Network(s)
Midland Burn Operational Delivery Network
Publication:
Document name: **Guideline for the Assessment, Care and Transfer of Adult Patients with potentially non survivable burn injuries in an Emergency Department**
Document purpose: This document contains the main principles of the immediate management of adult patients with potentially non survivable burn injuries in an Emergency Department
Author: Midland Burn Operational Delivery Network (MBODN)
Publication date: 2016 **Date Reviewed:** November 2023 **Next Review due:** April 2026 **Ref. No.** https://www.mcctn.org.uk/burns.html
Target audience: Midland Burns Referring Services, Midland Emergency Departments East and West Major Trauma Centres, Trauma Units, Local Emergency Hospitals, East and West Midlands Ambulance Services.
Additional circulation list: East and West Midlands referring services University Hospitals of Birmingham NHS Foundation Trust. Birmingham Women's and Children's Hospital NHS Foundation Trust Nottingham University Hospitals NHS Trust University Hospitals of Leicester NHS Trust. University Hospital of North Midlands NHS Trust. East and West Midlands Ambulance service. West Midlands Major Trauma and Critical Care Network East Midlands Major Trauma and Critical Care Network.
Superseded document(s): Guideline for the Assessment, Care and Transfer of Adult Patients with potentially non survivable burn injuries in an Emergency Department v2
Action required: Dissemination to MTC, TU, Burns services and dissemination to Ambulance Provider Representatives for information.
Contact details for further information: Midland Burn Operational Delivery Network Website https://www.mcctn.org.uk/burns.html Address MMBODN 15 Frederick Road. Birmingham B15 1JD
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Purpose. To outline the main principles of the immediate management of adult patients with potentially non survivable burn injuries in Emergency Departments based in the East and West Midlands

Scope of document. Limited to giving guidance on the immediate care of the burn injuries in Emergency Departments based in the East and West Midlands. Guidance for Emergency Departments based outside of the Midlands is not included in the scope of this document.

Introduction

The immediate and accurate care of the burn injury in the Emergency Department is crucial to patient outcomes from admission until transfer to a specialised burns service.
This document provides a guided approach to the assessment, care and transfer of adult patients with potentially non survivable burn injuries attending Emergency Departments in the Midlands.
These guidelines have been reproduced in consultation with the MBODN and the burns

clinicians within this network and agreed accordingly.

Standards

National Standards for Provision and Outcomes in Adult and Paediatric Burn Care
G.O.5 A, B, C, E, F, H and L. (British Burns association 2018)

Recommendations

1. The expectation is for staff working in Emergency Departments to familiarise themselves with this document and additional adjunct guidelines which can be found on the Midland Burn Operational Delivery Network website https://www.mcctn.org.uk/burns.html
2. Where it is possible, staff should receive teaching / educational sessions to support information documented in MBODN guidelines

References

1. Osler T, Glance LG, Hosmer DW. Simplified estimates of the probability of death after burn injuries: extending and updating the Baux score. J Trauma Acute Care Surg. 2010;68(3):690–697
2. Halgas B, Bay C, Foster K. A comparison of injury scoring systems in predicting burn mortality. Ann Burns Fire Disasters. 2018; 31(2):89-93.
3. https://www.mcctn.org.uk/burns.html
4. National Standards for the Provision and Outcomes in Adult and Paediatric Burn Care. (BBA 2018)

Guideline for the Assessment, Care and Transfer of Adult Patients with potentially non survivable burn injuries in an Emergency Department

Patients with potentially non-survivable burn injuries

Decisions about End of Life Care for burn injured patients are only considered after senior and experienced clinicians have assessed the patient. Decisions of this nature must be taken using a team approach and wherever possible must involve the patient, their family and carers. Clinical factors relevant to making these decisions include:

- The size of the burn / percentage Total Body Surface Area - %TBSA
- The depth of the burn (Partial Thickness - PTB and Full Thickness - FTB)
- Mechanism of injury
- Presence of inhalational injury and/or the presence of comorbidities
- The age of the patient *[1]
- Revised Baux scoring system predicting burn mortality [1,2]

* Age and % TBSA have historically been used as indicators of the likelihood of Burn injury survival [1 *]

Revised Baux score to predict the probability of death after burn injury
TBSA + age + (17×R). [R = 1 if patient has inhalation injury and R = 0 if not].

There are two possible scenarios when considering of life care as the most appropriate treatment plan for burn-injured patients:

- Where an injury is catastrophic and there is no feasible prospect of survival (comfort care is regarded as the only realistic option)

- Where a patient's condition deteriorates and there is no prospect of recovery. This can be during treatment in an Emergency Department or Burns Service

The first category (a catastrophic injury) is the most likely to present itself to the clinicians working in an Emergency Department (ED).
The overriding action should be that there is **ALWAYS** discussion between the medical team responsible for the initial treatment and the Consultant Burn Surgeon on call in either the local Burn Unit or Burn Centre.

Where EDs are located on the same site as a 24 hour Burns or Plastic Surgery Service, contact should be made for advice and a member of the team to review the patient in ED. A Consultant or equivalent should undertake this review in person.

Decisions must only be made after the following has occurred:

- Patient assessment in ED by two consultants and discussion with a Consultant Burn Surgeon at the local Burns Unit or Burn Centre. Consider using tele-medicine for further discussion.

- The two Consultants must agree that the patient has a "non - survivable" injury after taking into account % TBSA, patient age, burn depth, inhalation injury and co-morbidities.

- After discussion with patient, family or carers as are able.

The decision of a non-survivable injury is communicated to the patient (if able) and the family or carers in an honest and sensitive manner.

Summary of Referral Criteria for Adults with Burn Injuries

Service Type	% TBSA	Comment
Burn Facility	< 10 % TBSA	Non complex burn injuries
Burn Unit	>25% TBSA >25% TBSA + inhalation injury < 40 % TBSA < 50 % TBSA	Inform BC Discuss with BC and consider referral Deep dermal or full thickness burns With no inhalation injury
Burn Centre	All	All ages and severity of burn injury including those requiring complex intensive care

If a patient falls into burn centre referral criteria and has injuries that are non-survivable consultation with the burns centre within the network is mandatory. Discussion should be had at consultant level between plastic surgery/burns and those amongst ICU.

Location of Patient care

The overall aim is to give support and holistic end of life of care to the patient family and carers. The local Burn Service will advise regarding the best location for the care, management and support.

- For nursing care advice, e.g. wound care, family/carer physical contact with patient contact the nurse in charge at the local Burns Service.
- When deciding the best location / service to care for the patient with a non-survivable burn injury, discussion must occur with the patient (as able) and their family. Depending on the circumstances this may be the local hospital or a specialised Burn Service
- If expected that the patient may survive 24 hours or more then it would be best practice to transfer them to the local Burn Service unless it is considered not appropriate to transfer.
- If clinicians are in any doubt, then the patient should be transferred.
- If a decision is made that the patient receives care in the hospital of their initial admission, then the local Burns service MDT will support the clinicians in caring for the patient.
- The local Burn Service should be contacted for care advice at any time and there should be at least daily communication between the clinical teams. Advice sought and given must be documented. If available, the Burns Nursing Outreach Team may be able to visit the patient.
  Transfer to burns service, would be possible if safe to do so and should be discussed at local level.

MBODN Adult Burns Centre and Burns Unit contact phone numbers

MBODN	Site	Level	Adult	Contact
University Hospitals Birmingham NHSFT	Queen Elizabeth Hospital	Centre	Adult	0121 371 2000
Nottingham University Hospitals NHS Trust	City Hospital Campus	Unit	Adult	0115 9691169 ext. 76403 / 76401

Psychological support

A non-survivable injury is not only traumatic for the patient but also the family/carers and their psychological needs should be considered in all cases. Emotional responses are to be expected and nursing/medical staff should acknowledge this and provide a level of emotional support appropriate to the individual patient and family/carers. Allowing the patient and/or family/carers to express their emotions is important, as well as listening and responding where possible to any particular worries or concerns they have. Involving the patient and family/carers in any decisions and providing them with choices regarding their care where possible will also be important.
This may also include exploring and considering the patients' religious or spiritual needs and asking whether they would like to see someone from the hospital chaplaincy or they would like to invite a religious leader from their community into the hospital

Strong reactions to end of life are to be expected. Some patients and families / carers may want to seek psychological support if this is available within the hospital trust. This may include a Clinical Psychologist within the Burns Service or the Clinical Psychologist working within the Major Trauma Centre/ED. Each service will know the referral pathway and will be able to provide information.
Families / carers will also be able to receive advice from their G.P.