F&P Optiflow

Clinical Applications of Nasal High Flow (NHF) Therapy

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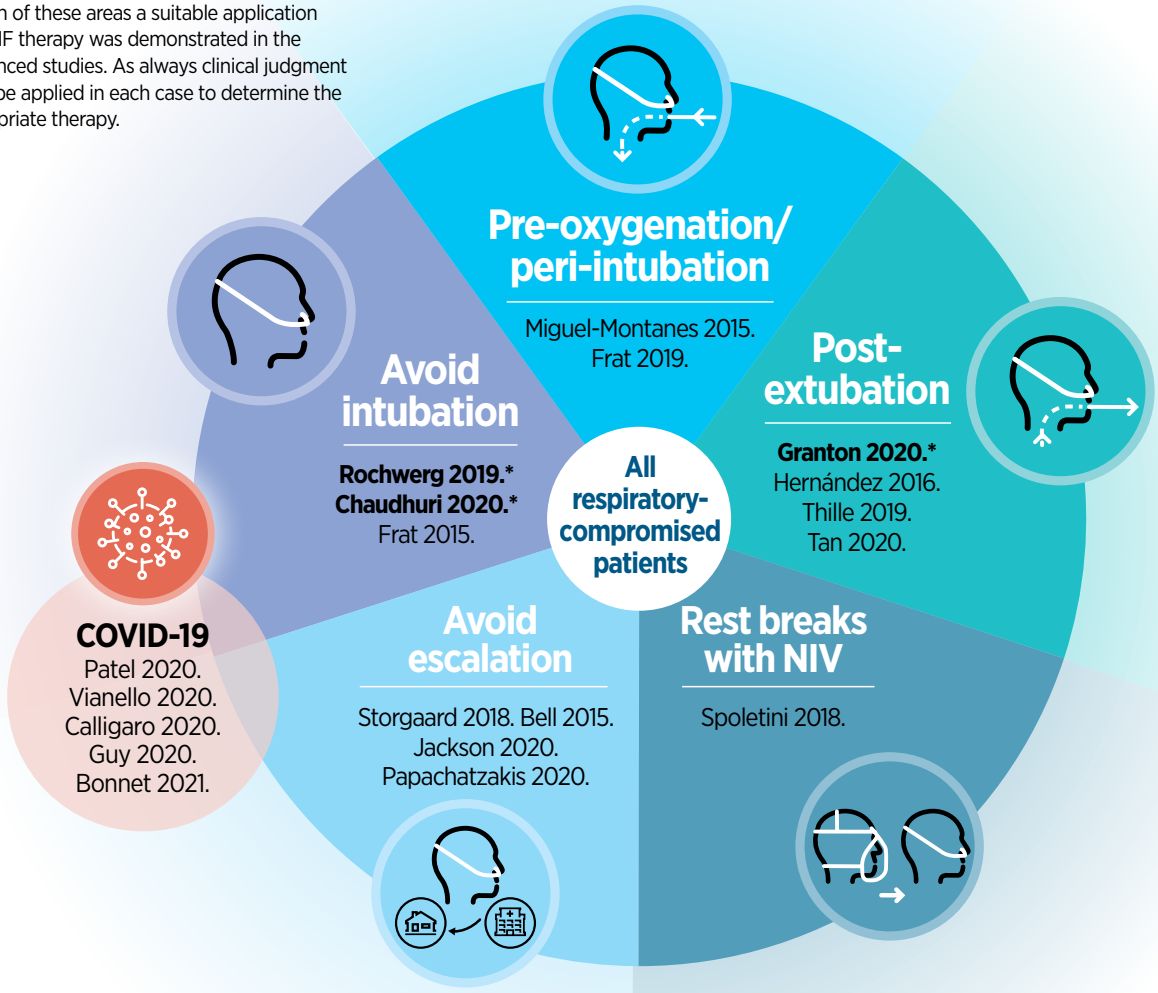
Applications of NHF therapy

In each of these areas a suitable application for NHF therapy was demonstrated in the referenced studies. As always clinical judgment must be applied in each case to determine the appropriate therapy.



* Meta-analysis

ESICM CLINICAL PRACTICE GUIDELINE FOR NASAL HIGH FLOW

Rochwerg B, et al. Intensive Care Medicine. 2020.

The role for high flow nasal cannula as a respiratory support strategy in adults

Acute hypoxemic respiratory failure

NHF is preferred to conventional oxygen therapy (COT) for patients with hypoxemic respiratory failure.

STRONG RECOMMENDATION

Peri-intubation

No recommendation is made regarding use of NHF in the peri-intubation period.

NHF during intubation should be continued for patients who are already receiving NHF.

CONTINUE NHF

Post-extubation respiratory failure

NHF is preferred to COT following extubation in patients with any high-risk feature who were intubated for >24 hours.

NIPPV is preferred to NHF in patients who would normally be extubated to NIPPV.

CONDITIONAL RECOMMENDATION

Post-operative

NHF is preferred to COT in high risk and/or obese patients undergoing cardiac or thoracic surgery to prevent respiratory failure in the immediate postoperative period.

Prophylactic NHF to prevent respiratory failure in other postoperative patients is not recommended.

CONDITIONAL RECOMMENDATION

SYSTEMATIC REVIEW WITH META-ANALYSIS

Rochwerg B, et al. Intensive Care Med. 2019.

Patients with acute hypoxemic respiratory failure

NHF vs COT

NHF is associated with a lower risk of requiring intubation	NHF is associated with a decreased escalation of oxygen therapy	No difference in mortality between NHF and COT
RR=0.85; 95% CI 0.74-0.99	*RR=0.71; 95% CI 0.51-0.98*	*RR=0. 94; 95% CI 0.67-1.31*

100% of the analyzed studies used F&P Optiflow NHF systems | Total: n = 446 | Randomized controlled trial: n = 9

Chaudhuri D, et al. Chest. 2020.

Preventing intubation in post-operative patients

NHF vs COT

NHF is associated with a lower risk of requiring intubation	NHF is associated with a decreased escalation of respiratory support
RR=0.32; 95% CI 0.12-0.88	*RR=0.54; 95% CI 0.31-0.94*

91% of the analyzed studies used F&P Optiflow NHF systems | Total: n = 650 | Randomized controlled trial: n = 11

Granton D, et al. Critical Care Medicine. 2020.

Critically ill adult patients immediately post-extubation

NHF vs COT				NHF vs NIV
NHF is associated with a decreased rate of reintubation	NHF is associated with decreased post-extubation respiratory failure	NHF may decrease use of NIV	NHF may decrease hospital LoS	NHF may reduce ICU and hospital LoS
RR=0.46; 95% CI 0.3-0.7	*RR=0.52; 95% CI 0.3-0.91*	*RR=0.64 CI 0.34-1.22*	*-0.98 days CI -2.96-0.21*	*ICU: -0.99 days (-1.68, -0.30) Hospital -3 days (-6.24, 0.24)*

100% of the analyzed studies used F&P Optiflow NHF systems | Total: n = 492 | Randomized controlled trial: n = 8

NHF: high-flow nasal cannula; COT: conventional oxygen therapy; NIV: Non-invasive; CI: confidence interval; ICU: intensive care unit; LoS: length of stay; RR: relative risk.

SELECTED CLINICAL EVIDENCE FOR APPLICATIONS OF **NHF THERAPY**

Avoid intubation

- Rochwerg et al. 2019 META-ANALYSIS
- Chaudhuri et al. 2020 META-ANALYSIS
- Frat et al. 2015

Pre-oxygenation/ peri-intubation

- Miguel-Montanes et al. 2015
- Frat et al. 2019

Avoid escalation

- Storgaard et al. 2018
- Bell et al. 2015
- Jackson et al. 2020
- Papachatzakis et al. 2020

Experience in COVID-19 patients

- Patel et al. 2020
- Vianello et al. 2020
- Guy et al. 2020
- Calligaro et al. 2020
- Bonnet et al. 2021

Post-extubation

- Granton et al. 2020 META-ANALYSIS
- Hernández et al. 2016 (high-risk patients)
- Hernández et al. 2016 (low-risk patients)
- Thille et al. 2019
- Tan et al. 2020

- ESICM Rochwerg et al Guidelines for NHF use

Rest breaks with NIV

- Spoletini et al. 2018

Click on the buttons to link to the full studies (internet connection needed)

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