

Burns

Initial management- KIDS Transport Team Guidelines

Refer EARLY to KIDS NTS for advice - 0300 200 1100

Primary Assessment: Follow the ABCDEF Approach

Airway

- Protect C-spine until cleared as stable
- Administer 100% O₂ initially, aim SpO₂ >95%.
- Obtain carboxyhaemoglobin levels to rule out CO poisoning (normal: 0–5%). Continue 100% O₂ if levels >10%
- Intubate if:
 - Airway burns (e.g., facial burns, singed nasal hairs, brassy cough)
 - Inhalational injury (e.g., hypoxaemia, raised CO levels)
 - Large burns needing significant analgesia
 - GCS <8 or fluctuating consciousness

Intubation Tips:

- Use Ketamine and Rocuronium for induction & don't use depolarising agents e.g. Suxamethonium
- Use cuffed ET tube (do not cut it). Consider smaller tube size if oedema present
- Secure tube with cotton tape if facial burns present
- Be cautious of progressive airway swelling (12–72 hours)

Ventilation Strategies:

- Low tidal volume, high PEEP for ARDS/acute lung injury.
- Consider HFOV or inhaled nitric oxide for refractory hypoxaemia.

Breathing

- Monitor for airway obstruction, pulmonary oedema, or ALI/ARDS
- Interventions:
 - Aggressive suctioning for secretion clearance
 - Bronchodilators for bronchospasm
 - Consider bronchoscopy for airway involvement
 - Perform escharotomy if chest wall restriction impacts ventilation

Circulation

- Insert 2 large-bore IV cannulas (through burns if needed) or IO access
- Treat shock with fluid boluses. Reassess for causes of persistent shock
- Fluid resuscitation:
 - Calculate using Parkland formula: % Total body surface area(TBSA) × body weight (kg) × 0.25 mL/hr of Hartmann's (first 8 hours from burn). After 8 hours: switch to 4.5% Human Albumin Solution (0.1 mL/kg/%TBSA/hr)
 - Add maintenance fluids (5% Dextrose + 0.9% saline)
 - Aim urine output: >1 mL/kg/hr (>2–4 mL/kg/hr in rhabdomyolysis/electrical burns)
- Circumferential burns: Absent peripheral pulses may require urgent escharotomy—**consult burns service immediately**

Disability

- Assess and manage pain (use IV opioids).
- Monitor GCS; intubate if GCS <8.

Exposure

- Remove loose clothing/jewellery; leave adherent clothing.
- Clean burns with saline and cover with loose cling film. Keep warm to prevent hypothermia
- Assess and document TBSA (Lund-Browder chart); exclude erythema.

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Threshold to refer to Burns Centre

Criteria		Paediatrics Burn Centre Threshold
Total body surface area (TBSA)	Refer	<ul style="list-style-type: none"> • ≥30% • ≥15% if under 1 yr old
	Discuss	<ul style="list-style-type: none"> • ≥20% • ≥10% if less than 1 yr old
Depth	Refer	≥20% TBSA if full thickness
Age	Discuss	Any burn injury in a neonate
Physiological instability	Refer	<ul style="list-style-type: none"> • All requiring inotropic support. • All requiring renal support. • All requiring respiratory support for more than 24 hours. • Oxygen requirement >FiO2 50% • Base deficit >6 and deteriorating. • Burn + major trauma

Key Transport Considerations

- Ensure stabilization pre-transport: secure airway, optimize ventilation, and manage circulation.
- Parents can send wound photos to **bch-tr.burns@nhs.net** with explicit consent for storage.