

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: None 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 (MI), 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, and 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: (specify on associated encounter form).
- Alteration in tissue perfusion, cardiac, related to/evidenced by: (specify on associated encounter form).

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, or hypotension. However, an ACS may be present in the absence of many of these signs and symptoms.
 - a. Notify a physician **STAT**.
 - b. Place the patient in a position of comfort.
 - c. Administer O₂ 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. Chew 1 tab nonenteric-coated Aspirin 325mg unless the patient is allergic to aspirin or actively bleeding.
 - f. Nitroglycerin 0.3mg or 0.4mg sublingually (may repeat every 5 minutes X 3 if the 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 the patient to an 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 a 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 the patient is 35 or under, with none of the above risk factors, and vital signs are within normal limits:
 - 1) Aluminum/Magnesium hydroxide with Simethicone 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 pleuritic 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 a physician **STAT**.
 - b. Administer O₂ at 1-6 L/minute via nasal cannula to maintain oxygen saturation ≥ 92%. Place the patient in a 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 the patient to an 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.
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 200mg 2 tabs PO Q8 hours PRN pain while symptoms persist; not to exceed 6 tabs in 24 hours **or**
 - b. Naproxen 220mg 2 tabs PO 1st hour; 1 tab Q8-12 hours 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 200mg 2 tabs PO Q8 hours PRN X 7 days; not to exceed 6 tabs in 24 hours **or**
 - c. Naproxen 220mg 2 tabs PO 1st hour; 1 tab Q8 hours PRN X 7 days; not to exceed 3 tabs in 24 hours **or**
 - d. ASA nonenteric-coated 325mg 2 tabs PO BID X 7 days **or**
 - e. Acetaminophen 325mg 2 tabs PO 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 the 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 in the health record.
4. Refer the patient to other resources as needed. Document all referrals in the health record.
5. Advise the 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, nursing protocol encounter form, or progress note and filed in the patient's health record.

III. REQUIREMENTS FOR THE REGISTERED NURSE

- A. Education/Training: The RN 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 RN 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 RN 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

The Chief Nurse Executive shall ensure a current list of all RNs authorized to perform this procedure is on file within Nursing Services as required by Inmate Medical Services Policies and Procedures, Volume 5, Chapter 4.2, Nursing Competency Program Procedure.

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:

Chief Nurse Executive

DATE: _____

Chief Medical Executive

DATE: _____