

# NASAL HIGH FLOW & COVID-19

- For patients with COVID-19 and Acute Hypoxemic Respiratory Failure (AHRF), guidelines suggest using Nasal High Flow over conventional oxygen therapy and NIPPV.
- The use of Nasal High Flow Therapy has been shown to reduce escalation and intubation of patients with AHRF, which could aid in vent preservation for more acute patients.

## FAQ

### 1. If a patient presents with AHRF and COVID-19, is there evidence that Nasal High Flow can be used?

- **Frat et al. 2015** (NEJM) showed a reduced 90-day ICU mortality and a 40% reduction in intubation (patients with P/F ratio < 200 mmHg) compared to standard oxygen & NIV.<sup>1</sup>
- The **ESICM** and **SCCM** suggest using **NHF** over conventional oxygen therapy and NIV for patients with COVID-19 and AHRF. They also strongly recommend SpO<sub>2</sub> is maintained no higher than 96% with close monitoring of COVID-19 patients with AHRF.<sup>2</sup>

### 2. What about concerns with aerosol dispersion when using NHF on a COVID-19 patient?

- There are two types of aerosols: medical aerosols (e.g. MDI, vibrating mesh, jet neb, etc.) and patient-generated bioaerosols (e.g. coughing, breathing, talking or laughing).
- Nasal High Flow provides heated humidified air and oxygen (37°/44 mg/L water vapor, 1/10,000 of a micron). A **vapor** is different from an **aerosol**.



- Aerosol generating procedures can result in nosocomial virus transmission, and intubation is a high-risk procedure for nosocomial virus transmission.
- Studies have shown Nasal High Flow does not increase exhaled aerosol dispersion compared to standard nasal cannula and should not increase the risk of nosocomial virus transmission.<sup>3</sup>