



National Network for Burn Care (NNBC)

National Burn Care Referral Guidance

Version 1, Approved February 2012

1. Introduction

This guidance describes the most clinically appropriate level of Specialised Burn Service for treating burn injuries of varying severities. It answers the question of “What types of burn injuries need referral to which level of Specialised Burn Service.”

Following the recommendations of the National Burn Care Review 2001, Specialised Burn Services were stratified into three levels of service:

Burn Centres – This level of in-patient burn care is for the highest level of injury complexity and offers a separately staffed, geographically discrete ward. The service is skilled to the highest level of critical care and has immediate operating theatre access.

Burn Units – This level of in-patient care is for the moderate level of injury complexity and offers a separately staffed, discrete ward.

Burn Facilities – This level of in-patient care equates to a standard plastic surgical ward for the care of non-complex burn injuries

However, these definitions lacked specificity and so this Guidance has been developed through the National Network for Burn Care, an NHS body that includes representation from the 4 regional Burn Care Networks for England and Wales, NHS Specialised Commissioners, Patient Representatives and the British Burn Association. The development of the guidance was informed by an expert multidisciplinary group. The guidance is based on the general principals outlined in the National Burn Care Review (2001) but now replaces the referral guidance contained within it.

This guidance aims to ensure that patients are referred to a burn care service which has the relevant level of expertise and specialised resources to optimise their treatment and recovery

The most up to date version of these guidelines can be found at:

www.specialisedservices.nhs.uk/burncare



2. Using this Guidance

The guidance uses 5 criteria to guide referral decisions:

- TBSA Total Body Surface Area
- Depth The depth of burn injury
- Site Anatomical site of the burn injury
- Mechanism The etiology of the burn injury
- Other Factors Parameters that may impact on the severity/complexity of burn injury

Thresholds for the above criteria are listed as either

“Refer:” It is recommended that the patient be referred to the level of specialised burn service described

Or

“Discuss:” In such cases a discussion should take place with a Consultant within the appropriate service and consideration given to referring / transferring the patient to the appropriate service level.

- For Thresholds listed as “Refer”, it is acceptable (in extenuating circumstances) for patients not to be transferred according to these criteria if discussed with and agreed at Consultant level with the appropriate specialised burn care service (i.e. the next service level up). Such agreement should be recorded in the patient notes and all such cases should be subject to formal audit.
- For the purpose of these guidelines a child is defined as being under 16 years of age.
- For the purpose of these guidelines a neonate is defined as: If born at term (37-42 weeks) then up to 4 weeks after birth. If born pre-term (before 37 weeks) then up to 44 weeks post conception.
- For Adult patients, the implementation of End of Life Care as a result of burn injury should only be made following assessment by at least two Consultants, one of whom should be a Specialised Burn Care Surgeon.



3. Specific Advice to Emergency Departments, General Practitioners and other non-specialised providers:

- The suggested minimum threshold for referral into specialised burn care services can be summarised as:
 - All burns $\geq 2\%$ TBSA in children or $\geq 3\%$ in adults
 - All full thickness burns
 - All circumferential burns
 - Any burn not healed in 2 weeks
 - Any burn with suspicion of non-accidental injury should be referred to a Burn Unit/Centre for expert assessment within 24 hours
- In addition, the following factors should prompt a discussion with a Consultant in a specialised burn care service and consideration given to referral:
 - All burns to hands, feet, face, perineum or genitalia
 - Any chemical, electrical or friction burn
 - Any cold injury
 - Any unwell/febrile child with a burn
 - Any concerns regarding burn injuries and co-morbidities that may affect treatment or healing of the burn
- If the above criteria/threshold is not met then continue with local care and dressings as required
- If burn wound changes in appearance / signs of infection or there are concerns regarding healing then discuss with a specialised burn service
- If there is any suspicion of Toxic shock syndrome (TSS) then refer early

If non-specialised practitioners require advice regarding the assessment, care or treatment of any type of burn injury they can contact their nearest specialised burn service at any time.

A list of the specialised burn services in England and Wales is available at:

<http://www.specialisedservices.nhs.uk/burncare/key-documents/specialised-burn-care-services-england-wales-1>



Thresholds for Referral to Paediatric Burn Services (1)

Criteria		Facility Threshold	Unit Threshold	Centre Threshold	Note
TBSA	Refer	≥2% <5%	≥5% <30% ≥5% <15% if under 1 year old	≥30% ≥15% if under 1 year old	
	Discuss			≥ 20% ≥ 10% if less than 1 Year Old	
Depth	Refer	All full thickness burns.	≥2% full thickness if under 10 yrs old ≥1% full thickness if under 6 months old	≥ 20% TBSA if Full Thickness	<i>All burns that are not blanching should be referred to a specialised burn service</i>
Site	Refer		Any significant burn to special areas (hands, feet, face perineum or genitalia) Any circumferential burn		<i>“Significant” can mean any injuries where the referrer feels that greater MDT expertise is required</i>
	Discuss	Any burn to special areas (hands, feet, face, perineum, genitalia)			
Mechanism	Discuss	Any chemical, electrical, friction burn. Any cold injury.			
Other Factors	Refer	Any burn not healed in 2 weeks.	Any predicted or actual need for HDU / PICU (including those predicted to require support for reasons other than the burn injury – e.g. smoke inhalation)	All those predicted to require assisted ventilation specifically for their burn injury for more than 24 Hours.	<i>Any child requiring assisted ventilation for >24 Hours must be within a Paediatric Intensive Care Unit. It is recommended that all children with smoke inhalation (irrespective of the presence of burn injury) are referred to a PICU with a specialised burn care service on site.</i>



Thresholds for Referral to Paediatric Burn Services (2)

Criteria		Facility Threshold	Unit Threshold	Centre Threshold	Note
Other Factors	Refer		<p>Any significant deterioration in physiology.</p> <p>Any burn with suspicion of non-accidental injury should be referred to a Burn Unit/Centre for expert assessment within 24 hours</p>	Any child who is physiologically unstable as a result of burn injury	<p><i>Suggested parameters for physiologically unstable are:</i></p> <p><i>Requirement for Inotropic support</i></p> <p><i>Requirement for renal support or with deteriorating renal function</i></p> <p><i>A base deficit >5 and deteriorating</i></p> <p><i>An oxygen requirement >FiO2 of 50% and increasing, especially with abnormal CO2 / respiratory rate</i></p>
	Discuss	<p>Unwell/febrile child with a burn</p> <p>Any concern regarding burn injury any co-morbidities that may affect treatment or healing of the burn</p>	<p>All children with Major Trauma + Burn Injury (post treatment within Major Trauma Centre) where the burn injury meets unit level thresholds</p> <p>Any burn injury in a neonate should be discussed with a Burn Unit or Centre</p>	<p>All children requiring respiratory support</p> <p>All children with Major Trauma + Burn Injury (post treatment within Major Trauma Centres) where the burn injury meets centre level thresholds</p> <p>Any burn injury in a neonate should be discussed with a Burn Unit or Centre</p>	<p><i>The treatment of children with Major Trauma + Burn Injury should be agreed between the Trauma service and the appropriate specialised burn service</i></p> <p><i>Neonates should only be admitted to burn services with an onsite NICU</i></p>



Thresholds for Referral to Adult Burn Services (1)

Criteria		Facility Threshold	Unit Threshold	Centre Threshold	Note
TBSA	Refer	≥3%<10% (including those with inhalation injury)	≥10%<40% ≥10%<25% with inhalation injury	≥40% ≥25% with inhalation injury	<i>The minimum indication for Inhalation Injury is defined as – Visual evidence of suspected upper airway smoke inhalation, laryngoscopic and/or bronchoscopic evidence of tracheal or more distal contamination/injury or unconscious at scene with suspicion of inhalation or raised COHb.</i> <i>If there are any concerns regarding inhalation injury with a patient with any size burn then it should be discussed with a Burn Care Centre</i>
	Discuss			≥25%	<i>Special Consideration should be given to referring patients >65 yrs with ≥25% TBSA (especially where there are co-morbidities) to the Burn Care Centre</i>
Depth	Refer	Any full thickness burns	≥5%<40% if non-blanching		<i>All burns that are not blanching should be referred to a specialised burn service</i>
Site	Refer		Any significant burn to special areas (hands, feet, face, perineum, genitalia) Any non-blanching circumferential burn		<i>“Significant” can mean any injuries where the referrer feels that greater MDT expertise is required</i>
	Discuss	Any burn to special areas (hands, feet, face, perineum, genitalia)			
Mechanism	Discuss	Any chemical, electrical, friction burn. Any cold injury			
Other Factors	Refer	Any burn not healed in 2 weeks.	Any predicted or actual need for HDU or ITU level care Any burn with suspicion of non-accidental injury should be referred to a Burn Unit / Centre for expert assessment within 24 hours		

Thresholds for Referral to Adult Burn Services (2)

Criteria		Facility Threshold	Unit Threshold	Centre Threshold	Note
Other Factors	Discuss	Any concern regarding burn injury and co-morbidities including any co-morbidities that may affect treatment or healing of the burn.	<p>Patients who are pregnant</p> <p>All patients with Major Trauma + Burn Injury (post treatment within Major Trauma Centre) where the burn injury meets unit level thresholds.</p>	<p>All patients with Major Trauma + Burn Injury (post treatment within Major Trauma Centre) where the burn injury meets centre level thresholds.</p> <p>Patients assessed as requiring end of life care should be discussed with a Consultant Burn Specialist at a Burn Centre (to discuss the appropriateness of local palliative care versus transfer to a centre).</p>	<i>The treatment of patients with Major Trauma + Burn Injury should be agreed between the Trauma service and the appropriate specialised burn service (in accordance with the TBSA, Depth, Site and Mechanism criteria listed above)</i>



Glossary

TBSA	Total Body Surface Area
Ventilation	Mechanical support for patients who cannot breath by themselves
Circumferential burn	An injury that goes all the way around the surface of a limb or the body
HDU	High Dependency Unit
ICU	Intensive Care Unit
PICU	Paediatric Intensive Care Unit
Inotropic Support	Drugs administered to support the heart or circulation
Renal	Kidneys and their functioning

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www.specialisedservices.nhs.uk/burncare





Burn Care Networks – England & Wales

-  Northern Burn Care Network
-  Midlands Burn Care Network
-  South West UK Burn Care Network
-  London & South East of England Burn Care Network