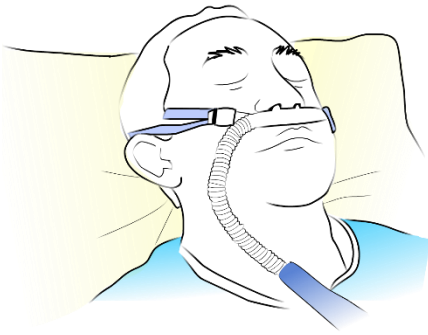




Use of High Flow Nasal Cannula

COVID-19



Purpose/Scope

This document is provided for clinical guidance regarding the use of High Flow Nasal Cannula for all adult patients, specifically persons under investigation (PUI) and COVID-19 confirmed patients.

Considerations

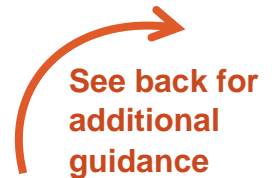
The source of truth for this document is: Surviving Sepsis Campaign: Guidelines on the Management of Critically Ill Adults with Coronavirus Disease 2019 (COVID-19). Link to full-text, PDF document:

<https://www.sccm.org/getattachment/Disaster/SSC-COVID19-Critical-Care-Guidelines.pdf>

Note: This article has been peer-reviewed and accepted for co-publication in the Journals of Critical Care Medicine (CCM) and Intensive Care Medicine (ICM). The article will undergo copyediting and typesetting before it is published in its final form with a Digital Object Identifier (DOI).

CLINICAL GUIDANCE

Heated High Flow Nasal Cannula is a nasal cannula (NC) form of oxygen therapy capable of delivering higher flows of oxygen between 20 and 60 liters per minute (lpm), depending on device type. A High Flow Nasal Cannula may be helpful to treat patients demonstrating signs of increased work of breathing and decreased oxygen saturation associated with acute respiratory insufficiency.



Please refer to the Atlas COVID-19 site for the most recent guidance regarding PPE recommendations for aerosol-generating procedures: <https://connect.medicity.net/web/ip/covid19>

BASIC SYSTEM COMPONENTS

Each unit has several variables of control:

- FiO₂, flow and humidity.
- Exact details are manufacturer/unit dependent. This may include a blender and flowmeter, or labeled dials on the interface.
- Flow is controlled/adjusted to meet patient inspiratory demand.
- FiO₂ is controlled/adjusted independently to deliver precise O₂ percent.
- **Humidity is required** and adjusted per patient comfort/tolerance.

CONTRAINDICATIONS

- Patients with apnea.
- Patients who are unable to maintain oxygenation and/or ventilation while receiving high flow oxygen therapy.
- Patients who are unable to tolerate high flow nasal cannula.
- Patient who are unable to clear their airway (for whatever physiologic reason) and are at high risk for aspiration.



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SIZING OF CANNULA

- Correct cannula size is necessary to minimize loss of flow and aerosol deposition. Each High Flow Nasal Cannula device will have specifics on proper cannula sizing (if applicable).
- Ideal/optimal flow rates:
 - Initial Flow settings: 25-40 lpm, commonly utilized in acute settings for adult patients.
 - Adjust FiO₂ to maintain oxygen saturation to goal (92-96%).
- Basic troubleshooting – See manufacturer resources/Instructions for Use (IFUs) for device specific recommendations.

CLINICAL TROUBLE-SHOOTING

- For acute desaturation, increase flow prior to increasing FiO₂.
- If oxygen saturation does not improve, then increase FiO₂.
- If patient continues to require FiO₂ greater than 50-60%, consider transferring to a higher level of care and intubation with mechanical ventilation.

FREQUENTLY ASKED QUESTIONS (FAQS) – See individual manufacturer’s resources (below).

Manufacturer	Manufacturer’s Resources (double-click each)
Vapotherm	 Vapotherm training
Fisher Paykel Optiflow	 MR850 Optiflow.pdf  Optiflow Cannula
Airvo	 airvo-2-user-manual- ui-185045495-g.pdf
Comfort Flo	 Comfort Flo Set up