N311 Care Plan # 3 (MI Scenario)

Lakeview College of Nursing

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N311 Care Plan

Date of Admission 12/07/xx	**Patient Initials** R. D.	**Age:** 54 **DOB:** 11/15/xx	**Gender** Male
Race/Ethnicity African American	**Occupation** Retired	**Marital Status** Married	**Allergies** Penicillin, Peanuts, Sulfa, Shellfish, Contrast Dye
Code Status DNR-No CPR	**Height** 66in	**Weight** 242 lbs.	

Demographics (5 points)

Medical History (5 Points)

Past Medical History:

- Hypertension
- CAD w/ angina
- Asthma
- Left Ventricular Damage

Past Surgical History:

- Stent Placement (Left anterior descending coronary artery)

Family History:

- Unknown

Social History (tobacco/alcohol/drugs):

- Stopped smoking 1 month ago
- Occasionally chewing tobacco

Admission Assessment

Chief Complaint (2 points):

- Angina (Tightness of the chest)

History of present Illness (10 points):

- 54 y/o African American male is brought into ED by wife, and c/o tightness and chest pain. Prior to being brought into the ED the pt. was shoveling snow on a cold winter day, started feeling chest pain and stated to wife, “feeling chest pain”. At home pt. was given nitro, which resulted in unrelieved pain. Last nitro taken was at 1710 before coming to ED. Patient has a Hx of CAD w/ angina, Hypertension, asthma. Vital signs are as follows: T- 99.0 F, P-104, R-26, BP- 96/56, O2%- 94% 4 L/min via Nasal Canula, pain rated- 8.

Primary Diagnosis

Primary Diagnosis on Admission (3 points):

- ST elevation Myocardial Infraction (Of Coronary Artery)

Secondary Diagnosis (if applicable):

- Allergic reaction
- Hematoma
- Development

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

Myocardial Infarction of Coronary Artery, AV block, Stent placement: A myocardial Infraction is a heart attack, that happens when there is a blockage that disrupts the blood flow through the heart. The usual cause of sudden blockage in a coronary artery is the formation of a blood clot (thrombus). The blood clot typically forms inside a coronary artery that already has been narrowed by atherosclerosis, a condition in which fatty deposits (plaques) build up along the inside walls of blood vessels. Slow blood flow in a coronary artery can happen when the heart is beating very fast or the person has low blood pressure. If the demand for oxygen is greater than the supply, a heart attack can happen without formation of a blood clot. People with atherosclerosis are also more likely to have this reason for a heart attack. Each coronary artery supplies blood to a specific part of the heart's muscular wall, so a blocked artery causes pain and malfunction in the area it supplies. Depending on the location and amount of heart muscle involved, this malfunction can seriously interfere with the heart's ability to pump blood. Also, some of the coronary arteries supply areas of the heart that regulate heartbeat, so a blockage sometimes causes potentially fatal abnormal heartbeats, called cardiac arrhythmias (***). The most common symptom of a heart attack is chest pain, usually described as crushing, squeezing, pressing, heavy, or occasionally, stabbing or burning. Chest pain tends to be focused either in the center of the chest or just below the center of the rib cage, and it can spread to the arms, abdomen, neck, lower jaw or neck. Other symptoms can include sudden weakness, sweating, nausea, vomiting, breathlessness, or lightheadedness. Sometimes, when a

heart attack causes burning chest pain, nausea and vomiting, a patient may mistake his or her heart symptoms for indigestion. Diagnosis includes a focus assessment of past, present, and family history. It also includes: ECG, Cardiac biomarkers, Echo, chest x-ray, stress test, total lipid panel. Prevention to help prevent a MI include: Exercise regularly, eating healthy, maintain a healthy weight, not using tobacco, controlling BP, and lowering LDL cholesterol. Risk factors include: Family Hx, increasing age, low high-density diet, diabetes, hx of smoking, obesity, male gender. My patient had a MI due to the risk factors of; his gender and race being an African American male, previous smoker, history of CAD, no exercise, uncontrolled BP and doesn't maintain a healthy weight as evidence by an unhealthy diet.

Pathophysiology References (2) (APA):

- Harvard Health Publishing. (2019, February). Heart Attack (Myocardial Infarction). Retrieved from https://www.health.harvard.edu/a_to_z/heart-attack-myocardial-infarction-a-to-z

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	3.90-4.98	**5.2**		**Recent STENT procedure; body healing and over producing RBC.**
Hgb	12.0-15.5	**15.9**		**Recent STENT procedure; body healing and over producing RBC**
Hct	35-45	**54%**		**Recent STENT procedure; body healing and over producing RBC**
Platelets	140-400	**220,000**		**Recent STENT procedure; body healing and over producing RBC**
WBC	4.0-9.0	6,000		
Neutrophils	40-70	---		
Lymphocytes	10-20	---		
Monocytes	5	---		
Eosinophils	1-4	---		
Bands	??	---		

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-	135-145	140		
K+	3.5-5.1	3.6		
Cl-	98—107	104		
CO2	22-29	24		
Glucose	70-99	**122**		**Stress, Recent procedure, Active bleeding from hematoma, NPO**
BUN	6-20	18		
Creatinine	0.50-1.00	0.8		
Albumin	3.5-5.2	3.6		
Calcium	8.4-10.5	10.2		
Mag	1.7-3.4	**1.6**		**Pt. is on a NPO diet; Malnutrition**
Phosphate	2.5-4.5	4.2		
Bilirubin	0.0-1.2	0.8		
Alk Phos	??	68		

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 yellow	Clear, yellow, aromatic		
pH	5-9	6.8		
Specific Gravity	1-1.060	1.030		

Glucose	<20	---		
Protein	<20	4 mg/dL		
Ketones	<3	---		
WBC	??	2		
RBC	??	---		
Leukoesterase	??	negative		

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	Normal	Normal	Normal	
Blood Culture	Normal			
Sputum Culture	Normal			
Stool Culture	Normal			

Lab Correlations Reference (APA):

- Nursing diagnosis list on Taylor's book 9th edition, page 369, Chapter 15 Diagnosing
- Pagana, K. D., & Pagana, T. J. (2014). *Mosbys manual of diagnostic and laboratory tests*. St. Louis, MO: Elsevier Mosby.

Diagnostic Imaging

All Other Diagnostic Tests (10 points):

- (12/07/xx @ 1750) **Chest X-ray**: Portable chest x-ray at the bedside demonstrates no fluid or pneumothorax. Heart is situated in the anterior chest under the sternum with no enlarged heart shadows. No rib fractures or tumors. The aorta and aortic arch have calcification and appears intact with no dilation of the artery.
- (12/07/xx @ 2000) **Percutaneous Coronary Angioplasty (PTCA) with stent placement in the left anterior descending coronary artery. No complication.**

- (12/07/xx @1745) Cardiac Enzymes
    - **Creatine Kinase (CK):** 0mEq/L
    - **Troponin T:** 0.2 ng/mL
    - **Troponin I:** 0.06 ng/mL
    - **Lactic Acid Venous:** 0.6 mmol/L
- (12/07/xx @1745) Coagulation Panel
    - **Activated Partial Thromboplastin Time (aPTT):** 34 seconds
    - **Prothrombin Time (PT):** 12 seconds
    - **International Normalized Ratio (INR):** 0.9
- (12/07/xx @1745) Arterial Blood Gases
    - **pH:** 7.35
    - **PaO_2:** 88mm Hg
    - **$PaCO_2$:** 40mm Hg
    - **HCO_{3-}:** 26mEq/L
    - **Base Excess:** 0 mEq/L
    - **SaO_2:** 95%

Current Medications (10 points, 2 points per completed med)

5 different medications must be completed

Brand/Generic	**Morphine**	**Aspirin**	**Lisinopril**	**Clopidogrel** (Plavix)	**Diphenhydramine** (Benadryl)
Dose	2 mg	325 mg	10 mg	75 mg	25 mg
Frequency	PRN Q4	Daily	Daily	daily	PRN Q4
Route	IV push	PO	PO	PO	IV bolus
Classification	Opioid analgesic	NSAID	Antihypertensive	Platelet aggregation inhibitor	Anti-anaphylactic , Antihistamine
Mechanism of	Binds with and	Blocks the	Blocks	Binds to ADP	Prevents histamine

Action	activates opioid receptors in brain and spinal cord to produce analgesia	activity of cyclooxygenase the enzyme needed for prostaglandin synthesis. Prostaglandins are needed in inflammatory response, so this relieves pain	binding of angiotensin II to receptor sites in tissues. The inhibiting effects of angiotensin II lowers blood pressure	receptors on the surface of activated platelets. This blocks the action of ADP which deactivates nearby glycoprotein receptors preventing fibrinogen from attaching o receptors, W/O fibrinogen platelets can't aggregate and form thrombi (clot)	from reaching site of actions, inhibiting GI, respiratory, and smooth muscle contraction
Reason Client Taking	Chest pain	Myocardial Infarction	Hypertension	To reduce thrombotic event (MI)	Itching or restlessness
Contraindications (2)	*Acute or severe asthma in unmonitored setting *Paralytic ileus	*Bleeding *Hypersensitive to NSAIDS	*Aliskiren use in diabetics *Other ACE inhibitors	*Active pathological bleeding *Intracranial hemorrhage	*Breastfeeding *Hypersensitivity to antihistamines
Side Effects/Adverse Reactions (2)	*Seizures *Hypotension *Shock	*Bleeding *CNS depression	*CVA *Hypotension *MI	*Bleeding *Acute liver failure *Hypotension	*Arrythmias *Thrombocytopenia

Medications (5 required)

Medications Reference (APA):

Jones and Bartlett Learning. 2020 Nurse's Drug Handbook. 19th ed., Jones & Bartlett Learning, 2020.

Assessment

Physical Exam (18 points)

GENERAL: **Alertness:** **Orientation:** **Distress:** **Overall appearance:**	• **A&O x3** • **Responding to verbal commands** • **Respiratory distress** • **Clean Hygiene**
INTEGUMENTARY: **Skin color:** **Character:** **Temperature:**	• **Skin normal (brown)** • **Ashen, No edema present** • **Warm**

Turgor: **Rashes:** **Bruises:** **Wounds:** . **Braden Score:** 17 No Risk **Drains present: Y☒ N ☐** **Type:**	• **Skin turgor=** 2+ • **During allergic reaction skin became ashy/itchy, nail beds ducky, Sweating hematoma development at groin site. Pressure applied w/ gauze at puncture site. Gauze is saturated w. bright red blood, Bleeding stopped after pressure applied.** • **Left stent placement in left anterior descending coronary artery; Central venous catheter; Arterial line; Indwelling Cather**
HEENT: **Head/Neck:** **Ears:** **Eyes:** **Nose:** **Teeth:**	• **Head/Neck symmetrical** • **No evident hearing loss - No hearing aids** • **Glasses shown in scenario (unknown vision acuity)** • **Nose is symmetrical, no deviation** • **No dentures present, no missing teeth of deformities**
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:**	• **Irregular heart rhythm** • **Telemetry monitoring shows RSR with PVC's** • **(During Allergic reaction) Tachycardia with PVC's. (After reaction treated) Returned to RSR with PVC's** • **Peripheral Pulses: Normal felt at all pulse points.** • **Cap refill brisk (< 3 sec); dusky nail beds** • **No edema**
RESPIRATORY: **Accessory muscle use: Y☒ N ☐** **Breath Sounds: Location, character**	• **Resp. labored w/ Accessory muscle used with SOB** • **Wheezing and intermittent stridor heard on auscultation** • **Allergic reaction to shellfish caused resp. distress**
GASTROINTESTINAL: **Diet at home:** **Current Diet** **Height:** **Weight:** **Auscultation Bowel sounds:** **Last BM:** **Palpation: Pain, Mass etc.:** **Inspection:** **Distention:** **Incisions:**	• **Regular** • **NPO** • **5'6"** • **242 lbs.** • **BM:** Unknown • **Bowel sounds present/Tympany to percussion in all x4 quadrants** • **Palpitation: No tenderness/masses/guarding** • **Drains: Indwelling catheter (placed**

Scars: **Drains:** **Wounds:** **Ostomy: Y ☐ N ☒** **Nasogastric: Y ☐ N ☒** **Size:** **Feeding tubes/PEG tube Y ☐ N ☒** **Type:**	**after cath lab)**
GENITOURINARY: **Color:** **Character:** **Quantity of urine:** **Pain with urination: Y ☐ N ☒** **Dialysis: Y ☐ N ☒** **Inspection of genitals:** **Catheter: Y ☒ N ☐** **Type:** **Size:**	• **Clear/ yellow** • **Total out-825** • **Indwelling Urinary Catheter**
MUSCULOSKELETAL: **Neurovascular status:** **ROM:** **Supportive devices:** **Strength:** **ADL Assistance: Y☐ N ☒** **Fall Risk: Y ☒ N☐** **Fall Score:** 9 Moderate (Sedative,Foley,IV) **Activity/Mobility Status:** BR **Independent (up ad lib):** (Post cath) elevate HOB 10 degrees for 2 hr and ab lib there after **Needs assistance with equipment:** n/a **Needs support to stand and walk:** n/a	• **Normal ROM in all extremities** • **Strength in all extremities** • **(After Cath Lab) HOB lay flat to keep right leg straight for 12hr until 0900** • **(During resp. distress) BR ordered w/ HOB at 10 degrees.**
NEUROLOGICAL: **MAEW: Y ☒ N☐** **PERLA: Y ☒ N☐** **Strength Equal: Y ☒ N ☐ if no - Legs ☐ Arms ☐ Both ☒** **Orientation:** A&O x3 **Mental Status:** Mature, No confusion **Speech:** Clear **Sensory:** No Sensory Deficits **LOC:** Alert to time, location, and self	****Filled out on other side****

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):**	• **Pt. and wife were educated on healthy eating habits and determined a better plan of action than the current** • **No coping methods evident. Pt vocalized about new symptoms which aided in early response of allergic reaction**

Vital Signs, 1 set (5 points)

Time	Pulse	B/P	Resp Rate	Temp	Oxygen
2100	**96bpm**	**112/66**	**14**	**96.8 F oral**	**98% 2L/min** **Nasal Cannula**

Pain Assessment, 1 set (5 points)

Time	Scale	Location	Severity	Characteristics	Interventions
1722	**Numeric 0-10**	**Chest**	**8/10**	**Tightness in chest**	**O2 provided, Nitro, Aspirin, keeping pt. comfortable and re-assessing.**

Intake and Output (2 points)

Intake (in mL)	Output (in mL)
NPO **Total: (12/08) 2050mL**	**Total: (12/08) 1100mL**

Nursing Diagnosis (15 points)

Must be NANDA approved nursing diagnosis

Nursing Diagnosis	Rational	Intervention (2 per dx)	Evaluation
• Include full nursing diagnosis with "related to" and "as evidenced by" components	• Explain why the nursing diagnosis was chosen		• How did the patient/family respond to the nurse's actions? • Client response, status of goals and outcomes, modifications to plan.

1. **Acute pain related to MI as evidence by tightness in chest**	**Pt. presented w/ chest pain which later showed through tests that the pt. was having a STEMI w/ AV blockage. Which caused inadequate perfusion to the heart. Cause chest pain is due to the inadequate perfusion to the heart, from the clogged arteries. With the lack to O2 and heart overload**	1. **Provide O2 on the pt. and titrate for O2 to be above 95% via nasal canula/mask** 2. **Re-asses vitals Q 15 minutes and monitor heart rhythm and pain. Ensuring patient is stable**	**Intervention #1 Goal met, O2 was administered and titrated thought RN shift. w/ vitals monitored frequently. Pt. became comfortable and anxiety lowered as well as SOB. Cardiac output increased, keeping BP at level needing to supply O2 rich blood.**
2.Impaired Gas exchange related to MI as evidenced by SOB, pt. stating, "I can't breathe" and Decreased cardiac output	**The pt. status dropped after stating itchiness and runny nose. After, pt. airway started to close.**	1. **Provide O2 on the pt. and titrate for O2 to be above 95% Via nasal cannula or nonbreather mask** 2. **Administer medications as ordered by provider. Monitor respiratory status, Vitals, Aucillary muscle, cough, breathing**	**Goal met, O2 administered via nonrebreather at 15L/ min after respiratory status declined. Applied non-breather mask to increase O2 stats. On Nasal cannula pt was at 85%, switching to non-breather mask to deliver O2 more controlled. Pt was able to stabilize and stay at or above 90% O2 stats and was able to further go back to nasal cannula. Medication administered and Resp., vitals, and assessment of pt. was evaluated frequently is expressing signs and symptoms of increased O2 perfusion by supply and production of RBC. Pain improved due to increased cardiac output.**

Other References (APA):

Carpenito, L. J. (2017). *Handbook of nursing diagnosis*. Philadelphia, PA: Wolters Kluwer.

Concept Map (20 Points):

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Pt. presented c/o chest pain, tightness in chest. Not relived by Nitro or aspirin. -Dx w/ STEMI, av heart block, receives angioplasty and stent.

Pt. states, "itching and nasal congestion, SOB, tongue swelling"- allergic reaction to shellfish and contrast dye.

Pt states "I feel like I am sitting in a puddle of water"- hematoma is present,

Nursing Diagnosis/Outcomes

1. **Decreased cardiac output related to MI as evidenced by Altered rhythm and chest pain**
   a. Goal met, O2 was administered and titrated thought RN shift. w/ vitals monitored frequently. Pt. became comfortable and anxiety lowered as well as SOB.
2. **Impaired Gas exchange related to Anaphylactic shock as evidenced by SOB, tongue swelling, itching, dyspnea, O2 saturation dropping.**
   a. Goal met, O2 administered via nonrebreather at 15L/min after respiratory status declined. Medication administered and Resp., vitals, and assessment of pt. was evaluated frequently. Pt. improved and switched back to Nasal canula.

Objective Data

Vitals:
BP: 112/66
Pulse: 96bpm
Resp: 14
Temp: 96.8 F oral
O2: 98% 2L/min, Nasal Cannula
Pain: 8/10 Due to chest tightness
Braden score: 17
Fall Risk: 9

- **Resp. labored w/ Accessory muscle used with SOB; Wheezing and intermittent**

Patient Information

54 y/o African American male comes into ED c/o tightness and chest pain, which is unrelieved by taking prescribed nitro, Having a Hx of CAD. Pt. receives angioplasty and stent, treated for anaphylaxis, hematoma, and received

Nursing Interventions

1. **Provide O2 on the pt. and titrate for O2 to be above 95%**
2. **Re-asses vitals Q 15 minutes and monitor heart rhythm and pain. Ensuring patient is stable**
3. **Provide O2 to ensure adequate gas exchange.**
4. **Administer medications as ordered by provider. Monitor respiratory status, Vitals, Auxiliary muscle, cough, breathing**
5. **Education on dietary and health choices.**

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