RN Protocol: Chest Pain

I. POLICY

A. Function: To facilitate and guide the Registered Nurse (RN) in the assessment and treatment of patients with chest pain.

B. Circumstances under which the RN may perform the function:
1. Setting: Outpatient clinic and triage and treatment area.
2. Supervision: No direct supervision required.

II. PROTOCOL

A. Definition: This protocol covers the assessment and treatment of patients presenting with chest pain. Chest pain is defined as a feeling of pain or discomfort in the chest. Chest pain may be described as substernal or epigastric discomfort, heaviness, squeezing, burning or tightness of the chest; or radiate to the jaw, shoulders, arms or back. Etiology may be cardiovascular (e.g. angina, myocardial infarction, pericarditis), pleural (e.g. pneumothorax, pulmonary embolus), gastrointestinal (e.g. peptic ulcer, cholecystitis, hiatal hernia, esophageal spasm), or musculoskeletal (e.g., degenerative disk disease, degenerative or inflammatory process of shoulder or ribs, anterior chest muscle). Symptoms associated with chest pain include anxiety, nausea, vomiting, diaphoresis, dizziness, syncope, or dyspnea, extreme fatigue, and palpitations.

B. Subjective:
1. Chief complaint (document in the patient's own words).
2. Date and time of onset.
3. Activity at onset (rest, exertion, sleep, other).
4. Location of the pain (e.g., left chest, right chest, substernal).
5. Severity of the pain (rate on a scale of 0-10, with 0=no pain and 10= the worst pain).
6. Describe the quality of the pain (e.g., indigestion, sharp, dull, crushing, sensation of burning, tightness, pressure or heaviness in the chest).
7. Radiation of the pain (epigastrium, back, neck/jaw, upper extremities, other).
8. What makes the pain better (activity, position, eating, antacids, other)?
9. What makes the pain worse (activity, breathing, palpation, position, other)?
10. Assess for accompanying symptoms (dyspnea, nausea, vomiting, diaphoresis, syncope, palpitations, or cough).
11. Obtain past medical history including, but not limited to, previous MI, angina, congestive heart failure, hypertension, diabetes, stroke, chronic obstructive pulmonary disease, trauma to chest, leg cramps, pacemaker, peripheral vascular disease, hyperlipidemia, thrombophlebitis or pulmonary emboli, recent travel greater than 4 hours, or family history of heart disease.
12. History of smoking.
13. Recent illicit drug use (specifically cocaine, methamphetamines, and heroin).
14. Allergies.

15. Current medications.

C. Objective:
   1. Vital signs and weight if patient is stable.
   2. Observe and document the following:
      a. Appearance of anxiety or fright.
      b. Pallor.
      c. Diaphoresis.
      d. Cyanosis.
      e. Evaluate for neck vein distention and tracheal deviation.
      f. Ventilatory effort indicating difficulty breathing/respiratory distress (retractions).
      g. Palpate chest wall for chest wall tenderness.
      h. Percuss for dullness, hyper resonance, asymmetry.
      i. Auscultate breath sounds bilaterally (clear, wheezes, crackles, diminished, absent).
      j. Inspect and palpate lower extremities for swelling, calf tenderness.
      k. Assess bilateral radial pulses and note intensity and quality.
      l. Pulse oximeter reading.

D. Assessment:
   - Pain related to/evidenced by:
   - Alteration in tissue perfusion, cardiac, related to/evidenced by:

E. Plan:
   1. Acute Coronary Syndrome (ACS) frequently presents as: Chest pain accompanied by lightheadedness, nausea, sweating, or shortness of breath; pain spreading to shoulders, neck, arms, jaw; pain in back between shoulder blades; uncomfortable pressure, or pain in the center of the chest lasting more than 15 minutes. Chest pain, associated with palpitations or arrhythmias, tachycardia or bradycardia, hypotention. However, an ACS may be present in the absence of many of these signs and symptoms.
      a. Notify physician **STAT**.
      b. Place patient in position of comfort.
      c. Administer O_2 at 1-6 L/minute via nasal cannula or 4-10L/minute via mask to maintain oxygen saturation $\geq$ 92%.
      d. Monitor cardiac rate and rhythm via cardiac monitor or EKG.
      e. Chewable Aspirin 325 mg X 1 unless patient is allergic to aspirin or actively bleeding.
      f. Nitroglycerin 0.3mg or 0.4mg sublingually (may repeat every 5 minutes X 3 if patient can tolerate).
      g. Start IV with large bore needle (16-18 gauge) and infuse Sodium Chloride Intravenous Solution (0.9%) at TKO.

h. Monitor level of consciousness, vital signs, cardiac rate and rhythm, and oxygen saturation every 5 minutes.
i. Prepare to transfer patient to outside facility or admit to a facility capable of providing a higher level of care if indicated.
j. Fax a copy of the relevant progress notes, physician orders, and emergency care flow sheet to the receiving facility.

2. Gastroesophageal Reflux Disease frequently presents as: Retrosternal burning pain and/or pain in the epigastric area, neck, throat, and occasionally the back. Pain typically occurs after meals and when lying down, and is relieved with antacids.
   a. Refer the patient to physician **STAT** if the patient is older than 35 years of age, has a history of hypertension, dyslipidemia, cardiovascular disease, diabetes, or strong family history of heart disease.
   b. If patient is 35 or under, with none of the above risk factors, and vital signs are within normal limits:
      (1) Aluminum/Magnesium hydroxide with Simethecone 2 chewable tablets, after meals, at hour of sleep, and PRN.
      (2) Refer the patient to the next MD sick call for evaluation.

3. Pleuritic chest pain: The treatment for pleuritic chest pain and sharp pleurtic chest pain is the same.
   - Pleuritic chest pain accompanied by fever, chills, cough, dyspnea on exertion, tachycardia, diminished breath sounds, crackles and / or wheezes, absent or diminished breath sounds, or tracheal deviation.

   a. Notify physician **STAT**.
   b. Administer O_2 at 1-6 L/minute via nasal cannula to maintain oxygen saturation $\geq$ 92%. Place patient in position of comfort.
   c. Start IV with large bore needle (16-18 gauge) and infuse Sodium Chloride Intravenous Solution (0.9%) at TKO.
   d. Monitor and record vital signs and oxygen saturation every 15 minutes.
   e. Prepare to transfer patient to outside facility or admit to a facility capable of providing a higher level of care if indicated.
   f. Fax a copy of the relevant progress notes, physician orders, and emergency care flow sheet to the receiving facility.
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4. Chest wall pain: For patients with chest wall tenderness whose symptoms can be entirely reproduced by applying pressure directly to the chest wall, who are not dyspneic, and have normal vital signs:
   a. Ibuprofen 200 mg. 3 tabs P.O. QID PRN pain while symptoms persist; not to exceed 6 tabs in 24 hours **or**

b. Naproxen 220 mg x 2 tabs P.O. 1st hour; I tab Q8-12 hrs PRN pain while symptoms persist; not to exceed 3 tabs in 24 hours.
c. Alternating ice or heat to chest wall for 15 minutes QID PRN.
d. No heavy lifting.
e. Follow-up with a physician in one week or sooner if symptoms persist.

5. Musculoskeletal strain or spasm frequently presents as: Sharp chest pain aggravated by movement.
   a. Light duty, no heavy lifting or strenuous exercise.
   b. Ibuprofen 200 mg 3 tabs P.O. QID PRN X 7 days; or
   c. Naproxen 220 mg x 2 tabs P.O. BID PRN X 7 days or
   d. ASA 325mg., 2 tablets P.O. BID X 7 days or
   e. Acetaminophen 650 mg, P.O. QID PRN X 7 days.
   f. Refer to next MD sick call for evaluation.

6. All other complaints of chest discomfort: Refer patient to a physician on a **STAT** or **Urgent** basis as appropriate.

F. Patient Education:
   1. Assess patient's potential for understanding the health information to be provided.
   2. Provide patient education consistent with the assessment of the condition.
   3. Document the education provided and the patient's level of understanding on the emergency care flow sheet.
   4. Refer patient to other resources as needed. Document all referrals on the emergency care flow sheet.
   5. Advise patient to utilize urgent/emergent process to access medical care if symptoms recur.

G. Documentation:
   All information related to the patient's complaint shall be documented on the emergency care flow sheet. The flow sheet shall be filed in the patient's unit health record.

III. REQUIREMENTS FOR RN

A. Education/Training: The Registered Nurse shall attend an in-service on the assessment and management of chest pain and achieve a minimum score of 80% on the written posttest examination.
B. Experience: None.
C. Certification: None
D. Initial Evaluation: Initial competence will be validated onsite through simulated exercises, mock scenarios, and return demonstration. The Registered Nurse must satisfactorily demonstrate all critical behaviors identified on the Competence Validation Tool to be considered competent to perform standardized procedure functions.

A written performance appraisal shall be performed by the Supervising Registered Nurse or designee six months after initial competence has been validated. Methods to evaluate performance shall include, but not be limited to direct observation, feedback from colleagues and physicians, and chart review.

E. Ongoing Evaluation: Ongoing competence will be validated annually using case study analysis, written examination, and return demonstrations where appropriate.

IV. REGISTERED NURSES AUTHORIZED TO PERFORM THIS PROCEDURE

A current list of all Registered Nurses authorized to perform this procedure shall be maintained on file in the Office of the Director of Nursing.

V. DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE

This standardized procedure was developed and approved by authorized representatives of administration, medicine, and nursing. The procedure will be reviewed annually.

REVIEW DATE: _____ REVISION DATE: _____
_____ _____
_____ _____

THE STANDARDIZED PROCEDURE WAS APPROVED BY:

_____ DATE:_____
Chief Nurse Executive/Director of Nursing

_____ DATE:_____
Chief Medical Executive