N311 Care Plan #4

Lakeview College of Nursing

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Demographics (5 points)

Date of Admission 4/9/2020	Patient Initials R.D.	Age 54	Gender Male
Race/Ethnicity African American	Occupation Working	Marital Status Married	Allergies Penicillin, Peanuts, Sulfa, Contrast Dye and Shellfish
Code Status Full Code	Height 5'6"	Weight 110 kg	

Medical History (5 Points)

Past Medical History: Hypertension, Coronary Artery Disease, and Asthma

Past Surgical History: N/A

Family History: N/A

Social History (tobacco/alcohol/drugs): Stopped smoking about a month ago, no use of alcohol, and no use of recreational drugs.

Admission Assessment

Chief Complaint (2 points): Chest tightness with complaints of not feeling well

History of present Illness (10 points): A pleasant fifty-four year old male came to the hospital via ambulance with complaints of chest pain. He states that the pain is in his chest. The patient says that the pain is constant and isn't intermittent. He says the pain feels like it's squeezing and it's hard to breathe. He also states that he feels dizzy and sick. The patient states his pain is an eight out of ten. The factors that makes his pain worse are doing any kind of activity. The only things that makes his pain any better is lying down and medications.

Primary Diagnosis

Primary Diagnosis on Admission (3 points): MI complications

Secondary Diagnosis (if applicable): Coronary Artery Disease

Pathophysiology of the Disease, APA format (20 points):

An MI is “ACS that occurs when the heart tissue endures prolonged ischemia without recovery.” (Capriotti & Frizzell, pg 352, 2016) Ischemia means there is a period of time where there little to oxygen getting to those cells. After little to no exposure, these cells can die, leaving irreversible damage. (Capriotti & Frizzell, pg 352, 2016) There are two different kinds of MI’s that can be diagnosed. These include STEMI OR NSTEMI, which can be diagnosed through an ECG. With an MI, arteries are usually blocked with atherosclerotic plaque, which limits blood flow through the rest of the arteries and to the myocardium. (Capriotti & Frizzell, pg 352, 2016) There is a possibility for these pieces of plaque to come off the rest of the build-up and block off more blood flow. (Capriotti & Frizzell, pg 352, 2016) There is also a chance where platelets can keep forming at the build-up area and form a clot, in which this is more common with an MI. When someone is experiencing an MI or symptoms similar to it, then they have about sixty minutes to get to the catherization lab. If they don’t, there is a possibility for this to be fatal. Three factors that are important when the determination of an MI include “the location or level of occlusion in the coronary artery, length of time that the coronary artery has been occluded, and the heart’s availability of collateral circulation.” (Capriotti & Frizzell, pg 353, 2016) Knowing these factors will help the doctors know if the heart muscle can make it through the damage. “MI tissue changes are evident within 12 to 24 hours.” (Capriotti & Frizzell, pg 353, 2016)

Common signs and symptoms of MI complications includee: diaphoresis, dyspnea, extreme anxiety, Levine’s sign (fist to chest), pallor, retrosternal crushing chest pain that radiates to shoulder, arm, jaw or back, or weak pulses. (Capriotti & Frizzell, pg 354, 2016) Other

symptoms include: “pressure, tightness, pain or squeezing or aching sensation in your chest or arms that may spread to your neck, jaw or back, nausea, indigestion, heartburn or abdominal pain, cold sweat, fatigue or lightheadedness or sudden dizziness.” (Heart attack- Symptoms and cause, 2018) The patient had dyspnea, showed Levine’s sign, and diaphoresis. He also stated that he was dizzy and felt sick.

There are some diagnostic testing use to confirm an MI and these include and ECG or blood tests. (Heart attack- Diagnosis and treatment, 2018) An ECG measures and records wave lengths of the heart. ECG’s also look at the ST elevation and depression. (Capriotti & Frizzell, pg 354, 2016) This can help indicate if there is any kind of errors within the heart. Blood tests look for specific enzymes like troponin I and CPK-MB. “CPK-MB levels begin to rise within four hours after MI, peak between 18 and 24 hours, and subside over three to four days.” (Capriotti & Frizzell, pg 354, 2016) For troponin I levels, they “rise four to eight hours after onset of chest pains, peak at twelve to sixteen hours, and return to baseline within five to nine days.” (Capriotti & Frizzell, pg 354, 2016) The patient had two ECG’s and had his labs done, which included troponin I levels.

Even though damage cannot be reversible, there are some ways to help treat MI’s. The most important thing to be careful about is to get the blood flow back to the rest of the myocardium. People that think that they are experiencing an MI need to get medical attention right away. If available, the person should take the three doses of nitroglycerin and aspirin. The nitroglycerin will help with the chest pain, and the aspirin is to help thin out the blood so that it doesn’t clot. Oxygen is also needed, because blood is what takes oxygen to the rest of the body, and with the clot, then there isn’t any oxygen being delivered. Thrombolytic agents are used within four hours of the chest pain. (Capriotti & Frizzell, pg 355, 2016) Beta blockers and

unfractionated or low molecular weight heparin can also be used for treatment. If the MI is severe, then they may need an CABG, which is a coronary artery bypass grafting, which helps increase the blood flow to that are of damage and possibly break that barrier. (Capriotti & Frizzell, pg 355, 2016)

Pathophysiology References (2) (APA):

Capriotti, T., & Frizzell J.P., (2016). *Pathophysiology: introductory concepts and clinical perspectives.* (1st ed.). F.A. Davis Company.

Heart attack- Diagnosis and treatment. (2018) Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/heart-attack/diagnosis-treatment/drc-20373112

Heart attack- Symptoms and causes. (2018) Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/heart-attack/symptoms-causes/syc-20373106

Laboratory Data (20 points)
If laboratory data is unavailable, values will be assigned by the clinical instructor

CBC Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason for Abnormal Value
RBC	4.5-6.3	5.2		N/A
Hgb	14-18	15.9		N/A
Hct	41-51	54		Dehydration, which can result from large amounts of salt intake related to him eating out four times a week. (Hematocrit Test: MedlinePlus Lab Test Information, 2017)

Platelets	140-440	220		N/A
WBC	4-10	6		N/A
Neutrophils	2-6.9	Unable to Obtain		N/A
Lymphocytes	0.6-3.4	Unable to Obtain		N/A
Monocytes	0-8	Unable to Obtain		N/A
Eosinophils	0-0.5	Unable to Obtain		N/A
Bands	Unknown	Unable to Obtain		N/A

Chemistry Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab	Normal Range	Admission Value	Today's Value	Reason For Abnormal
Na-	136-145	140		N/A
K+	3.5-5.1	3.6		N/A
Cl-	98-107	104		N/A
CO2	21-31	40		He is in distress, so this would mean the gas exchange is poor, leaving CO2 in the lungs.
Glucose	74-109	122		He stated that he eats out about four times a week, which means his sugar would be increased.
BUN	7-25	18		N/A
Creatinine	0.7-1.2	0.8		N/A
Albumin	3.5-5.2	3.6		N/A
Calcium	8.6-10.3	10.2		N/A
Mag	Unknown	1.6		N/A

Phosphate	Unknown	4.2		N/A
Bilirubin	0.3-1.0	Unable to Obtain		N/A
Alk Phos	40-130	68		N/A

Urinalysis Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Lab Test	Normal Range	Value on Admission	Today's Value	Reason for Abnormal
Color & Clarity	Clear and Yellow	Clear and Yellow		**N/A**
pH	4.5-8	6.8		**N/A**
Specific Gravity	1.000-1.035	1.030		**N/A**
Glucose	None	None		**N/A**
Protein	Negative, but a few of is normal	4		**N/A**
Ketones	None	None		**N/A**
WBC	0-5	2		**N/A**
RBC	0-5	None		**N/A**
Leukoesterase	Negative	Negative		**N/A**

(Urinalysis- Understand the Test & Your Results, 2016)

Cultures Highlight All Abnormal Labs—Explanations must be in complete sentences and contain in-text citations in APA format.

Test	Normal Range	Value on Admission	Today's Value	Explanation of Findings

Urine Culture		Unable to Obtain		**N/A**
Blood Culture		Unable to Obtain		**N/A**
Sputum Culture		Unable to Obtain		**N/A**
Stool Culture		Unable to Obtain		**N/A**

Lab Correlations Reference (APA):

Capriotti, T., & Frizzell J.P., (2016). *Pathophysiology: introductory concepts and clinical perspectives.* (1st ed.). F.A. Davis Company.

Corbett, J. V., & Banks A. D. (2019). *Laboratory tests and diagnostic procedures with nursing diagnoses.* (9th ed.). Pearson.

Hematocrit Test: MedlinePlus Lab Test Information. (2017) Medlineplus.gov. https://medlineplus.gov/lab-tests/hematocrit-test/

Sarah Bush Lincoln Health Center (2020). Reference (lab values). Mattoon, IL.

Urinalysis- Understand the Test & Your Results, (2016) Labtestsonling.org. https://labtestsonline.org/tests/urinalysis

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

12-Lead ECG

Chest X-Ray bedside

MRI of the Chest

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Left Cardiac Catherization with possible percutaneous transluminal coronary angioplasty with possible balloon dilation and stent replacement

ECG

Current Medications (10 points, 2 points per completed med)
5 <u>different</u> medications must be completed

Medications (5 required)

Brand/Generic	Diphenhydramine/ Allerdryl (CAN), etc.	Aspirin/ Ancasal (CAN), etc.	Clopidogrel/ Plavix	Epinephrine / Adrenaline, etc.	Morphine/ Arymo ER, etc.
Dose	25 mg	325 mg	75 mg	0.25 mg (0.1 mg/mL or 1:10,000)	2 mg
Frequency	PRN q 4 hr	Daily 0900	Daily 0900	Stat	PRN q 4 hrs
Route	IV bolus	PO	PO	IV bolus	IV
Classification	<u>Pharmacologic:</u> Antihistamine <u>Therapeutic:</u> Antianaphylactic adjunct, antidyskinetic, antiemetic, antihistamine, antitussive (syrup), antivertigo, sedative-hypnotic	<u>Pharmacologic:</u> Salicylate <u>Therapeutic</u>: NSAID	<u>Pharmacologic</u>: P2Y12 Platelet inhibitor <u>Therapeutic</u>: Platelet aggregation inhibitor	<u>Pharmacologic:</u> Sympathomimetic <u>Therapeutic</u>: Antianaphylactic	<u>Pharmacologic</u>: Opioid <u>Therapeutic</u>: Opioid analgesic
Mechanism of Action	Binds to central and peripheral H1, receptors, competing with histamine for these sites and preventing from reaching its site of action. By blocking	Blocks the activity of cyclooxygenase, the enzyme needed for prostaglandin synthesis. Prostaglandins, important	Binds to adenosine diphosphate (ADP) receptors on the surface of activated platelets. This action blocks ADP, which	Acts on alpha and beta receptors. This nonselective adrenergic agonist stimulates: alpha1	Binds with and activates opioid receptors (mainly mu receptors) in brain and spinal cord to produce analgesia and euphoria.

	histamine, diphenhydramine produces antihistamine effects, inhibiting GI, respiratory, and vascular smooth-muscle contraction; decreasing capillary permeability, which reduces flares, itching, and wheals; and decreasing lacrimal and salivary gland secretions. Diphenhydramine produces antidyskinetic effects, possibly by inhibiting acteylchoine in the CNS. It also produces antitussive effects by directly suppressing the cough center in the medulla oblongata in the brain. Diphenhydramine's antiemetic and antivertigo effects may be related to its ability to bind to CNS muscarinic receptors and depress vestibular	mediators in the inflammatory response, cause local vasodilation with swelling and pain. With blocking of cyclooxygenase and inhibition of prostaglandins, inflammatory symptoms subside. Pain is also relieved because prostaglandins play a role in pain transmission from the periphery to the spinal cord. Aspirin inhibits platelet aggregation by interfering with production of thromboxane A2, a substance that stimulates platelet aggregation. Aspirin acts on the heat-	deactivates nearby glycoprotein IIb/IIIa receptors and prevents fibrinogen from attaching to receptors. With fibrinogen, platelets can't aggregate and form thrombi.	receptors, which contricts arteries and may decrease bronchial secretions, presynaptic alpha2 receptors, which inhibits norepinephrine release by way of negative feedback, postsynaptic alpha2 receptors, which constricts arteries, beta1 receptors, which induces positive chronotropic and inotropic responses, and beta2 receptors, which dilate arteries, relaxes bronchial smooth muscles, increases glycogenolysis, and prevents mast cells	

	stimulation and labyrinthine function. Its sedative effects are related to its CNS depressant action.	regulating center in the hypothalamus and causes peripheral vasodilation, diaphoresis, and heat loss.		from secreting histamine and other substances, thus reversing bronchoconstriction and edema.	
Reason Client Taking	For itching or restlessness	To reduce risk of MI in patients with previous MI or unstable angina.	To reduce thrombotic events, such as MI and stroke, in patients with atherosclerosis documented by recent MI, peripheral artery disease, or stroke	To provide emergency treatment of allergic reactions (Type 1), including anaphylaxis to allergen immunotherapy, biting and stinging insects, diagnostic testing substances, drugs, foods, and other allergens, as well as exercise-induced or idiopathic anaphylaxis.	For moderate pain
Contraindications (2)	Hypersensitivity to diphenhydramine, similar antihistamines, or their components Use in newborns or premature infants	Active bleeding or coagulation disorders Current or recent GI bleed or ulcers	Active pathological bleeding, including peptic ulcer and intracranial hemorrhage Hypersensitivity to clopidogrel or its components	Cerebral arteriosclerosis, coronary insufficiency, dilated cardiomyopathy, general anesthesia with	Acute or severe bronchial asthma in an unmonitored setting or in the absence of resuscitative equipment Hypersensitivity to montelukast

				halogenated hydrocarbon or cyclopropane Hypersensitivity to epinephrine or its components	sodium or any of its components
Side Effects/Adverse Reactions (2)	Drowsiness Thickened bronchial secretions	Stomach pain Dizziness	Fatigue Chest pain	Anxiety Insomnia	Agitation Light-headedness

(Jones & Bartlett Learning, 2020)

Medications Reference (APA):

Jones & Bartlett Learning (2020), *2020 nurse's drug handbook* (19th ed.). Jones & Bartlett Learning.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	 Alert and oriented to time, place and person X3 In distress Well groomed and well kept
INTEGUMENTARY: **Skin color:**	 Ashy

Character: **Temperature:** **Turgor:** **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** **Drains present: Y☐ N ☒** **Type:**	Dry to touch Warm Good; Not tenting; Less than 3 secs. None None Patient has vascular closure device at the right groin puncture site. Dressing clean and dry with no bleeding or hematoma noted, until about 2205, then his dressing was saturated with bright red draining and a 3 inch hematoma. Dressings were changed and assessed. Thirty minutes later, the bleeding stopped and pressure dressing applied. Hematoma is now 6 inches in diameter. Braden Score is 19-Mild Risk N/A
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	 Symmetrical and Lymph nodes non-palpable Pearly grey tympanic membrane PERRLA and does wear glasses No turbinates, clear sinuses, no deviated septum, no polyps No decay and in good condition Patient has a Right neck CVP catheter with opaque dressing, scant amount of red drainage around insertion site.
CARDIOVASCULAR: **Heart sounds:** **S1, S2, S3, S4, murmur etc.** **Cardiac rhythm (if applicable):** **Peripheral Pulses:** **Capillary refill:** **Neck Vein Distention: Y ☐ N ☒** **Edema Y ☐ N ☒** **Location of Edema:**	S1 and S2 heard Sinus Rhythm with occasional premature ventricular contraction Strong and equal pulses Less than 3 seconds Capillary refill N/A
RESPIRATORY: **Accessory muscle use: Y☐ N ☒** **Breath Sounds: Location, character**	 Respirations are above normal, even and labored, symmetrical, wheezes and intermittent stridor heard on auscultation
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:**	 Regular Diet NPO 5’6”

Weight:	110 kg
Auscultation Bowel sounds:	Normal in all four quadrants
Last BM:	4/8/2020
Palpation: Pain, Mass etc.:	No pain
Inspection:	
Distention:	N/A
Incisions:	N/A
Scars:	N/A
Drains:	N/A
Wounds:	N/A
Ostomy: Y ☐ N ☒	N/A
Nasogastric: Y ☐ N ☒	
Size:	
Feeding tubes/PEG tube Y ☐ N ☒	N/A
Type:	
	N/A
GENITOURINARY:	
Color:	Yellow
Character:	Clear
Quantity of urine:	Urinated twice with 250 mL
Pain with urination: Y ☐ N ☒	
Dialysis: Y ☐ N ☒	
Inspection of genitals:	Normal
Catheter: Y ☒ N ☐	
Type:	Indwelling Urinary Catheter
Size:	14 (not stated in clinical)
MUSCULOSKELETAL:	
Neurovascular status:	
ROM:	Good and MAEW
Supportive devices:	N/A
Strength:	Strength in both arms and legs
ADL Assistance: Y☐ N ☒	
Fall Risk: Y ☒ N☐	
Fall Score:	40- Moderate Risk
Activity/Mobility Status:	
Independent (up ad lib) ☐	Independent
Needs assistance with equipment ☐	Does not need assistance with equipment
Needs support to stand and walk ☐	Does not need support to stand or walk
NEUROLOGICAL:	
MAEW: Y ☒ N☐	
PERLA: Y ☒ N☐	
Strength Equal: Y ☒ N ☐ if no -	
Legs ☐ Arms ☐ Both ☒	
Orientation:	

Mental Status: **Speech:** **Sensory:** **LOC:**	X3 Alert and awake Clear No impairment
PSYCHOSOCIAL/CULTURAL: **Coping method(s):** **Developmental level:** **Religion & what it means to pt.:** **Personal/Family Data (Think about home environment, family structure, and available family support):**	 He has his wife Mature for age No known religion He lives with his wife, and she was with him the while he was at the hospital

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
1725	104	96/56 mmHg	26 per minute	99.0 F	94% with 4 L/ min nasal cannula

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1725	Numeric Scale 0-10	Chest	8/10	Squeezing, tightness, hard to breathe, makes him dizzy and feels sick	Given nitroglycerin and aspirin Adjusted his position in bed

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
125 mL IV 250 mL IV 100 mL PO	175 mL urine 75 mL urine Total: 250 mL

2000 mL NaCl 12 mL NaCl 12 mL NaCl Total: 2499 mL	

Nursing Diagnosis (15 points)
Must be NANDA approved nursing diagnosis

Nursing Diagnosis • Include full nursing diagnosis with "related to" and "as evidenced by" components	**Rational** • Explain why the nursing diagnosis was chosen	**Intervention (2 per dx)**	**Evaluation** • How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.
1. **Decreased Peripheral Tissue Perfusion**	Related to MI with decreased arterial flow to the myocardium as evidenced by oxygen levels dropping to 87% without nasal cannula.	1. Administer medications like antiplatelet agents, anticoagulants, thrombolytics, blood viscosity, lipid-lowering agents, or antihypertensive agents 2. Monitor BP. Report to the health care provider any	1. Goal Met. Medications were administered around the clock. The medications were altered depending on how he reacted to them. For example, the nurse gave him diphenhydramine when he had an allergic

		significant increase or decrease greater than 15-20 mmHg, or as directed.	reaction to the contrast dye. 2. Goal Met. The nurse redid vitals every 15 minutes to ensure he was remaining stable. His BP kept decreasing, until norepinephrine was ordered by his doctor and was administered.
3. Acute Pain	Related to an MI as evidenced by diaphoresis, complaints of chest tightness, feeling sick, and showing the Levine's sign.	**1.** Administer pain medication as prescribed. **2.** Teach the patient to rest when claudication (severe, cramping pain) occurs. If claudication occurs at rest, encourage the patient to position the legs so that they are dependent, and ensure	1. Goal Met. The patient was given Morphine and said the medication had helped decrease his pain level. 2. Goal Met. The patient was instructed to stay lying flat for a total of two hours after his procedure and to keep his legs flat as well. He listened and acknowledged the

		warmth with socks and blankets, as appropriate.	instructions and did just that.

(Swearingen & Wright, 2019)

Other References (APA):

Swearingen, P. L., & Wright, J. D., (2019) *All-in-one nursing care planning resource: medical-surgical, pediatric, maternity, and psychiatric-mental health.* (5th ed.). Elsevier.

Concept Map (20 Points)

Subjective Data

Patient states the tightness of his chest started about 1700 on 4/9/2020. He states the pain is in his chest. The pain is constant and isn't intermittent. He says the pain feels like it's squeezing and it's hard to breathe. He also states that he feels dizzy and sick. The patient states his pain is an eight out of ten. The factors that makes his pain worse are doing any kind of activity. The only things that makes his pain any better is lying down and medications. Before arrival, he took three nitroglycerins and an aspirin.

Nursing Diagnosis/Outcomes

1. Decreased Peripheral Tissue Perfusion related to an MI as evidenced by oxygen levels dropping to 87% without nasal cannula.
   a. Goal Met. Medications were administered around the clock. The medications were altered depending on how he reacted to them. For example, the nurse gave him diphenhydramine when he had an allergic reaction to the contrast dye.
   b. Goal Met. The nurse redid vital every 15 minutes to ensure he was remaining stable. His BP kept decreasing, until norepinephrine was ordered by his doctor and administered.
2. Acute Pain related to MI as evidenced by diaphoresis, complaints of chest tightness, feeling sick, and showing Levine's sign.
   a. Goal Met. The patient was given Morphine and said the medication had helped decrease his pain level.

Objective Data

Vitals:
BP: 96/56 mmHg
His BP is low
RR: 26 per minute
His respiratory rate is high
Temp: 99.0 F
Sp02%: 94
Pulse: 104
His pulse is a little high
His labs read high amounts of Hct, CO2 and glucose. This means that he eats out too often, is in distress and is dehydrated related to large amounts of salt intake.
12-Lead ECG, Chest X-Ray bedside, MRI of the Chest, Left Cardiac Catherization with possible percutaneous transluminal coronary angioplasty with possible balloon dilation and stent replacement, and ECG were used to diagnose the MI.

Patient Information

A fifty-four year old man with a history of coronary artery disease, asthma and hypertension came into the hospital via ambulance. He was admitted for complaints of tightness of the chest, feeling sick and dizzy. He had stopped smoking about a month ago and has no history of drinking alcohol or using recreational drugs.

Nursing Interventions

1. Administer medications like antiplatelet agents, anticoagulants, thrombolytics, blood viscosity, lipid-lowering agents, or antihypertensive agents
2. Monitor BP. Report to the health care provider any significant increase or decrease greater than 15-20 mmHg, or as directed.
3. Administer pain medication as prescribed.
4. Teach the patient to rest when claudication (severe, cramping pain) occurs. If claudication occurs at rest, encourage the patient to position the legs so

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