



NHHN NICU Ventilator Associated Pneumonia Prevention Protocol

Purpose: To prevent the incidence of ventilator associated pneumonia in neonates in the Neonatal Intensive Care Unit.

Once a patient is placed on mechanical ventilation, begin the following protocol:

I. Basic Care

- 1) Assuring meticulous hand hygiene (hand washing or waterless hand cleaner) and don gloves before any patient contact and contact with the ventilator circuit.
- 2) Assure the head of the bed (HOB) is at maximum tilt unless contraindicated and accompanied by a written order by the physician. *This is to avoid aspiration of gastrointestinal contents or oropharyngeal and nasopharyngeal secretions.*

II. Oral Care

- 1) Assure meticulous hand hygiene and don gloves
- 2) Perform every 3-4 hours, before repositioning of infant or of the ETT, and before elective intubation or extubation to keep the patient's mouth clean. Oral care reduces the overall bacterial flora count that causes VAP. Pathogens have been shown to form a bio-film on ET tubes and then migrate down the tube to infect the lungs causing pneumonia.

Step 1. Suction with 8 french suction catheter (oral catheters should be discarded after each use for patients who are intubated.)

Step 2. Clean the mouth with a sterile water saturated swab/wipe lips with sterile water and gauze or saline wipe (Sterile water should be discarded after each use / swabs should be discarded after each use)

Step 3. (Optional) If fresh human milk is available apply to buccal cavity with a new swab (see Oral Swabbing with Human Milk Policy)

III. Suctioning

- 1) Assure meticulous hand hygiene and don gloves
- 2) Use of closed in-line suction. Suction ETT only as clinically indicated:
 - unexplained drop in SpO₂
 - visible secretions
 - ventilator graphics reveal evidence of secretions
 - Remember to suction mouth before nasal or ETT

- 3) Discontinue the practice of instilling normal saline down the ET tube. *Potentially harmful practice. Studies show no benefit.* Only use sterile saline bullets to flush suction catheter after each use. Saline lavage should ONLY be used if the ETT appears plugged.

IV. Ventilator Circuit

- 1) Wear gloves when handling the vent circuit & draining the condensation.
- 2) Drain condensation from the vent circuit q 2-4hrs; avoid draining toward the patient.
- 3) Do not break the circuit to drain the water. Ventilator tubing should not be disconnected. *Maintaining a closed system prevents contamination of the ventilation system.*
- 4) Always drain the circuit prior to repositioning the patient.
- 5) In-line suction catheter should be changed every 72 hours or sooner if noted to be visibly soiled.

V. Continuously Evaluate for Extubation

- 1) MD & RT will continuously evaluate each patient's readiness to extubate.

VI. Clean Equipment

1. RT will clean respiratory equipment Q 12 hr using saniwipes.
 - a. Disinfect high touch surfaces i.e., Vent screen and knobs.
2. Nursing will clean the bed space & equipment at the bedside at least Q 12 hr.

VII. Documentation

1. Document all VAP implementation and prevention interventions in the patient record in EPIC under the Respiratory Assessment and the VAP Bundle Tab.
2. Readiness to extubate criteria completed per R.T.

References:

Guidelines for Preventing Health-Care-Associated Pneumonia, CDC, MMWR, March 26, 2004/ Vol. 53/ No. RR-3
Getting Started Kit: Prevent Ventilator-Associated Pneumonia, Institute for Healthcare Improvement. 2004

Towing the Line: A Children's Hospital's Experience in Decreasing VAP, American Association for Respiratory Care's Neonatal Pediatrics Bulletin, Spring 2006.