

ATI Real Life Student Packet
N202 Advanced Concepts of Nursing
2024

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ATI Scenario: Myocardial Infarction (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: Myocardial Infarction (MI)

NCLEX IV (8): Physiological Integrity/Physiological Adaptation

Anatomy and Physiology
Normal Structures

Circulation of the blood to/and from the heart: blood enters the heart through the infer/sup vena cava and into the R atrium. From there it goes through tricuspid valve and into the R ventricle, where it is then squeezed through the pulmonic valve and travels to the lungs is the pulmonary arteries and to the lungs where gas exchange occurs and then blood is brought back, oxygenated through the pulmonary veins, and come Into the L atrium. Then the blood passes through the mitral valve and into the L ventricle. Then the blood Is pumped through the aortic valve, through the aortic arch, and to the rest of the body via the aorta. The coronary artery supplies blood to the heart tissue.

Conductivity: the Sa node is the pacemaker of the heart, so that is where the electrical Impulse starts, then it is sent to the AV node, to the bundle of his, and finally to the purkinje fibers.

NCLEX IV (7): Reduction of Risk

Pathophysiology of Disease

A myocardial infarction is known as a heart attack. This is when there is decreased blood flow or no blood flow to the heart itself. This can be cause by many things such as CAD, a blood clot in a coronary artery, and coronary artery spasm. CAD is the main cause of an MI, CAD is when plaque builds up on the artery and restricts or blocks blood flow, eventually leading to an MI because the heart is not getting blood. The main take away is that an MI is caused by the coronary artery not being able to deliver blood to the heart, this results in heart tissue death. There are two types of MI's an NSTEMI and STEMI. NSTEMI is partial wall death with depressed ST wave and non-occlusive thrombus, STEMI is full wall death with elevated ST wave and occlusive thrombus. A STEMI is more serious and requires getting to a cath-lab within 30 minutes to preserve heart tissue. As soon as the patient is seen M.O.N.A. should be activated, morphine, oxygen, nitroglycerin and aspirin.

To Be Completed Before the Simulation

Anticipated Patient Problem: Decreased Cardiac Output r/t MI

Goal 1: Patient will demonstrate adequate cardiac output by evidence of skin warm to touch, cap refill less than 3 seconds, and strong +2 peripheral pulses during my 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 SpO2 q4hr.	Apply oxygen prn.
Assess peripheral pulses and cap refill q4hr.	Raise legs above the level of the heart prn, as tolerated. Apply EPC's prn, as tolerated.
Assess VS- HR, BP, RR q4hr. Assess EKG qshift, prn, with chest pain.	Administer fluids as ordered and apply oxygen. Maintain telemetry device as ordered.
Assess skin color, temperature, and moisture q4hr.	Apply a warm blanket and encourage bed movement as tolerated, prn.
Assess lung sounds and edema q4hr.	Administer diuretics as ordered.
Assess urinary output q2hr.	Encourage fluid intake, q2hr.
Assess coags, PTT, plts, and clotting factors, qshift, prn.	Administer aspirin as ordered.

Goal 2: Patient will have a urinary output of at least 30mL/hr during my care.

Goal 3: will demonstrate adequate cardiac output by evidence of BP around 120/80, HR within 60-100, and SpO2 above 95% during my care.

To Be Completed Before the Simulation

Anticipated Patient Problem: Acute Pain r/t MI: Chest

Goal 1: Patient will have a pain level of 0/10 using the numeric scale during my time of care.

Goal 2: Patient will report any change in level of pain using the numeric scale 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 PQRST of pain q4hr.	Administer morphine as ordered. Apply oxygen during chest pain as ordered. Perform 12-lead ECG with chest pain, prn. Provide rest periods, prn. Cluster care throughout shift, prn.
Assess VS- HR, BP, RR q4hr.	Encourage favor position, prn. Encourage to use breathing techniques, prn. Administer pain medication as ordered.
Assess favored diversional activity, qshift.	Encourage favored diversional activities, such as watching TV or reading a book, prn.
Assess favored position, qshift.	Encourage favored positioning, prn.
Assess pain expectation, qshift.	Educate that pain should always be a 0/10 in the chest after an MI, prn.
Assess knowledge of current state of health, qshift.	Educate to report any change in pain immediately. Educate on signs and symptoms of an MI, qshift.
Assess response to pain medication when administering for chest pain, prn.	Administer Nitroglycerin every 5 minutes until pain is gone, maximum of three doses.

Goal 3: Patient will use diversional activities at least two times a day during my care.

To Be Completed During the Simulation:

Actual Patient Problem: Decreased Cardiac Output r/t MI

Clinical Reasoning: Recent MI, death of left ventricular heart tissue, poor perfusion of heart

Goal: R.D. will demonstrate adequate cardiac output by evidence of skin warm to touch, SpO2 above 95%, cap refill less than 3 seconds, MAP 60-65, BP 120/80, HR 60-100, A&Ox4, and strong +2 peripheral pulses during my care. Met: Unmet: X

Goal: R.D. will have a urinary output of at least 30mL/hr during my care. Met: X Unmet:

Actual Patient Problem: Readiness for enhanced health management

Clinical Reasoning: Recent MI, recent heart cath, lifelong anticoagulation therapy, lifestyle modification education

Goal: R.D. will be able to identify two lifestyle modifications that can prevent further heart injuries/complications during my care. Met: X Unmet:

Goal: R.D. will teach me (teach back) why anticoagulation therapy will be used for the rest of his life by the end of my care. Met: Unmet: X

Additional Patient Problems:

#3 Acute Pain

#4 Fear

#5 Risk for shock

#6 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
1,3,4	Monday, 1655	Chest is tight, tries to sit down to relieve pain, Rodney states “my chest is squeezing.”	1655	Maggie administers nitroglycerin.	1655	If chest pain is not relieved in after five minutes call 911 and administer only 2 more doses of nitroglycerin.
1,3,4	Monday, 1725	Maggie administered 3 doses of nitroglycerin 1655	1725	Maggie called 911.	1725	Rodney is being taken to the hospital to meet Christine.

		and 325mg of aspirin at 1715, chest pain was not relieved.				
1,3,4	Monday, 1725	Rodney states chest pain and squeezing still present, Maggie states Rodney has a history of “clogged arteries”, pain is an 8/10 on numeric scale.	1725	Christine applied telemetry, 12-lead EKG will be performed, administered medication for pain.	1725	Elevated ST present in EKG.
1,2,3,4,	Monday, 1730	STEMI is present due to blocked artery, Rodney states “Anything to get rid of this squeezing pain,” Maggie asked how the reopening works and is Rodney will be awake.	1730	Rodney will be taken to the cath-lab to see if there is a blockage, a percutaneous transluminal coronary angioplasty will be performed if there is a blockage, procedure explained to Rodney and Maggie.	1730	Must get Rodney in cath-lab within 60 minutes. So, Christine has initiated the orders for the cath-lab, starting Morphine, getting a chest x-ray, checking Troponin, potassium and creatinine levels. Maggie and Rodney understand the procedure.
1,2	Monday, 1755	30 minutes since arrival, nurses are ready for Rodney in the cath-lab.	1755	Christine educated that Rodney will be taken to the ICU after the cath-lab. Maggie will wait in the waiting room.	1755	Rodney and Maggie understand what is happening, Rodney is taken to cath-lab.
1,2,6	Monday, 1900	Cath-lab is transferring Rodney to ICU, Carl in ICU is getting report for Jean. Rodney has a stent placed in the left anterior descending coronary artery, the stent was placed through the right femoral artery it has been closed and there is no presence of bleeding or	1900	Carl educates Rodney that he will be staying in the ICU, that he will be monitoring him closely with his vital signs, insertion site, and circulation to lower extremities. Carl educated that it is important to stay flat for the first 2 hours, and if he needs to cough to press down gently on the puncture site	1900	Rodney understands all the teaching. Rodney states during the assessment “I feel itch on my arm and chest,” Carl asks about other allergies, Rodney states “One time my tongue swelled up after having shrimp.”

		hematoma, VS stable, central venous catheter, arterial line, indwelling urinary catheter, IV fluids running IV pump, 2L oxygen via nasal canula.		dressing when coughing. Educated to tell if chest pain occurs. Carl assesses Rodney after surgery.		
4,5	Monday, 1900	Rodney states "I feel like I am coming down with a cold, I started coughing, and my nose is kind of stuffy too, and I can't quite catch my breath."	1900	Carl assesses lung sounds and has Benadryl with him.	1900	Carl auscultates wheezing in the lungs.
5	Monday, 1900	Rodney has coughing and nasal congestion, Carl notices signs of dyspnea and wheezing is present.	1900	Carl administers 25mg of Diphenhydramine (Benadryl) via IV bolus.	1900	Rodney still cannot catch his breath, Carl suspects a reaction to the contrast dye.
5	Monday, 1900	Rodney is having trouble breathing and wheezing.	1900	Carl applies a nonrebreather, increases the oxygen to 15L per minute.	1900	Rodney's SpO2 is 87%, skin ashen, his nail beds are dusky, he has strider, and he is distressed.
5	Monday, 1910	Rodney's respiratory status is deteriorating, rapid response team is coming to help Carl.	1910	Carl administered Epinephrine IM.	1910	Rodney's anaphylaxis reversed.
2,5,6	Monday, 1915	Rodney is no longer itching, and he is breathing better. SpO2 is 100%. Rodney's cough is still present.	1915	Carl put Rodney on a nasal canula, replacing the nonrebreather, Carl educates Rodney about holding pressure to puncture site when coughing, Carl puts Rodney's shellfish allergy in chart, notifying his provider and caregiver as well.	1915	Carl assesses Rodney's puncture site and performs a post heart cath assessment.

1,5,6	Monday, 2000	Carl assesses that Rodney is developing a hematoma on the right femoral puncture site, Rodney states "Is that why it feels like I am sitting on something wet?"	2000	Carl applies pressure to the hematoma for 10 minutes.	2000	Rodney's bleeding stops, Carl outlines the hematoma with a marker to allow for further assessments to see if the hematoma is getting larger.
1	Monday, 2030	Rodney's potassium is low at 3.2.	2030	Carl gives Rodney an oral potassium.	2030	Rodney's potassium increases.
2	Monday, 2030	Carl assesses Rodney's lifestyle, such as exercise, eating habits. Rodney states "I only walk at work, we eat out at least 4 times a week, I like steak and enjoy eating bread, but I did stop smoking a month ago."	2030	Carl educates Rodney that these are modifiable risk factors, he can exercise more and substitute red meats with things like fish or chicken, eat six serving of fruits, eat foods low in sodium and taking medications regularly.	2030	Rodney understands the teaching.
1,4,5	Monday, 2100	Carl suspects Rodney is having symptoms of cardiogenic shock, MAP is 54mmHg, BP is 88/54mmHg, agitated and restless, skin is cool and clammy, UO 48mL/hr.	2100	Carl increased oxygen, starts 0.9NS at 250mL/hr, and starts his dobutamine drip at 16.5mL/hr.	2100	Rodney is in cardiogenic shock due to his left ventricle being damaged by the MI, this is causing symptoms like left sided heart failure.
1,5	Monday, 2110	Rodney is still unstable with a systolic BP of less than 90mmHg with a dobutamine drip.	2110	Carl administers Norepinephrine IV drip through the central line at 0.5mcg/hr.	2110	Carl titrates the rate to maintain a systolic BP greater than 100, documenting the BP every 2-3 minutes initially then every 5 once stable.
1,5	Monday, 2130	Rodney's blood pressure has stabilized, he is no longer shacking or sweating.	2130	Carl allows Rodney to rest.	2130	Carl continues to monitor Rodney throughout to night.
2	Tuesday,	Rodney is	0700	Carl is educating	0700	Rodney states

	0700	disconnected from all the lines and IVs and is getting transferred down to cardiac stepdown.		Rodney and Maggie on lifestyle changes, such reading labels, reducing sodium to 1500mg/day an example of a low sodium food is shredded wheat cereal, and what can be used as a substitute for salt.		“Maggie and I have been talking about lifestyle changes and to start when I leave.”
1,2	Tuesday, 0730	Rodney and Maggie are curious about how the medication Clopidogrel works and why Rodney also must take Aspirin.	0730	Carl educates that Clopidogrel is to prevent clots in the new coronary artery and Aspirin is to help prevent clotting of Rodney’s stent. Maggie and Rodney also need to watch out for unusual bleeding. Carl also educated that Lisinopril is for Rodney’s BP and a persistent dry cough is a side effect.	0730	Rodney and Maggie understand the uses of the medications. Carl believes Rodney is now ready for transfer because Rodney states he will start an exercise program, he will modify his diet, decrease sodium intake, and will take all his medications as prescribed.

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
 Potassium: 3.6, 3.2mEq/L
 Troponin T: 0.2, 0.4, 0.6ng/mL
 Troponin I: 0.06, 0.07, 0.08ng/mL
 Creatinine: 0.8, 0.7, 1.0mg/dL
 12-lead EKG: Elevated ST wave
 X-ray: calcification of aorta, causing left ventricular heart damage
 CK-MB

NCLEX II (3): Health Promotion and Maintenance

Signs and Symptoms
 Chest pain
 Squeezing of the chest
 Difficulty breathing
 Indigestion
 Excessive sweating
 Nausea
 Left arm, back, or jaw pain

NCLEX II (3): Health Promotion and Maintenance

Contributing Risk Factors
 Obesity
 Sedentary lifestyle
 Eating habits (high sodium, lots of fast food, lots of red meat)
 CAD
 Diabetes
 HTN
 Tobacco
 High cholesterol

NCLEX IV (7): Reduction of Risk

Therapeutic Procedures
Non-surgical
 Nitroglycerine
 Morphine
 Oxygen
 Aspirin

Surgical
 Percutaneous transluminal coronary angioplasty, stent placement, cath, bypass, atherectomy

Prevention of Complications
 (Any complications associated with the client's disease process? If not what are some complications you anticipate)
 Heart Failure
 Arrhythmia
 Cardiogenic Shock
 Right Ventricular Infarction
 Acute Heart Failure

NCLEX IV (6): Pharmacological and Parenteral Therapies

Medication Management
 Aspirin
 Nitroglycerine
 Morphine
 Clopidogrel
 Thrombolytics

NCLEX IV (5): Basic Care and Comfort

Non-Pharmacologic Care Measures
 M.O.N.A.
 Smoking Cessation
 Change in eating habits
 Exercise
 Cardiac Rehab

NCLEX III (4): Psychosocial/Holistic Care Needs

Stressors the client experienced?
 Role changes.
 Fear of next MI.
 Trauma from multiple complications following MI.

Client/Family Education

Document 3 teaching topics specific for this client.
 • Diet changes
 • Exercise more
 • Continuously take medication

NCLEX I (1): Safe and Effective Care Environment

Multidisciplinary Team Involvement
 (Which other disciplines were involved in caring for this client?)
 ICU, HCP, Primary HCP, Cardiology, Nurse, Case Management, Cardiac Rehab

Patient Resources

- Outpatient cardiac rehab
- MI support group
- Dietary consults
- Exercise programs

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 take away is that an MI causes severe damage to the heart. When the heart is damaged it will not pump as well and can put them at risk for cardiogenic shock. When we realize the signs we have to treat them so they do not progress further into shock. Also, make sure to ask if a patient is allergic to shellfish to prevent an allergic reaction to the contrast dye.
2. What was something that surprised you in the care of this patient?
Something that surprised me is that on top of the complicated MI, the patient had two other complicated experiences that prolonged his hospital stay and caused fear.
3. What is something you would do differently with the care of this client?
I would ask the patient if they are allergic to shellfish. I would also predict the fact that they have a chance of going into cardiogenic shock and have everything prepared.
4. How will this simulation experience impact your nursing practice?
This simulation impacted my nursing practice by making me realize I have to expect the unexpected and be prepared in all situations to switch gears. The patient may come in for one serious problem, but others may arise on the way. I must treat as the problems arise based on priority.