Student Name: Jessica Rigby
ATI Real Life Scenario: MI_

*Complete and submit to the corresponding dropbox by 1600 on the assigned clinical day.

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/ Disease: Myocardial infarction

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

Anatomy and Physiology
Normal Structures

-Heart: composed of 2 upper chambers (atria) and two lower chambers (ventricles). The heart has 3 layers: endocardium (inner layer), myocardium (muscular layer), and the epicardium (outer layer). The heart is covered in a fibrous sac called the pericardium. The pericardium has an inner layer (epicardium) ad outer layer (parietal). The small amount of fluid between the pericardial layers creates lubrication to prevent friction between the surfaces as the heart contracts.
-Normal blood flow through the heart: deoxygenated blood enter the right atrium via the superior vena cava, blood then travels through the tricuspid valve into the right atrium. Right atrium → pulmonary artery via pulmonic valve→becomes oxygenated in the lungs→returns to left atrium via pulmonary artery→enters left ventricle via mitral valve→aortic valve→aorta and is sent throughout the body.
-The myocardium has its own blood supply via coronary circulation. Blood flow into the 2 major coronary arteries occurs primarily during diastole. The left coronary artery arises from the aorta divides into the left anterior descending artery and left circumflex artery. These supply the left atrium, left ventricle, interventricular septum, and part of the right ventricle. The right coronary artery also arises from the aorta, and supplies the right atrium, right ventricle, and part of the posterior wall of the left ventricle.

NCLEX IV *(7)*: Reduction of Risk

Pathophysiology of Disease

An MI occurs because of an abrupt stoppage of blood flow through a coronary artery with a thrombus caused by platelet aggregation. This causes irreversible myocardial cell death (necrosis) in the heart muscle beyond the blockage. Serum cardiac biomarkers are released into the blood. A STEMI, causes by an occlusive thrombus formation, results in ST elevation in the ECG leads facing the area of infarct. An NSTEMI, caused by a nonocclusive thrombus, does not cause ST segment elevation on the 12-lead EKG.

Anticipated Diagnostics
Labs

-Troponin T and I: specific indicators of an MI (will ↑ 4-6hrs after onset)
-Creatinine kinase: ↑ 6hrs after onset of an MI
-Myoglobin (not as specific for an MI though)
-Chem panel, CBC, PTT/INR (for coags)

Additional Diagnostics

-ECG: determine STEMI vs. NSTEMI
-Cardiac catheterization: used as treatment and diagnostic for STEMI

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

Contributing Risk Factors

-Atherosclerosis
-CAD
-Smoking tobacco
-Advanced age
-Poor diet and sedentary lifestyle
-Family hx (predisposition)

Signs and Symptoms

-Severe chest pain unrelieved by rest, position change, or admin of a nitrite. Pain may radiate to the neck, lower jaw, arms, or down the back.
-N/V, indigestion, SOB, weakness, pain in epigastric region.

NCLEX IV *(7)*: Reduction of Risk

Possible Therapeutic Procedures

Non-surgical

PCI- percutaneous coronary intervention for STEMI (open up blocked artery within 90 mins)

Surgical

-CABG: coronary artery bypass graft in certain emergencies.

Prevention of Complications

(What are some potential complications associated with this disease process)

-Myocardial ischemia or tissue death that can result in dysrhythmias.
-Heart failure, cardiogenic shock, acute pericarditis
-Left ventricular aneurysm
-Papillary muscle dysfunction or rupture.

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

Anticipated Medication Management

-Morphine, oxygen, nitroglycerin, chewable aspirin, high dose statin, heparin, stool softeners, antiarrhythmics.

Thrombolytics for STEMI pts

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

Non-Pharmacologic Care Measures

NPO until stable then advance to cardiac diet as tolerated, low stimuli environment w/ bed rest initially. Supplemental O2

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

What stressors might a patient with this diagnosis be experiencing?

-Acute pain, anxiety, guilt, anger, uncertainty of the future.

Client/Family Education

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

List 3 potential teaching topics/areas	**Multidisciplinary Team Involvement** (Which other disciplines do you expect to share in the care of this patient)
•Signs and symptoms of an MI and when to seek help •Promotion of healthy diet and aerobic exercise •Medication compliance to prevent further cardiac complications or occurrence of another MI.	-Cardiology, lab, cath lab, nursing staff, pharmacy, physical therapy, cardiac rehab.

Anticipated Patient Problems, Goals, & Interventions Based on Medical Diagnosis

** This worksheet should be completed before you begin the ATI simulation

Problem #1: Acute pain; angina

Patient Goals:

1. Pt will report 0/10 chest pain by the end of my care.
2. Pt will verbalize importance of reporting chest pain immediate during time of care.

Assessments:

- Assess type, pain, location, duration, and quality of pain q2h, assess pain utilizing numeric pain scale q2h, assess HR, BP, and RR q2h, assess emotional response to pain q2h.

Interventions (In priority order):

1. Administer Morphine PRN pain greater than 6/10 during my care.
2. Administer nitroglycerin PRN pain great then 6/10 during my time of care.
3. Administer supplemental O2 via NC PRN pain and SpO2 <93% during my care.
4. Provide a dim lit, low stimuli environment during my time of care.
5. Teach relaxation technique (deep breathing/guided imagery) during my care.
6. Teach the importance of reporting chest pain immediately during my time of care.

Problem #2: Decreased cardiac output

Patient Goals:

1. Pt will maintain a HR between 60-100bpm and cap refill <3 seconds by end of my care.
2. Pt will have a UO of at least 30ml/hr during my time of care.

Assessments:

- Assess HR and BP, and RR q2h, assess SpO2 q2h, assess cap refill q2h, assess color and temperature of extremities q2h, assess UO q4h.

Interventions (In priority order):

1. Administer O2 2L via NC PRN SpO2 <95% during my time of care.
2. Administer antidysrhythmic medication per MD order.
3. Administer positive inotropic agent (Digoxin) per MD order during my care.
4. Position in semi-fowlers position during my time of care.
5. Provide frequent rest periods in between activities during my care.
6. Maintain quiet, low stimuli environment during my care.

At this time, complete assigned ATI Real Life Simulation

Actual Patient Problems & Goals

** The following should be completed after the ATI simulation.

Problem #1: Acute pain: angina

Patient Goals:

1. R.D. will report 0/10 chest pain by the end of my care. Met ☑ Unmet ☐
2. R.D. will verbalize importance of reporting chest pain immediate during my care. Met ☑ Unmet ☐

Problem #2: Impaired gas exchange; anaphylaxis

Patient Goals:

1. R.D. will have a RR between 12-20 and an SpO2 >95% on 2L NC by end of care. Met ☑ Unmet ☐
2. R.D. will have clear lungs sounds in all lobes bilaterally by end of my care. Met ☑ Unmet ☐

Problem #3: Decreased cardiac output: cardiogenic shock

Patient Goals:

1. R.D. will have a BP WNL (Systolic >90mmHg) and HR 60-100bpm by end of care. Met ✓ Unmet
2. R.D will have skin that is warm to touch and absence of cyanosis by end of care. Met ✓ Unmet

SOAP Notes Based on Priority Problems

Priority Patient Problem #1: Acute pain

Subjective: *This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.*	**Chief Complaint:** chest pain unrelieved by nitroglycerin tablets after shoveling the snow in driveway. **PMH:** HTN, CAD with angina, asthma. Quit smoking tobacco 1 month ago but now chews tobacco. **Allergies**: penicillin, peanuts, sulfa, shellfish, and contrast dye. **Current Medications**: nitroglycerin sublingual tablets, lisinopril, albuterol inhaler.
Objective: *This section is your clinical observations. Include, pertinent vital signs, pertinent labs and diagnostics related to priority problem.*	**Vital Signs**: T: 37.2C, P 104, RR 26, BP 95/56. SpO2 95% on 2L NC. Pain rated 8/10. **Labs:** troponin T: 0.2ng/mL, 0.4, 0.6, and then 0.8- trended upwards over 24 hrs. troponin I: 0.06ng/mL, 0.07, 0.08, and 0.09- trended upwards over 24 hrs. Lactic acid 0.6mmol/L **Diagnostics:** EKG revealed ST elevation and prolonged P waves (indicated STEMI) CXR: no fluid or pneumothorax. No heart enlargement. No rib fractures or tumors. Aorta and aortic arch has calcification and appears intact w/ no dilation of the artery.
Assessment: *Focused assessment on your priority problem.*	Chest pain described as "squeezing tightness" and is unrelieved by nitroglycerin. Pain rated 8/10. HR: 104bpm and BP: 95/56. Stated "I feel dizzy and sick to my stomach". Diaphoretic with RR of 26. Applied EKG leads at bedside- STEMI confirmed.
Plan ***Based on priority problem only** *Include what your plan is for the client. What treatments or medications are needed. You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?*	**Plan:** morphine 2mg IVP q4h for moderate pain, initiate IV access to admin medications and fluids, transfer to cath lab within 90 minutes for a percutaneous coronary intervention (PCI) to open up the left anterior descending coronary artery. Continue to draw serial labs to trend troponin levels. Continuous telemetry monitoring. Titrate oxygen delivery to maintain saturation >96% per NC or nonrebreather mask. Assess VS q15 mins, then q30 mins for the first hour. **Teaching/Resources:** teach the purpose of a PCI, medication compliance, diet modification, and the importance of reporting onset of chest pain immediately.

Priority Patient Problem #2: Impaired gas exchange; anaphylaxis

Subjective: *This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.*	**Chief Complaint:** c/o "running nose, coughing, and feels like I can't breathe". Itching over chest and arms. Revealed allergy to shellfish, indicating an allergy to the IV contrast used in the cath lab.
Objective: *This section is your clinical observations. Include vital signs, pertinent labs and diagnostics related to priority problem.*	**Vital Signs:** HR: 116, RR: 32, BP: 155/98, and SpO2 87% on 100% nonrebreather. **Labs: N/A** **Diagnostics:** Contrast dye used in PCI
Assessment: *Focused assessment on your priority problem.*	Wheezing and intermittent stridor on auscultation. Dyspnea. Skins appears ashen and nail beds are dusky. Pt is anxious.
Plan ***Based on priority problem only** *Include what your plan is for the client. What treatments or medications are needed. You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?*	**Plan:** document allergy and alert the provider contrast dye allergy. Administer 25mg diphenhydramine IV bolus q4h PRN itching and restlessness, administer epinephrine 0.3mg IM PRN q10-15mins, deliver oxygen via nonrebreather until oxygen saturation improves. Monitor VS q5 mins until stable, and then q15 mins x4. **Teaching/Resources:** teach the importance of alerting all health care providers of allergies.

Problem #3: decreased cardiac output; cardiogenic shock

Subjective: ***This section explains the client symptoms. Include a narrative of the patient's complaints/concerns and/or information obtained from secondary sources.***	**Chief Complaint:** cardiogenic shock Nurse Carl is concerned that R.D. is not progressing as he should 2 days post PCI. Occlusion occurred in LAD coronary artery 2 days ago (suspecting left sided heart failure due to infarct over left atrium and ventricle)
Objective: ***This section is your clinical observations. Include vital signs, pertinent labs and diagnostics related to priority problem.***	**Vital Signs:** HR: 58, RR: 8, BP: 64/42 SpO2 92% on 4L NC. **Labs:** **Diagnostics:** PCI finding occlusion in LAD (indicating damage to the left side of the heart)
Assessment: ***Focused assessment on your priority problem.***	Skin is cool and clammy. Pt is agitated. MAP decreased to 54. UO decreased to 48ml/hr. Right femoral pressure dressing is clean and dry. Cardiac rhythm: sinus brady with PVCs. c/o feeling dizzy and diaphoretic.
Plan ***Based on priority problem only** ***Include what your plan is for the client. What treatments or medications are needed. You can include procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?***	**Plan:** alert provider, administer Dobutamine 250mg in 250mL 5% dextrose at initial rate of 2.5mcg/kg/miL and titrated as needed. Administer 0.9% NaCl 1000mL at 250ml/hr, may increase rate to 1000ml over 1 hr if BP <90mmHg. Administer norepinephrine 4mg dextrose 5% 1000Ml at 0.5-1mcg/min (max: 30 mcg/min) if still unstable. Continue to monitor BP, cardiac rate, and rhythm during infusion. **Teaching/Resources**: diet and lifestyle medication, pamphlets provided to reinforce healthy diet choices, dietician consult.

Reflection:

1. Go back to your Preconference Template:
    a. Indicate (circle, star, highlight, etc.) the components of your preconference template that you saw applied to the care of this virtual patient.

2. What was your biggest "take-away" from participating in the care of this patient? How did this impact your nursing practice?

My biggest takeaway from this scenario is the importance of assessing your patient and constantly looking for even the smallest changes in baseline. Mr. Davis was treated so fast because his nurse was able to pick up subtle changes in his baseline. The scenario emphasized looking at the entire picture, not just the admitting diagnosis. Mr. Davis was initially admitted due to a STEMI, but the care provided focused on the allergic reaction to contrast dye and then cardiogenic shock. This has impacted my nursing practice by stressing the importance of good assessment skills and constantly reassessing my patient throughout the course of my care.

Time Allocation: 8 hours