

ACTIVE LEARNING TEMPLATE: **Diagnostic Procedure**

STUDENT NAME _____

PROCEDURE NAME **Electrocardiogram (ECG/EKG)**

REVIEW MODULE CHAPTER _____

Description of Procedure

an electrocardiogram records the electrical signal from the heart to check for different heart conditions. electrodes are placed on the client's chest to record the heart's electrical signals.

Indications

- arrhythmias
- CAD
- previous MI
- fam hx

CONSIDERATIONS

Nursing Interventions (pre, intra, post)

Pre: get into gown, shave areas if needed
educate pt on procedure

Intra: attach electrodes

Post: change out of gown, educate pt on resuming normal activity

Interpretation of Findings

- identifies arrhythmias and heart rhythms
- evidence of previous MI or current
- enlargement chambers or walls of heart, heart defects, or other heart problems

Client Education

- just educate pt on what to expect with the ECG, it is not invasive.
- have pt tell you/doctor about any medications and supplements they may take

Potential Complications

- unclear or failed reading of ECG
- electrode placement

Nursing Interventions

- have pt lie still when placing electrodes
- shave areas with hair for better adhesion

ACTIVE LEARNING TEMPLATE: **Diagnostic Procedure**

STUDENT NAME _____

PROCEDURE NAME **Chest X-Ray (CXR)**

REVIEW MODULE CHAPTER _____

Description of Procedure

electromagnetic waves produce visible images of the heart, lungs, bones, and blood vessels. it is a non-invasive procedure to provide an adequate diagnosis for patients.

Indications

- pneumonia in the lungs
- monitor progressions/resolutions of a disease
- evaluate patient response to therapy

CONSIDERATIONS

Nursing Interventions (pre, intra, post)

- remove any jewelry
- ensure patient isn't pregnant
- instruct patient to cooperate and hold still for as long as possible

Interpretation of Findings

- clarity of right and left hemidiaphragm
- opacities in lower lobes

Client Education

- ensure as little movement as possible during procedure
- tell patient, if you begin to feel worse or need assistance

Potential Complications

- skin burns
- radiation poisoning

Nursing Interventions

- proper hand hygiene
- wear the proper attire
- educate patient prior to procedure
- monitor vitals

ACTIVE LEARNING TEMPLATE: **Medication**

STUDENT NAME _____

MEDICATION Nitroglycerin

REVIEW MODULE CHAPTER _____

CATEGORY CLASS antianginal agent

PURPOSE OF MEDICATION

Expected Pharmacological Action

- stabilize angina
- decrease cardiac oxygen
- prevent or reduce coronary artery spasm, increasing oxygen supply

Therapeutic Use

- treat acute angina attack
- prophylaxis of chronic stable angina or variant angina

Complications

- headache
- orthostatic hypotension
- reflex tachycardia

Medication Administration

- oral extended release caps
- sublingual tab
- translingual spray
- topical ointment
- transdermal patch
- IV

Contraindications/Precautions

- pregnancy risk
- hypersensitivity to nitrates
- severe anemia
- traumatic head injury
- antihypertensive meds

Nursing Interventions

- continuous cardiac monitoring
- continuous blood pressure monitoring
- monitor vital signs
- use lowest dose possible

Interactions

- alcohol
- antihypertensive meds (both can cause hypotension)

Client Education

- do not crush/chew nitroglycerin tabs or sublingual
- place patch on hairless area & rotate sites
- remove patch at night

Evaluation of Medication Effectiveness

- prevention/termination of acute anginal attacks
- long-term management of stable angina
- control of heart failure following acute MI

ACTIVE LEARNING TEMPLATE: **Nursing Skill**

STUDENT NAME _____

SKILL NAME **Intravenous (IV) Line Insertion**

REVIEW MODULE CHAPTER _____

Description of Skill

Starting an IV therapy such as medication administration, blood administration, fluids, etc.

Indications

- when a patient is in need of large infusions of medications, fluids, fluid replacement, electrolytes, or nutrients

CONSIDERATIONS

Nursing Interventions (pre, intra, post)

- Pre: appropriate supplies, correct catheter size, provider orders
- Intra: tourniquet application, selection of venous site, clean area of insertion, insertion of catheter and stabilization, + documentation of IV placement + site
- Post: maintaining patency of IV access + discontinuation of IV therapy

Outcomes/Evaluation

- the IV will infuse whatever medication or fluid

Client Education

- educate patient on procedure
- educate on the type of medications or fluids to be infused

Potential Complications

- infiltration
- extravasation
- phlebitis
- thrombophlebitis
- cellulitis
- fluid overload

Nursing Interventions

- change IV every 72 hours or sooner depending on facility policy
- practice aseptic technique
- practice needlestick safety

System Disorder

STUDENT NAME _____

DISORDER/DISEASE PROCESS Myocardial Infarction (MI)

REVIEW MODULE CHAPTER _____

<p>Alterations in Health (Diagnosis) Steady substernal pain, radiates to neck, back, jaw</p>	<p>Pathophysiology Related to Client Problem process where areas of the heart that lack oxygen die; sudden or gradual</p>	<p>Health Promotion and Disease Prevention - life changes including diet and exercise - medication</p>
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ASSESSMENT

<p>Risk Factors men > 50, women > 55, tobacco, HTN, high cholesterol, obesity, diabetes, metabolic syndrome, family hx</p>	<p>Expected Findings diaphoresis, hypotension, HTN, bradycardia, tachycardia, palpitations, dyspnea, disorientation, severe anxiety, confusion</p>	<p>SAFETY CONSIDERATIONS</p> <ul style="list-style-type: none"> - limit the amount of visitors at one time - observe for adverse effects - assist patient to get up slowly from lying flat
<p>Laboratory Tests CRP and lipoprotein, PTT, WBC, PET, radionuclide, creatine protein, creatine kinase</p>	<p>Diagnostic Procedures ECG/EKG</p>	

PATIENT-CENTERED CARE

<p>Nursing Care</p> <ul style="list-style-type: none"> - explain equipment procedures - explain need for frequent assessment to patient and family 	<p>Medications</p> <ul style="list-style-type: none"> - aspirin - clopidogrel - heparin - fibrinolytics - beta blockers - ACE inhibitors - nitroglycerin - morphine 	<p>Client Education explain to patient what is going on with their heart</p>	<p>Complications</p> <ul style="list-style-type: none"> - dysrhythmias - sudden cardiac death - infarct expansion - heart failure - cardiogenic shock - reinfarction - ischemic cardiomyopathy - cardiac rupture - papillary muscle rupture - ventricular mural thrombus
<p>Therapeutic Procedures</p> <ul style="list-style-type: none"> - surgical revascularization - percutaneous coronary interventions 	<p>Interprofessional Care cardiology consult physical therapy consult nutrition consult</p>		

ACTIVE LEARNING TEMPLATE: **Medication Procedure**

STUDENT NAME _____

MEDICATION **Morphine Sulfate**

REVIEW MODULE CHAPTER _____

CATEGORY CLASS _____

PURPOSE OF MEDICATION

Expected Pharmacological Action

morphine binds with and activates opioid receptors in the brain and spinal cord to produce analgesia

Therapeutic Use

decrease pain severity

Complications

agitation confusion
amnesia decreased concentration
anxiety delirium
ataxia bradycardia
chills cardiac arrest
coma edema
HTN

Medication Administration

PO: 5-30mg every 3-4 hours as needed

IV: 0.8-10 mg/hr; increase as needed

Contraindications/Precautions

acute/severe bronchial asthma
paralytic ileus
acute alcoholism, alcohol withdrawal, seizure disorder,
heart failure, injection site infection

Nursing Interventions

- before admin, ensure opioid antagonist and oxygen supplies are available
- monitor for excessive or persistent sedation

Interactions

anticholinergics: severe constipation
antihypertensives: ↓ hypertension, risk of orthostatic hypotension
hydroxyzine: ↑ analgesic

Client Education

- side effects of morphine
- educate on use of other sedatives or respiratory depressants while on morphine

Evaluation of Medication Effectiveness

when titrating, 7 of 25-50% should be administered until there is either a 50% reduction in the patient's pain rating on a pain scale or until patient is comfortable

Therapeutic Procedure

STUDENT NAME _____

PROCEDURE NAME Cardiac Catheterization

REVIEW MODULE CHAPTER _____

Description of Procedure

used to diagnose and treat certain cardiovascular conditions
 a long thin catheter is inserted into the femoral or radial artery or vein, that gets threaded through to the heart

Indications

CAD
 evaluation of ventricular function
 evaluation + treatment of cardiac arrhythmias
 evaluation + treatment of valvular heart disease
 measuring hemodynamics of the left and right side of the heart

CONSIDERATIONS

Nursing Interventions (pre, intra, post)

do not eat or drink anything prior to procedure
 may need to stop taking medications that thin the blood prior to procedure

Outcomes/Evaluation

coronary angiogram: blockages in arteries
 right heart cath: checks pressure + blood flow
 heart biopsy: sample of heart muscle
 balloon angioplasty: opening a narrowed artery in or near the heart
 repair of defects: repair of structural defects in the heart

Client Education

- most likely will be awake during procedure
 - will be give medications to relax
 - recovery for heart cath
 - low risk of complications
 - RR for 6 hrs if femoral access + flat

Potential Complications

bruising
 bleeding
 MI
 stroke
 damage to artery where catheter was
 irregular heart rhythms
 allergic reaction to dye or medications
 kidney damage

Nursing Interventions

- during procedure, tell patient to take deep breaths, or hold breath, may have to cough or place arms in certain positions
 - if femoral was accessed, the patient will need to be bed rest for a minimum of 6 hours and laying flat to avoid serious bleeding risks