ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2026

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ATI Scenario: MI

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: MI

NCLEX IV *(8)*: Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

Normal Structures:
Inferior and Superior Vena Cava
Right Atrium
Tricuspid Valve
Right Ventricle
Pulmonary Artery
Pulmonary Valve
Pulmonary Vein
Left Atrium
Bicuspid/Mitral Valve
Left Ventricle
Aorta
Aortic Valve
Sino-Atrial Node
Atrioventricular Node
Bundle of His
Perkinje Fibers
Endocardium- Outermost layer
Myocardium- Thick muscular middle tissue of heart
Epicardium- Inner layer
Pericardium- A liquid filled space around the heart (10-15 mL) that helps lubricate the pericardial space
Preload- Force stretches ventricles during diastole resulting from blood volume
Contractility-Ability of cardiac fibers to contract or shorten
Afterload-Pressure left ventricle needs to exert to overcome higher pressure in aorta to eject blood
Cardiac Output- Amount of blood pumped by each ventricle in 1 minute, calculated by stroke volume times heart rate
Heart Receptors:

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

Coronary Artery Disease- development of atherosclerosis in the coronary arteries
Nonmodifiable risk factors (things you can not control)- Age, gender, family hx
Modifiable risk factors (things you can control) smoking habits, chronic HTN, obesity, substance abuse

CAD can lead to chronic stable angina or acute coronary syndrome due to not getting enough oxygen supply to the myocardium muscle.

Chronic Stable Angina
Criteria- 1 or more arteries blocked by 70% or more of plaque, 50% or more for left main coronary artery
Onset- Occurs from physical exertion or stress
Qualities- Subsides when onset factor resolves, can include rest or sublingual nitro, EKG returns to normal from blood flow being restored
Medications given- Aspirin, nitroglycerin, ACEs, ARBs, beta blockers, calcium channel blockers

Acute Coronary Syndrome
Prolonged ischemia from blocked artery, can have non-ST elevation (NSTEMI, partial occlusion) or ST-elevation (STEMI, total occlusion) on an EKG
Unstable Angina- new onset, occurs at rest, increasing in pain, **does not go away with usual interventions (rest, nitro)**
If one nitro tablet is taken and pain does not reside, must go to hospital

Alpha- Can cause vasoconstriction of blood vessels, which causes an increase of BP
Beta 1- Increases rate of contraction in physical activity or stress
Beta2- The secondary receptors to Beta 2, only become noticeable when Beta 1 effects become suppressed
Systole- Contraction phase of heart to push blood out of the ventricles
Diastole- Relaxation phase of heart to fill ventricles with blood

Blood Flow Through the Heart:

1.) Deoxygenated blood comes from superior and inferior vena cava
2.) Right Atrium
3.) Tricuspid Valve
4.) Right Ventricle
5.) Pulmonary Artery
6.) Becomes oxygenated via the lungs
7.) Pulmonary vein
8.) Left Atrium
9.) Bicuspid Valve
10.) Left Ventricle
11.) Aorta
12.) Oxygenates muscles throughout the body

Heart Sounds:

S1(Lub)- Closure of tricuspid and mitral valve, beginning of systole
S2(Dub)- Closure of aortic and pulmonary valve, beginning of diastole
S3(Ventricular Gallop)- Occurs after S2, when mitral and tricuspid valves open and blood fills ventricles
S4(Atrial Gallop)- Occurs before S1, atria when the atria difficulty pushing into left ventricle
Apex of Heart- Bottom portion of heart, called the point of maximal impulse, or where the pulse can be felt the strongest.

Myocardial Infarction

Abrupt stoppage of blood flow through a coronary artery causing necrosis of myocardial muscle
STEMI- occlusive thrombus
NSTEMI- nonocclusive thrombus
Necrosis of entire thickness of muscle can take 4 to 6 hours

EKG Findings with Location of Damage:

Anterior (LAD)- V1, V4
Inferior (RCA)- V2, V3, aVF
Lateral (L Circumflex)- V5, V6, I, aVL

S/Sx of MI:

Pain that is feels heavy or as pressure
Pain that radiates to neck, arms, or jaw
Pain lasting 20 mins or longer
Cool clammy skin
JVD
Decreased urinary output
High HR and BP (initially)
High HR decreased BP (late)
N/V
Fever

DX of MI:

Cardiac biomarkers- Troponin, CK, BNP
12 Lead EKG

Care for MI:

STEMI- Cath lab in 90 minutes, thrombolytic therapy if can not reach goal of 90 minutes
NSTEMI- Cath lab within 24 to 48 hours, stabilize symptoms

To Be Completed Before the Simulation

Anticipated Patient Problem: Decreased Cardiac Output

Goal 1: HR will remain between 60-100 bpm during my time of care

Goal 2: Will remain conscious and alert and oriented during my time of care

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess EKG rhythm q15 minutes	Administer sublingual nitroglycerin or nitroglycerin IV drip as ordered
Assess HR, BP, and O2 q15 minutes	Apply supplemental O2 via nonrebreather or nasal cannula to maintain O2 saturations above 92% or as ordered
Assess LOC and orientation q15 minutes	Assess ability to maintain a patent airway q5 minutes
Assess BNP, Troponin, CK on arrival and q2 hours	Activate STEMI code and prepare for cath lab within 90 minutes of care
Assess peripheral pulses q15 minutes	Start CPR if pulses are absent if patients' resuscitation status is a full code
Assess urine output every hour	Administer fluids as indicated per order

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute Pain

Goal 1: Pain will be maintained at or less a 6/10 throughout my time of care

Goal 2: Skin will be warm and dry 1 hour after pain interventions

Relevant Assessments (Prework) What assessments pertain to your patient's problem? Include timeframes	**Multidisciplinary Team Intervention** (Prework) What will you do if your assessment is abnormal?
Assess pain level and description q15 minutes	Administer morphine to pain level and give as needed per order
Assess BP, HR, and RR q15 minutes	Cluster care and maintain rest periods throughout time of care
Assess skin temperature and dryness level q1h	Administer nitroglycerin q5 minutes and as ordered
Assess anxiety levels q1h	Explain plan of care and use therapeutic communication during every patient interaction
Assess onset of pain, PMHx, and Hx of chest pain on admission	Document past medical history and findings, notify provider STAT
Assess restlessness levels q1h	Position patient with the HOB at 45 degrees or greater at pain level at 3/10 or greater

To Be Completed During the Simulation:

Actual Patient Problem: Decreased Cardiac Output

Clinical Reasoning: Troponin T of 0.2, Troponin I of 0.06, ST Elevation on EKG, Complaints of chest pain, Nitroglycerin tablets taken 3 times with no improvement

Goal: EKG will show sinus rhythm by the end of my care Met: ☐ Unmet:☐

Goal: LOC will not be decrease less then baseline throughout my time of care Met: ☐ Unmet:☐

Actual Patient Problem: Ineffective Tissue Perfusion

Clinical Reasoning: MAP of 54, Cool and clammy skin, Decreased urine output, Capillary refill more then 3 seconds, Blood pressure of 88/54

Goal: Blood pressure reading will have a systolic number greater then 90 by the end of my care
Met: ☐ Unmet:☐
Goal: Skin will be warm and within normal color limits of ethnicity by the end of my care Met: ☐
Unmet:☐

Additional Patient Problems: Allergic Reaction, Deficient Knowledge, Risk for Bleeding

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
Decreased Cardiac Output	1730	States pain in the middle of chest described as squeezing, complains of SOB, RR of 24, SPO2 of 96% on 4L NC, EKG showing ST elevation	1745	Doctor explained plan of care and diagnosis to patient and wife, taken to cath lab within 40 minutes of care	1800	Cath lab placed a stent in the left anterior ascending coronary artery via PTCA
Decreased Cardiac Output	1900	Wound from catheter insertion sight in femoral artery with pressure dressing applied	1905	Provided education on keeping HOB flat, put slight pressure over the dressing sight when you feel the need to cough	1905	"I will do that", no further complications to femoral artery dressing site
Allergic Reaction	1915	"I feel itchy over my arms and	1920	Administered 25 mg	1925	Lung sounds turned into stridor, SPO2

		chest", Wheezes upon auscultation, Reports an allergy to shellfish		diphenhydramine IV bolus		87% on nonrebreather 15L
Allergic Reaction	1930	Stridor, increased work of breathing, no improvement from administration of diphenhydramine	1935	Rapid Response called, Administered epinephrine 0.3 mg via IM injection	2000	"I don't itch as bad and my breathing feels better", Switched nonrebreather to NC, SPO2 at 100%
Risk for Bleeding	2005	Hematoma present on site of femoral artery	2015	Applied pressure to site for 10 minutes, traced site of hematoma	0100	Dressing remained clean, dry, and intact by the end of my care
Decreased Cardiac Output	2030	Potassium level of 3.2	2035	Administered 20 mEq of potassium PO	0100	Potassium level of 3.5, EKG rhythm of sinus
Deficient Knowledge	2135	States cessation of smoking 1 month ago, exercises only by walking at work, reports diet high in fast food with eating steak frequent	2140	Provided education on modifiable risk factors to coronary artery disease, such as eating a diet high in fiber and low in saturated fat and eating fruit and vegetable servings 4-6 times daily, left pamphlets at bedside	2145	Read over pamphlets and requested a time to talk regarding questions
Ineffective Tissue Perfusion	1400	MAP of 54, Skin is cool to touch and clammy, Systolic BP less than 90	1405	Administered 0.9% NS at 250 mL/hr, Dobutamine 250 mL bolus then at 16.5 mL/hr, and Norepinephrine at 0.5 mcg/min	1430	"I feel less dizzy and sweating less" BP of 96/56, HR of 64
Deficient Knowledge	0800	Wife had questions about how to reduce sodium intake, how to replace salt in food, and requested more information on the blood thinner medication	0815	Provided education on choosing healthy breakfast options, how to incorporate fruits and vegetables in every meal, and how the blood thinner is helping his stent placement and who he needs to tell that hes on a blood thinner, and bleeding signs and symptoms	0820	"My wife and I will try our best to cut out sodium at home"

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 T- (0.2 to 0.8)
Troponin I (0.06 to 0.09)
Lactate- 0.6
CK- 0 mEq
Potassium-
aPTT- 34 sec
PT- 12 sec
INR- 0.9
BUN- 18
Creatine- 0.8
pH- 7.35
PaO2- 88
PaCO2- 40
HCO3- 26
CXR- No fluid or pneumothorax, aorta and aortic arch has calcification with no dilation of artery

NCLEX II *(3)*: Health Promotion and Maintenance

Signs and Symptoms

Sudden, severe chest pain with no changes when taking nitroglycerin
SOB
N/V
Dizziness
Anxiety/Impending Doom
Clammy Skin

NCLEX II *(3)*: Health Promotion and Maintenance

Contributing Risk Factors

Non-Modifiable:
-Age
-Gender
-Ethnicity
-Family hx
Modifiable:
-Smoking
-Obesity
-Diet
-Exercise

NCLEX IV *(7)*: Reduction of Risk

Therapeutic Procedures

Non-surgical
Percutaneous Coronary Intervention (PCI)
Coronary angiography
Thrombolytic therapies

Surgical
CABG
Rupture Repairs

NCLEX IV *(7)*: Reduction of Risk

Prevention of Complications

(Any complications associated with the client's disease process? If not what are some complications you anticipate)

Cardiogenic shock
Dysrhythmias
Heart Failure
Ruptures in heart structures

NCLEX IV *(6)*: Pharmacological and Parenteral Therapies

Medication Management

Nitroglycerin
Morphine
Oxygen therapy
Aspirin
Thrombolytics (Heparin)
ACEs, Beta Blockers, ARBS, CCBs

NCLEX IV *(5)*: Basic Care and Comfort

Non-Pharmacologic Care Measures

Telemetry monitoring
Bedrest
Reduce Anxiety
Frequent vital signs
HOB >45 degrees

NCLEX III *(4)*: Psychosocial/Holistic Care Needs

Stressors the client experienced?

Balance of work and a healthy lifestyle
Creating a healthy diet
Cessation of smoking

Client/Family Education

NCLEX I *(1)*: Safe and Effective Care Environment

Document 3 teaching topics specific for this client.

- Daily limits of sodium intake
- Daily exercise habits
- When to notify provider of taking blood thinner medication

Multidisciplinary Team Involvement

(Which other disciplines were involved in caring for this client?)

Cardiology
Rapid Response Team
Hospitalist

Patient Resources

Nutritionist
Cardiac Rehab Center
Pamphlets on healthy diet, importance of exercise
Information on when to call 911
Information on blood thinner and blood pressure medication

Reflection Questions

Directions: Write reflection including the following:

1. What was your biggest "take away" from participating in the care of this client?

   The biggest takeaway caring for this client was how important it can be to assign nurses to their same assignment during multiple shifts in a row. By the nurse having taking care of this client for multiple days, he was able to catch patterns quicker then a nurse who it was their first day taking care of Mr. Davis. The nurse was able to catch the pattern of blood pressures and how he has had no improvement of status since the day he came to the unit. Catching that early on allowed Mr. Davis to receive interventions quicker for his cardiogenic shock.

2. What was something that surprised you in the care of this patient?

   Something that surprised me in the care of this client is how easy it is to go into cardiogenic shock after an MI. Mr. Davis got to the cath lab within 90 minutes of being cared for at the hospital. Even getting his timely interventions, the left side of his heart still had enough damage done to create heart failure and cardiogenic shock. This shows you even with timely care how much damage can be done to the heart.

3. What is something you would do differently with the care of this client?

   Something that I would have done differently in this client is do a closer screen of allergies before his procedure. I would have reviewed his allergies and ask if he had a potential shellfish allergy, since it corelates with a contrast allergy. By asking him if he had a shellfish allergy prior to the procedure, he could have shared the story about his experience eating shrimp. He could have received a different medication instead of contrast.

4. How will this simulation experience impact your nursing practice?

   This simulation will impact my nursing experience by advocating for the same patient assignment during working multiple shifts in a row. The continuation of care, building trust with the patient, and being able to notice patterns in the patient can save their life, just like it did with the timely interventions for Mr. Davis and his anaphylactic and cardiogenic shock.