*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

3 layers to the heart – endocardium, myocardium, epicardium
4 valves in the heart prevent backflow of blood
SVC/IVC - RA – tricuspid valve – RV – pulmonary valve – pulmonary artery – lungs (gas exchange) – pulmonary vein – LA – mitral valve – LV – aortic valve – aorta – body, repeat.
Coronary arteries supply oxygen to the heart itself

Pathophysiology of Disease

An occurs because of an abrupt stoppage of blood through a coronary artery w/ a thrombus caused by platelet aggregation
Serum cardiac biomarkers are released into the blood
STEMI – emergent, there is total occlusion which causes an ST elevation
NSTEMI – partial occlusion, no ST elevation
Lack of blood flow causes decreased oxygenation to the heart muscle which leads to ischemia & cell death

NCLEX IV *(7)*: Reduction of Risk

Anticipated Diagnostics

Labs

Troponin, CKMB
Myoglobin
CBC
BMP

Additional Diagnostics

EKG – STEMI vs NSTEMI
Chest x-ray

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

Contributing Risk Factors

Smoking
Diabetes
Obesity
High cholesterol levels
Family history
Poor diet
Poor exercise

Signs and Symptoms

Sever chest pain - heavy, tight, crushing
Chest discomfort
Weakness, fever
N/V, diaphoresis
SOB – increase RR
Indigestion
Changes in mental status
Increase HR & BP

NCLEX IV *(7)*: Reduction of Risk

Possible Therapeutic Procedures

Non-surgical

Bedrest/limit activity
Continual monitoring
Dual antiplatelet

Surgical

Coronary angiography
Thrombolytic therapy
CABAG. PCI

Prevention of Complications

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

Irreversible myocardial cell death – tissue necrosis
Dysrhythmias
Heart failure
Cardiogenic shock

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

Anticipated Medication Management

Morphine
Nitroglycerin
Aspirin
ACE inhibitors
Stool softeners

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

Non-Pharmacologic Care Measures

High/semi-fowlers position
Low stimuli/clam environment
Continuous oxygen
Foley catheter
Tele monitoring

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

What stressors might a patient with this diagnosis be experiencing?

Hospitalization
Things moving quickly
Not being educated
Unknown of what is next

Client/Family Education

List 3 potential teaching topics/areas

• Side effects of nitroglycerin (hypotension, headache)
• Importance of follow up care with cardiologist upon discharge
• S/S that would require the pt. to come back to the emergency department

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

Multidisciplinary Team Involvement

(Which other disciplines do you expect to share in the care of this patient)

Pharmacist
Cardiologist
Nutritionist
CNA
Home health care
PT/OT
Case management
Environmental services

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

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

Problem #1: Decreased cardiac output

Patient Goals:

1. Demonstrates adequate cardiac output as evidence by systolic BP: 90-120, HR: 60-100, RR: 12-20, and SpO2: greater than or equal to 93% on RA during my time of care.
2. Urine output will be greater than or equal to 30mL/hour and will remain alert and oriented x4 during my time of care.

Assessments:

- Cardiac enzymes (troponin)/CBC/electrolytes as soon as possible, continuous SpO2 and HR monitoring, check BP/LOC/RR q5min, I/O and UO q1hr, auscultate lung sounds q15min, check for edema q30min, cap refill q15min, check pulses q10min, continuous EKG monitoring, assess family history/PMH/ETOH or smoking.

Interventions (In priority order):

1. Obtain a STAT 12-lead EKG
2. Draw blood for stat cardiac markers work up, CBC, and CHEM 7
3. Place on continuous ECG monitoring
4. Apply oxygen as ordered
5. Insert a foley catheter as ordered with I/O q1hr
6. Place on bedrest or minimize activity as appropriate and as ordered

Problem #2: Acute pain: chest

Patient Goals:

1. Chest pain will be scored a 0 out of 10 within the first 1-2 hrs of my time of care and will be maintained a 0 during my time of care
2. Vital signs will be within normal limits during my time of care (HR: 60-100, systolic BP: 90-120, RR: 12-20, SpO2: greater than or equal to 93%)

Assessments:

- Assess pain PQRST q5min until stable – then q15min, assess effectiveness of pain interventions before and 30 min after, continuous SpO2 and HR monitoring, RR and BP q5min

Interventions (In priority order):

1. Administer nitroglycerin sublingual or topical as ordered
2. Administer morphine IVP as ordered
3. Apply oxygen vis nasal canula as ordered
4. Maintain HOB in a semi-fowlers position as tolerated
5. Maintain strict bedrest or ordered level of activity as ordered/appropriate
6. Promote a calm, low stimulating environment at all times

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: chest

Patient Goals:

1. RD will achieve and maintain a chest pain of 0 out of 10 during my time of care – **MET**
2. RD will maintain vital signs within normal limits at all times during my time of care (HR: 60-100, systolic BP: 90-120, RR: 12-20, SpO2: greater than or equal to 93%) – **UNMET**

Problem #2: Decreased cardiac output

Patient Goals:

1. RD's urine output will remain above 30mL/hour during my time of care – **MET**
2. RD's systolic BP will remain between 90-120, HP: 60-100 bpm, SpO2 greater than or equal to 93%, skin warm and intact, capillary refill less than 3 seconds during my time of care – **UNMET**

SOAP Notes Based on Priority Problems

Priority Patient Problem #1: Acute pain: chest

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 tightness unrelieved by nitroglycerin **PMH:** HTN, CAD with angina, asthma, quit smoking 1 month ago & occasionally chews tobacco **Allergies:** Penicillin, peanuts, sulfa, shellfish/contrast dye **Current Medications:** Nitroglycerin prn at home, 325mg of aspirin at home
Objective: *This section is your clinical observations. Include, pertinent vital signs, pertinent labs and diagnostics related to priority problem.*	**Vital Signs:** Admission @ 1715 - HR: 96, RR: 28, SpO2: 92% @ 1718 - HR: 98, RR: 24. SpO2: 94% @ 1720 - HR: 104, RR: 24, SpO2: 95% (Admission SpO2 % all on 4L NC) Post PTCA 12/07/XX @ 2100 – HR: 96, RR: 14, SpO2: 98% on 2L NC, BP: 122/66, **Labs:** Troponin T: 0.2 Troponin I: 0.06 Lactic Acid Venous: 0.6 **Diagnostics:** EKG confirms STEMI
Assessment: *Focused assessment on your priority problem.*	On admission, chest pain scored 8 out of 10 and described as chest tightness and stated, "a squeezing feeling that won't go away." RD is alert and oriented x4. Stated "it feels hard to breath." Wife at bedside, informed that RD was outside shoveling snow when the chest pain stated. Nitroglycerin was taken x3 and 325mg of aspirin taken prior to arrival to the ED. Peripheral IV access is obtained. RD also stated feeling nauseous and dizzy. @ 1745: lab values and cardiac markers results shows that there is myocardial cell damage occurring and lactic acid building up which all cause in increase in pain. Post PTCA @ 2100 – pain score 0 out of 10

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:** Due to STEMI confirmation, RD is not getting adequate oxygenation to his heart muscle which is causing ischemia & cell death. That is ultimately what is causing his chest pain so to relieve the occlusion should relieve RD of his chest pain. A cardiac catheterization is ordered. RD has a percutaneous transluminal coronary angioplasty with stent placement in the let anterior descending coronary artery. Oxygen was placed at 4L/min via nasal cannula on admission. 2mg of morphine given q10 min before cardiac catheterization for moderate to severe chest pain – causes vasodilation and decreases myocardial oxygen consumption. Provided a comfortable, low stimulating, calm environment throughout care. RD appeared to be in a comfortable position and the HOB was elevated. **Teaching/Resources:** Taught what a cardiac catheterization and angioplasty procedure involves/what it is/how it will help. RD should follow up with a cardiologist if chest pain occurs again without relief of nitroglycerin. Taught when RD or his wife should call 911 when in the outpatient setting. Also taught to report if any new s/s of chest pain or SOB occur during hospital stay.

Priority Patient Problem #2: Decreased cardiac output

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 tightness unrelieved by nitroglycerin
Objective: *This section is your clinical observations. Include vital signs, pertinent labs and diagnostics related to priority problem.*	**Vital Signs:** Admission @ 1715 - HR: 96, RR: 28, SpO2: 92%, BP: 110/82 @ 1718 - HR: 98, RR: 24, SpO2: 94%, BP: 104/78 @ 1720 - HR: 104, RR: 24, SpO2: 95%, BP: 100/68 (Admission SpO2 % all on 4L NC)

	Post PTCA 12/07/XX @ 2100 – HR: 96, RR: 14, SpO2: 98% on 2L NC, BP: 122/66, arterial BP: 114/70 @ 2120 – HR: 116, RR: 32, SpO2: 87% on non-rebreather mask, arterial BP: 155/98 On ICU 12/08/XX @ 2000 – HR: 64, RR: 8, SpO2: 92% on 4L NC, BP: 64/42 Arterial BP: 66/42 @ 2010 – HR: 58, RR: 12, SpO2: 96% on 4L NC, BP: 78/56 On 12/09/XX @ 1900 – HR: 68, RR: 12, SpO2: 98% on RA, BP: 124/172 **Labs:** Troponin T: 0.2 Troponin I: 0.06 Lactic Acid Venous: 0.6 **Diagnostics:** EKG confirms STEMI
Assessment: *Focused assessment on your priority problem.*	On admission RD's blood pressure was decreasing as his heart rate was increase. RD came in with an elevated RR and was having oxygen saturation percentages in the low 90's while on 4L NC. Nitroglycerin x3 and 325 mg of aspirin were given prior to admission to the ED. RD is alert and oriented x4, urine output was at a zero during admission until 1745 when a foley catheter was placed and 600mL of urine was collected. Post PTCA @ 2100 – urine output still at a zero. RD is believed to be having an allergic reaction after his procedure – this causes his HR and RR to increase.
Plan ***Based on priority problem only** *Include what your plan is for the client. What treatments or medications are needed. You can include*	**Plan:** RD has a PTCA with stenting to open the coronary artery and place a stent to maintain patency of the artery. Due to an allergic reaction, diphenhydramine is administered and is beneficial. RD is believed to go into cardiogenic shock. RD is administered oral

procedures, consults, labs/diagnostics, etc. What nursing interventions are being performed?	potassium due to potassium levels being 3.6 on admission and 3.2 20 minutes later. Potassium then increased to 3.4. In the ICU Rd is stated on a dobutamine drip and IV fluid infusion. Norepinephrine is also administered to increase RD's blood pressure and increase perfusion to the kidneys. **Teaching/Resources:** Taught about modifiable and nonmodifiable risk factors in RD's life. Discussed low sodium diets and exercise changes that can be included in his life in the outpatient setting. Discharge teaching of lisinopril and to report a dry cough

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 take away is that things can really change at any time. At school and over in the hospital cardiac catheterizations and "the cath. lab" are talked about frequently but it seems like nobody realizes what they do and how critical it is. This scenario allowed me to see what it is like for a patient from admission to discharge who needed to go to the catheterization lab. I went to an observation and I didn't really appreciate that experience and what I saw then as to how much I do now after participating in this scenario. Usually we don't get to see patients fully through until discharge so it was pretty interesting to see. This scenario also showed the importance of how much time plays a factor into situations like this. It is extremely valuable to be able to think quickly and calmly but then to act and apply to what is going on. If Nurse Carl didn't realize what was going on, being able to openly communicate with the charge nurse, call the rapid response team, and initiate the doctors' orders effectively – the scenario could of play out very differently.

Time Allocation: 8 hours