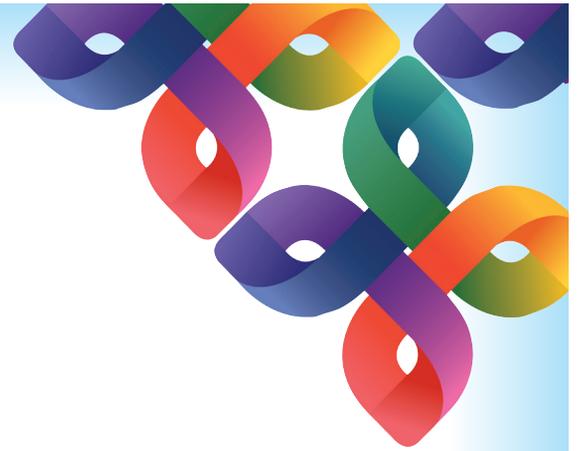
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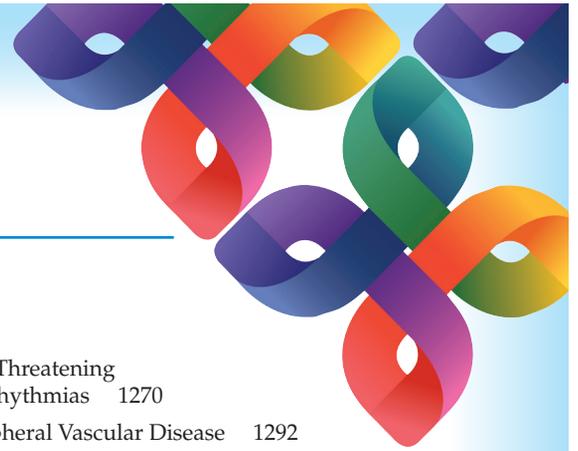
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Available in Pearson MyLab and eText:

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