

Estimate of child's weight (1-10 years)

Weight (kg) = 2 x (age in years + 4)

Systolic blood pressure = 80 + (age in years x 2)

N.B. Low BP is a pre-terminal sign in children

Conscious Level	Normal Values		
	Age	Respiratory Rate/min	Heart Rate/min
Alert	<1	30-40	110-160
Responds to Voice	1-2	25-35	100-150
Responds to Pain	2-5	25-30	95-140
Unresponsive	5-12	20-25	80-120
	>12	15-20	60-100

Observe HR,RR,BP,Perfusion, Conscious Level

Cardiac monitor and pulse oximetry. Take blood for Glucose, FBC, Clotting, U&E, Ca⁺⁺, Mg⁺⁺, PO₄, Blood cultures, Blood Gas (bicarb, base deficit), Cross-match

Colloid bolus (20ml/kg)

4.5% Human Albumin Solution (or Fresh Frozen Plasma or Hemaccel/Gelofusine) i.v. or intra-osseous

Inotropes

Dopamine or Dobutamine at 10-20 mcg/kg/min. Make up 3 x weight (kg) mg in 50 ml 5% dextrose and run at 10 ml/hr = 10 mcg/kg/min. (These dilute solutions can be used via a peripheral vein.) Start Adrenaline via a central line only at 0.1 mcg/kg/min. Make up 300 mcg/kg in 50 ml of normal saline at 1 ml/hour=0.1 mcg/kg/min.

Intubation (call anaesthetist)

Atropine 20 mcg/kg (max 600 mcg) AND Thiopentone 3-5 mg/kg AND Suxamethonium 2 mg/kg (caution, high potassium) ETT size = age/4 + 4, ETT length (oral) = age/2 + 12, Then: morphine (100 mcg/kg) and midazolam (100 mcg/kg) every 30 mins

Hypoglycaemia (Glucose < 3 mmol/l)

5ml/kg 10% dextrose bolus i.v. and then dextrose infusion at 80% of maintenance requirements over 24 hours

Correction of metabolic acidosis pH < 7.2

1 mmol/kg NaHCO₃ i.v. = 1 ml/kg 8.4% NaHCO₃ over 20 mins or 2 ml/kg 4.2% NaHCO₃ in neonates

If K⁺ < 3.5 mmol/l

Give 0.25 mmol/kg over 30 mins i.v. with ECG monitoring Caution if anuric

If total Calcium < 2 mmol/l or ionized Ca⁺⁺ < 1.0

Give 0.1 ml/kg 10% CaCl₂ (0.7 mmol/ml) over 30 mins i.v. (max 10 ml) or 0.3 ml/kg 10% Ca Gluconate (0.22 mmol/ml) over 30 mins (max 20 ml)

If Mg⁺⁺ < 0.75 mmol/l

Give 0.2 ml/kg of 50% MgSO₄ over 30 mins i.v. (max 10 ml)

Prophylaxis of household contacts

Inform Public Health Department, Give Rifampicin (bd for 2 days) < 1yr 5 mg/kg • 1-12yrs 10 mg/kg • > 12yrs 600 mg or Ceftriaxone (single im dose) < 12yrs 125 mg • > 12yrs 250 mg or Ciprofloxacin as single 500 mg dose (adults only)

Diagnosis

Blood cultures, throat swab, whole blood (EDTA specimen) for PCR, rapid antigen test. Aspirations/scrapings from skin showing haemorrhagic rash

Serology

For suspected cases with no isolate or where PCR does not identify serogroup, clotted blood sample to MRU⁺ (acute within 72 hrs and convalescent 10-28 days after presenting symptoms)

⁺PHLS Meningococcal Reference Unit
Tel: 0161 276 6757 Fax: 0161 276 6786

For further copies of this resource call Meningitis Research Foundation 01454 281811

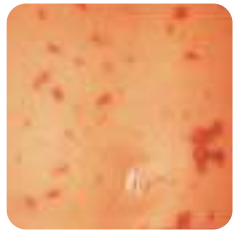


RECOGNITION

May present with predominant SEPTICAEMIA (with shock), MENINGITIS (with raised ICP) or both. Purpuric/petechial non-blanching rash. Rash may be atypical or absent in some cases.

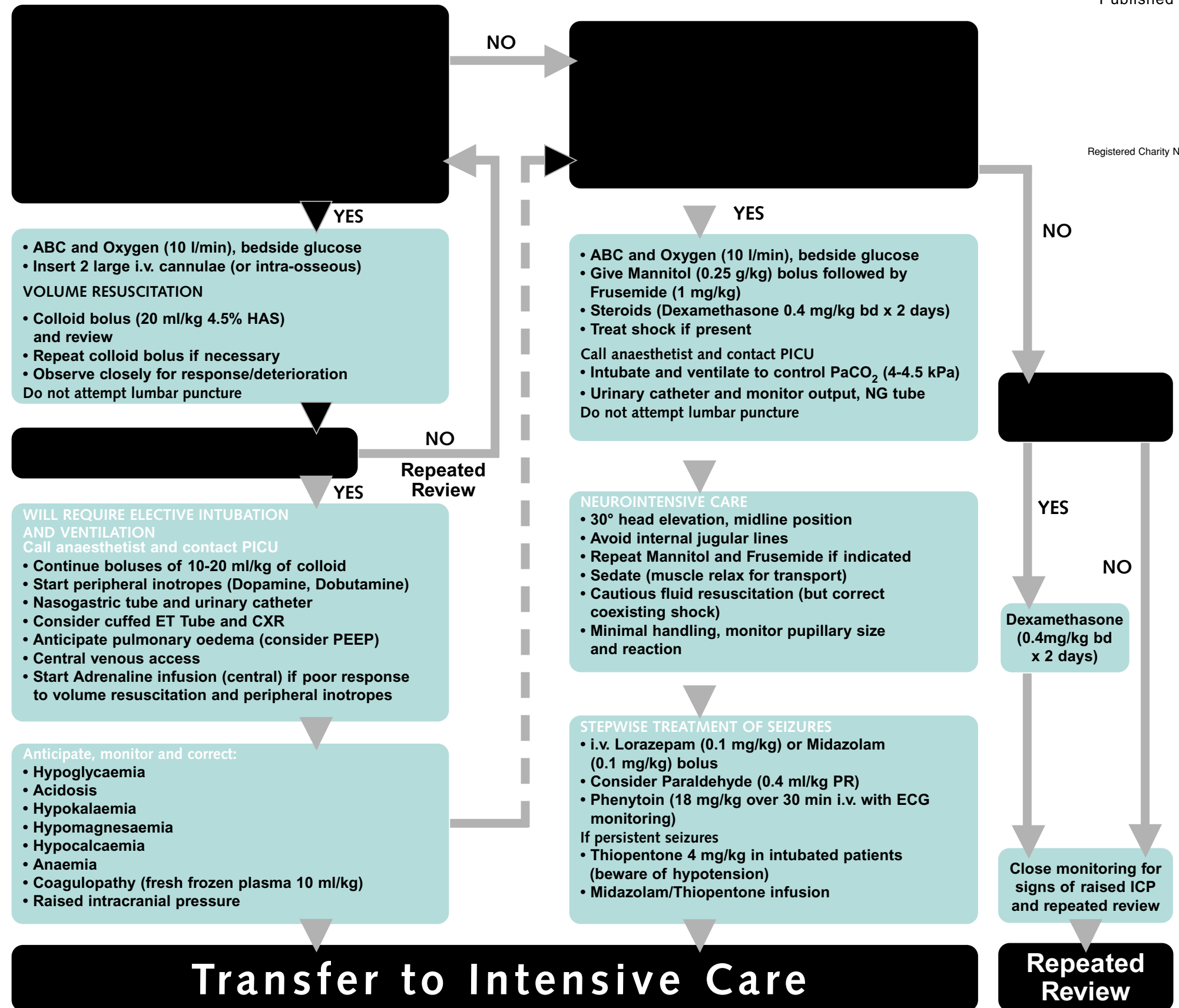
- Call consultant in A&E, Paediatrics, Anaesthesia or Intensive Care
- Initial assessment, looking for features of early shock/raised ICP
- DO NOT ATTEMPT LUMBAR PUNCTURE
- i.v. Cefotaxime (80 mg/kg) or Ceftriaxone (80 mg/kg)

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Transfer to Intensive Care

Repeated Review