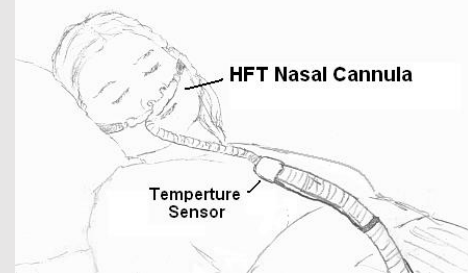


# HIGH FLOW NASAL CANNULA

**BACKGROUND:** High Flow Nasal Cannula (HFNC) is a means of delivering humidified oxygen at a rate of up to 60L/Min. Due to uncertainty about the level of aerosolization, and the risk of COVID transmission, initial UCMC policy was to avoid HFNC use until more data was available.

**HOWEVER,** recently published literature reviews, as well as international expert consensus have found that transmission risk using HFNC may be less than anticipated. It is now thought that HFNC may represent a relatively safe alternative to intubation in the setting of the COVID Pandemic.



## SUPPORT FOR HIGH FLOW NASAL CANNULA USE:

Based on extensive literature review, studies coming out of China and Italy, as well as expert consensus, several multi-national organizations are **now recommending the use of HFNC in COVID Patients!!**

### SURVIVING SEPSIS GUIDELINES (Alhazzani, 2020)

- Composed by a multi-national panel of experts
- Now recommend HFNC over conventional O2 therapy for patients with hypoxemic respiratory failure in the setting of COVID-19
- **Reasoning:**
  - Found to decrease need for intubation, which is a higher aerosol generating procedure
  - Retrospective studies **DO NOT SHOW increased risk of transmission with HFNC alone**

### WORLD HEALTH ORGANIZATION (WHO, 2020)

- Agency of United Nations: Specialized in Informational Public Health
- Recommends use of HFNC
- **Reasoning:**
  - Found to reduce need for intubation
  - **Did not find any evidence that HFNC increased aerosol transmission risk**

## STUDIES EXAMINING RISK OF AEROSOLIZATION IN HFNC USE:

- While HFNC is generally thought to be an aerosolizing procedure, the level of aerosolization is quite low. A study by Roberts et al (2015) demonstrated that **HFNC did not generate any more aerosol than a forceful exhalation or cough.**
- A large systematic review by Tran et al (2012) examined the risk of SARS disease transmission during several aerosolizing procedures. **HFNC did not increase the rate of SARS (Corona Virus) disease transmission to a statistically significant degree.**
- **What does Up-to-Date say for Covid-19 pts?** "Oxygen via high flow nasal cannula versus noninvasive ventilation — Among the noninvasive modalities, we prefer HFNC."

<https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19-critical-care-issues>

**TAKE AWAY:** High Flow Nasal Cannula is a reasonable option for patients with hypoxic respiratory failure in the setting of COVID Infection, and transmission risk is likely minimal if proper PPE is worn (N95, eye protection, gown, gloves) and patient remains in an isolation room.

**RESOURCES:**

