What is High Flow Oxygen?

- Heated humidified oxygen is administered through a high-flow nasal cannula when a patient requires a higher dose of supplemental oxygen or increased flow for shortness of breath.
- The device can deliver:
  - fraction of inspired oxygen (FiO2) of 21% to 98%
  - relative humidity of 95% to 100%
  - a flow rate of 15 to 60 L/minute.
- The device consists of a large bore nasal cannula that attaches to corrugated tubing (circuit) to a heated humidifier with an oxygen source.

Indications for use

- Patients who require a higher dose of supplemental oxygen but can’t tolerate a mask or when a mask impairs a patient’s ability to eat, drink, and speak.
- The device can also be used as an alternative to continuous positive airway pressure (CPAP) delivered by nasal prongs or a nasal mask in neonates.
- Good alternative to a CPAP/BiPAP to prevent skin breakdown on nose bridge.
- The lighter device may also make it easier to care for & handle a neonate.

Equipment

- High-flow (large bore) nasal cannula
- Heated humidifier
- Sterile water for inhalation
- Oxygen source
- Pressurized air source (device dependent)
- Pulse oximeter and probe

Special Considerations

- Follow AGP PPE guidelines
- Collaboration between nursing and respiratory therapy is essential when using device and caring for the patient. Communication is needed with oxygen and/or respiratory status changes.
- Oxygen toxicity can occur when oxygen is delivered in concentrations greater than 50%; however, there's no consensus in the literature defining a safe upper limit for prevention of oxygen toxicity. Rule of thumb: always adjust FiO2 to lowest level to achieve SpO2 goal per order.
- Heated humidifier should always have water present. Water should be labeled “Inhalation Only” and will be managed by RT. Be sure to fill according to manufacture guidelines.
- Ensure all connections are secure. A slight disconnect could cause negative effects like oxygen desaturation.
- Some devices have external temperature probes that are plugged into the circuit.
Adult

Obtain the patient's baseline oxygen saturation level via pulse oximeter to detect changes in the patient's condition during the procedure.

The nasal cannula interface on the patient, fitting the prongs into the patient's nares.

Place the elastic strap around the back of the patient's head above the ears.

Ensure skin assessments are done with focus on the nose and pressure points of the face.

Consider use of silicone foam prophylactic dressing under cannula

Adjust the strap so that it fits snugly, not too tight, and utilize gown clip(s) to prevent skin breakdown.

Monitor the patient's oxygen saturation level and tolerance of the prescribed oxygen therapy.

If the patient's oxygen saturation level doesn't reach the targeted level or the patient's condition deteriorates, notify the practitioner because alternative therapy may be warranted.

Documentation includes O2 Device, O2 Flow Rate (L/min), FiO2 (%) and SpO2.

After the patient's condition stabilizes, make sure that the call light and necessary personal items are within the patient's reach to promote patient safety.

Work closely with your Respiratory Care Team

Interface options

Heated Breathing Tube

Info

https://youtu.be/tsn4Z6QLlgs

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