

Northwest Iowa Community College
Nursing Program
ADN Simulation Design Template

Course ADN 1B

Primary Health Condition Myocardial Infarction

Subcompetencies:

1. Correlate client's signs and symptoms to pathophysiology of perfusion disorders.
2. Assess the results of diagnostic tests for a client with perfusion disorders.
3. Summarize actions, side effects, and nursing implications of pharmaceutical agents commonly administered to a client with perfusion disorders.
4. Implement appropriate nursing management for the client with perfusion disorders.

Simulation Learning Objectives

Students participating in the Simulated Clinical Experience will:

1. Recognize abnormal assessment findings **(GLO # 1)**
2. Implement appropriate interventions using a set of routine orders **(GLO #2)**
3. Notify physician using the SBAR format **(GLO #4)**
4. Administer IV medications for the client with cardiac condition **(GLO #2)**
5. Recognize the need to call for additional assistance **(GLO #4)**

Client Information:

Age: 63 Date of Birth: April 19 Gender: Female Setting: Med/Surg/Tele unit

Name: Deloris Fredricks Race/Ethnicity: Caucasian

Weight: 172 lbs Height: 66 inches

Allergies: NKDA

Past Medical History:

History of diabetes mellitus, hypertension, hyperlipidemia

Surgeries/Procedures & Dates:

NONE

Social History (Religion, Support System):

Religion: Not reported

Major Support: Daughter; Widowed x 1 yr

Admission Date this morning

ED SABAR Report:

Situation:

Mrs. Fredricks is a 63 year old female who presented to the emergency department this morning with complaints of heart palpitations, indigestion and mid-back pain which had subsided by the time she reached the ED.

Background:

Mrs. Fredricks has a history of diabetes and hypertension.

Assessment:

Lungs CTA. In ER, 12 Lead EKG showed sinus tachycardia with a heart rate of 122. Labs were drawn in the ED but not yet back. When students ask, labs are :

Labs:

CBC:

WBC:12.0

RBC: 5.2

Hgb: 15.8

Hct: 36.4

Plts: 250,000

BMP:

K+: 4.0

Na++: 142

Cl: 94

CO₂: 31

BUN: 22

Cr: 0.1

Glucose: 128

Cardiac enzymes: elevated

LFT: All within normal limits

Recommendation:

She is being admitted to the medical-surgical unit for observation. Cardiology has been called for a consult. A saline lock was placed in her right arm and IV of 0.9% NaCl is running at TKO 30 mL/h. She is on the monitor.

Healthcare Provider Orders:

1. Admit to medical surgical unit
2. Remote tele **(done)**
3. NPO
4. Bedrest
5. IV 0.9% NaCl @ TKO
6. Consent for cardiac catheterization
7. Hold home meds for now
8. Initiate Hypoglycemia and SSI protocols to manage diabetes
9. PRN medications
 - a. Zofran 4mg IVP every 4 hours for nausea
 - b. Lopressor 5mg IVP every 2 hours for HR greater than 120
10. If onset of chest pain:
 - a. ASA 325mg PO
 - b. O2 at 4 L/NC
 - c. Nitroglycerin 0.4mg SL every 5 minutes x 3 doses
 - d. Morphine 2 mg IVP x1

e. Notify physician

Theoretical Concepts Required Prior to Simulation

PN level didactic content for Cardiac Conditions and Diabetes

Simulation Room Set- up:

Setting Acute Care Type of Manikin Used Adult Vital-Sim

Props: (available for all simulations – BP cuff, pulse ox, thermometer, glucometer, O2 set-up)

Additional Props: IV pump x2

Initial Manikin Settings (sitting with Head of Bed elevated):

Vitals	Lungs	Heart	Abdomen	Other
HR: 122 R: 28 BP: 138/90 O2 sat: 92%	CTA	Sinus Tach <i>(Later: ST depression on monitor (Sim setting of sinus with ant MI)</i>	BS + x 4	PRN: diaphoresis on forehead: Silicon with water
Additional Moulage: Diaphoretic Double lumen IV: IV 0.9% NaCl running at 30 mL/h 2 IV pumps or “babies”				

Mock Medications Required:

Ondansetron 4mg/2mL

Metoprolol 5mg/5mL

Nitroglycerin 0.4mg tabs

Morphine prefilled cartridges (2 mg/mL & 4mg/mL)

IV Nitroglycerin IV labeled 25mg/250mL (100mcg/mL)

ASA 325mg tablets

0.9% NaCl 1000mL

Documents Required (indicate what information will need to be handwritten on forms):

✓Kardex

✓Med Sheets

✓Graphic

Other documents:

- ED report: include history of present illness, labs, vitals, EKG report
- SSI protocol
- Hypoglycemia protocol
- Tele strip or EKG showing ST depression in chart

Scenario Progression Outline

Name: Deloris Fredricks

Age: 63

Date of Birth: April 19

Timing (approximate)	Manikin Actions	Expected Interventions	Comments
Phase 1	<p>"My heart feels like it is racing again"</p> <p>"I am feeling nauseated again too"</p>	<p>Focused cardiac assessment Temp: 37.0 P.O.: 92%</p> <p>Notes diaphoresis</p> <p>Rhythm: sinus tach</p> <p>Administers Metoprolol 5mg IV (5mL over 5 min = 0.25mL/15sec)</p> <p>May also give Ondansetron 4mg (2mL over 2-5 min)</p> <p>Applies O₂</p>	<p>After Metoprolol given, decrease HR and B/P</p>
Phase 2	<p>Begins c/o chest pain: "My chest is feeling really tight"</p> <p>If asked: "Pain is 8/10"; "crushing" "radiates to back"</p>	<p>Completes focused chest pain assessment</p> <p>Give ASA 81mg x 4 tabs</p> <p>Gives Nitro 0.4mg SL</p> <p>Reassess HR <i>*5 min time jump prn*</i></p>	<p><i>Change monitor to ST depression here after Metoprolol has been given</i></p>
Phase 3	<p>Cont c/o chest pain: "That pill is not helping. I feel worse now"</p> <p>"I am having trouble breathing"</p> <p>If asked chest pain is "better", "6/10" after 2nd nitro</p>	<p>Gives 2nd Nitro 0.4mg SL</p> <p>Reassesses chest pain</p> <p>Reassesses BP</p> <p><i>*5 min time jump prn*</i></p>	<p>If asked chest pain is "better", "6/10" after 2nd nitro</p> <p>BP 130/88</p>
Phase 4	<p>"My chest is starting to hurt again" "It is worse than before"</p> <p>10/10</p> <p>Remains 10/10 even after 3rd nitro</p>	<p>Gives 3rd Nitro 0.4mg SL</p> <p>Reassesses chest pain.</p> <p>Gives Morphine 2mg (1 mL) (over 5 min ~ prebrief discuss)</p> <p>Reassesses BP</p> <p>Rhythm: Sinus tach with ST depression</p> <p>Calls physician (see orders received below)</p>	<p>BP 126/84</p>

<p>Phase 5 (If nitro drip not started by this time, pt will get progressively worse – rhythm will change and she may code)</p>	<p>“What are you going to do to help me”</p> <p>“My chest hurts so bad. Am I going to die”</p> <p>Chest pain “a little better” 8/10 after nitro IV started.</p>	<p>Gives nitro glycerin IV 5mcg/min (3 mL/hr)</p> <p>Reassures patient</p> <p>Reassesses chest pain</p>	
<p>Phase 6</p>		<p>Increases nitro to 10mcg/min (6 mL/hr)</p> <p>Scenario complete</p>	

“Healthcare Provider” Role

Students are expected to use the SBAR format when calling.

Sample:

(S) *This is _____ and I am calling about Deloris Fredricks*

(B) *Deloris (Mrs. Fredricks) is a 63 yr old female who came into the emergency room this morning with complaints of heart palpitations, indigestion and mid-back pain.*

(A) *Deloris (Mrs. Fredricks) is having severe chest pain that has been unrelieved by 3 doses of sublingual nitroglycerin. Morphine 2 mg has been given per orders. Current vital signs are T: 37.0, P: 98, R: 28, BP: 112/60, Pulse ox-92%.*

(R) *I would recommend ordering something to control her chest pain*

If students are missing some of the information, ask questions until you get the information they should have included. If they are missing a large amount of information ask them to gather the correct information and call you back.

Once you have sufficient information give the following orders:

1. *Nitroglycerin IV. Start with 5mcg/min, Titrate for chest pain. May increase by 5 mcg/min every 3 minutes until pain controlled.*
2. *12 lead EKG now (if monitor not working to demo ST depression)*
3. *I will be up in 15 minutes*

Students should read orders back to you.

Debriefing Discussion Points:

General

1. How did you feel about how things went?
2. Using the Nursing Process how did the team do with:
 - A. Data Collection/Assessment
 - B. Planning
 - C. Implementation
 - D. Interventions
3. Discuss maintenance of safety and infection control concepts
4. Discuss therapeutic communication
5. Discuss teamwork

Scenario Specific:

1. Discuss atypical MI signs and symptoms
2. Discuss which type of ACS patient is experiencing based on s/s
 - a. Angina
 - b. NSTEMI ✓
 - c. STEMI(considering using article in folder has a guide for discussion)
3. Discuss MONA
4. Discuss impact of nitroglycerin and other drug given on BP
5. Discuss titration orders

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