

Raoof et al. 2020. Chest.

STEP 1
No Respiratory
Distress
SpO₂ < 92-94%
RA or Declining
SpO₂

Simple Oxygen Supplementation O_2 Via N/C @ 4-6 L/min

Worsening Hypoxemia NRB mask @ 15 L/min

STEP 2

Mild to moderate respiratory distress $150 > P/F < 300 \text{ or } SpO_2 < 90-94\% \text{ on } NRB mask and/or labored breathing;} hemodynamically stable$

Noninvasive Strategies

Transfer to a continuously monitored setting. Observe patient closely and obtain ABG in 30 min.

High Flow Nasal Cannula

(Preferred modality)
Minimal hypercapnia
(PaCO₂ preferably
< 5 mm Hg above
baseline)

Awake Proning

(Alone or with HFNC or NIV.) Useful with diffuse lung opacities-ARDS.
No unstable spine fractures, hemoptysis, abdominal compartment syndrome, > first trimester pregnancy, anterior chest tubes.

Noninvasive Ventilation

(Consider Helmet.)
COPD with moderate
hypercapnia or
cardiogenic pulmonary
edema or inability
to carry out work of
breathing.
Low aspiration risk.

STEP 3

Severe Respiratory Distress
P/F < 150 or SpO₂/PaO₂ < 196 or
hemodynamically unstable or at
risk of impending respiratory arrest

Invasive Mechanical Ventilation

(Unless carries a Do Not Intubate order) ARDS net guidelines

Figure 1. – Algorithmic approach to respiratory failure in coronavirus disease 2019. ABG = arterial blood gas; HFNC = high-flow nasal cannula; N/C = nasal cannula; NIV = noninvasive ventilation; NRB = nonrebreather; P/F = PaO_2/FIO_2 ratio; RA = room air; PO_2 = arterial oxygen saturation

determined by pulse oximetry.

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