

J: Cardiovascular

Major Competency Area: **J**
Cardiovascular

Competency: **J-1**
Cardiovascular Nursing

Date: June 1, 2015

A Licensed Practical Nurse will:

- J-1-1 Demonstrate knowledge and ability to apply critical thinking and critical inquiry throughout the nursing process in cardiovascular nursing.**
- J-1-2 Demonstrate knowledge and understanding of anatomy, physiology and pathophysiology of the cardiovascular system and cardiovascular disease including:**
- determinants of normal cardiac cycle and cardiac conduction pathway
 - cardiovascular diseases and disorders
 - atherosclerosis
 - cardiac dysrhythmias
 - cardiac valve disease (insufficiency/stenosis)
 - cardiomyopathy
 - congenital heart disease/anomaly
 - pericarditis/myocarditis/endocarditis
 - heart failure
 - hypercholesterolemia/dyslipidemia
 - hyper/hypotension
 - ischemic heart disease
 - peripheral artery disease
 - determinants of blood pressure and central venous pressure
 - decompensation, shock, hypovolemic shock, cardiac failure
 - single and multiple organ system failure
- J-1-3 Demonstrate knowledge and ability to provide health teaching and coaching associated with cardiovascular nursing.**
- J-1-4 Demonstrate knowledge and ability to communicate and collaborate with inter-professional team.**

Major Competency Area: **J**
Cardiovascular

Competency: **J-2**
Cardiovascular Interventions

Date: June 1, 2015

A Licensed Practical Nurse will:

J-2-1 Demonstrate knowledge and ability to provide evidence informed, client centered care in relation to cardiovascular nursing:

- ensure and respect client choices in decision making
- assess and monitor:
 - hemodynamics
 - lab values/biochemical markers
 - limb temperature
 - peripheral diagnostic and interventional procedures
 - renal sufficiency
 - venous thromboembolism (sequential compression device therapy)
 - vital signs
- differentiate normal rhythm and arrhythmia
- prepare client for diagnostic tests, procedures, treatments and/or surgery
- implement pre/post procedure routines and protocols

J-2-2 Demonstrate knowledge and ability to utilize cardiac equipment:

- apply 3 and 5 lead electrocardiogram (ECG)
- apply telemetry equipment
- resuscitation equipment:
 - automated external defibrillator (AED)
 - bag and mask
 - crash cart
- understand use of:
 - external cardiac pacing
 - pacemaker sensing, on/off
 - 24 hour Holter monitor
 - Doppler imagery/echocardiography
 - central venous pressure (CVP) and arterial lines

A Licensed Practical Nurse will:

- J-2-3 Demonstrate knowledge and understanding of normal/abnormal lab values and cardiac markers:**
- Aspartate transaminase (AST)
 - Creatine Kinase (CK-MB)
 - Ischemia-Modified Albumin (IMA)
 - Lactate Dehydrogenase (LDH)
 - Myoglobin (Mb)
 - Natriuretic Peptides: BNP/or NT-proBNT
 - Troponin 1 test
- J-2-4 Demonstrate knowledge and ability to apply principles of pharmacokinetics and pharmacodynamics specific to medication management in cardiovascular nursing according to agency policy.**
- J-2-5 Demonstrate knowledge and understanding of indications, contraindications and complications associated with cardiovascular and related diagnostic tests and procedures including:**
- angiogram (radial, femoral)
 - angioplasty and stents
 - coronary artery bypass grafting (CABG)
 - echocardiogram (trans-thoracic, trans-esophageal)
 - exercise stress test
 - radionuclide angiography:
 - MIBI Scan (Cardiolite, Persantine)
 - multiple gated acquisition (MUGA)
 - Thallium Scan
 - right heart catheterization
 - tilt test
- J-2-6 Demonstrate knowledge and ability to anticipate and recognize actual or potential immediate life threatening health crisis including:**
- alteration in cardiac output
 - alteration in vascular tissue perfusion (compartment syndrome)
 - cardiac arrhythmias
 - cardiac tamponade

A Licensed Practical Nurse will:

- J-2-6** **Demonstrate knowledge and ability to anticipate and recognize actual or potential immediate life threatening health crisis including: (cont'd)**
- cardiomyopathy
 - congenital heart defect
 - congestive failure
 - myocardial infarction
 - shock
- J-2-7** **Demonstrate knowledge and ability to recognize signs and symptoms of a life threatening cardiac event and implement or assist with cardio pulmonary resuscitation according to agency policy.**

Major Competency Area: **J**
Cardiovascular

Competency: **J-3**
**Advanced Cardiovascular
Interventions**

Date: June 1, 2015

A Licensed Practical Nurse will:

J-3-1 Demonstrate knowledge and ability to care for client requiring detailed observation and interventions including:

- hemodynamic monitoring
 - central venous pressure monitoring (CVP)
 - peripherally inserted central catheter care (PICC) (Competency V-4)
 - arterial line monitoring
- non-invasive and mechanical ventilation

J-3-2 Demonstrate knowledge and ability to assist with and/or provide cardiac procedures, treatments, therapies and interpretation of diagnostic and lab values:

- 12 and 15 lead ECG application and interpretation
 - rhythm, rate, P-wave configuration, PR interval, QRS duration/configuration, inversion, flattening, other wave anomalies
- atrial fibrillation protocol
- monitor and manage symptoms of arrhythmia and cardiac tamponade
- monitor and remove radial bands
- monitor femoral sheaths and epicardial pacing wires

J-3-3 Demonstrate knowledge and understanding of indications for use of external cardiac pacing and implanted cardiac devices:

- monitor telemetry equipment
- apply 24hr Holter monitor
- recognize complications of external pacemaker and implantable cardioverter defibrillator (ICD)
 - failure to output
 - failure to capture
 - sensing abnormalities