

GOAL



Optimize oxygenation and patient comfort
SpO₂ >90% with FiO₂ <0.6

ALREADY ON NIPPV?

Start at the patient's current settings at randomization

IF NOT TOLERATING SETTINGS

Make small adjustments (↓IPAP or EPAP by 2-3 cmH₂O) until tolerated, then continue to titrate as tolerated

CLINICAL PEARL



Titrate EPAP first to optimize oxygenation. Then titrate IPAP for ventilation and patient comfort

STEP 1



START

- Mode: BPAP only
- FiO₂ - 1.0
- IPAP ≥ 8 cmH₂O
- EPAP ≥ 5 cmH₂O
- Backup rate = 8-12 (if required)

STEP 2



OPTIMIZE OXYGENATION (EPAP)

- Increase EPAP by 2-5 cmH₂O every 5-10 minutes until:
- SpO₂ >90% with FiO₂ <0.6 **OR**
 - Maximum EPAP reached (15 cmH₂O)

STEP 3



OPTIMIZE VENTILATION (IPAP)

- Adjust IPAP by 2-3 cmH₂O every 5-10 minutes to achieve:
- Respiratory rate <30/min **AND**
 - Patient comfort

STEP 4



CONTINUE MONITORING

Maintain settings and continue clinical monitoring

MONITOR CONTINUOUSLY



SpO₂ (goal > 90%)



Respiratory rate (goal <30/min)



Work of patient breathing & patient comfort



Clinical status



ABG / VBG (as indicated)



Tidal Volume (<9.5 mL/kg PBW)

If tidal volume >9.5mL/kg (predicted body weight), decrease IPAP until <9.5

TROUBLESHOOTING



Discomfort

Adjust settings, interface, or breaks on nasal cannula as needed



Worsening work of breathing, clinical status, or respiratory rate >30

Increase IPAP, intubate if on maximal settings



Persistent hypoxemia

SpO₂ <90% despite max settings and FiO₂ 1.0: increase EPAP, intubate if on maximum EPAP



High tidal volumes (> 9.5 mL/kg PBW)

Reduce IPAP

