Acute Non-Invasive Ventilation Initiation

The scope of this guideline is to support clinical teams within the Thames Valley & Wessex Paediatric Critical Care Network with the use of non-invasive ventilation in the acutely unwell child or young person. The aim is to support teams in their usual clinical practice. For the Long Term Ventilation cohort of patients, please refer to LTV CYP Guideline.

Indications for Acute NIV

- Type 1 respiratory failure – hypoxia
- Type 2 respiratory failure – hypercarbia
- Moderate to severe respiratory distress
- Unresponsive to Humidified High Flow Therapy

** Children with neuro disability may not show signs of respiratory distress in the usual ways, observe for signs such as tachycardia. Clinicians should have a lower threshold for escalating respiratory support in children with neuro disability.*

Child or Young Person identified as potential candidate for acute non-invasive ventilation

STOP & ASSESS – is there evidence of any of the following?		
A	Airway obstruction	
B	SPO2 <92% or FiO2 >50% Poor respiratory effort Significant respiratory acidosis	Has the chest x-ray been reviewed? Are there any indications on x-ray to proceed straight to I&V?
C	Signs of shock – hypotension, tachycardia, pronged capillary refill time Raised lactate	
D	Reduced level of consciousness. Worsening agitation and/or drowsiness.	

YES

Place 2222 paediatric peri/cardiac arrest call immediately.

Contact SORT team.

Follow local escalation protocol for critically unwell child.

Do not delay intubation & ventilation for initiating NIV if this is needed.

NO

Are any contraindications to NIV present (see list below)?

Yes – Escalate

No –
Proceed to PIER - Initiation of Acute NIV for full guideline.

Contraindications to NIV

Respiratory or peri-arrest state
Severe cardiovascular instability
Inability to protect the airway
Patient not tolerating intervention
Undrained pneumothorax/pneumomediastinum
Facial trauma/surgery
Significant vomiting/aspiration risk
Upper GI obstruction