Providence HEALTH CARE	Department: **Respiratory Services**	Date Originated: June 2005 Reviewed/Revised: **September 2010**
PROCEDURE	Topic: Emergency – Cricothyrotomy for Emergency Airway Management (Respiratory Therapy) Number: B-00-12-12058	Related Links:

APPLICABLE SITES:

St. Paul's Hospital
Mount Saint Joseph Hospital

INDICATIONS:

- Inability to establish an airway despite using standard airway procedures and adjuncts
- Difficult airways such as:
  - Fractures of the jaw or face
  - Burns and inhalation injury
  - Swelling due to allergic reactions
  - Neurologic issues causing clamping of the teeth

RISKS:

- Bleeding
- Scarring
- Subglottic stenosis
- Esophageal perforation
- Pneumothorax

EQUIPMENT:

- Cricothyrotomy kit with uncuffed tube
- Intubation supplies and equipment
- Manual resuscitator and mask
- Suction setup
- Sterile gloves and drapes
- Skin antiseptic

PROCEDURE:

1. Ensure all intubation supplies and suction systems are prepared and functional.

2. While maintaining sterility, open the emergency Cricothyrotomy kit.

3. Assist the physician in preparing the site.

4. The ***physician*** will insert the needle through the cricothyroid membrane and into the trachea as follows:

    a. While stabilizing the thyroid cartilage, make a vertical incision in the cricothyroid membrane at the midline point. The incision must be large enough to pass the dilator and tracheostomy tube through.

    b. Attach syringe to the introducer needle or catheter introducer needle, and advance through the incision at a 45 degree angle in a caudal direction. Tracheal placement can be confirmed by aspiration of air into the syringe.

    c. If using the catheter introducer needle, remove the syringe and needle, leaving the catheter in place. If using the introducer needle alone, remove the syringe and leave the needle in place.

    d. Advance the soft, flexible end of the wire guide through the catheter/needle and into the airway several centimeters.

    e. Remove the catheter or needle, leaving the guidewire in place.

    f. Prepare the dilator/trach assembly by pushing the dilator all the way into the trach; lubricant may help to place the dilator.

    g. Advance the dilator/trach assembly over the guidewire. It is important to continually visualize the proximal end of the guide wire to prevent inadvertent loss into the trachea.

    h. While maintaining the guide wire position, continue to advance the dilator/trach assembly over the wire until the flange of the trach rests against the patient's neck.

    i. While maintaining the trach in situ, remove the guide wire and dilator simultaneously.

5. The tracheostomy tube will then be inserted using the wire and dilator technique.

6. Once the airway is in place, attach to the manual resuscitator and provide manual ventilation.

    NOTE: Air leaks and high resistance may make ventilation difficult.

7. Confirm proper placement of the airway via capnography and auscultation. Secure the airway using twill ties.