

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2025

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ATI Scenario: Myocardial Infarction complications

To Be Completed Before the Simulation

Blue boxes should be completed using textbook information. What do you expect to find? This information should be collected before you start the ATI simulation

Medical Diagnosis: STEMI-Myocardial infarction

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology

Normal Structures

The heart consists of 4 chambers, the left and right atria, and the left and right ventricles. The heart also consists of valves that prevent blood from back flowing during cardiac circulation [mitral, tricuspid, aortic, pulmonary]. The left and right coronary arteries along with the left circumflex and left anterior descending arteries supply the heart with blood. Blood enters the cardiac circulation through the superior and inferior vena cava. It then travels to the R atrium, through the tricuspid valve, and into the R ventricle. From there it goes through the pulmonary valve to the pulmonary arteries where it is taken to the lungs of oxygen exchange to occur. After blood leaves the lungs, it re-enters the heart through the pulmonary veins going into the L atrium, through the mitral valve, into the L ventricle. Blood lastly travels through the aortic valve and to the aorta to be pumped out into systemic circulation.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

Myocardial infarction occurs d/t an abrupt stoppage of blood flow through a coronary artery with a thrombus caused by platelet aggregation. This causes myocardial cell necrosis in the heart beyond the blockage. A STEMI caused by an occlusive thrombus result in ST-elevation in ECG leads facing the area of infarction. During the initial phase of MI, the ischemic heart cells release catecholamines. This results in diaphoresis, increased HR and BP, and vasoconstriction of peripheral blood vessels results in cool and clammy skin. Within 24 hours, leukocytes infiltrate the area. The dead heart cells release enzymes that are important diagnostic indicators of MI. Proteolytic enzymes of the neutrophils and macrophages remove necrotic tissue during the third day. During this time, the muscle wall is thin. 10-14 days post MI, new scar tissue is still weak. The muscle is most vulnerable during this period. The changes in the heart muscle can cause changes in unaffected areas. To try and compensate, the normal myocardium hypertrophies and dilates.

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute pain

Goal 1: Pt will have 0/10 chest pain during my time of care

Goal 2: Pt will verbalize pain score and location during my time of care

Relevant Assessments	Multidisciplinary Team Intervention
(Prewrite) What assessments pertain to your patient's problem? Include timeframes	(Prewrite) What will you do if your assessment is abnormal?
Assess pain score, location, and type PRN and 30 mins to 1 hour after admin of pain medication	Administer NTG and Morphine as ordered
Perform 12-lead ECG	Prepare and educate pt on cardiac cath
Assess BP, RR, HR continuously and PRN	Apply O2 as needed
Assess for grimacing, guarding, diaphoresis with each encounter	Administer NTG as ordered
Assess HOB level with each encounter	Maintain HOB \geq 30 degrees
Assess for cardiac Hx each shift	Perform cardiac cath

To Be Completed Before the Simulation

Anticipated Patient Problem: Risk for decreased cardiac output

Goal 1: Pt will maintain a MAP >60 during my time of care

Goal 2: Client will have UO of >= 30 mL/hr during my time of care

Relevant Assessments (Prewrite) What assessments pertain to your patient's problem? Include timeframes	Multidisciplinary Team Intervention (Prewrite) What will you do if your assessment is abnormal?
Assess BP, HR, MAP continuously and PRN	Administer IVFs and vasopressor as prescribed
Assess heart rhythm via continuous ECG	Administer antiarrhythmics as prescribed
Assess for orthostatic hypotension when ambulating and assisting pt OOB	Change positions slowly, administer IVFs as needed
Assess cap refill Q2 hr and PRN	Administer vasopressors as ordered
Assess mental status with every encounter and PRN	Apply O2 as needed
Assess pulse ox continuously	Apply O2 as need

To Be Completed During the Simulation:

Actual Patient Problem: Decreased CO (1)

Clinical Reasoning: MAP of 54, SBP <90, decreased UO, dusky nail beds and ashen skin, Hx of blockage, stent placement, restlessness, and agitation

Goal: Client will maintain a MAP >60 during my time of care Met: Unmet:

Goal: Client will have no CP or dyspnea during my time of care Met: Unmet:

Actual Patient Problem: Impaired gas exchange (2)

Clinical Reasoning: Required supplemental O2, increased WOB, complaints of dyspnea, wheezes

Goal: Pt will have no complaint of dyspnea during my care Met: Unmet:

Goal: Pt will have no wheezes during my time of care Met: Unmet:

Additional Patient Problems: [Risk for] bleeding (3), [risk for] reaction to iodinated contrast media (4), electrolyte imbalance (5), deficient knowledge (6), acute pain [r/t chest pain] (7)

Below will be your notes, add more lines as needed. **Relevant Assessments:** Indicate pertinent assessment findings. **Multidisciplinary Team Intervention:** What interventions were done in response to your abnormal assessments? **Reassessment/Evaluation:** What was your patient’s response to the intervention?

Patient Problem	Time	Relevant Assessments	Time	Multidisciplinary Team Intervention	Time	Reassessment/Evaluation
1	1655	Shoveling snow, experienced chest tightness	1655	Took NTG sublingual	1700	Chest pain unrelieved by the NTG
1,2,7	1725	8/10 chest pain “Feels like my chest is being squeezed, it’s hard to breath” Pain midsternal	1725	Applied continuous ECG and obtained 12-lead	1725	ST segment elevation seen on 12-lead
1,3	1730	Hx of blockage	1730	Provider educated on cardiac cath procedure; Stent place in L anterior descending coronary artery	1800	Relief of chest pain
1,3	1800	Vascular closure device on R femoral area	1800	RN educated on frequent neurovascular checks, and	1800	Pt verbalized understanding of teaching and nodded in accordance to

				maintaining position		reinforce understanding
4	1830	“I’m itchy on my arms” “I ate shrimp onetime, and my tongue swelled, I never ate it again” Dyspnea and wheezing auscultated	1830	Administered 25mg Benadryl PO	1840	“I feel like my breathing is worse”
4	1845	Skin ashen, nail beds dusky, stridor	1845	Administered Epi IM	1850	Sats 100% on NRB, decreased WOB, wheezing has subsided
3	1900	“I feel like I’m sitting on something wet” 3-inch hematoma, gauze saturated w/ bright red blood	1905	Applied pressure to site	1915	Bleeding has stopped
5	2000	Serum K: 3.2	2015	Administered K PO, educated on need for Med	2015	Verbalized understanding, med swallowed w/ no difficulty
6	2100	Eats fast food several times a week, eats lots of red meat	2100	Educated on diet changes such as fish a few times a week instead of so much red meat	2105	Stated, “Wow, me and wife will both make these changes”
1,2	2130	Skin cold, clammy Restless and agitated MAP: 54, SBP<90, decreased UO	2130 2200	NC applied at 3 L Administered NS 250 mL/hr Dobutamine initiated at 16.5 mL/hr Administer Norepinephrine IV	2300	Decreased UO

To Be Completed After the Simulation

The orange boxes should be filled out with your simulation patient's actual results, assessments, medications, and recommendations

NCLEX IV (7): Reduction of Risk

Actual Labs/ Diagnostics
Troponin, serum potassium, continuous/12-lead ECG

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
Chest pain, diaphoresis, nausea, SOB

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
CAD, poor diet, cardiac Hx/Hx of blockage, overweight

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical
Oxygen, pain management

Surgical
Cardiac cath/PCI w/ stent placement

Prevention of Complications
(Any complications associated with the client's disease process? If not what are some complications you anticipate)
Dysrhythmias, decreased cardiac output, cardiac arrest

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
Nitroglycerin Sublingual, aspirin

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
Apply O2 as needed

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
Fear r/t cardiac cath procedure, deficient knowledge r/t disease prevention

Client/Family Education

Document 3 teaching topics specific for this client.
•Education on proper nutrition
• Education on weight management
•Education on cardiac catheterization procedure

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
(Which other disciplines were involved in caring for this client?)
Nurse, cardiology

Patient Resources
Education- verbal and written for weight loss and nutrition, connect pt with nutritionist

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest “take away” from participating in the care of this client?
My biggest takeaway is to thoroughly assess for pt allergies. The impact of the contrast dye was detrimental and could have been very serious for the pt.
2. What was something that surprised you in the care of this patient?
Something that surprised me was the use of a closure devices post cardiac cath. I though pressure dressing were only applied at the femoral insertion site.
3. What is something you would do differently with the care of this client?
Something I would have done differently is assess the allergies more carefully ensuring to ask about shellfish allergies. Some pts do not realize that shellfish and contrast is a similar allergy.
4. How will this simulation experience impact your nursing practice?
This simulation will impact my nursing career in the fact that I learned to assess for allergies. It also shows how a simple thing such as contrast dye can have such a big impact. This pt really decompensated after the contrast dye.