J: Cardiovascular

Please note: Competencies within this section of the Profile are to be taken in consideration with competencies outlined throughout this document and are not intended to be standalone.

Important: LPNs are responsible to ensure they have any required education or training and the individual competence prior to performing these competencies.
Competency Statement - A Licensed Practical Nurse will:

**J-1-1 Demonstrate knowledge and understanding of anatomy, physiology, and pathophysiology of the cardiovascular system and cardiovascular disease:**
- cardiac cycle and conduction pathway
  - artherosclerosis
  - dysrhythmias
  - valve insufficiency or stenosis
  - cardiomyopathy
  - congenital heart disease or anomaly
  - pericarditis, myocarditis, endocarditis
- blood pressure and central venous pressure
- cardiovascular diseases and disorders
  - heart failure or organ system failure
  - hypercholesterolemia and dyslipidemia
  - hyper and hypotension
  - ischemic heart disease
  - peripheral artery disease
- decompensation, shock, hypovolemic shock

**J-1-2 Demonstrate knowledge and ability to assess and monitor the cardiovascular patient:**
- hemodynamics
- lab values and biochemical markers
- peripheral diagnostic interventional procedures
- renal sufficiency
- venous thromboembolism
- prepare patient for diagnostic procedures, treatments, and surgery
- sequential compression device
- vital signs
- differentiate normal rhythm and arrhythmia
- implement pre and post procedure protocols

**J-1-3 Demonstrate knowledge and ability to utilize cardiac equipment:**
- apply 3 and 5 lead electrocardiogram (ECG)
- apply telemetry equipment
- resuscitation equipment:
  - external defibrillator
  - non-invasive and mechanical ventilation
- bag and mask
- crash cart

**J-1-4 Demonstrate knowledge of the use of cardiac devices:**
- external cardiac pacing
- echocardiography
- 24-hour Holter monitor
- pacemaker
- central venous pressure (CVP) and arterial lines
J: Cardiovascular

Competency
J-1: Cardiovascular Nursing and Interventions

Competency Statement - A Licensed Practical Nurse will:

J-1-5 Demonstrate knowledge and understanding of normal and abnormal lab values and cardiac markers.

J-1-6 Demonstrate knowledge and ability to apply principles of pharmacokinetics and pharmacodynamics specific to medication management in cardiovascular nursing according to employer requirements.

J-1-7 Demonstrate knowledge and understanding of indications, contraindications, and complications related to cardiovascular diagnostic tests and procedures:
- angiogram (radial, femoral)
- angioplasty and stents
- coronary artery bypass grafting
- echocardiogram (transthoracic, transesophageal)
- cardiac stress test
- radionuclide angiography:
  - MIBI scan (Cardiolite, Perantine)
  - multiple gated acquisition
  - thallium scan
- right heart catheterization
- tilt test

J-1-8 Demonstrate knowledge and ability to anticipate and recognize actual or potential life threatening health crisis:
- alteration in cardiac output
- impaired tissue perfusion (compartment syndrome)
- cardiac arrhythmias
- cardiac tamponade
- cardiomyopathy
- congenital heart defect
- congestive heart failure
- myocardial infarction
- shock

J-1-9 Demonstrate knowledge and ability to recognize signs and symptoms of a life threatening cardiac event and initiate or assist with cardio pulmonary resuscitation.

J-1-10 Demonstrate knowledge of internal and external cardiac pacing devices and indications for use:
- telemetry equipment
- external pace maker and implantable cardioverter defibrillator (ICD) complications:
  - failure to output
  - failure to capture
  - sensing abnormalities
Major Competency
J: Cardiovascular

Competency
J-1: Cardiovascular Nursing and Interventions

Competency Statement - A Licensed Practical Nurse will:

J-1-11 Demonstrate knowledge and ability to care for patient requiring advanced cardiac observation and interventions:
- mechanical ventilation
- hemodynamic monitoring
  - central venous pressure (CVP)
  - arterial line

J-1-12 Demonstrate knowledge and ability to assist with or provide cardiac procedures and treatments:
- assess and monitor 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 arrhythmias and cardiac tamponade
- monitor and remove radial bands
- monitor femoral sheaths and epicardial pacing wires