

# NASAL HUMIDIFIED HIGH FLOW OXYGEN (HFO)

## INDICATIONS

**SEVERE BRONCHIOLITIS/PNEUMONIA**

Discuss with a consultant/ registrar  
Take a base line blood gas

## STEP 1a - FLOW

Initiate at 1L/kg/min, increase as tolerated to:  
If  $\leq 10$ kg: 2L/kg/min.  
If  $>10$ kg: 1<sup>st</sup> 10kg; 2L/kg/min + 0.5L/kg/min for each kg above that (Max 60L/min)

## STEP 1b - FiO<sub>2</sub>

Use an Oxygen blender or AIRVO to titrate FiO<sub>2</sub>  
Start with FiO<sub>2</sub> = 1 (100%)  
and titrate to target SaO<sub>2</sub>  $> 92\%$

## STEP 1c - HUMIDIFICATION

Target temperature 34 - 37°C

## STEP 2 - MONITORING

### CONTINUOUS

SaO<sub>2</sub> + Heart rate

### HOURLY - CIRCUIT

Flow rate  
FiO<sub>2</sub>  
Patency of nasal cannula and tubing  
Humidifier settings

### HOURLY - PATIENT

PEWS score

Repeat Blood Gas

Perform 2 hours after starting treatment

## CONTRAINDICATIONS

Life threatening hypoxia

Pneumothorax

Nasal obstruction

Suspected basal skull fracture

Max-Fax Trauma

Foreign body aspiration

## REMEMBER

Cyanotic heart disease and pulmonary hypertension will have different target saturations

Actual FiO<sub>2</sub>  $<$  set FiO<sub>2</sub> due to air entrainment

## TRANSPORT

Possible but seek advice from SORT: 02380 775502

## STEP 3 - WEANING

WEAN ACCORDING TO IMPROVEMENTS IN:

Work of breathing  
PEWS score

WEAN FiO<sub>2</sub> FIRST

Wean FiO<sub>2</sub> maintaining SaO<sub>2</sub>  $> 92\%$

WEAN FLOW WHEN FiO<sub>2</sub>  $\leq 0.3$  (30%)

Reduce flow by 2L/min  
Re-assess RR, SaO<sub>2</sub> and WOB every 30 minutes.  
If stable reduce flow by 2L/min every hour

SWITCH TO 1 - 2L/min NP O<sub>2</sub> WHEN

$\leq 10$ kg: Flow rate  $\leq 0.5$ L/kg/min  
 $> 10$ kg: Flow rate  $\leq 5 - 8$ L/min



## DETERIORATION MANDATES SENIOR REVIEW

Worsening agitation/reduced consciousness  
SaO<sub>2</sub>  $\leq 90\%$   
Increasing CO<sub>2</sub> + /- Acidosis (pH  $\leq 7.25$ )  
Hypotension

TRIAL OF CPAP  
OR  
INTUBATION AND VENTILATION