

Southampton Oxford Neonatal Transport Guideline

REINTUBATION IN TRANSIT

PREVENTION

Extubation in transit is a NEVER EVENT and must be reported through local governance reporting systems

- Securing the tube properly at referring centre is vital- keep local hospital securing mechanism unless insecure
- Check position on CXR-ideally between T1/T2
- Assess patency of the tube- Chest movement, breath sounds, leaks and obstruction
- Assess whether suction is required before leaving
- Ensure tCO₂ and/or ET CO₂ monitoring is in place and trending prior to leaving referring unit

Signs of a problem with ventilation en route

- Increase in tcCO₂ /ET CO₂ or change in capnographic waveform (see chart below)
- Decrease SaO₂, colour changes, reduced chest movement
- Breath sounds may not be a reliable sign in presence of traffic

Management

- If there is a significant problem **STOP THE AMBULANCE AT A SAFE APPROPRIATE LOCATION**
- Consider- DOPE (**D**isplacement, **O**bstruction, **P**neumothorax, **E**quipment)
- Remember equipment issues are more common on transport :
 - Are gas supplies adequate?
 - Has the ventilator circuit been checked for disconnection
 - Is there a ventilator malfunction?
 - Is the power supply secure?
- Examine clinically for chest movement, breath sounds, review ET CO₂ and increase FiO₂ & PIP
- Insert colorimetric CO₂ device and assess for colour change (in small babies < 1kg there may be a false negative due to low tidal volumes)
- Suction the ETT if thought to be obstructed
- Reconnect to ventilator, if patient improves, reassess
- If not, commence manual ventilation using bag/ neopuff /RPAP via ETT (remember to connect the bag to oxygen supply)
- If patient fails to improve, make a decision to reintubate unless you strongly suspect another cause.
- In order to optimally position for intubation open the incubator at the head end and pull the tray out.
- Efforts must be made to maintain thermo-regulation during intubation.

If intubation unsuccessful use alternative airway adjuncts e.g. laryngeal mask (see below for sizing) and seek advice from the transport consultant.

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Airway Equipment and Initial Respiratory Support Settings

Individual babies vary and clinical assessment and further tests should be used to confirm suitability.







Gestation (wks)		22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41+
Airway Equipment Size	Face Mask Size (mm)	35mm					35mm/42mm			42mm		42/50mm		50mm							
	Laryngeal mask size	Not recommended		Consider in extremis		Consider Size 1 igel or size 0.5/00 LMA						Size 1 Laryngeal mask (igel or LMA)									
	Laryngoscope Blade (Miller straight)	size 00						size 0						size 1							
	ET Tube size (mm)	2.0-2.5		2.5			3						3.5								
	Oral ET depth of insertion at lips (cm)	5	5.5	6	6.5	7	7.5	8	8.5	9											
	Initial Respiratory support & Ventilation settings at Delivery	CPAP/HFT	CPAP 6-8 cm H ₂ O OR 6-8L/min nHFT																		
PIP	20-25cm H ₂ O										30cm H ₂ O										
PEEP	5-6 cm H ₂ O																				
FiO ₂	0.3					0.21-0.30					0.21										
Weight (kg)	0.5	0.6	0.7	0.8	0.9	1	1.1	1.25	1.4	1.55	1.75	1.95	2.15	2.45	2.65	2.9	3.1	3.3	3.5	3.6	

Preductal SpO₂ Targets
 2 mins 65%
 5 mins 85%
 10 mins 90%

Tube Placement Check
 ✓ Chest Rise
 ✓ Auscultation
 ✓ CO₂ Detection

Colorimetric ET CO₂ detectors
 (Neo-StatCO₂ or Pedi-Cap)
GOLD IS GOOD
 False -ve: low cardiac output

Capnography Traces

GOOD 	BIG LEAK 
OBSTRUCTION/ BRONCHOSPASM 	OESPHAGEAL INTUBATION 

Surfactant
 Initial Dose 200mg/kg Curosurf®
ET surfactant: ensure insertion length of catheter is shorter than ET
Surfcath: ensure 0.5cm black tip is still visible above glottis for babies <27 weeks.

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