

# Respiratory Care Services

## John Dempsey Hospital

### Policy and Procedure Manual

**Subject:** Venturi Masks / Air Entrainment Mask

**Rationale:** These masks are designed to provide a fixed concentration of oxygen. Selection of a prescribed oxygen concentration is provided via the use of the appropriate oxygen diluter jet available and adjusting the oxygen flow to the appropriate level.

For the Accurox Mask Kit – 6 different diluters are available and color coded as follows:

<i>Orange</i>	50% O <sub>2</sub>	at oxygen flow of 12 lpm
<i>Pink</i>	40% O <sub>2</sub>	at oxygen flow of 15 lpm
<i>Green</i>	35% O <sub>2</sub>	at oxygen flow of 12 lpm
<i>White</i>	31% O <sub>2</sub>	at oxygen flow of 8 lpm
<i>Yellow</i>	28% O <sub>2</sub>	at oxygen flow of 6 lpm
<i>Blue</i>	24% O <sub>2</sub>	at oxygen flow of 3 lpm

The oxygen flow to the masks cannot be humidified. Humidity is added to the mask separately through a special attachment but the additional equipment is awkward in application.

For the Multi-Vent Air Entrainment Mask two color coded diluters are available and the oxygen concentrations selected by setting the indicator on the appropriate diluter barrel as follows:

<i>White</i>	50% O <sub>2</sub>	at oxygen flow of 15 lpm
<i>White</i>	40% O <sub>2</sub>	at oxygen flow of 12 lpm
<i>White</i>	35% O <sub>2</sub>	at oxygen flow of 9 lpm
<i>Green</i>	30% O <sub>2</sub>	at oxygen flow of 6 lpm
<i>Green</i>	28% O <sub>2</sub>	at oxygen flow of 6 lpm
<i>Green</i>	26% O <sub>2</sub>	at oxygen flow of 3 lpm
<i>Green</i>	24% O <sub>2</sub>	at oxygen flow of 3 lpm

If humidity is desired, the high humidity adapter must be installed. Connect adapter to humidity source using large bore aerosol tubing. **Note:** Room air must be used with the high humidity adapter only. Use of oxygen will affect the desired FIO<sub>2</sub> concentration.

**Equipment:** Accurox Mask kit (contains mask, 6" flextube, 6 diluter jets, nebulizer hood and OR 84" of oxygen tubing)  
Multi-Vent Air Entrainment Mask (contains mask, multi-vent barrel, 2 diluters, locking ring, high humidity adapter, O<sub>2</sub> tubing)  
Oxygen flowmeter  
Air flowmeter (optional unless humidity desired)  
Nebulizer bottle (optional unless humidity desired)  
Aero tubing (optional unless humidity desired)

**Procedure:**

1. Obtain appropriate mask kit and proceed to the patient's nursing unit.
2. Read the patient's order sheet for the doctor's specific instructions. Verify the patient's name, DOB, and bed location.
3. Go to the patient's bed, introduce yourself and explain what you are about to do and that it was ordered by the patient's doctor. Check the patient's name and DOB verbally and by wristband. Be reassuring. Be sure there is no ignition material at the patient's bedside.
4. Wash your hands.
5. Connect the flowmeter to the oxygen source. Select the appropriate diluter for the FIO<sub>2</sub> desired and assemble for use. Attach the connecting tube and mask. If humidity is desired, connect air flowmeter to the air source, fill the nebulizer with sterile distilled water and attach to the air flowmeter. Set the nebulizer bottle at 35% setting for best humidity (this setting does not affect oxygen concentration as bottle is connected to an air flowmeter, not O<sub>2</sub>.) Connect aero tubing to nebulizer bottle and attach to entrainment collar provided with the venti mask set up.
6. Be sure there is flow from the mask. Test for leaks, loose connections and proper operation of the pressure relief valve by pinching the tube close to the mask.
7. Adjust the mask on the patient's face for maximum comfort and security.
8. Turn the flowmeter to the appropriate meter flow, e.g. 3 lpm - 15 lpm depending on the Jet diluter used. Observe the initial effects of the treatment and make any necessary adjustments.
9. Enter the charges for equipment used and for appropriate oxygen hourly usage.

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