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Firelands Regional Medical Center School of Nursing
AMSN 2023
Comprehensive Simulation: STEMI scenario

Patient: Nicky Heartbreaker DOB: 1/1/59

- Nicky is a 64-year old male who developed diaphoresis and mid-sternal chest pain at 10/10 this morning while at work. He drove himself to the local Emergency Department.
- Past medical history: HTN, Hyperlipidemia, DM Type II, Smokes 1 ppd; Noncompliance; Family History CAD; Erectile dysfunction.
- Social history: Divorced, 2 adult children, 3 grandchildren, rents apartment, factory laborer
- **Home medications:** (patient has not refilled the first three medications and has not taken since beginning of April)
 - Atorvastatin 20 mg po QHS
 - Metformin 500 mg PO BID
 - Enalapril 10 mg PO BID
 - Sildenafil 25 mg PO Daily PRN
- Weight: 90kg
- Allergies: Contrast Dye

Emergency Department

- Vital Signs: T- 98⁰ F (oral); HR-55; RR-18; BP 80/60; SpO2-92%. Weight: 90kg
- A 12-Lead ECG was done which showed ST elevation in Leads II, III, and aVF. He was started on O2 2L per NC, and 2- 18-gauge IV's were started. Fast patches placed.

Diagnosis: _____ inferior _____ STEMI

- He was given the following: four- ASA 81 mg tablets (chewed), three- 0.4 mg SL NTG (has not taken Sildenafil within last 24 hours), Brilinta loading dose (180 mg), Morphine Sulfate 4 mg IV, a Heparin bolus and started on a drip per protocol, and an IV bolus of 2,000 mL of NS.
- The time between his arrival to the Emergency Department and arrival to the Cardiac Cath Lab was 30 minutes.

Cardiac Catheterization Lab

- Procedure: Left Heart Catheterization with PTCA to: right coronary artery
- Right radial: TRB band bruising noted
- 2 drug eluting stents
- Medications:
 - o Versed 2 mg IV
 - o Fentanyl 50 mcg IV
 - o Bivalirudin (Angiomax): Supply 250 mg in 50 mL NS
 - Bolus: 0.75 mg/kg (90 kg X 0.75 mg = 67.5 mg/250 mg X 50 = 13.5 mL)
 - Drip: 1.75 mg/kg/hr (90 X 1.75= 157.5 mg/hr/250 mg X 50= 31.5 mL/hr)
 - o Verapamil 5 mg IV
 - o Diphenhydramine 50 mg IV
 - o Solumedrol 125 mg IV
 - o Famotidine 20 mg IV
- TRB band placed
- Stent card placed in chart

4C

- He has just arrived to 4C from the Cath Lab.
- Vital signs: T- 98.9^O F (oral); BP 108/56; HR- 118; RR- 24; SpO2- 91% on 2L NC
- You performed a 12-Lead ECG with the following findings: atrial fibrillation
- Present condition: Chest pain free currently; complaint of fatigue & dyspnea; crackles present; low back pain 3/10; EF 35%
- Ecchymosis at right radial site; TR Band in place
- Medications: All but the IV fluid are medications the patient will also be prescribed at discharge
 - o ASA 81 mg PO Daily
 - o Brilinta 90 mg PO BID
 - o Atorvastatin 40 mg PO QHS
 - o Metformin 500 mg PO BID- Hold for 48 hours
 - o Enalapril 10 mg PO BID
 - o Acetaminophen 500 mg PO Q 4-6 hours PRN non-cardiac pain
 - o D5 0.45 NS at 80 mL/hr- slowed this due to probable HF and fluid overload

1-hour post simulation assignment and survey: due April 24, 2023 at 1600

Discharge Education: A copy of this document is on Edvance360 under Simulation Resources- use this electronic version to complete and submit the assignment.

Firelands Regional Medical Center School of Nursing
 AMSN 2023: Comprehensive Simulation

Discharge Education (1H-Sim)



Directions: For **each** education topic, include specific information you would provide to Nicky Heartbreaker at discharge. The information must be specific to the patient, scenario, social determinants of health concerns, and be thorough and detailed (this will not be a brief list). Include handouts, video links, pictures, etc. that you could present for **at least 4** of the education topics. This assignment is due in the Comprehensive Simulation dropbox on Edvance360 at **1600 on April 24, 2023 (along with the simulation survey)**. If the assignment is late or not completed in full it will result in 1-hour missed simulation time, and will have to be completed prior to beginning the final exam on 4/28/2023 at 0800.

Topic	Education
Diagnosis	Nicky Heartbreaker came in with mid-sternal chest pain 10/10. Diagnosed with an inferior STEMI myocardial infarction. I would educate the patient that he had an inferior ST segment elevation myocardial infarction. This meaning that his right coronary artery had a blockage and that the coronary artery was not infusing enough blood to the heart muscle and that was causing it not to get enough blood and causing the 10/10 chest pain he was experiencing. If he did not come to the hospital when he did the heart could be more damaged and the heart could become infarcted, meaning dead/damaged from not getting enough blood supply.
Medications	One thing I would educate is medication compliance with this patient. I say this because his atorvastatin which helps lower blood pressure, but lower lipids could have helped keep the blockage from occluding and lowering blood pressure. The enalapril is also very important to educate on because it lowers the blood pressure and workload of the heart. A healthy blood pressure is important to prevent heart attacks and heart failure. I would also educate if the patient were to go home on Nitroglycerin, that he not takes that nitroglycerin if he had taken his PRN medication of Sildenafil.
Follow-up/ Compliance	I would educate the patient how important it is to be compliant with their medication because it could prevent myocardial infarction, lower blood pressure, and high lipids in the blood. It is important to come to follow-up appointments because the patient could again get blocked coronary arteries and this could be prevented, if the right diagnostics and medications are performed. Being compliant could prevent anymore myocardial infarctions, lower blood pressure which could prevent stroke in the future.
Puncture site care	It is important to educate the patient about the puncture site. The procedure is done through the radial artery or femoral artery. These sites bleed and need pressure to stop the bleeding or the patient could potentially bleed out. The patient will have a wear a TRB band that puts pressure on the site. The patient should be educated that there will be pressure from this band and every hour a few mLs of air will be drawn

	<p>out of the band until bleeding has completely stopped. The patient will also remain laying down for 2 hours or more depending on the puncture site used. The patients arm or leg will be immobilized by a board to prevent movement which prevents bleeding.</p>
Diet	<p>This patient should be on a heart healthy diet. The patient should lower their fat/lipid intake to prevent further growth of plaque in the arteries to prevent the arteries to become blocked again and causing another myocardial infarction. The patient should then lower their salt/sodium intake. This will help his blood pressure and lower it because salt does increase blood pressure. The heart Foundation provides education on changes in diet after a patient experiences a myocardial infarction. It's important to educate on foods the patient is willing to cut of their lives and substitute. It's not realistic to cut out everything the patient enjoys, try substituting or explaining that food they enjoy is okay in moderation. The Heart Foundation has a very informative article on what foods the patient should eat and avoid for a better healthy heart. The article link is below. Education handout provided at the end</p>
Exercise/Activity	<p>I would educate the patient about the importance of getting active after a heart attack to strengthen the heart. I would educate the patient on the importance of cardiac rehab and being compliant with going to rehab and continuing rehab and being active in their future to keep the heart strong and getting stronger after the myocardial infarction. I would educate the patient on Cardiac rehab and the Cleveland Clinic has an article that is very informative about the benefits and importance of Cardiac rehab. Article link below. Education handout provided at the end</p>
Smoking cessation	<p>I would educate the patient about the importance of smoking cessation. It is important that patient stops smoking because smoking causes vasoconstriction. Leading to higher blood pressure putting the patient at higher risk for myocardial infarction and stroke. Tobacco abstinence lowered reinfarction by 30-40% and it's important to educate the patient about this and provide the article, "Improving Smoking Cessation After Myocardial Infarction by Systematically Implementing Evidence-Based Treatment Methods" which explains the importance of smoking cessation and the benefits of it on the heart and how it could reduce reinfarction. I provided a youtube video about how smoking can cause heart attacks. Education handout provided at the end</p>
Signs and symptoms to report/Seek medical care	<p>It is very important to know the signs and symptoms of a heart attack. It is important that once you have a heart attack you could have another and preventing that is very important. The CDC has a great article about the signs and symptoms to educate someone who could have a heart attack. Common signs and symptoms of a myocardial infarction. These symptoms are chest pain, some say that an elephant feels like they are sitting on their chest, chest discomfort, shortness of breath, pain or discomfort in jaw, back, arm, shoulder pain. Feeling nauseous and light heading could also be a symptom.</p>

	Education handout provided at the end
Other	<p>I would also educate on the importance of signs and symptoms of heart failure. With the patient having a myocardial infarction, they are at risk for developing heart failure from some of the heart being infarcted or damaged, making it harder for the heart to pump correctly. I would educate on the importance to recognize the signs and symptoms of heart failure. Monitor for shortness of breath, crackles, edema, activity intolerance and weight gain.</p> <p>Education handout provided at the end</p>

The electronic version of this document is under Simulation Resources

Diet education handout: <https://www.heartfoundation.org.au/bundles/support/nutrition-after-a-heart-attack#:~:text=Aim%20for%205%20vegetables%20and,avoid%20processed%20and%20deli%20meats.>

HEART DIET

All the information in www.botanical-online.com

- **Eat foods rich in fiber:** whole grains, legumes, vegetables
- **Soluble fiber:** fresh fruit, oatmeal
- **Foods rich in potassium:** bananas, potatoes, tomatoes, peaches, grapes
- **Vitamin C:** fresh fruit
- **Folate-rich foods:** green leafy vegetables (spinach, cauliflower, broccoli), nuts
- **Omega 3 and olive oil**



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Heart Defense



A return to all of normal activities after a heart attack may take a few weeks to a few months. Your diet will help determine the speed of your recovery!



A heart-healthy diet consists of:

- Fruits and vegetables
- Lean meats
- Nuts, beans, and legumes
- Fish
- Whole grains
- Plant-based oils (olive oil)
- Low-fat dairy products
- Eggs (you can eat up to six per week)

EATING A HEART HEALTHY DIET

PORTION CONTROL



SELECT WHOLE GRAINS 

REDUCE SODIUM INTAKE 

LIMIT UNHEALTHY FATS 

EAT MORE FRUITS AND VEGETABLES 

CREATE DAILY MENUS 

CHOOSE LOW-FAT PROTEIN SOURCES 

Exercise/activity handouts:

<https://my.clevelandclinic.org/health/treatments/22069-cardiac-rehab>

<https://selfhelphome.org/benefits-of-heart-health-rehabilitation-at-the-selfhelp-home/>

What is **CARDIAC REHABILITATION?**

1 Regular Exercise
From supervised activities, to a daily walk in the park, the idea is to get moving.

2 Adopt a Heart Healthy Diet
This includes meals that are low in salt and rich in whole grains, fruits, vegetables, low-fat meats and fish.

3 Reduce Stress
Learn to control your daily stress through relaxation techniques, recreation, music and other various methods.

4 Medical Therapy
Follow your doctor's instructions carefully and take your medications as directed.

5 Stop Smoking
Most cardiac rehab programs offer methods to help you kick this harmful habit.

Cardiac Rehabilitation Programs Typically Consist Of The Following 5 Components

TALK TO YOUR HEALTH CARE PROVIDER about enrolling in a cardiac rehab program **TODAY!**

CARDIAC REHAB can:

- Lower the chances of a 2nd heart attack or heart surgery
- Control risk factors such as high blood pressure & cholesterol
- Reduce overall risk of dying or having a future cardiac event
- Lessen chest pain, and in some cases, the need for medications
- Help with weight loss

Information provided for educational purposes only. Please consult your health care provider regarding your specific health needs.

For more information, visit [CardioSmart.org/CardiacRehab](https://www.cardiosmart.org/CardiacRehab)

Smoking Cessation handouts:

Leosdottir, M., Wärjerstam, S., Michelsen, H.Ö. *et al.* Improving smoking cessation after myocardial infarction by systematically implementing evidence-based treatment methods. *Sci Rep* **12**, 642 (2022).
<https://doi.org/10.1038/s41598-021-04634-5>

<https://www.youtube.com/watch?v=ft0anissTnQ&t=8s>

Signs and symptoms to report/Seek medical care handouts:

https://www.cdc.gov/heartdisease/heart_attack.htm#:~:text=Heart%20attack%20signs%20and%20symptoms,-headed%2C%20or%20unusually%20tired.

Heart Attack
Signs and symptoms in women and men

- Chest pain or discomfort
- Shortness of breath
- Pain or discomfort in the jaw, neck, back, arm, or shoulder
- Feeling nauseous, light-headed or unusually tired

Other (education about heart failure):

<https://www.mayoclinic.org/diseases-conditions/heart-failure/symptoms-causes/syc-20373142>

