Burns – Admission and Discharge

Title of Guideline	Guideline for the Admission and Discharge of Children and Young People with Burn Injuries
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Directorate & Speciality	Family Health – Paediatrics Burns
Date of submission	July 2021
Date on which guideline must be reviewed (this should be one to three years)	June 2024
Explicit definition of patient group to which it applies (e.g. inclusion and exclusion criteria, diagnosis)	Burn care is organised using a tiered model of care (centre, unit and facility) whereby the most severely injured are cared for in services recognised as centres and those requiring less intensive clinical support are cared for in services designated as either burns units or facilities.
Abstract	The admission and treatment and care of the burns patient and their family is a continual process and the immediate care given to them on arrival on the burns unit is a continuum of the care and treatment already received at scene of the accident and at the accident and emergency department.
Key Words	Paediatric. Children. Burns. Admission. Discharge
Statement of the evidence base of the guideline – has the guideline been peer reviewed by colleagues? Evidence base: (1-6)	5, 6

1	NICE Guidance, Royal College Guideline, SIGN (please state which source).
2a	meta analysis of randomised controlled trials
2b	at least one randomised controlled trial
3a	at least one well-designed controlled study without randomisation
3b	at least one other type of well-designed quasi-experimental study
4	well –designed non-experimental descriptive studies (ie comparative / correlation and case studies)
5	expert committee reports or opinions and / or clinical experiences of respected authorities
6	recommended best practise based on the clinical experience of the guideline developer

Consultation Process	Burns Multidisciplinary Team, CAS Governance, Staff of Nottingham Children's Hospital via the guidelines email process
Target audience	Staff of Nottingham Children's Hospital

This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.

Document Control

Document Amendment Record

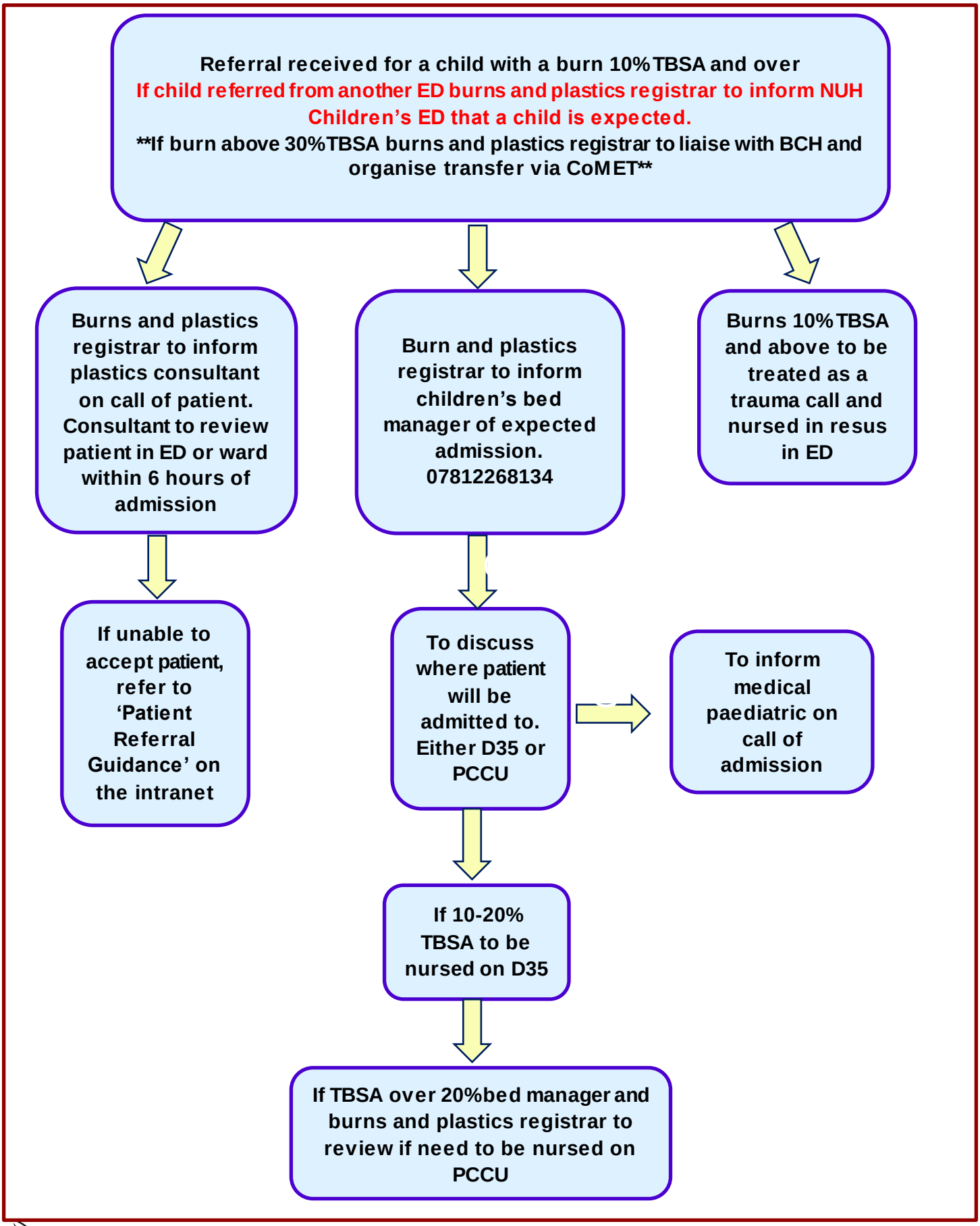
Version	Issue Date	Author
2	May 2019	Andrea Cronshaw
3	May 2021	Andrea Cronshaw

Summary of changes for new version:

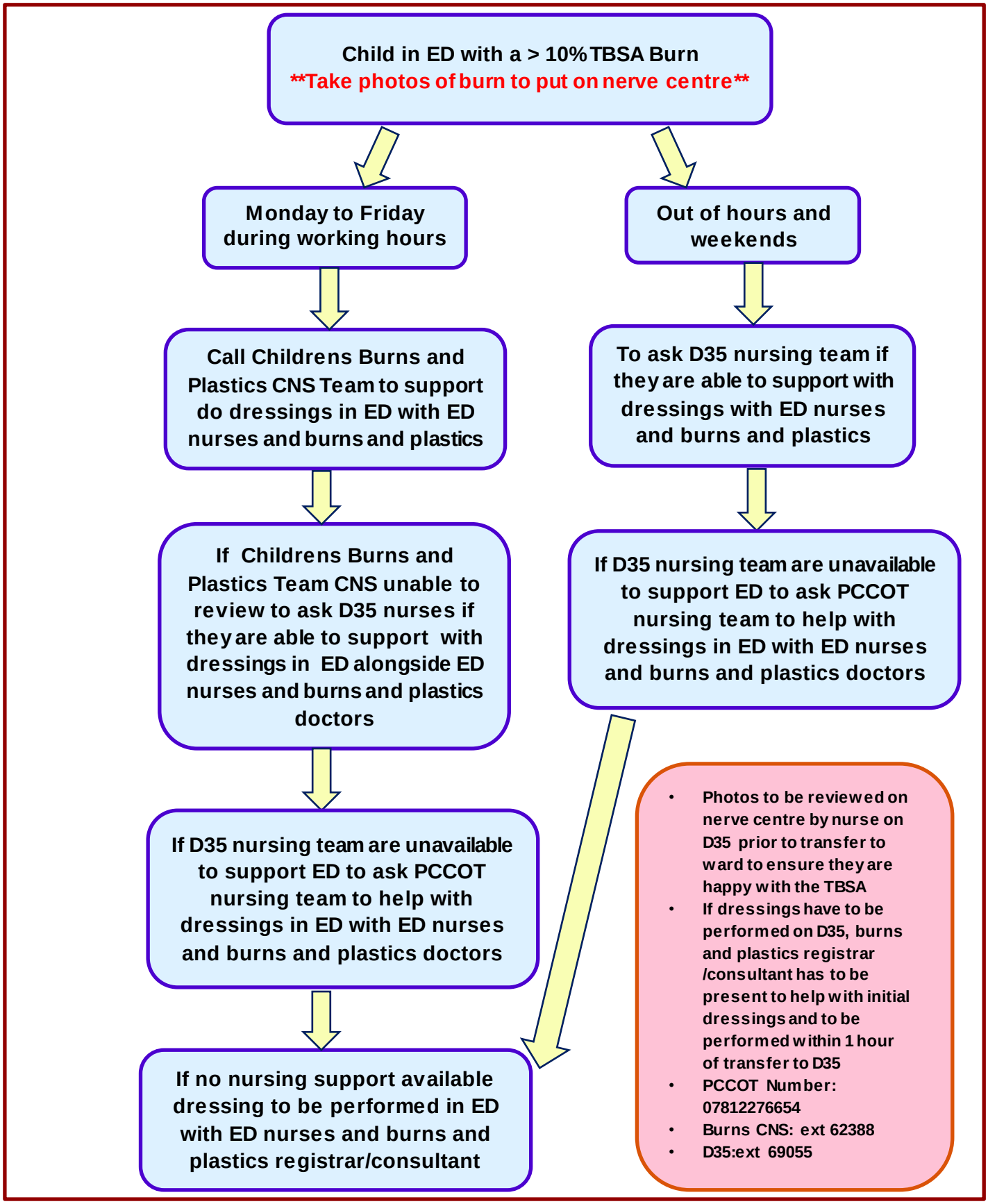
- Provision of flow chart for escalation of burns.
- Provision of flow chart for doing dressings in ED if burn above 10% TBSA

Statement of Compliance with Child Health Guidelines SOP
This guideline has followed Child Health Guideline SOP. It has been circulated to all Paediatric Senior staff and comments incorporated before uploading to the Trust Guideline site.
Maria Moran
Clinical Guideline Lead
3 August 2021

Referral Pathway for Childrens Burns with Burns Over 10% and Over



Nursing Dressing Support in ED for Burns >10% TBSA



Burns Unit Thresholds and Referral Criteria

Introduction

The admission and treatment and care of the burns patient and their family is a continual process and the immediate care given to them on arrival on the burns unit is a continuum of the care and treatment already received at the scene of the accident and at the accident and emergency department. All admissions to the Children's Burns Service should have been triaged and their initial management commenced in the Emergency Department.

Burns Services Thresholds

Burn care is organised using a tiered model of care (centre, unit and facility) whereby the most severely injured are cared for in services recognised as centres and those requiring less intensive clinical support are cared for in services designated as either burns units or facilities.

There are agreed thresholds for the admission of children in to burns services [1, 2].

Burns Services in the Midlands

Hospital	Level of Service	Description of Service
University Hospitals Birmingham NHS Foundation Trust.	Burns Centre (BC).	Adults with minor, moderate, severe and complex severe burns.
Birmingham Children's Hospital NHS Foundation Trust.	Burns Centre (BC).	Children with minor, moderate, severe and complex severe burns.
Nottingham University Hospitals NHS Trust.	Burns Unit (BU).	City Hospital Campus: Adults with minor, moderate and severe burns. Queens Medical Centre: Children with minor and moderate burns.
University Hospitals of Leicester NHS Trust.	Burns Facility (BF).	Adults and Children with minor burns.

Referral of patients with burn injuries to Specialist Burn Care Services

The first point of contact for advice regarding the admission, transfer or treatment of a patient with a burn injury should be the local burn service. There are a number of factors that will influence the need for a patient to be referred to a specialised burn service. These include the size (TBSA - total body surface area), type and severity of the burn, the age of the patient, presence of an inhalation injury and any significant co-morbidity. All burn services in the Midlands will manage burns patients at the lower end of the referral threshold (minor burns /facility level care). Patients with more complex or severe injuries will be referred to a burn unit or a burn centre (unit / centre level care). The local burn service will assist any referrer in ensuring that patients from the Midlands are admitted to the right service. Alignment with major trauma referral pathways is facilitated by having the burn unit and centre level services (Nottingham and Birmingham) collocated with major trauma centres.

Initial indication for referral to a specialised burns service

• A child with a partial thickness burn greater than 2% TBSA

In addition to the % TBSA thresholds described for children, any child with a burn injury regardless of age and %TBSA who presents with any of the following should be discussed with the local burn service and consideration given for the need for referral:

- Inhalation injury (defined as either visual evidence of suspected upper airway smoke inhalation, laryngoscopic +/ - bronchoscopic evidence of tracheal/bronchial contamination/injury or suspicion of inhalation of products of incomplete combustion).
- A full thickness burn greater than 1% TBSA
- Burns to special areas (hands, face, neck, feet, perineum)
- Burns to an area involving a joint which may adversely affect mobility and function
- Electrical burns
- Chemical burns
- Suspected non-accidental injury (NAI). Any burn with suspicion of non accidental injury should be referred to a specialised burn service for an expert assessment within 24 hours.
- A burn associated with major trauma
- A burn associated with significant co-morbidities
- Circumferential burns to the trunk or limbs
- Any burn not healed in 2 weeks

The burns service will routinely admit children for the management of both minor and major burn injuries to Ward D35. Guidance on the age and severity of burn injury to be managed within a burns unit is shown below:

- Children between 6 months and 1 year with a burn less than 10% TBSA
- Children older than 1 year with a burn less than 30% TBSA
- Children older than 1 year with a Full Thickness Burn of less than 20% TBSA
- If a child with a TBSA between 20 to 30% is to be admitted to the burns service then the admitting consultant should inform the consultant on call at the children's burn centre.

- All children with an inhalation injury (irrespective of the presence of burn injury) should be referred to a PICU with a specialised burn care service on site.

Considerations for discussion and referral to the burn centre are:

- Children predicted to require respiratory support or admission to PICU specifically for their burn injury for more than 24 hours.
- Children with a burn injury associated with significant multiple injuries (Major Trauma). The best location for the treatment of these children must be decided following discussion between the major trauma service and the consultant burn surgeon in the local burn unit. Discussion must also take place between the consultant on call for burns at the burn unit and burn centre for all children that meet centre level referral thresholds.
- Children with severe chemical burns.
- Children with high voltage electrical burns.
- Neonates should only be admitted to a burns service with an on-site NICU. The management of neonates should be discussed with the burn consultant in the burn centre and the neonatal service.

Referral Criteria for Children with Burn Injuries

(FTB = Full Thickness Burn)

Service	Age	%TBSA	Comment
Burn Facility	6 months – 1Year 1 – 10 Years 10 – 16 Years	< 5 % TBSA < 5 % TBSA < 5 % TBSA	Refer to BU or BC if: > 1%TBSA FTB > 2%TBSA FTB > 5%TBSA FTB
Burn Unit	< 1 Year > 1 Year > 1 year	< 10 % TBSA < 30 % TBSA < 20% FTB	A child with non-blanching / FTB over 20% TBSA is to be referred to a BC.
Burn Centre	0 -16 Years	All	Neonates are to be discussed with the Burn Consultant and the neonatal service / paediatric team. BC will manage children with all severities of burn injuries including those that require complex paediatric intensive care.

Admitting a Child to the Burns Service

When a child is accepted and admitted to the Burns Service, the following must be undertaken:

- All children admitted under a named Burns Consultant.
- For children with a resuscitation burn injury (≥10% TBSA) a Consultant Burns and Plastics Surgery Specialist will be informed and review the child within 12 hours of admission.
- If paediatric advice is needed this should be discussed with the hot week consultant on call (via the hot week phone 07713097074), or the on call paediatric medical registrar (on bleep 284 3150) or consultant (via switchboard) out of hours.
- All patient wounds are photographed on first presentation to the service. In hours by medical photography and out of hours on the ward camera.
- All inpatients admitted for more than 24 hours should be screened for psychosocial difficulties. Inpatient psychosocial screening will be overseen by the Burns Clinical Psychology Team.
- Functional therapy assessment for inpatients admitted for longer than 24 hours or as soon as it is clinically appropriate.
- Nutritional screening within 24 hours of admission. All children to have weighted and height/length measured and results plotted on DHR growth centiles.
- All patients who have received a burn ≥5%TBSA to be referred to the burns dietitian via nerve centre.
- Referral to appropriate members of the MDT as required depending on the severity of the patients burn.
- Health Visitor /School Nurse informed of admission.
- GP informed of admission of admission within 2 working days.
- For all patients it is important to consider whether there are any safeguarding concerns. These need to be clearly documented and actioned at the earliest opportunity. Further advice should be sought from the safeguarding team if needed.
- All burns inpatients will be reviewed at the weekly multi-disciplinary team meeting.
- Admit patients in conjunction with the Trust's Patient Access Management Policy. http://nuhnet/nuh_documents/Documents/Patient%20Access%20Management%20Policy.doc
- To update the burns bed state when a patient is admitted to ward D35 to ensure the burns bed state is up to date and accurate.
- If a patient is to be transferred to Birmingham Children's Hospital to liaise with the CoMET team for transfer of the patient.

Discharging a Child from the Burns Service

The discharge of the burns patient and their family is a multidisciplinary approach. All patients who have made contact with the burns service need to have their individual needs and circumstances assessed and a clear plan put in place to ensure their needs are met upon discharge.

When a child is being discharged a plan of care and/or discharge documentation must include current and future physical, social and psychological care.

The following must be discussed upon discharge and written information should be given to patients and their family on:

- Pain and itch management.
- Resuming activities of daily living.
- Preventing burns in the future.
- Recognition of complications associated with a burn injury.
- Aftercare of the burn wound (scar management and protection).
- Psycho-social, information and support available.
- Nutritional support and guidance.
- Key contact details (including 24 hour access to the clinical team).
- Follow up appointment details and location.
- Information leaflets given to parents and families and information on Toxic Shock Syndrome.

Written information must be given to the following members of the multi-disciplinary team to inform of the patients discharge:

- Discharge letter to be sent to the GP within 2 days of discharge.
- Health Visitor / School Nurse must be informed of discharge.
- If applicable to write in the patients red book.

Social care need to be informed of discharge and follow up care of the patient if they are involved.

Discharge patients in conjunction with the Trust's Discharge and Transfer Policy.
http://nuhnet/nuh_documents/Documents/Discharge%20and%20Transfer%20Policy.doc

Burns Dressing Clinic

If a patient does not need to be admitted to the ward they can be referred to the dedicated burns and plastics dressing clinic.

Dressing Clinic Opening Hours

Dressing clinic is open five days a week, at the following times:

Day	Time
Monday	07:00 – 18:00
Tuesday	07:00 – 18:00
Wednesday	08:00 – 16:00
Thursday	07:00 – 16:00
Friday	08:00 – 16:00

These times are flexible depending on patients and the dependency/number of patients.

Clinic is led by Clinical Nurse Specialists. A Burns Registrar is available for patient review. Additionally there are clinical support workers and hospital play specialists within the dressing clinic.

Physiotherapy, occupational therapy, and dieticians will review patients in clinic. Arrangements can be made for a Clinical Psychology review in clinic if required.

Any patients who need to reviewed out of these hours to contact Ward D35 or Children's ED.

Admitting a Child to the Burns Dressing Clinic

When a patient is referred to the dressing clinic they should have an allocated new patient slot given to them. A new patient slot will allow the patient:

- To be assessed by a nurse.
- To be assessed by a doctor.
- To have initial photographs taken of the burn injury.
- To have swabs taken of the wound.

When a child is accepted and admitted to the Burns and Plastics Dressing, the following must be undertaken:

- All children admitted under a named Burns Consultant.
- If paediatric advice is needed this should be discussed with the hot week consultant on call (via the hot week phone 07713097074), or the on call paediatric medical registrar (on bleep 284 3150) or consultant (via switchboard) out of hours.
- All patient wounds are photographed on first presentation to the service. In hours by medical photography and out of hours on the ward camera.
- Functional therapy assessment for patients as soon as it is clinically appropriate.

- Nutritional screening. Every patient is to be have weight and height/length measured and results plotted on DHR growth centiles.
- All patients who have received a burn ≥5%TBSA to be referred to the burns dietician via nerve centre.
- Referral to appropriate members of the MDT as required depending on the severity of the patients burn.
- Health Visitor /School Nurse informed of admission.
- GP informed of admission of admission within 2 working days.
- For all patients it is important to consider whether there are any safeguarding concerns. These need to be clearly documented and actioned at the earliest opportunity. Further advice should be sought from the safeguarding team if needed.
- All burns outpatients will be reviewed at the weekly multi-disciplinary team meeting.
- Admit patients in conjunction with the Trust's Patient Access Management Policy. http://nuhnet/nuh_documents/Documents/Patient%20Access%20Management%20Policy.doc
- Information leaflets given to parents and families with follow up appointments and information on Toxic Shock Syndrome.

Discharging a Child from the Burns Dressing Clinic

When a child is being discharged a plan of care and/or discharge documentation must include current and future physical, social and psychological care.

The following must be discussed upon discharge and written information should be given to patients and their family on:

- Pain and itch management.
- Resuming activities of daily living.
- Preventing burns in the future.
- Recognition of complications associated with a burn injury.
- Aftercare of the burn wound (scar management and protection).
- Psycho-social, information and support available.
- Nutritional support and guidance.
- Key contact details (including 24 hour access to the clinical team).
- Follow up appointment details and location.

Written information must be given to the following members of the multi-disciplinary team to inform of the patients discharge:

- Discharge letter to be sent to the GP within 2 days of discharge.
- Health Visitor / School Nurse must be informed of discharge.
- If applicable to write in the patients red book.

Social care need to be informed of discharge and follow up care of the patient if they are involved.

Follow Up's

The following members of the team need to be contacted and appointments made to follow up patients depending on the burn injury and the position of the burn:

- Occupational therapy for scar management.
- Physiotherapy.
- Outpatients follow up with the consultant.
- Referrals can be made to the Clinical Psychologist if required.
- Dietetics

References

1. **British Burns Association National Standards for the Provision and Outcomes In Adult and Paediatric Burns (2018)**
   www.britishburnsassociation.org/standards/

2. **Midlands Burns Operational Delivery Network (2019)** Midland Burn ODN Guidelines for the Admission and Transfer of Burns Patients in the Midlands.
   http://www.mcctn.org.uk/burns