OLIVE VIEW-UCLA MEDICAL CENTER
RESPIRATORY CARE SERVICES - ADULT
POLICY & PROCEDURE

NUMBER: 5528
VERSION: 1

SUBJECT/TITLE: AEROSOL THERAPY

POLICY: Aerosol therapy will be initiated with an appropriate physician's order that must include:

a) Specific delivery device.
b) Liter flow if applicable.
c) A specific Fi02 if applicable.

Oxygen devices delivering with an F102 of 50% or greater in addition to metered devices shall be monitored and maintained by the Respiratory Care Services Department. Devices functioning on 5 liters or less shall be monitored and maintained by nursing and the Respiratory Care Services Department.

PURPOSE: To deliver controlled concentrations of oxygen via aerosolized therapy in an accurate safe and clinically appropriate maner.

DEPARTMENTS: RESPIRATORY CARE SERVICES

DEFINITIONS: Continuous aerosol administration is the delivery of cool or heated aerosolized sterile water to the upper airways. Aerosol delivery may include use of an oxygen source gas when oxygen therapy is indicated, or a compressed air source.

Indications

Cool aerosol administration may be indicated for relief of upper airway edema such as in laryngotracheobronchitis, subglottic edema, post-extubation edema, and postoperative management of the upper airway.

Heated aerosol administration may be indicated for minimizing the humidity deficit created by the bypassing of the upper airway such patients with tracheostomy or in the intubated, non-ventilated patient.

Aerosol **therapy** may also be indicated as an adjunct for bronchial hygiene to hydrate secretions, promote cough, and restore the

mucous blanket.

Contraindications

- Bronchoconstriction.
- History of airway hyper reactivity to aerosolized sterile water

Complications

- Wheezing or bronchospasm.
- Over-hydration.
- Swelling of secretions with resultant increased work of breathing.
- Alterations in patient temperature.
- Bacterial contamination.

Precautions

- Patients must be monitored throughout aerosol therapy for signs of bronchospasm and increased work of breathing.
- Patients with an ineffective cough and/or an inability to clear secretions should have appropriate suction apparatus at the bedside.
- When a heated aerosol is being delivered, the temperature of the aerosol should be monitored proximal to the patient's airway.
- Patient body temperature should also be monitored during any aerosol administration.
- Patients should be monitored for signs of overhydration.
- When therapeutic oxygen is being delivered in conjunction with the aerosol, patients must be monitored for the appropriateness of oxygen therapy.
- Ensure that tubing condensate is drained at regular intervals to avoid alterations in the FiO2. The condensate should be drained away from the patient, and not back into the nebulizer, to avoid contamination of the patient with potentially infectious condensate.
- Ensure that the source gas flow is adequate to meet the patient's minute ventilation. Refer to the package insert or the label on each device for total flow delivery information.
- Equipment and Materials for further instruction on the choice of a nebulizer device.

Subject/Title: Aerosol Therapy.

Because of the cough-provoking potential of aerosol therapy, appropriate precautions for the minimization of risk to health caregivers, patients, and others of tuberculosis must be strictly followed.

Adverse Reactions and Interventions
If wheezing or bronchospasm develops in a patient receiving aerosol therapy, discontinue the aerosol and provide an alternate source of oxygen if indicated. Notify the physician and assess the need for bronchodilator therapy.

Initiate or discontinue the use of a heating device as indicated by patient temperature and tolerance.

For patients who exhibit signs of over hydration, an alternate source of humidification should be obtained if indicated.

PROCEDURE

- Oxygen and/or air source gas with flow-meter(s).
- AuqaPak nebulizer with top.
- Corrugated tubing.
- Appropriate patient application device, i.e. aerosol mask, face tent, tracheostomy collar, T-piece, or head tent/hood.
- Water drainage bag.
- Heating device and thermometer with adapter (if indicated).
- Verify physician's order for justification and accuracy.
- Introduce yourself to the patient.
- Identify patient by utilizing 2 identifiers.
- Assess patient's respiratory status.
- Inform patient of procedure.
- Inform patient of no smoking regulations and remove all flammable materials from bedside area and place in bedside table drawer.
- Wash hands thoroughly before assembling the equipment.
- Remove: Aerosol humidifier, tubing, and mask from package.
- Discard packaging in proper receptacle.
- Set up equipment according to specific equipment requirements.
- Assemble disposable humidifier and connect to flow-meter.
- Turn oxygen supply to the liter flow necessary for a high flow (flush) check equipment for proper operation.
- Place delivery device on patient.

Post Procedure

Monitor the patient for adverse reactions throughout the therapy. Monitor the patient for the effectiveness of therapy as evidenced by improvements in stridor, secretion clearance, work of breathing, and breath sounds.

Documentation

All documentation will be done in the hospital EHR, ORCHID. The Aerosol documentation is in the RT Therapy and Treatment section, under Aerosol Therapy. Documentation can also be done by clicking on the Aerosol Therapy task in the Multi-patient Task List (MPTL).

References: 1) AARC Clinical Practice Guideline *Selection of an Oxygen Delivery Device for Neonatal and Pediatric Patients* 2002 Revision & Update. 2) JCAHO "7 Rules of safety".	
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Review Date: 05/17/201905/17/2022	Revision Date:
Next Review Date: 05/17/2022	
Distribution: Respiratory Care	
Original Date: 06/13/1990	