Module Report

Tutorial: Real Life RN Medical Surgical 3.0

Module: Myocardial Infarction Complications

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Institution: **Lakeview CON**

Program Type: **BSN**

Standard Use Time and Score

	Date/Time	Time Use	Score
Myocardial Infarction Complications	1/28/2023 10:59:12 PM	1 hr 8 min	Needs Improvement

Reasoning Scenario Details
Myocardial Infarction Complications - Use on 1/28/2023 9:50:52 PM

Reasoning Scenario Performance Related to Outcomes:

*See Score Explanation and Interpretation below for additional details.

Body Function	Strong	Satisfactory	Needs Improvement
Cardiac Output and Tissue Perfusion	54.5%	18.2%	27.3%
Cognition and Sensation	100%		
Integument		100%	
Oxygenation	100%		
Regulation and Metabolism		50%	50%

NCLEX RN	Strong	Satisfactory	Needs Improvement
RN Management of Care		100%	
RN Pharmacological and Parenteral Therapies	66.7%		33.3%
RN Reduction of Risk Potential	62.5%	25%	12.5%
RN Physiological Adaptation		50%	50%

QSEN	Strong	Satisfactory	Needs Improvement
Safety	57.1%	28.6%	14.3%
Patient-Centered Care	50%	25%	25%
Evidence Based Practice	50%	16.7%	33.3%

Decision Log:

Optimal Decision	
Scenario	Mr. Davis has taken an initial dose of nitroglycerin.
Question	Mr. Davis has taken the first dose of nitroglycerin. Which of the following actions should be taken next?
Selected Option	Mrs. Davis should call 911 if her husband’s chest pain is not relieved within 5 minutes.
Rationale	Unresolved chest pain with the administration of nitroglycerin can indicate the client is having a myocardial infarction, so Mrs. Davis should call 911 if the pain continues. Mr. Davis should also take another dose of nitroglycerin. For unresolved chest pain, a total of three doses of nitroglycerin should be administered 5 minutes apart. Mr. Davis should also take a 325 mg dose of aspirin to inhibit platelet aggregation, which can reduce cardiac damage from the formation of a thrombus.

Scenario	Nurse Christine reviews Mr. Davis’s a 12-lead ECG.
Question	Nurse Christine is reviewing Mr. Davis’ ECG strip, which was completed at 1725. Which pattern on the ECG strip is the priority finding? (You will find hot spots to select in the artwork below. Select only the hot spot that corresponds to your answer.)
Selected Option	68,49,78,48,78,59,67,59
Rationale	Mr. Davis’ ECG strip shows a prolonged P wave, which can indicate first-degree atrial ventricular block and can be related to myocardial damage. Another finding, however, is a priority.

Scenario	Nurse Christine prepares to initiate prescriptions.
Question	Nurse Christine is preparing to initiate the prescriptions for Mr. Davis. Which of the following prescriptions should she expect to initiate? (Select all that apply.)
Selected Ordering	Troponin levelMagnetic resonance image (MRI) of the chest

Rationale	Nurse Christine should expect to initiate a bedside chest x-ray to rule out chest pain resulting from a dissecting aorta. A CAT-scan is ordered if the chest x-ray indicates the client has a dissecting aorta. Troponin is a cardiac enzyme, and when elevated, is an early indicator of myocardial cell damage. Morphine is administered to relieve pain, reduce myocardial oxygen consumption, and facilitate vasodilation. Potassium and creatinine are drawn for a baseline prior to the cardiac catheterization. A client having an ST-segment elevation myocardial infarction (STEMI) will not have an MRI before having a heart catheterization because this would delay the initiation of the cardiac catheterization and thus prohibit the provider meeting the 60-minute time-frame from the arrival to the facility to intervention.

Scenario	Nurse Carl is determining the priority action to take when Mr. Davis is itching.
Question	Mr. Davis is reporting itching over his arms and chest. What is the most appropriate action Nurse Carl should take? (Type your response in the field below and click “Submit” to compare your answer to the expert response.)
Selected Option	Treat this reaction as an allergic reaction to the contrast dye and monitor for swelling, difficulty breathing, or any other serious signs of anaphylactic shock.
Rationale	The priority action nurse Carl should take is to check Mr. Davis’s medical record for a shell fish allergy. Nurse Carl should recognize the possibility of an allergic reaction related to a shellfish allergy. Record the allergy to shellfish in the medical record and notify the provider of the allergy and Mr. Davis’s report of itching. The provider can determine if Mr. Davis is having a delayed allergic reaction to the contrast dye used during cardiac catheterization. Nurse Carl should check the client’s skin for a rash and request a prescription for diphenhydramine IV to decrease the itching.

Optimal Decision	
Scenario	Mr. Davis is having difficulty breathing, and Nurse Carl is assessing breath sounds.
Question	Nurse Carl is assessing Mr. Davis’s breath sounds and suspects Mr. Davis is starting to experience a moderate systemic reaction to the contrast dye used for the heart catheterization. Which of the following breath sounds should the nurse expect to hear during auscultation?
Selected Option	Wheezing
Rationale	Nurse Carl should recognize that high-pitched wheezing following a heart catheterization using contrast dye indicates a moderate allergic reaction that can progress into anaphylactic shock. Anaphylactic reaction to the contrast dye requires immediate intervention. Wheezing is a continuous squeaky breath sound that arises from the small airways and is associated with inflammation and edema.

Optimal Decision	
Scenario	Nurse Carl is choosing the correct medication to administer for Mr. Davis’s dyspnea and wheezing.

Question	Nurse Carl has listened to Mr. Davis's breath sounds and recognizes the manifestations of Mr. Davis's condition. Nurse Carl should expect a prescription for which of the following medications?
Selected Option	Epinephrine IM
Rationale	Nurse Carl should administer epinephrine IM to promote bronchodilation, vasoconstriction, and maintenance of the blood pressure and heart rate. Anaphylaxis is a life-threatening event and requires rapid intervention to prevent a potential critical outcome.

Scenario	Nurse Carl is checking Mr. Davis's puncture site during the post-heart catheterization assessment.
Question	Nurse Carl is completing a post-heart catheterization assessment of Mr. Davis. Which of the following observations should Carl address first?
Selected Option	Diminished right dorsal pedal pulse from the client's baseline
Rationale	Decreased strength of the right dorsal pedal pulse compared with the left dorsal pedal pulse requires further assessment of color, blanching of the nailbeds and pads of toes, capillary refill, and sensation. The client is at risk for decreased blood flow due to possible thrombus formation and/or hematoma formation, which could block blood flow to the lower extremities. However, another finding is the priority.

Optimal Decision	
Scenario	Nurse Carl finds bleeding at the puncture site.
Question	Mr. Davis's puncture site is covered with gauze and a transparent bandage. Nurse Carl is assessing Mr. Davis' puncture site for bleeding. There is a 7.62-cm (3-in) groin hematoma. The gauze is saturated with bright red blood. Which of the following actions should Nurse Carl take?
Selected Option	Apply pressure to the right groin site.
Rationale	Nurse Carl should assess the puncture site and apply pressure to the area for at least 10 minutes in the presence of active bleeding or a hematoma. Pressure is applied to create hemostasis.

Scenario	Nurse Carl is reviewing Mr. Davis's laboratory values.
Question	Nurse Carl is reviewing Mr. Davis's laboratory results in the electronic medical records (EMRs). Which of the laboratory results should nurse Carl report immediately to the provider?
Selected Option	aPTT
Rationale	The aPTT is 38 seconds, which is within the expected reference range of 30 to 40 seconds; therefore, this finding does not need to be reported.

Optimal Decision	
Scenario	Nurse Carl is planning to teach Mr. Davis about modifiable risk factors.

Question	Nurse Carl has information to provide to Mr. Davis about modifiable risk factors for coronary artery disease. Which of the following risk factors should he include in the teaching?
Selected Option	Obesity
Rationale	Nurse Carl should include in the teaching that modifiable risk factors include obesity, cigarette smoking, hypertension, diabetes, and sedentary lifestyle. Clients can alter modifiable or controllable risk factors by making choices to change aspects of personal lifestyle.

Scenario	Nurse Carl suspects manifestations of cardiogenic shock.
Question	Nurse Carl is assessing Mr. Davis with the charge nurse and suspects manifestations of cardiogenic shock. Which of the following findings should Carl identify as manifestations of cardiogenic shock? (Select all that apply.)
Selected Ordering	Mean arterial pressure of 54 mm HgAgitation and restlessnessBradycardiaPitting edema of the lower extremities
Rationale	A client who is manifesting cardiogenic shock can have hemodynamic instability. These can be observed by decreased blood pressure, tachycardia, reduced mean arterial pressure (MAP), agitation, and restlessness.

Optimal Decision	
Scenario	Nurse Carl is calculating of the initial rate of the dobutamine drip.
Question	Nurse Carl is preparing to administer dobutamine 2.5 mcg/kg/min by continuous IV infusion to Mr. Davis who weighs 110 kg (242 lb). Available is dobutamine 250 mg in 250 mL of dextrose 5% in water. Carl should set the IV pump to deliver how many mL/hr? (Round the answer to the nearest tenth. Use a leading zero if it applies. Do not use a trailing zero.)
Selected Option	16.5
Rationale	**Follow these steps for the Ratio and Proportion method of calculation:** Step 1: What is the unit of measurement the nurse should calculate? mL/hr Step 2: What is the dose the nurse should administer? Dose to administer = Desired 2.5 mcg/kg/min *X = Dose per kg/min × Client's weight in kg* *X* mcg/min = 2.5 mcg/~~kg~~/min × 110 ~~kg~~ *X* mcg/min = 275 mcg/min Step 3: What is the dose available? Dose available = Have 250 mg Step 4: Should the nurse convert the units of measurement? Yes (mcg does not equal mg) 1,000 mcg275 mcg/min = 1 mg*X* mg/min *X* mg/min = 0.275 mg/min Yes (min does not equal hr) 60 ~~min~~*X* mg/hr = 1 hr0.275 mg/~~min~~ *X* mg/hr = 16.5 mg/hr Step 5: What is the quantity of the dose available? 250 mL Step 6: Set up an equation and solve for X. *HaveDesired = QuantityX250 mg16.5 mg/hr = &#160250 mLX mL/hr* *X mL/hr = 16.5 mL/hr* *Step 7: Round if necessary.* *Step 8: Determine whether the amount to administer makes sense. If there are*

	250 mg/250 mL and the prescription reads 2.5 mcg/kg/min, it makes sense to administer 16.5 mL/hr. The nurse should set the IV pump to deliver dobutamine at 16.5 mL/hr. ***Follow these steps for the Desired Over Have method of calculation:*** *Step 1: What is the unit of measurement the nurse should calculate? mL/hr* *Step 2: What is the dose the nurse should administer? Dose to administer = Desired 2.5 mcg/kg/min* *X = Dose per kg/min × Client's weight in kg* *X mcg/min = 2.5 mcg/~~kg~~/min × 110 ~~kg~~* *X mcg/min = 275 mcg/min* *Step 3: What is the dose available? Dose available = Have 250 mg* *Step 4: Should the nurse convert the units of measurement?* *Yes (mcg does not equal mg)* *275 ~~mcg~~ × 1 mgX mg = 1,000 ~~mcg~~* *X mg/min = 0.275 mg/min* *Yes (min does not equal hr)* *0.275 mg × 60 ~~min~~X mg = 1 ~~min~~* *X mg/hr = 16.5 mg/hr* *Step 5: What is the quantity of the dose available? 250 mL* *Step 6: Set up an equation and solve for X.* *Desired × QuantityX = Have16.5 ~~mg~~ × 250 mLX mL/hr = &#160250 ~~mg~~* *X mL/hr = 16.5 mL/hr* *Step 7: Round if necessary.* *Step 8: Determine whether the amount to administer makes sense. If there are 250 mg/250 mL and the prescription reads 2.5 mcg/kg/min, it makes sense to administer 16.5 mL/hr. The nurse should set the IV pump to deliver dobutamine at 16.5 mL/hr.* ***Follow these steps for the Dimensional Analysis method of calculation:*** *Step 1: What is the unit of measurement the nurse should calculate? (Place the unit of measure being calculated on the left side of the equation.)* *X mL/hr =* *Step 2: Determine the ratio that contains the same unit as the unit being calculated. (Place the ratio on the right side of the equation, ensuring that the unit in the numerator matches the unit being calculated.)* *250 mLX mL/hr = &#160250 mg* *Step 3: Place any remaining ratios that are relevant to the item on the right side of the equation, along with any needed conversion factors, to cancel out unwanted units of measurement.* *250 mL1 ~~mg~~2.5 ~~mcg~~110 ~~kg~~60 ~~min~~X mL/hr = × × × × &#160250 ~~mg~~1,000 ~~mcg~~1 ~~kg~~1 ~~min~~1 hr* *Step 4: Solve for X.* *X mL/hr = 16.5 mL/hr* *Step 5: Round if necessary.* *Step 6: Determine whether the amount to administer makes sense. If there are 250 mg/250 mL and the prescription reads 2.5 mcg/kg/min, it makes sense to administer 16.5 mL/hr. The nurse should set the IV pump to deliver dobutamine at 16.5 mL/hr.*

Optimal Decision	
Scenario	Nurse Carl is anticipating a medication prescription for Mr. Davis.

Question	Nurse Carl continues to monitor Mr. Davis, who remains unstable with a systolic blood pressure less than 90 mm Hg even with a dobutamine drip infusing. Which of the following medications should nurse Carl plan to administer?
Selected Option	Norepinephrine IV drip
Rationale	Norepinephrine is a vasopressor that produces vasoconstriction resulting in increased blood pressure and increased cardiac output. Norepinephrine should be administered, along with fluid volume replacement therapy, but not with a rapid infusion. Nurse Carl should monitor Mr. Davis for arrhythmias, chest pain, and hypertension.

Scenario	Nurse Carl is preparing to administer norepinephrine.
Question	Nurse Carl is preparing to administer norepinephrine to Mr. Davis. Which of the following actions should nurse Carl plan to take?
Selected Option	Document Mr. Davis's arterial blood pressure initially every 15 min.
Rationale	Nurse Carl should document the blood pressure continually per arterial line or every 2 to 3 minutes using a cuff pressure until Mr. Davis's blood pressure is stable within the parameters set by the provider.

Scenario	Nurse Carl is monitoring for adverse effects of norepinephrine.
Question	Nurse Carl is reviewing a medication reference for adverse effects of norepinephrine. For which of the following findings should Carl monitor as an adverse effect of the medication?
Selected Option	Metabolic alkalosis
Rationale	Metabolic acidosis, not metabolic alkalosis, is an adverse effect of norepinephrine infusion.

Optimal Decision	
Scenario	Lifestyle changes to reduce the risk of further coronary events.
Question	Nurse Carl is listening to Mr. Davis who is sharing about his plans for lifestyle changes. Which of the following statements indicates that Mr. Davis is planning to make appropriate lifestyle changes?
Selected Option	"I will reduce my sodium intake to 1,500 milligrams a day."
Rationale	Mr. Davis, who is African American, over the age of 50, and has a history of hypertension, should decrease sodium intake to 1,500 mg/day.

Scenario	Nurse Carl is reviewing food choices with Mr. and Mrs. Davis.
Question	Nurse Carl has asked Mr. Davis to select foods from the hospital breakfast menu. Nurse Carl should determine that which of the following foods selected by Mr. Davis is the best choice for adhering to a 1,500 mg low-sodium diet?
Selected Option	1 cup low-fat yogurt
Rationale	Nurse Carl should recognize that low-fat yogurt is not the best choice for Mr. Davis because 1 cup contains 175 mg of sodium.

Optimal Decision	
Scenario	Nurse Carl is teaching Mr. Davis about lisinopril.
Question	Nurse Carl is teaching Mr. Davis about taking lisinopril for hypertension. Which of the following information should Carl include in the teaching?
Selected Option	"Report a persistent dry cough."
Rationale	Nurse Carl should include that a persistent dry cough is an adverse effect of lisinopril and may persist until the medication is discontinued. Mr. Davis should notify the provider if he experiences this adverse effect, so the medication can be changed.

Score Explanation and Interpretation
Individual Performance Profile

REASONING SCENARIO INFORMATION

Reasoning Scenario Information provides the date, time and amount of time use, along with the score earned for each attempt. The percentage of students earning a Scenario Performance of Strong, Satisfactory, or Needs Improvement is provided. In addition, the Scenario Performance for each student is provided, along with date, time, and time use for each attempt. This information is also provided for the Optimal Decision Mode if it has been enabled.

If a detrimental decision is made during a Real Life scenario, the scenario will diverge from the optimal path and potentially end prematurely, in which case an indicator will appear on the score report.

REASONING SCENARIO PERFORMANCE SCORES

Strong	Exhibits optimal reasoning that results in positive outcomes in the care of clients and resolution of problems.
Satisfactory	Exhibits reasoning that results in mildly helpful or neutral outcomes in the care of clients and resolution of problems.
Needs Improvement	Exhibits reasoning that results in harmful or detrimental outcomes in the care of clients and resolution of problems.

REASONING SCENARIO PERFORMANCE RELATED TO NURSING COMPETENCY OUTCOMES

A performance indicator is provided for each outcome listed within the nursing competency outcome categories. Percentages are based on the number of questions answered correctly out of the total number of questions that were assigned to the given outcome. Outcomes have varying numbers of questions assigned to them. Also, due to divergent paths within the branching simulation, the outcomes encountered and the number of questions for each outcome can vary. The above factors cause limitations related to comparing scores across students or groups of students.

NCLEX® CLIENT NEED CATEGORIES

Management of Care	Providing integrated, cost-effective care to clients by coordinating, supervising, and/or collaborating with members of the multi-disciplinary health care team.
Safety and Infection Control	Incorporating preventative safety measures in the provision of client care that provides for the health and well-being of clients, significant others, and members of the health care team.
Health Promotion and Maintenance	Providing and directing nursing care that encourages prevention and early detection of illness, as well as the promotion of health.
Psychosocial Integrity	Promoting mental, emotional, and social well-being of clients and significant others through the provision of nursing care.
Basic Care and Comfort	Promoting comfort while helping clients perform activities of daily living.
Pharmacological and Parenteral Therapies	Providing and directing administration of medication, including parenteral therapy.
Reduction of Risk Potential	Providing nursing care that decreases the risk of clients developing health-related complications.
Physiological Adaptation	Providing and directing nursing care for clients experiencing physical illness.

Score Explanation and Interpretation
Individual Performance Profile

QUALITY AND SAFETY EDUCATION FOR NURSES (QSEN)

Safety	The minimization of risk factors that could cause injury or harm while promoting quality care and maintaining a secure environment for clients, self, and others.
Patient-Centered Care	The provision of caring and compassionate, culturally sensitive care that is based on a client's physiological, psychological, sociological, spiritual, and cultural needs, preferences, and values.
Evidence Based Practice	The use of current knowledge from research and other credible sources, upon which clinical judgment and client care are based.
Informatics	The use of information technology as a communication and information gathering tool that supports clinical decision making and scientifically based nursing practice.
Quality Improvement	Care related and organizational processes that involve the development and implementation of a plan to improve health care services and better meet the needs of clients.
Teamwork and Collaboration	The delivery of client care in partnership with multidisciplinary members of the health care team, to achieve continuity of care and positive client outcomes.

BODY FUNCTION

Cardiac Output and Tissue Perfusion	The anatomical structures (heart, blood vessels, and blood) and body functions that support adequate cardiac output and perfusion of body tissues.
Cognition and Sensation	The anatomical structures (brain, central and peripheral nervous systems, eyes and ears) and body functions that support perception, interpretation, and response to internal and external stimuli.
Excretion	The anatomical structures (kidney, ureters, and bladder) and body functions that support filtration and excretion of liquid wastes, regulate fluid and electrolyte and acid-base balance.
Immunity	The anatomic structures (spleen, thymus, bone marrow, and lymphatic system) and body functions related to inflammation, immunity, and cell growth.
Ingestion, Digestion, Absorption, and Elimination	The anatomical structures (mouth, esophagus, stomach, gall bladder, liver, small and large bowel, and rectum) and body functions that support ingestion, digestion, and absorption of food and elimination of solid wastes from the body.
Integument	The anatomical structures (skin, hair, and nails) and body functions related to protecting the inner organs from the external environment and injury.
Mobility	The anatomical structures (bones, joints, and muscles) and body functions that support the body and provide its movement.
Oxygenation	The anatomical structures (nose, pharynx, larynx, trachea, and lungs) and body functions that support adequate oxygenation of tissues and removal of carbon dioxide.
Regulation and Metabolism	The anatomical structures (pituitary, thyroid, parathyroid, pancreas, and adrenal glands) and body functions that regulate the body's internal environment.
Reproduction	The anatomical structures (breasts, ovaries, fallopian tubes, uterus, vagina, vulva, testicles, prostate, scrotum, and penis) and body functions that support reproductive functions.

DECISION LOG

Information related to each question answered in a scenario attempt is listed in the report. A brief description of the scenario, question, selected option and rationale for that option are provided for each question answered. The words "Optimal Decision" appear next to the question when the most optimal option was selected.

The rationale for each selected option may be used to guide remediation. A variety of learning resources may be used in the review process, including related ATI Review Modules.

If a detrimental decision that could result in grave harm to the client is made during a Real Life scenario, the scenario ends immediately and an indicator that a detrimental decision has been made appears in the score report.
A detrimental decision indicates the need to remediate the related topic area to prevent detrimental outcomes in the future.

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