Venturi Oxygen Delivery

Purpose

To standardize delivery of precise concentrations of oxygen at high flow via facemask, tracheostomy collar, or t-tube, utilizing a Venturi device for the entrainment of room air to achieve the desired FIO_2.

Policy

- Respiratory Care Services provides equipment and therapy according to physician's orders for patients requiring supplemental oxygen to maintain adequate blood levels of oxygen.
- A Licensed Respiratory Care Practitioner may institute oxygen by Venturi.
- Training must be equivalent to the minimal therapist entry level in the Respiratory Care Service with understanding of age specific requirements of the patient population treated.

Physician's Order

The written physician's order must include:

- Inspired oxygen concentration.
- In the absence of a complete order, Venturi mask oxygen therapy is to be administered only in an emergency. The order must be secured at the earliest possible time after emergency administration has occurred. Otherwise, the complete order must be secured before therapy can be administered.

Indications

Documentation of need with arterial blood gases or oximetry or as indicated by respiratory distress or other acute or chronic indicators.

Contra-indications

Venturi mask therapy may be contraindicated for the patient with facial injuries.

Goals

To achieve adequate oxygenation of the blood.

Procedure

Step	Action
1	Check physicians order.
2	Wash hands.
3	Explain the therapy and the safe use of O_2 to the patient and family, per RCS policy 03.6.1.
4	Assemble the venturi mask per the manufacturer instructions to deliver the ordered FiO_2.
5	Attach to flow meter with oxygen connecting tubing.

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Procedure Continued

Step	Action
6	Secure mask to patients face and explain the importance of leaving the mask on.
7	Document in patient in EPIC and treatment card as outlined in RCS Policies # 7.1.1 and # 7.1.2.

Infection Control

Follow as outlined in the Healthcare Epidemiology Policies and Procedures #2.24; Respiratory Care Services
http://www.utmb.edu/policy/hcepidem/search/02-24.pdf

Undesirable Side Effects

- Atelectasis - Absorption atelectasis may occur under conditions of reduced lung capacity, early airway closure, or normal lung volumes in the absence of coughing or sighing.
- Oxygen-induced hypoventilation - Occurs in patients with chronic hypoxemia and hypercapnia.
- Pressure necrosis of the skin from tight fitting straps.
- Any backpressure on a Venturi device increases the oxygen concentration around the entrainment ports, thereby increasing the FIO_2. Causes of backpressure are blowing into mask, occluding mask portholes, and/or connection of supply tubing.

References

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