


Name of Policy: <u>Humidification of inspired medical gasses</u> Policy Number: 3364-136-04-06 Department: Pulmonary Services Approving Officer: Senior Hospital Administrator Responsible Agent: Director, Pulmonary Services Scope: The University of Toledo Medical Center Pulmonary Services Department	 Effective Date: June 1, 2023 Initial Effective Date: 12/1/2004	
<input type="checkbox"/> New policy proposal <input type="checkbox"/> Major revision of existing policy		<input checked="" type="checkbox"/> Minor/technical revision of existing policy <input type="checkbox"/> Reaffirmation of existing policy

(A) Policy Statement

The Respiratory Care Department will humidify prescribed medical gases for therapeutic use in accordance with the procedure written herein.

(B) Purpose of Policy

To provide guidelines for the selection and operation of various types of humidification devices for the humidification of medical gas. For humidification during mechanical ventilation, a practitioner may choose either a heated humidifier or a heat and moisture exchanger (HME), using the following guidelines:

Indications: include patients whose natural mechanism for heating and humidifying inspired gas has been bypassed or is insufficient.

Goals: to prevent mucosal drying, prevent insensible water loss and to increase patient comfort.

Contraindications: there are no contraindications, to our knowledge, for humidification of inspired medical gases. A HME is contraindicated under some circumstances:

1. Do not use HME for patients with thick, copious or bloody secretions.
2. Do not use HME for patients with an expired tidal volume less than 70% of the delivered tidal volume (e.g., BP Fistula or an incompetent or absent endotracheal tube cuff).
3. Do not use HME for patients with body temperatures less than 32C.
4. Use of HME may be contraindicated for patients with high spontaneous minute volumes (>10 l/m).
5. The HME must be removed from the ventilator circuit during aerosol treatments or use alternative HME that is specially made for use during an aerosol treatment. The collar is rotated to bypass the heat-moisture exchanger. After aerosol is completed and nebulizer removed, rotate collar back so the exchanger is not bypassed.

Hazards: include hyper/hypothermia, over/under hydration, and nosocomial infection due to contaminated humidification source.

(C) Procedure

1. Sterile water will be used for humidification of medical gases in conjunction with nasal cannulas if the flow is greater than 4 lpm. Add humidity at any flow if the patient requests it or a physician orders it. Use appropriate humidification in conjunction with cool and heated aerosols for face masks, face tents, t-pieces and trach collars, and mechanical ventilators if the practitioner is not using an HME.

2. The practitioner will check and document the set up and operation of all therapeutic gases (both humidified and non-humidified) every shift on the floors, and three times each shift in the ICUs. Mechanical ventilators in all areas will be checked and documented three times each shift.

