RN Protocol: Chest Trauma

I. POLICY

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

B. Circumstances under which the RN may perform:
1. Setting: Triage and treatment area.
2. Supervision: None required.

II. PROTOCOL

A. Definition: This protocol covers the assessment and treatment of patients presenting with penetrating or blunt injury to the chest.

B. Subjective:
1. Chief complaint (document in the patient's own words).
2. Precipitating event.
3. Date, time, and location of injury.
4. Mechanism of injury (e.g., weapon, or blunt trauma).
5. Pain (location, intensity, quality, and radiating characteristics).
6. Shortness of breath.
7. Allergies.
8. Current medications and last dose taken.
9. Tetanus immunization status (penetrating trauma only).

C. Objective:
1. Vital signs and pulse oximeter reading.
2. Observe and document the following:
   a. Assess airway, breathing and circulation.
   b. Dyspnea.
   c. Shortness of breath.
   d. Skin color and temperature.
   e. Restlessness.
   f. Distended neck veins.
   g. Tracheal deviation.
   h. Chest depressions or bulges.
   i. Asymmetrical or paradoxical chest wall movement.
   j. Entrance and exit wounds; wound size and estimated blood loss.
3. Palpate chest wall for crepitus, swelling, and tenderness.
4. Percuss for hyperresonance.
5. Auscultate breath sounds bilaterally (clear, wheezes, crackles, diminished, absent).

D. Assessment:
- Impaired gas exchange related to/evidenced by:
- Ineffective breathing pattern related to/evidenced by:
- Fluid volume deficit related to/evidenced by:

E. Plan:
1. Contact physician STAT.
2. Maintain airway, breathing, and circulation.
3. For non-penetrating trauma, immobilize the cervical/thoracic/lumbar spine with the patient secured to a backboard. Note: Thoracic trauma, in the absence of altered level of consciousness, neck tenderness, or signs and symptoms of neck trauma, does not require a backboard, which may interfere with evaluation, management, and patients comfort.
4. Control hemorrhage.
5. Administer supplemental oxygen via non-rebreather mask to maintain O_2 saturation above 90%.
6. Start an intravenous line and infuse Sodium Chloride Intravenous Solution (0.9%). Adjust rate to keep systolic blood pressure > 90 mm Hg. Do not start an IV if vital signs are normal and the trauma is non-penetrating, non-vehicular or involves a fall less than ten (10) feet.
7. **DO NOT** remove impaled object unless object interferes with cardiopulmonary resuscitation.
8. Cover (do not stuff) open chest wound with dry sterile gauze and occlusive tape. Apply occlusive dressing at the end of expiration and tape dressing on three sides only to allow air to escape. Continuously evaluate patient for development of pneumothorax. Remove dressing if tension pneumothorax develops.
9. For paradoxical chest movement, immobilize the flail segment of the chest by stabilizing it with sandbags or bags of IV solution taped securely to the flail segment. This improves the patient's comfort and willingness to take a deep breath.
   Note: Paradoxical movement in itself rarely causes respiratory compromise; it is the underlying lung injury that creates the problem.
10. Place patient on injured side to ensure the injury is compressed.
11. Obtain EKG if blunt cardiac trauma is suspected.
12. Keep patient NPO.
13. Continue to monitor airway, breathing, circulation, vital signs, oxygen saturation, and neurologic status every 15 minutes.
14. Prepare to transfer patient to outside facility or admit to a facility capable of providing a higher level of care.
15. Fax a copy of the relevant progress notes, physician orders, and emergency care flow sheet to receiving facility.

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.

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 trauma 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