Guidelines for management of severe bronchiolitis in infants i.e. up to 12 months age CGA

Title:	Management of severe bronchiolitis
Version:	**Version 4**
Supersedes:	Version 3
Application:	The guideline is intended for use by any hospital team caring for infants, children and young people under 16 years age across the Paediatric Critical Care Network in the North-West (England) & North Wales region.

Originated /Modified By: **Designation:**	**Originated By:** North-West (England) & North Wales Paediatric Transport Service (NWTS) & North-west (England) and North Wales Paediatric Critical Care Network **Version 4 modified by:** Mohammed Rohouma, PICM Grid trainee, RMCH/NWTS/AHCH Kate Parkins, PICM Consultant, NWTS **Version 3 modified by:** Eamonn Coleman, Paediatric Anaesthetic SCF, NWTS & Alder Hey Children's Hospital Luke Winslow, Paediatric Anaesthetic CF, NWTS & Alder Hey Children's Hospital Sam Ellis, ANP PICM, NWTS & Alder Hey Children's Hospital Kate Parkins, PICM Consultant, NWTS **Version 1 & 2 Originated / Modified By:** Nayan Shetty, Consultant PICM, Alder Hey Children's NHS Foundation Trust & NWTS Rajesh Phatak, Consultant PICM, Royal Manchester Children's Hospital & NWTS
Reviewed by:	1. North-West (England) & North Wales Paediatric Critical Care Operational Delivery Network (ODN) 2.Lewis Nicholls, Paediatric Pharmacist, PCC ODN & RMCH
Ratified by:	1. North-West (England) & North Wales Paediatric Critical Care ODN 2. RMCH (Host Trust): Paediatric Policies & Guidelines & Pharmacy & Medicines Management Committees
Date of Ratification:	1. PCC Oversight: 24.10.25 2. PMMC: completed November 25 3. P&G Committee: 12.12.25

Issue / Circulation Date:	**15.12.25**
Circulated by:	PCC, SiC & LTV ODN
Dissemination and Implementation:	**15.12.25**
Date placed on the websites (NWTS / PCC, SiC & LTV ODN) + MFT intranet	**15.12.25**

Planned Review Date:	**December 2028**
Responsibility of:	Clinical lead North-West (England) & North Wales Paediatric Critical Care ODN & NWTS guideline lead consultant

Minor amendment (if applicable) notified to:	
Date notified:	

EqIA Registration Number:	**2026-50**

1. Detail of Procedural Document

Management of severe or life-threatening bronchiolitis

2. Equality Impact Assessment

Equality Impact Assessment Please record the decision whether the policy, service change or other key decision was assessed as relevant to the equality duty to: Eliminate discrimination and eliminate harassment Advance equality of opportunity Advance good relations and attitudes between people		
Relevant	YES	Guideline relevant for paediatric age group only Intended for use across North-West (England) & North Wales region for those under 16 years of age. Appropriate PEWS and observation target ranges included for all age groups. Risk of occult hypoxaemia highlighted IE that it is more than 3 times greater in Black vs White pts AND may over-estimate SpO_2 between 1.5-5%.
Where the decision was RELEVANT, please record details of the outcome of the full impact assessment and summarise the actions that will be taken to eliminate or mitigate adverse impact, advance equality or justification for the impact.		
EqIA registration Number for RMCH:		**2026-50**

3. Consultation, Approval and Ratification Process

This guideline was developed with input from:
- North-West (England) and North Wales Paediatric Transport Service (NWTS).
- North-West (England) and North Wales Paediatric Critical Care Operational Delivery Network
- Representatives from the Local Hospital Teams within network above.

These guidelines were circulated amongst the North-West (England) and North Wales Paediatric Critical Care Operational Delivery Network for comments on the 10.10.25

All comments received have been reviewed and appropriate amendments incorporated.

These guidelines were signed off by the PCC ODN guidelines committee on Date.

For ratification process for network guidelines see appendix 1.

4. Disclaimer

These clinical guidelines represent the views of the North-West (England) and North Wales Paediatric Transport Service (NWTS) and the North-West (England) and North Wales Paediatric Critical Care Operational Delivery Network (PCC ODN). They have been produced after careful consideration of available evidence in conjunction with clinical expertise and experience.
It is intended that trusts within the Network will adopt this guideline and educational resource after review and ratification (including equality impact assessment) through their own clinical governance structures.
The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient.
Clinical advice is always available from NWTS on a case-by-case basis.
Please feel free to **contact NWTS (01925 853 550)** regarding these documents if there are any queries

NWTS North West & North Wales Paediatric Transport Service

Guidelines for management of severe bronchiolitis in infants i.e. up to 12 months age CGA

ODN SiC LTV PCC NORTHWEST

SEVERE: FiO_2 > 0.5 to maintain SpO_2 > 92%, ↑HR, ↑RR, ↑WOB, frequent apnoeas (>2/hr) but not needing BVM

LIFE-THREATENING DISEASE: SpO_2 < 88% despite high flow oxygen / NIV, respiratory acidosis (pH <7.25) despite CPAP / BiPAP, exhaustion, grunting, apnoea needing BVM or frequent with associated desaturations +/- bradycardia

ASSESSMENT:

- Discuss with +/- review by Paediatric Consultant. NB consultant review for those with life-threatening bronchiolitis
- HR, BP, RR, 3-lead ECG, PEWS, Pre (Right hand) & Post (legs) ductal SpO_2 (to exclude congenital heart disease)
- Start Low Flow Nasal Cannula O_2: Aim SpO_2 >90% or >92% if any Risk Factors (see below). Insert NGT.
- Blood Gas with lactate/glucose; CXR (check lung fields and size/shape of heart) + NPA for respiratory viral screen

RISK FACTORS FOR SEVERE DISEASE: NB Aim SpO_2 > 92%

- < 6 weeks CGA +/- weight < 5 kg
- Prematurity (especially < 32/40)
- Chronic lung disease: especially if O_2 dependent
- Congenital heart disease or cardiomyopathy
- Anatomical defects of airway
- Neuromuscular disorders
- Immune deficiency
- Trisomy 21

CONSIDER DIFFERENTIAL DIAGNOSES: Sepsis (including HSV encephalopathy or Pertussis or Measles); Cardiac (check size/shape heart on CXR); Metabolic/Endocrine; Safeguarding; Surgical: see Collapsed neonate/infant

SIGNS OF DETERIORATION:

- Failure to achieve target SpO_2 (not transient)
- ↑WOB / ↑HR / ↑RR / Rising Lactate
- Respiratory Acidosis: Poor CO_2 clearance (↑CO_2)
- Recurrent apnoea: causing ↓HR +↓SpO_2 +/- needing BVM

NO APNOEAS

- Escalate to Heated Humidified High Flow Nasal Cannula O_2 ($HFNCO_2$) @ 2L/kg/min (max 60 L/min)
- Neonates may go up to 8 L/min regardless weight (if ≤ 4 kg)
- Blood Gas after 1 hour

DETERIORATION

- Escalate to CPAP 6-8 cmH_2O
- Gas after 1 hour
- Senior Review

DETERIORATION: escalate to BiPAP

D/W NWTS: Use NWTS referral

APNOEAS

FREQUENT APNOEAS AT ANY TIME:

- Paediatric/Anaesthetic Consultant Review
- D/W NWTS (Use NWTS referral form)
- **Early BiPAP (strong evidence of benefit):**
- Pressure: High/PIP = 10; Low/PEEP = 6
- Ti = 0.5-0.7 Back-up rate = 30/min
  Apnoea time = 20 secs
- Repeat blood gas in 1 hour
- NIV care (see page 4)
- **Consider transfusion PRC if Hb < 100 g/L**
- **Aim Hb ≥ 100 g/L to ↓apnoea frequency & severity, especially in ex-prem/CLD**
- No clear evidence for benefits of using caffeine

INDICATIONS FOR INTUBATION: NWTS intubation guideline

- Refractory hypoxia despite NIV CPAP/BiPAP or $HFNCO_2$ for infant/older child
- Marked ↑ WOB, impending exhaustion
- Recurrent significant apnoeas despite BiPAP
- ↑pCO_2 > 10 kPa with respiratory acidosis pH <7.25 despite non-invasive support (capillary gas)

CARE FOR PATIENTS WHO DON'T NEED INTUBATION

AIRWAY:

- To clear blocked nose: nasal 0.9% sodium chloride drops +/- gentle nasopharyngeal suction

BREATHING

- Optimise support via $HFNCO_2$ or NIV CPAP/BiPAP (flowchart page 3)
- Make all efforts to improve seal with available interfaces (trial prongs/mask); use dummy to encourage infant to keep mouth closed & maintain PEEP
- Positioning: elevate head of cot (30 - 45°) & change position 2-4 hourly e.g. supine, right, left sides & prone position (to improve oxygenation and secretion clearance).
  NB when prone, always place a roll under pelvic and shoulder girdles. Aim: abdomen just lifts off bed (hand should easily slide under abdomen) & so that abdominal contents not splinting diaphragm
- No clear evidence of benefit for addition of caffeine to treat apnoea's in bronchiolitis. May be considered in under 6 -12 weeks corrected gestational age patients, especially for those who were ex-premature, but evidence still equivocal.

CIRCULATION

- Always check pre (right hand)/post (either foot) ductal SpO_2 & presence femoral pulses, murmur, or liver
- Check heart size on CXR looking for cardiomegaly or congenital heart disease
- If suspect congenital heart disease (CHD) or cardiomyopathy: consider local ECHO ASAP (see **Collapsed Neonate/Infant Guideline**)
- **If known CHD** check with parents & aim for their **usual SpO_2** range
- Treat hypotension/shock (see **NWTS shock guideline**)

DISABILITY/SEDATION (if agitated on NIV)

- **Cluster cares** e.g. turn, suction, change nappy 2-4 hrly. Aim medical review/blood gases at same time
- **Non-pharmacological**: swaddling, oral sucrose, regular aspiration of OGT/NGT to prevent gastric distension
  Pharmacological: use ONE agent due to risk of over-sedation in pt with an unprotected airway.
  Promethazine 0.5-1 mg/kg/dose IV or enteral 6-8 hourly PRN. Avoid more frequent or higher doses as risk of over-sedation in pt with an unprotected airway. AVOID promethazine if patient on erythromycin or ondansetron or domperidone as all these drugs cause prolonged QT interval & risk or arrhythmias increased.
  NB CAUTION: Use of chloral hydrate
  MRHA drug safety alert 2021 was highlighted by PCCS & NPPG statement in 2022: new restriction to use of chloral hydrate due to the potential for carcinogenic effects, based on animal data. Licensed use limited to short-term (max 2 weeks) treatment of severe insomnia, only in over 2 years of age with a neurodevelopmental disorder and where the insomnia affects normal daily life.
  Chloral is a gastric irritant.
  PCCS/NPPG statement emphasised use of alternative agents eg promethazine.
  It may be appropriate to use chloral hydrate short-term, but only when alternative agents unsuccessful
  Chloral Hydrate: dose 10-15 mg/kg/dose enterally 6-8 hourly PRN. If used for ≥ 5 days need to wean the dose to avoid withdrawal or delirium before stopping.

EXPOSURE/SEPSIS:

- Send respiratory viral cultures (+/- extended screen) & blood cultures as appropriate
- If suspected sepsis, see **Collapsed Neonate/Infant Guideline** & **Sepsis Guideline**.

FLUIDS/FEEDING:

- **Severe respiratory distress, FiO_2 > 0.5 or deteriorating:** keep NBM, start IV maintenance fluids 100 mL/kg/day (in those up to 10 kg in wt). NB reduce to 70 mL/kg/day if Na < 130 mmol/L. Watch blood glucose.
- **Maintenance fluids: i**deally Plasmalyte 148 + 5% glucose if available (& glucose stable ≥ 3 mmol/L)
- **Stable & improving?** start small NGT/OGT feeds e.g. 2-5 mL/hour then increase gradually as tolerated aiming for 100 mL/kg/day 2-3 hourly feeds. Consider continuous/hourly feeds if bolus feeds cause vomiting or splinting of diaphragm while on NIV CPAP/BiPAP. Switch from NGT to oral feeding when on low flow O_2
- Keep input/output fluid chart, watch U&Es. Aim for urine output 1-2 mL/kg/hr (calculate 4-6 hrly)

CARE FOR PATIENTS THAT DO NEED INTUBATION

Discuss with NWTS consultant

Print out appropriate **NWTS emergency drugs guide or**
https://www.nwts.nhs.uk/emergency-drug-guides

AIRWAY:

- For intubation: use **Intubation Guidelines** (includes a paediatric checklist) & **ETT fixation**
- Always use CUFFED ETT if ≥ 3 kg (if possible)
- Use an UNCUT ETT as this makes optimising ETT position & securing ETT much easier
- Place an NGT to decompress the stomach (prior to intubation if possible)
- CXR: to visualise ETT tip (aim around T2 or midway between clavicles & carina), check position NGT & exclude pneumothorax or lobar collapse/consolidation

BREATHING/VENTILATION:

	Tidal Volume	PEEP cmH_2O	PIP cmH_2O	Rate (bpm)	Inspiratory Time (Ti)	I:E ratio
Initial settings	5-8 mL/kg (IBW) Max 10 mL/kg	5-10	Limit (ideally) < 30	≤ 30 - 40	0.6 - 0.8 secs	1:1 -1:2 OR if wheezy 1:2-1:3 (+ slower rate)

- Titrate FiO_2 (as required) to achieve SpO_2 > 90-92%.
- Use either an appropriately sized Heat & Moisture Exchanger (HME) filter OR active heated humidification via ventilator circuit. NB too large or a waterlogged HME will cause ↑CO_2
- Tolerate permissive hypercarbia if pH > 7.15 (as long as haemodynamically stable)
- **Suction** with 'saline lavage' i.e. 0.9% sodium chloride 1-2 mL via ETT to relieve mucus plugging. Instil 0.9% NaCl, allow few breaths (either via ventilator or via bagging circuit) & then suction
- Regular capillary blood gases: 4-6 hourly with lactate

Circulation:

- Secure 2 peripheral IV cannula preparing for transfer.
- Treat hypotension if present (fluid boluses +/- inotropes: **NWTS shock guideline**)

Disability/Sedation:

- Keep well sedated during stabilisation.
- Use: Morphine 20 microgram/kg/hr +/- Midazolam 60-120 microgram/kg/hr + Rocuronium boluses 1 mg/kg/dose
- If transfer is delayed: Midazolam may be swapped for promethazine 0.5-1 mg/kg/dose 6 hourly via IV or NGT once stable and feeds started, but always D/W NWTS

Exposure/Sepsis:

- Start appropriate antibiotics / antivirals for age (30-40% may have associated bacterial infection).
- Send blood & sputum cultures, & NPA for extended respiratory viral screen (including C-19 & Pertussis PCR)

Fluids/Feeding:

- Continue IV fluids at 100 mL/kg/day (for ≤ 10 kg) during stabilisation. Keep NBM if transfer within 4-6 hrs.
- Aim for UO 1-2 mL/kg/hr. Watch blood glucose, biochemistry and fluid balance.
- If transfer is delayed (keep in regular contact with NWTS): only consider enteral feeds once stable & lactate < 2 mmol/L. Start NG feeds 2-5 mL/hr. Gradually increase up to full feeds 100 mL/kg/day 2-3 hourly feeds.

Transfusion:

- Packed cells only if Hb < 70 g/L in haemodynamically stable and easily oxygenated patient.

Note: Bronchospasm

- Wheezing in infants with bronchiolitis is usually due to narrowing of the airway with secretions & oedema. Bronchospasm & asthma can happen in infants (see **BTS/NICE guidelines**), but is rare, & the effect of bronchodilators are not guaranteed.
- For suspected bronchospasm, nebulised bronchodilators (ipratropium bromide not salbutamol) can be tried, but should be discontinued if not effective.
- In responders, consider steroids, magnesium sulphate bolus IV +/- aminophylline IV bolus, then infusion.
- Discuss with Respiratory consultant (see **NWTS asthma guideline**)

POTENTIAL WEANING STRATEGY FROM OR BIPAP OR CPAP OR HFHNCO₂

NB NO GUIDELINE REPLACES CLINICAL JUDGEMENT

REGULAR ASSESSMENT: check stable/improving observations/PEWS plus regular blood gases as appropriate

STABILITY CRITERIA WHEN WEANING FROM NIV BIPAP (OR CPAP)

SpO_2 > 90% (>92% if any risk criteria)
Good respiratory drive / no apnoea
Respiratory distress settled, if ↑WOB was previously a concern
Normal (or normalising) blood gas—pH, pCO_2 & lactate
Cardiovascularly stable and neurologically appropriate

BIPHASIC POSITIVE AIRWAY PRESSURE: STABLE FOR 24 HRS ON BIPAP + FiO_2 ≤ 50%

↓

Switch directly to Continuous Positive Airway Pressure (CPAP): start at 6-8 cmH_2O

↓

CPAP once stable for 6-12 hours
Wean O_2 every hour
If SpO_2 > 95% reduce FiO_2 by 10% i.e. 50% to 40%
If SpO_2 = 90 - 95% reduce by 5% i.e. 50% to 45%
Wean PEEP when FiO_2 = 30-35% & stable for 4 hrs

↓

STABILITY CRITERIA ON CPAP: PEEP = 4 –6 cmH_2O + FiO_2 = 30-35% + SpO_2 > 90% for 4 hrs
RR within normal range for age (or underlying condition)
No significant recession, tolerating time off CPAP during cares (up to 15 mins)
Consider switching to $HFHNCO_2$ OR directly to $LFNCO_2$

↓

$HFHNCO_2$ once infant stable for 6 hours
Wean FiO_2 until FiO_2 < 30%
Then reduce flow gradually to 1 L/kg/min
Once stable for 6 hours switch to $LFNCO_2$

↓

$LFNCO_2$ once infant stable for 6 hours
Wean every hour that SpO_2 > 90% if stable

If patient fails at any step, go back onto previous step/plan and review with senior paediatrician

SUGGESTED DISCHARGE HOME CRITERIA FOLLOWING ADMISSION FOR BRONCHIOLITIS

- Consider discharge when observed and stable over previous 6-8 hours
- SpO_2 > 90% in air (> 92% if any risk factors present see page 3)
- Respiratory rate: less than 60 /min (under 1 year); < 50 /min (over 1 year)
- Heart rate < 150 /min
- Not requiring suction
- Apyrexial
- Tolerating 100 mL/kg/day enteral feeds (orally fed)
- Breast feeds not lasting more than 25 minutes plus no maternal concerns re feed volume
- Infants > 6 months and tolerating solids: aim approx. 600 mL/day
- Regular wet nappies
- Assess whether parents need further support via social services, health visitor or hospital at home
- Check parents understand when to seek medical review
- **Registrar review prior to discharge home**

Parent information leaflets regarding Bronchiolitis are available

HERE **OR** **HERE**

https://www.clinicalguidelines.scot.nhs.uk/media/2898/bronchiolitis-leaflet-14092021.pdf

https://www.nhs.uk/conditions/bronchiolitis/

https://bsw.icb.nhs.uk/wp-content/uploads/sites/6/2022/06/NHS-Paediatric-Bronchiolitis-Advice-Sheet.pdf

TARGETS for managing any critically sick child			
ALL AGES	**SpO_2 ≥ 94% unless cyanotic CHD**	**Lactate ≤ 2 mmol/L**	**Glucose: ≥ 3 mmol/L**

CAUTION inaccurate pulse oximetry (SpO_2) readings can occur in severe anaemia, high carbon monoxide levels and hypoperfusion. IN ADDITION, SpO_2 may inaccurately over-read masking hypoxaemia (occult or unrecognised hypoxaemia), i.e. ARTERIAL (true) oxygen saturation < 88% when SpO_2 ≥ 92%. Risk of occult hypoxaemia is >3xs greater in Black vs White pts AND may over-estimate SpO_2 between 1.5-5%.

AGE	TARGET MEAN BP	AGE	TARGET MEAN BP
0-11 Months	45-55	5-12 Years	60
1-4 Years	55-60	>13 Years	60-65

Respiratory Rate (Score up to 4)							
Score	**4**	**2**	**1**	**0**	**1**	**2**	**4**
0-11 months	0-10	11-20	21-20	31-49	50-59	60-69	≥70
1-4 years	0-10	11-20		21-39	40-49	50-59	≥ 60
5-12 years	0-10	11-15	16-20	21-24	25-39	40-49	≥ 50
>13 years	0-10		11-15	16-24	25-29	30-39	≥ 40

ALL AGES Score	Respiratory Distress (Score up to 4)
0 = none	None
1 = mild	Nasal flaring, subcostal recession
2 = moderate	Tracheal tug, intercostal recession, inspiratory or expiratory noises
4 = severe	Supraclavicular recession, grunting, exhaustion, impending respiratory arrest

ALL AGES Score	Oxygen Saturations (Score up to 4)
0	95-100%
2	92-94%
4	≤ 91%

ALL AGES Score	Oxygen Requirement (Score up to 4) - ALL AGES
0	Room Air
2	0.01 up to 4 litres/min
4	4 or more litres/min **NB** High flow humidified NC oxygen, NIV CPAP or BiPAP score 4 (irrespective of O_2 requirement)

Heart Rate (Score up to 4)							
Score	**4**	**2**	**1**	**0**	**1**	**2**	**4**
0-11 Months	0-80	81-90	91-110	111-149	150-169	170-179	≥ 180
1-4 Years	0-60	61-70	71-90	91-139	140-149	150-169	≥ 170
5-12 Years	0-60	61-70	71-80	80-119	120-139	140-159	≥ 160
>13 Years	0-50	51-60	61-70	71-99	100-119	120-129	≥ 130

Blood Pressure Systolic (Score up to 4)							
Score	**4**	**2**	**1**	**0**	**1**	**2**	**4**
0-11 Months	0-50	51-60	61-70	71-89	90-99	100-109	≥ 110
1-4 Years	0-50	51-60	61-80	81-99	100-119	120-129	≥ 130
5-12 Years	0-70	71-80	81-90	91-109	110-119	120-129	≥ 130
>13 Years	0-80	81-90	91-100	101-119	120-129	130-139	≥ 140

Capillary Refill Time (CRT) (Score up to 2)							
Score	**4**	**2**	**1**	**0**	**1**	**2**	**4**
All Ages		≥ 3 secs		<3 secs		≥ 3	

CHECK IF YOUR PATIENT HAS ANY ADDITIONAL RISK FACTORS (NPEWS)		
RISK FACTOR	**THINK!**	
☐ Baseline vital signs outside normal reference ranges	Always score relevant PEWS value even if this is normal for the patient eg cyanotic heart disease	Vital sign: Eg SpO_2 Patient's normal value: Eg SpO_2 = 75-85%
☐ Tracheostomy / Airway Risk / Difficult Intubation	Do you need additional help in an airway emergency? Needs review by local anaesthetics & ENT teams. Consider d/w NWTS early	
☐ Invasive/Non-invasive ventilation/high flow	Check oxygen requirement on additional respiratory support. Remember High Flow/BiPAP & CPAP score max 4 on oxygen delivery	
☐ Neutropenic/immunocompromised	Sepsis recognition & escalation has a lower threshold	
☐ <40 weeks corrected gestational age	Sepsis recognition & escalation has a lower threshold (beware hypothermia)	
☐ Neurological condition (ie meningitis, seizures)	Remember: check pupil response if anything other than ALERT on AVPU	
☐ Neurodiversity or Learning Disability	Be aware of the range of responses to pain & physiological changes	

NPEWS ESCALATION LEVEL	ACTIONS	MEDICAL REVIEW	OBSERVATIONS / PLAN
E0 – no concerns **Score = 0**	None	Not required	Continue current observations
E1 – Increased monitoring **Score = 1- 4**	Inform Nurse-in-Charge Consider medical review (ST3+ or equivalent) Ensure feedback to parents	As required Discuss with Nurse-in-Charge whether medical review required	Reassess within 60 mins & document ongoing plan
E2 – Needs clinical review (within 30 mins) **Score = 5-8**	Review by Nurse-in-Charge Ensure feedback to parents	Within 30 mins Review by ST3+ or equivalent Discuss stabilisation plan with consultant	Reassess within 30 mins & document ongoing plan Continuous SpO_2 monitoring
E3 – Needs rapid review (within 15 mins) **Score = 9-12**	Immediate review by Nurse-in-charge Discuss medical plan with consultant Senior feedback to parents	Within 15 mins Alert to ST3+ or equivalent Stabilisation plan to be agreed after review by consultant Consider NWTS referral after consultant review	Reassess every 30 mins Continuous monitoring SpO_2, RR, & ECG Record full GCS if change in AVPU
E4 – Needs emergency review (immediate) **Score > 12**	Immediate review by Nurse-in-Charge Consider immediate 2222 call for immediate emergency medical response Inform paeds consultant Senior feedback to parents	Immediate Alert to ST3+ or equivalent Consultant review ASAP Anaesthetic review Consider NWTS referral after appropriate initial interventions	Reassess every 15 mins Continuous SpO_2, ECG, & RR Record full GCS if change in AVPU

NB Escalation levels can also be selected and triggered if parent or carer expresses concern that their child needs increased monitoring +/- clinical review despite PEWS, OR parent or nursing gut instinct irrespective of score.

Medical Plan for Stabilisation:

Structured plan must be documented including:

1. Specific actions to be taken
2. Expected outcome
3. Outcome deadline / in timeframe
4. Escalation if outcome not met by deadline / in timeframe

Emergency Drug Guide (wt based) via NWTS website home page - for intubation drugs / sedation regime / inotropes…..
https://www.nwts.nhs.uk/emergency-drug-guides

GUIDELINES FOR < 16 YEARS: ***www.nwts.nhs.uk/clinicalguidelines***

STOPP tool = Safe Transfer of Paediatric Patients which includes risk assessment prior to transfer, and checklists
NWTS LocSIPPS includes sizes of ETT, suction, NGT, CVL & arterial lines and checklist for paediatric intubation
Guidelines include: intubation and difficult airway, sepsis including inotropes, insertion of intraosseous needle, collapsed neonate or infant, management of under 16 years outside PCC level 3 unit, and transfer

EDUCATION: ***www.nwts.nhs.uk/education-website***
Includes recordings of NWTS education eg time critical transfers, sepsis, airway management etc
Login details for NWTS education site are available from your nursing, AHP and medical paediatric critical care operational delivery network links
OR via email: info@nwts.nhs.uk

FOR DRUG DOSES:

British National Formulary for Children

Emergency Drug Guide via https://www.nwts.nhs.uk/emergency-drug-guides

CONTACT NUMBERS:

NWTS (North-West (England) & North Wales Paediatric Transport Service): **Referrals 08000 84 83 82**
General enquiries: 01925 853 550
Regional Paediatric Intensive Care Unit Alder Hey Childrens Hospital: 0151 252 5241
Regional Paediatric Intensive Care Unit Royal Manchester Childrens Hospital: 0161 701 8000

Date of Review: December 2028

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For the most up to date version of this guideline please visit PCC / SiC / LTV ODN
https://northwestchildrensodnhub.nhs.uk/ or
NWTS website: https://www.nwts.nhs.uk/clinicalguidelines/regionalguidelines-a-z

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SORT 2024 STRS 2022

CATS 2024 WATCh 2024

Ratification Process