This document is intended to provide information to an international audience outside of the US.

NAVA flowchart – Adult

Admission
Criteria for NIV met?

Yes

Insert Edi catheter

No

Intubate – CMV
Optimize CMV settings

Insert Edi catheter

Confirm stable Edi > 2 µV

Set NAVA level = 1.0 cmH₂O/µV
(or target Pedi/est in preview)

NAVA

NIV NAVA
Set NAVA level = 0.5 cmH₂O/µV
(or target Pedi/est in preview)

Titrate NAVA level to patient comfort with:
VT/PBW 4 – 8 ml/kg PBW
Edipeak ~ 10 – 20 µV
Respiratory rate 15 – 35

Weaning
Reduce NAVA level regularly in steps of 0.1
Titrate down sedation
Assess Patient comfort

End NIV

No

Preventive NIV

Yes

Titrate NAVA level to patient comfort with:
VT/PBW 4 – 8 ml/kg PBW
Edipeak ~ 5 – 15 µV
Respiratory rate 15 – 35

Weaning
Reduce NAVA level regularly in steps of 0.1 – 0.2
Titrate down sedation
Assess Patient comfort

Extubate

Monitor Edi
Edi remains stable?

Yes

Discharge

No

COPD patient observations:
• Clinically observed Edipeak values for patients with COPD or other chronic pulmonary diseases may be higher than 15 – 20 µV.
• A higher NAVA level may be needed to unload and take over an adequate amount of work of breathing from the patient. A higher proportion of resistive pressure must be compensated for.

PEEP/O₂ titration strategies:
• Follow local policies and protocols, e.g., personalized to oxygenation, hemodynamics and patient physiology.
• Edi-guided PEEP titration may be performed by small incremental or decremental steps. Average Edipeak can then be assessed when the respiratory drive has stabilized at the new PEEP level.

Weaning and liberation:
• Follow local weaning policies and protocols. Integrate NAVA level and Edi as decision criteria.
• Post-extubation NIV NAVA may be used for 24 – 48 h for frail patients (e.g., with previous weaning failure, ineffective cough, excessive secretions and comorbidities).

Refer to the SERVO-i/u User’s Manual for operation of the ventilator

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**Edi catheter insertion**

1. Connect the Edi module and cable
2. Perform the Edi module function check
3. Measure the NEX distance in cm
4. Determine the insertion distance (use tape measure or on-screen calculator)
5. Dip the Edi catheter in water and insert
6. Connect the Edi cable to catheter
7. Verify the position in the positioning window

**Note:** Check position as enteral feeding tube according to hospital routines (e.g. X-ray, pH)
8. Secure the Edi catheter
9. Make a note of the insertion distance
10. Verify the position regularly

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**Trouble shooting**

**No or Low Edi signal**
- High sedation level?
- Patient overassisted?
- Edi catheter out of position?
- Phrenic nerve injury?

**Increased Edi signal**
- Too low NAVA level? Patient underassisted?
- Too low PEEP? Atelactasis/Cyclic tidal recruitment?
- Airway obstruction, e.g. secretion?
- Worsened disease condition?
- Too low pH and/or high PaCO₂?
- Patient not ready for a support ventilation mode?

**Flow triggering or switch to NAVA(PS) backup**
- PS flow trigger set too sensitive?
- Consider change to pressure trigger
- Patient using accessory muscles

**Volume delivery restricted/Regulation pressure limited**
- Upper pressure limit alarm set too low?

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**Positioning window**

**Correct position**

**Note:** The Edi catheter is correct positioned if the second and third leads are highlighted in pink/blue and the Edi signal is present. An end-expiratory occlusion can also be made to check Edi signal versus patient’s negative inspiratory pressure.

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**Re-positioning**

**Too deep**
Pull out slightly

**Too shallow**
Insert carefully further

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**NAVA level – Edi – Tidal Volume/PBW**

**Titrate NAVA level to patient comfort with:**

- VT/PBW 4–8 ml/kg PBW
- Edi peak ~ 5–15 μV
- Respiratory rate 15–35

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**Edi – Patient’s respiratory drive**

**Edi peak**

End inspiration (70% of Edimin)

**Edimin**

Edi trigger (default 0.5 μV)

**Patient effort**

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**Edi – Pressure proportionality**

- 5 cm H₂O
- Upper pressure limit alarm
- Regulation pressure limited/Volume delivery restricted

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**Trouble shooting**

**Flow triggering or switch to NAVA(PS) backup**

**Volume delivery restricted/Regulation pressure limited**

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**Re-positioning**

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Pull out slightly

**Too shallow**
Insert carefully further

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**NEX**

Y cm 54 55 56 57  58 59 60 61 62 63 64 65 66 67  68 Y cm

39 40 41  42 43 44 45 46 47  48 49 50 51  52  53 54 55 56 57

Y cm 50 51  52  53 54 55 56 57  58 59 60 61 62 Y cm

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**Trouble shooting**

**Flow triggering or switch to NAVA(PS) backup**

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**Edi trigger**

(default 0.5 /μV)

(Edipeak – Edimin)

End inspiration (70% of Edimin)

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**Edi – Pressure proportionality**

- 5 cm H₂O
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