

HOSPITAL

DEPARTMENTAL PROCEDURE

**TITLE: TRAUMA: NEEDLE CRICOTHYROTOMY**

**Date Adopted:**

**Date Revised:**

**Supersedes:**

**Date Reviewed:**

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**DISTRIBUTION:**

Nursing

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**STAFF LEVEL:**

RN, GN, LVN, GVN

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**PROCEDURE:**

Indication

1. To establish a patent airway in an emergent situation when nasal or oral intubation is not possible due to severe head/maxillofacial trauma or due to tracheal stenosis.
2. For patients less than 12 years of age due to damage to the cricoid cartilage and stenosis of the trachea from the formation of scar tissue caused by a surgical cricothyrotomy.

Equipment

- sterile gloves
- 14 gauge or larger over the needle catheter
- O<sub>2</sub> tubing (nasal cannula)
- O<sub>2</sub>
- Cricothyrotomy tray with prep pack
- Surgical prep solution

Procedure

1. Place patient in supine position with towel roll behind neck/shoulders to hyperextend the neck.
2. Cleanse patient's neck with sterile surgical prep solution in circular outward motion.
3. Attach needle to syringe, physician will insert needle above the cricoid ring at a 45 degree angle while pulling back on plunger; when air is returned into syringe advance catheter and remove needle.
4. Connect O<sub>2</sub> tubing to 10-15L O<sub>2</sub>, nasal prong will then connect to catheter.

Nursing Assessment

1. Place thumb over opposite nasal prong for 2-3 seconds; this should inflate the lungs; once inflated remove thumb to allow for passive exhalation.
2. Assess patient for bilateral breath sounds, monitor O<sub>2</sub> sat (if available) and vital signs.
3. Assess for development of subcutaneous emphysema.

4. Prepare for intubation (possibly fiberoptic) or surgical tracheostomy.

Complications

1. Hemorrhage
2. Perforation of thyroid or esophagus
3. Subcutaneous or mediastinal emphysema
4. Infection

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**REFERENCES:**

American Association of Critical Care Nurses, *AACN Procedure Manual for Critical Care*, 2010, Sixth Edition, W.B. Saunders Company, Philadelphia, Pennsylvania.

American College of Surgeons, *Advanced Trauma Life Support*, 2014, Seventh Edition, Chicago, Illinois.

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**SIGNATURES:**

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