Midland Burn
Operational Delivery Network

Burns Management in the Emergency Department

(***Referral Proforma***)

Referring ED Department

Date /Time of injury (24hr)

Please affix patient label or complete:

Patient Name:

DoB:

NHS / Hospital (K) Number:

Please remember to protect C-spine until clinically cleared as stable

Airway

Administer high flow oxygen
Is there any suggestion this patient has an **Airway injury**?
Has this patient any of the following: (underline if present)

- Stridor
- Injury in an enclosed space
- Soot in airway
- Singed nasal hair
- Facial burn
- Change in voice
- Brassy cough
- Carbonaceous sputum

Yes / No

If yes please seek senior anaesthetic review immediately

If intubation is required use an uncut ETT to allow for facial oedema

URGENT AIRWAY MANAGEMENT MAY BE NECESSARY- DO NOT DELAY

Breathing

Is there any suggestion of **Breathing impairment?**
Has this patient any of the following: (underline if present)

- Circumferential chest burns: ***Needs immediate discussion with local burns service***
- O_2 saturation lower than expected
- Respiratory rate outside expected limits
- Any other evidence of broncho-pulmonary or chest wall injury
- Carbon Monoxide >10% (available with ABGs)
- Elevated lactate, arrythmias, reduced GCS and reduced arterial-venous oxygen saturation difference: Consider Cyanide poisoning. Use of antidote recommended

Circulation

Is there any suggestion of a **<u>Circulation</u> problem**?
Has the patient any of the following? (Underline if present)

- Tachycardia
- Tachypnoea
- Reduce level of consciousness
- Central and peripheral capillary refill time >2seconds
- Cool peripheries
- Circumferential limb burn. ***Absence of peripheral pulses requires immediate contact with local burns service as an escharotomy may be required.*** ******

- *IV fluid resuscitation should be commenced as per ATLS protocol. If this does not improve parameters repeat primary survey looking for causes of shock.*

All patients requiring fluid resuscitation should have two large-bore intravenous cannulae through the burn if necessary, and an indwelling urinary catheter attached to an hourly urine collection bag.

<u>REMEMBER TO TAKE BLOOD FOR FBC, U&E, ABG, G&S, CK, Clotting screen and BHCG</u>

If you consider that the patient requires an escharotomy the following actions need to be undertaken

- **You must Contact Plastic & Burns Surgery team – Consultant or SpR grade if need for escharotomy is suspected.**

- Escharotomies are performed by plastic surgeons in Operating Theatres, except when required immediately to allow ventilation.

- All escharotomy procedures must be carried out with diathermy immediately available.

- In immediate escharotomy, only carry out chest incisions, until satisfactory ventilation is achieved, then stop.

- Local anaesthetic and adrenaline infiltration along incision lines will reduce blood loss and improve comfort.

- Escharotomy may cause bleeding and damage to underlying structures. Do NOT perform a fasciotomy.

- All escharotomy wounds must be dressed with appropriate haemostatic dressings, e.g. calcium alginate (Kaltostat) and overlying absorbent dressings. Take care to avoid tight dressings.

Disability

Does the patient have a GCS <9 and are pupils equal and reacting to light?

If so:

- Consider CO poisoning
- Exclude other injuries
- Contact an ANAESTHETIST
- Ensure ABC normalised

GCS … / 15

Pupils: reactive / unreactive

Exposure, Environment and Evaluation

Measure core temperature and maintain >36C

Assess Total Burn Surface Area (TBSA) %

Use Lund and Browder Chart below to document findings. **Ignore simple erythema**. The patient's hand including fingers is 1% TBSA.
This knowledge can be used to calculate the total area of small burned or unburned areas.

% Total Body Surface Area Burn

(Lund and Browder)

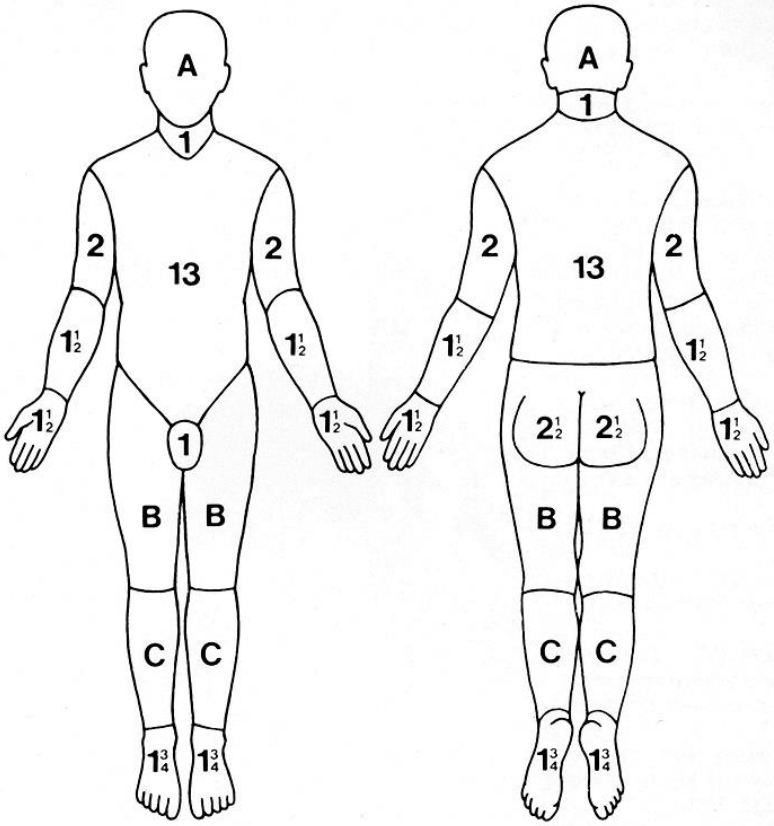
Be clear and accurate, and **do not include erythema**

CHART FOR ESTIMATING SEVERITY OF BURN WOUND

NAME_____WARD_____NUMBER_____DATE_____

AGE_____ ADMISSION WEIGHT_____

LUND AND BROWDER CHARTS



IGNORE SIMPLE ERYTHEMA

Partial thickness loss (PTL)

Full thickness loss (FTL)

REGION	% PTL	% FTL
HEAD		
NECK		
ANT.TRUNK		
POST.TRUNK		
RIGHT ARM		
LEFT ARM		
BUTTOCKS		
GENITALIA		
RIGHT LEG		
LEFT LEG		
TOTAL BURN		

RELATIVE PERCENTAGE OF BODY SURFACE AREA AFFECTED BY GROWTH

AREA	AGE 0	1	5	10	15	ADULT
A=½ OF HEAD	9½	8½	6½	5½	4½	3½
B=½ OF ONE THIGH	2¾	3¼	4	4½	4½	4¾
C=½ OF ONE LEG	2½	2½	2¾	3	3¼	3½

Smith+Nephew

For further supplies of this pad or of Flamazine* Cream for the prevention and treatment of infection in burns contact Ingrebourne (04023) 49333 or your Smith & Nephew Pharmaceutical representative.

*Trade mark

Fluid resuscitation with Hartman's solution

ADULT >15% OF TBSA burned require IV fluid resuscitation

CHILDREN >10% OF TBSA burned require IV fluid resuscitation

Use the Parkland Formula to calculate an estimate of the amount of fluid required in the form of Hartmanns over the first 24 hrs calculated from ***time of injury***

4mls x %TBSA burn x weight (kg) = Total Fluid Volume **TFV** over 1st 24hrs from time of injury

- ***Fluid for 1st 8hrs*** TFV ÷ 2 =
- ***Fluid for 9 – 24hrs*** TFV ÷ 2 =

Maintenance fluids

Adults
No maintenance fluids

Children
Calculate as normal, give as Dextrose- Saline (0.45% Saline +5% Dextrose)

Urine output target

Adults 0.5 ml/ kg/hr

Children And Infants 1- 2 ml/ kg/hr

Catheterise and attach an hourly urine device

FLUID RESUSITATION IS ONLY A GUIDE AND INFUSION RATE SHOULD BE ADJUSTED TO DELIVER APPROPRIATE URINE OUTPUT

Wound Cover and Ambulance Transfer

Cover the burn wounds in loose cling film prior to transfer.

If transfer is going to be delayed, clean the burn wounds then cover with a non-adherent dressing e.g. Jelonet.

All ambulance transfers for resuscitation burns must be performed by crews who can and will continue to provide

- on-going fluid resuscitation
- thermal regulation and
- monitoring throughout transfer

Please attach any X-rays and blood results to the patient's notes.

Midland Burn Care Services Contact details

Hospital	Level of Service	Description of patients treated and cared for in service	Contact Telephone Number Address
University Hospitals Birmingham NHS Foundation Trust	Burns Centre	Adults with minor, moderate, severe and complex severe burns	Tel: 0121 627 2000 Queen Elizabeth Hospital Birmingham Mindelsohn Way Edgbaston Birmingham B15 2WB
Birmingham Children's Hospital NHS Foundation Trust	Burns Centre	Children with minor, moderate, severe and complex severe burns	Tel: 0121 333 9999 Birmingham Children's Hospital Steelhouse Lane Birmingham B4 6NH
Nottingham University Hospitals NHS Trust	Burns Unit	**Adults** **City Hospital campus:** Adults with minor, moderate and severe burns **Children** **Queens Medical Centre**: Children with minor and moderate burns	Tel: 0115 969 1169 Nottingham City Hospital Hucknall Road Nottingham NG5 1PB Tel: 0115 924 9924 Queens Medical Centre Derby Road Nottingham NG7 2UH
University Hospitals of Leicester NHS Trust	Burns Facility	Adults and Children with minor burns	Tel: 0300 303 1573 Leicester Royal Infirmary, Infirmary Square, Leicester, LE1 5WW
University Hospitals of Coventry and Warwickshire NHS Trust	Burns Facility	Adults and Children with minor burns	Tel: 024 7696 4000 University Hospital Clifford Bridge Road Coventry CV2 2DX
University Hospitals of North Midlands NHS Trust	Burns Facility	Adults and Children with minor burns	Tel: 01782 715444 Royal Stoke University Hospital, Newcastle Road, Stoke-on-Trent, ST4 6QG

NATIONAL BURN BED BUREAU TELEPHONE NUMBER

01384 215576