

**The Management of Burns and
Scalds
December 2023**

Tissue Viability Service

Management of Burns & Scalds Procedural Document

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POLICY TRACKING TABLE	
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This document replaces	The Guidance was previously inserted into the Wound management Guidelines 2022

1.0 POLICY SUMMARY

This document has been written by the Tissue Viability Service (TVS) and contains guidance for clinical staff on the assessment and management of patients who have sustained a burn or scald and includes the referral process, based on guidance from the National Institute for Health and Clinical Excellence (NICE) (2023) and the London and South East England Burn Network (LSEBN)

2.0 OVERRRIDING DUTY OF CARE

Should the content or operation of these guidelines be challenged on any grounds whatsoever then the impact on the past, present or future duty of care to patients will be taken to be a primary factor in deciding the outcome of that challenge.

3.0 TO WHOM THIS GUIDELINE APPLIES

This document is aimed at practitioners who are responsible for patients who have sustained a burn or a scald and is relevant to all trust clinical services.

4.0 BACKGROUND AND SCOPE

Burns are the fourth most common type of trauma wound worldwide ⁽¹⁾. The exact prevalence of burns injuries is not fully known as some people self-treat and do not seek medical attention ⁽²⁾. In the UK it is estimated that 250,000 people receive burn injuries each year, 175,000 people attend A&E departments and 16,000 people are admitted to hospital for specialist burns care ⁽³⁾.

Children account for almost 50% of the population with severe burns and children under five years of age account for 50-80% of all childhood burns. The risk of burns is also increased in the elderly, people with reduced mental capacity such as those with dementia or learning disabilities and those who may not recognise or react to a dangerous situation, people with reduced mobility, sensory impairment or those who may not have a quick response to injury ⁽⁴⁾. Burning is a recognised behaviour of self-harm using lighters, cigarettes, hot water, matches, or candles.

The complexity and rarity of burn injuries makes delivering burn care a specialised service. Although significant advances have been made in burn care over recent decades, it is recognised that to achieve the best possible clinical outcome for burn injured patients, burn care must be delivered by expert multi-disciplinary teams in specialised burn services ⁽⁴⁾.

5.0 AIMS AND OBJECTIVES

1. To provide a reference guide for assessing, managing and referring adults and children who present with a burn or a scald.
2. To ensure an evidence-based, standardised approach to the assessment and management of patients with a burn or scald.
3. To provide a framework to ensure that the quality of care for patients with a burn or a scald are assessed and managed and monitored in line with the Trusts quality improvement strategy.

6.0 QUALITY ASSURANCE AND AUDIT/DISSEMINATION

The principles upon which this document is based are:

- An individualised holistic assessment should be undertaken and evidence-based treatment plans commenced, which take into account the underlying aetiology, patient's circumstances, patient's wishes, the overall goals of treatment, the practitioners clinical judgement, available resources and knowledge of more recent research findings.
- Those who undertake assessment, planning, implementation and evaluations of care should be trained/educated/competent in the management of wounds. They should have attended in-house training on wound assessment and management
- The patient and their carers where applicable should be fully informed, given consent and share in the decision making process.
- The process should be clearly documented in the patient's electronic records and made accessible to all those caring for the patient to ensure continuity of care.
- A collaborative, multi-disciplinary, inter agency approach is taken to meet all the needs of patients with a burn or scald.
- Patients, staff and carers should have access to the equipment and resources necessary to deliver quality care.
- Monitoring of wound healing rates is an indicator of quality care and should be undertaken regularly.

7.0 DISSEMINATION

This document is available to all staff on the Trust Intranet site. The recommendations have been incorporate into the Tissue Viability Education and Training Sessions.

8.0 DEFINITIONS:

Burn injuries are classified into groups according to the amount of tissue damage ⁽⁶⁾. (Appendix 1)

- Superficial burns – partial thickness also known as first and second degree burns. These burns do not extend through all layers of the skin.
- Full Thickness burns also known as third degree burns extend through all layers of skin into the subcutaneous tissues.
- Severe full thickness burns known as fourth degree burns extend into muscle and bone

8.1 THERMAL BURNS

A burn is an injury caused by exposure to thermal heat which maybe from fire/flames, sun, electrical, chemical or radiation energy. It usually effects the skin but may also affect the airways, lungs, muscles, bones or other internal organs. Flame injuries are caused by direct or indirect exposure to a flame source. These burns can be any depth partial, full thickness or severe full thickness skin damage.

Contact burns occur when the skin touches an extremely hot object often seen in industrial accidents or may be caused by hot objects such as an iron, oven or radiator for a prolonged period of time. These type of burns usually cause deep dermal burns or full thickness burns.

8.2 SCALDS

A scald is a burn caused by contact with a hot liquid or steam for example spilling hot drinks, steam from a kettle, or immersion into a hot bath or shower. Scalds tend to cause superficial epidermal or dermal burns and may involve a large area of the skin.

Burns and scalds are categorised as complex or non-complex wounds

8.3 COMPLEX BURN

- All electrical burns
- All Chemical burns
- Any burn affecting a critical area such as burns to the face, hands, feet, perineum, genitalia, crossing joints and circumferential burns
- Any full thickness burn covering more than 15% of the Total body surface area (TBSA) in adults
- Any full thickness burn covering more than 10% TBSA in children
- Any full Thickness Burn covering more than 5% TBSA in children aged one year and under Appendix 2

8.4 NON COMPLEX BURNS

- Any partial thickness burn covering up to 15% of the TBSA in adults
- Any partial thickness burn covering up to 10% of TBSA in Children
- Any Partial Thickness burn covering up to 5% of TBSA in children age one year and under
- Any burn that **does not** affect a critical area such as to the face, hands, feet, perineum, genitalia, crossing joints and is not a circumferential burns

8.5 CHEMICAL BURNS

Burns caused by acid, alkaline or caustic chemicals can be very damaging and need immediate medical attention. Where a chemical burn is witnessed call 999 to help prevent severe injury. Where possible immediate first aid can be administered if it safe to do so **after calling 999**

- Wearing gloves and protective clothing try to carefully remove the chemical and any contaminated clothing from contact with the skin
- Use scissors to cut clothing rather than taking over the head risking damage to the face and eyes
- Do not wipe the skin as this may spread the chemical
- If the chemical is dry, brush it off the skin
- Rinse the affected area continuously using as much clean water as possible
- Try to make sure the water runs off the skin rather than letting it pool
- Follow any other advice the operator provides while waiting for the ambulance crew to arrive

9.0 IMMEDIATE FIRST AID

If the patient sustains a burn in the ward setting administer immediate first aid (Appendix 3) and then proceed to assess the patient to determine whether immediate admission to hospital is required or whether the person can be managed on the ward by the medical team.

Arrange immediate admission to A& E in the following situations.

- All complex burns
- All full thickness burns
- Deep dermal burns affecting more than 5% the TBSA in adults (Appendix 2)
- All deep dermal burns in children
- Superficial epidermal burns for adults with TBSA 15-25% with blistering
- Superficial epidermal burns for children with TBSA >10%
- All Circumferential burns
- Any high pressure steam injury
- Any burn associated with suspected non accidental injury regardless of the complexity of the burn see Appendix 4
- Burns with associated sepsis
- Burns affecting the face, hands, feet genitalia/perineum, or flexural surface, such as the neck, axilla, elbow or knee
- Burns associated with suspected inhalation injury e.g singed nasal hair, sore throat, black carbon in the sputum, hoarse voice, stridor, wheeze or signs of carbon in the oropharynx
- People with significant co-morbidities that may affect wound healing or increase the risk of complications that may affect wound healing or increase the risk of complications, or those clinically judged to be at risk of complications
- People with other significant injuries in addition to the burn such as crush injuries, fractures, head injuries or penetrating injuries
- If there is any uncertainty as to whether referral is needed or appropriate
- Superficial epidermal burns e.g sunburn
- Where there are signs and symptoms of heat exhaustion or heat stroke

10.0 ASSESSMENT

Following the process for immediate first aid take a full and detailed assessment to include

10.1 DEMOGRAPHIC DETAILS

- Date and time of initial assessment
- Name, address
- NHS number
- Contact telephone number
- Date of birth
- District/Community/ Clinic nurses name, contact details
- GP's name, address, telephone number

10.2 BURN/SCALD HISTORY

- The time and exact cause of the injury
- Past medical history, including conditions that could impair wound healing and or increase the risk of complications such as:
 - Cardiac or respiratory
 - Type 2 Diabetes
 - Pregnancy
 - Immunosuppressed including use of medications such as steroids or chemotherapy
 - Poor Nutrition
 - Cognitive impairment
 - Predisposing factors which may require further investigation or management e.g a burn resulting from a fall, seizure, blackout, alcohol or drug misuse

- Tetanus status
- Allergies

10.3 ASSESSMENT OF BURN/SCALD

Asses and record the assessment of the burn onto the wound assessment chart/template in the patients electronic record on EMIS, RiO, Systmone. Assessment to include:

- The Location on the body of the burn
- The size measured in width, length and depth
- The extent of the burn expressed as TBSA – see Appendix 2
- The depth of the burn
- Skin Colour
- Presence of blistering
- Burn depth may increase with time, so reassessment after 24-48 hours is essential

10.4 PAIN ASSESSMENT

Pain management in patients with burn injuries is often inadequate. While cooling and covering the burn gives some relief, opioids may be needed initially for pain control. Superficial epidermal burns can be extremely painful (more so than deep wounds) because the nerve endings remain intact but exposed (5). Assess pain using the following criteria

- Asses and record the patient reported pain using a 1-10 scale with 10 being the most pain.
- Constant or intermittent
- Day or night
- At dressing change
- What helps to relieve the pain
- Impact of the burn on the patients quality of life

10.5 WOUND PHOTOGRAPHY

Taking a photograph of the burn or area scalded is a useful visual record for burns or scalds that are difficult to trace. It is also a good record for tracking wound improvement over time Patient consent should always be obtained prior to wound photography. Images should be stored on the patient's electronic record according to recommended guidelines

10.5.1 Criteria for Wound Photography - see Appendix 6 for guide

- Verbal consent for wound photography can be obtained for the purpose of wound evaluation, triage or to obtain virtual specialist advice from the tissue viability team
- Obtain written consent from the patient if the photograph is for the purpose of teaching, product evaluations or publication.
- Where the patient lacks capacity to consent. Written consent must be obtained from the next of kin or those with Lasting Power of attorney
- Photograph the Burn/scald on initial assessment and repeat every four weeks or more frequently if the wound condition changes rapidly.
- Photographs for wound evaluation should be labeled with the patient's Initials, date of photograph and wound position.
- Include a ruled measure to give an indication of scale.

- Secure/upload in the patient's electronic records in chronological order.
- All photographs should be clear and in focus.
- Privacy and dignity should be protected and maintained at all times.
- If photographs are used for training purposes or publication confidentiality must be maintained and the wound measure should be labelled as patient 1, 2 etc and the date of the photograph.
- Wound images should be taken using a digital device or Trust mobile phone. Members of the tissue viability team will have access to a digital camera. **Personal devices should not be used to take wound images.**
- The camera/mobile device should be cleaned after use with disinfectant wipes to prevent cross infection
- Images should be deleted from the mobile device as soon as possible once the images have been uploaded onto the patient electronic record

11.0 MANAGEMENT OF COMPLEX BURNS

Management of complex burns will be managed in secondary care and may be discharged for ongoing care into the community or ward setting for ongoing management. Where burns are deemed to be complex, the hospital team will have discussed a management plan with the patient that will be followed once the patient is discharged into the community/ward.

11.1 MANAGEMENT OF NON COMPLEX BURNS/SCALDS

The care of patients with non-complex burn injuries will usually be managed in primary care or by district nurses for house bound patients. Occasionally ward staff may be required to manage non-complex burns. Care should be aimed at:

- Preventing or reducing the risk of wound infection
- Applying a dressing to provide moist wound healing
- Optimising pain relief
- Providing patient education.

11.2 WOUND AND SKIN CARE

A new burn is essentially sterile and it is important to keep it clean and moist to promote the development of healthy granulation tissue. To minimise the risk of microbial contamination, all wounds should undergo some form of cleansing to remove foreign bodies, soluble debris and devitalised tissue such as necrotic tissue or slough, all of which can become a focus for infection if not managed appropriately

11.3 WOUND CLEANSING

Irrigation is the preferred method for cleansing a burn. Clean the burn with warmed (body temperature) sterile 0.9% sodium chloride. Consider: patient comfort and the need to cleanse surrounding skin. If there are signs of infection a topical irrigation solution containing topical antiseptics such as PHMB can be considered to help reduce the bacterial load.

11.4 DEBRIDEMENT

Debridement of the wound and wound edges to remove necrotic tissue can reduce the risk of infection and encourage epithelialisation (8). This may be a one off treatment or may need to be repeated several times. It is important to use a debridement method that is appropriate to the location of the wound, amount of tissue to be removed and the needs of the patient as well as the skill of the healthcare professional (8). A referral to the Tissue Viability service should be made for further advice and support in the debridement of burns wounds

11.5 MANAGING BLISTERS

Burn Blisters occur as a response to a burn injury whereby increased capillary permeability results in oedema formation that separates the epidermis from the underlying dermis. Burn blisters occur primarily in superficial partial thickness burns but also may overlay deeper burns. Where possible blisters should be left intact to reduce the risk of infection however there may be occasions when de-roofing of the blister should be considered for example those that are likely to rupture, or those over a joint

Criteria for de-roofing Blisters (LSEBN 2016)		
Leave intact	Small non-tense blisters (<6 mm)	Natural method of pain control. Unlikely to rupture spontaneously, damage underlying tissue, or impede healing
	Deroofing is not the priority in care for severe and extensive burns.	
De-roof	Thick-walled blisters on fingertips, palms and soles of feet	Blisters on these areas are associated with discomfort and limited mobility. Alternative management is to cut a sizeable "window" to remove fluid and enable assessment of the wound
	Large (>6 mm) and thin-walled blisters	Most likely to occur on hair-lined surfaces and rupture spontaneously, which increases the risk of infection
	Ruptured blisters and loose skin	Remove any necrotic and possibly contaminated material from the wound
Rational for deroofing		
<ul style="list-style-type: none"> • Allows proper observation of the wound bed and accurate assessment of the burn depth, including capillary refill time and sensation, to determine appropriate treatment • Removes non-viable tissue from the wound bed, allowing faster wound healing and decreasing likelihood of scarring • Evacuates blister fluid that may suppress local and systemic immune function, improving the patient's ability to defend against infection • Reduces the risk of wound infection associated with uncontrolled blister rupture and prolonged presence of non-viable tissue • Prevents pressure on underlying tissue, preserving the wound microcirculation and preventing the burn depth progression • Enables movement of joints, reducing the likelihood of burn contracture • Improves the efficacy of topical wound therapy 		

Developed by The London South East Burns Network (March 2016)

11.6 Dressing Choice

Dressing choice should be based on the findings of the holistic assessment and wound assessment and taking into account the preferences of the patient. There are a wide variety of dressings available for the management of partial thickness burns. Understanding the principles of dressing selection and consulting the wound dressing formulary for your area will help simplify the process. Advances in dressing technology has led to a wider range of dressing options, some of which may offer advantages over traditional products in terms of time to healing, pain experienced and frequency of dressing changes. For further advice and support refer to the Tissue Viability Team.

The following considerations should influence your choice when deciding on which dressing to use on a burn:

- Maintains a moist wound environment
- Contours easily
- Non-adherent to protect delicate skin
- Retains close contact with the wound bed
- Easy to apply and remove
- Painless on application and removal
- Protects against infection
- Cost-effective.

A simple non-adhesive wound contact layer with a secondary absorbent layer is effective for most non-complex superficial dermal burns). Pain is also an important consideration and, where possible, non adherent products (soft silicone dressings) should be considered. These dressings can remain in place for several days, allowing the wound bed to remain undisturbed.

Antimicrobial dressings should only be used to treat infection for further guidance refer to the wound management Guidelines (2023) and the wound dressing Formulary

11.7 Skin care

Healed burns can be sensitive and develop dry scaly skin. The areas should be moisturised daily with a non-perfumed emollient. This should be continued until the burn area is no longer dry or itchy. Using an emollient will help to keep the skin soft and supple

12.0 Referral

Burns should be managed using a multidisciplinary approach. In addition to the referral criteria discussed above all burn wounds that are not healing as expected or that have not healed within 2 weeks of initial injury should be referred to a specialist burns unit See appendix 5

12.1 Safeguarding

Where non accidental injury is suspected refer to local authority safeguarding team see appendix 4 for red flags

12.2 Referral to Foot Health Team

Where the burn is situated on the foot and the patient is a diabetic or has a compromised vascular status refer to foot health team

12.3 Referral to Physiotherapist/Occupational Therapist

For people with a superficial dermal burn arrange a referral to a physiotherapist and or occupational therapist if the person has hypertrophic scars or contractures that need support with maintaining movement and function

12.4 Referral for camouflaging

For areas that are deeply scarred or disfiguring camouflaging cosmetics may be a useful adjunct and can increase confidence and self-esteem. Patients should be referred to specialist scar services, where available, where a consultant will help select the most appropriate shade and advise on application.

13.0 Education & Training

These Guidelines will be incorporated into the wound assessment and management training delivered by the Tissue Viability Services

13.1 Patient Education

Patients may forget instructions when they are in pain or upset by their burn injury. Written information should be provided at the key stages of management to help patients and their families or carers make informed decisions about their care. It should be clear, understandable, evidence based and culturally sensitive. Written information can be downloaded from the London and South East England Burn Network

<https://www.lsebn.nhs.uk/page1.aspx?p=16&t=3>

13.2 Emollient use and risk of fire

There is a fire risk with all paraffin-containing emollients, regardless of paraffin concentration and the risk cannot be excluded with paraffin-free emollients. Emollients can transfer from the skin onto clothing, bedding, dressings, and other fabric. Once there, they can dry onto the fabric and build up over time. In the presence of a naked flame, fabric with emollient dried on is easily ignited. Although emollients are not flammable in themselves or when on the skin, when dried on to fabric they act as an accelerant, increasing the speed of ignition and intensity of the fire. This accelerant effect significantly reduces the time available to act to put out clothing or bedding fire before serious and fatal burns are sustained. When using Emollients or prescribing emollients for use in the home, the clinician must provide information to the service user regarding the fire risk. The risk is heightened when oxygen Therapy is in use. Further Information for patients can be found and downloaded from The Trust web site <https://www.elft.nhs.uk/sites/default/files/2022-03/Emollients%20%20risk%20of%20fire%20%28ELFT%20Nov%202020%29.pdf>

Clearly document in the patient record that the risk has been discussed and information has been provided.

14.0 Mental Health Units

Self-inflicting burns are a common form of deliberate self-harm. If burns occur on a Mental health unit or in patients with mental health concerns then this must trigger a full risk assessment which should include incident reporting, patient safety measures and timely communication with the wider Multidisciplinary team.

14.1 Burns Kits

All of the MH units should have access to a burns kit. These kits include a guidance leaflet, gloves, burn gel sachet, burn relief dressings of various sizes, burn relief gel bottle, bandages, and universal shears for cutting off clothing. The kits can be obtained from the Trust warehouse Catalogue following the link below

<https://showroom.inflowinventory.com/f8539264-537e-48fc-8e47-e8dfce4f9b1f/?search=burns>

The use of these kits should not exclude obtaining medical help. Once first aid has been administered using the kit a full holistic assessment must be completed and documented and appropriate action and referral made

REFERENCES

1. Nice 2023: Clinical Knowledge Summary Burns & Scalds
<https://cks.nice.org.uk/topics/burns-scalds/> accessed 28/09/2023
2. BMJ Best Practice (2022) Cutaneous Burns BMJ Best Practice.
<http://bestpractice.bmj.com> Accessed 28/09/2023
3. National Burn Care Review Committee (2001) National Burn Care Review British association of Plastic Surgeons. <https://www.bapras.org.uk/> accessed 28/09/2023
4. London & South East England Burn Network (2006) <https://www.lsebn.nhs.uk/>
Accessed 03/10/2023
5. Wounds International (2014): Best Practice Guidelines Effective skin and wound management of non complex burns <https://woundsinternational.com/best-practice-statements/best-practice-guidelines-effective-skin-and-wound-management-non-complex-burns/> Accessed 28/09/23
6. Lloyd, ECO., Rodgers, B.C, Michener, M & Williams, M.S. (2012) Outpatient burns: Prevention and care. **85** (1), pp 25-32
<https://pubmed.ncbi.nlm.nih.gov/22230204/> accessed 28/09/2023
7. Atiyeh B, Masellis A, Conte C. Optimizing burn treatment in developing low- and middle-income countries with limited healthcare resources (Part 2). *Ann Burns Fire Disasters* 2009;22:189–95
8. Wounds UK. Effective debridement in a changing NHS: A consensus document. Wounds UK, 2013. Available from: www.wounds-uk.com accessed 03/10/23

APPENDIX 1

Classification of Burn Depth

Appendix 1

Table 1. Classification of the depth of burn.

Depth of burn	Layers of skin affected	Skin examination
Superficial epidermal (for example, sunburn)	The epidermis is affected, but the dermis is intact.	The skin is red and painful, but not blistered. Capillary refill* blanches then rapidly refills.
Superficial dermal (partial thickness)	The epidermis and upper layers of dermis are involved.	The skin is red or pale pink and painful with blistering. Capillary refill* blanches but regains its colour slowly.
Deep dermal (partial thickness)	The epidermis and the upper and deeper layers of the dermis are involved, but not underlying subcutaneous tissues.	The skin appears dry, blotchy or mottled, red, and typically painful (due to exposed superficial nerves). There may be blisters. Capillary refill* does not blanch.
Full thickness	The burn extends through all the layers of skin to subcutaneous tissues. If severe, it extends into muscle and bone.	The skin is white, brown, or black (charred) in colour, with no blisters. It may appear dry, leathery, or waxy and is painless. Capillary refill* does not blanch.

*Assess capillary refill by pressing with a sterile cotton bud (such as a bacteriology swab).

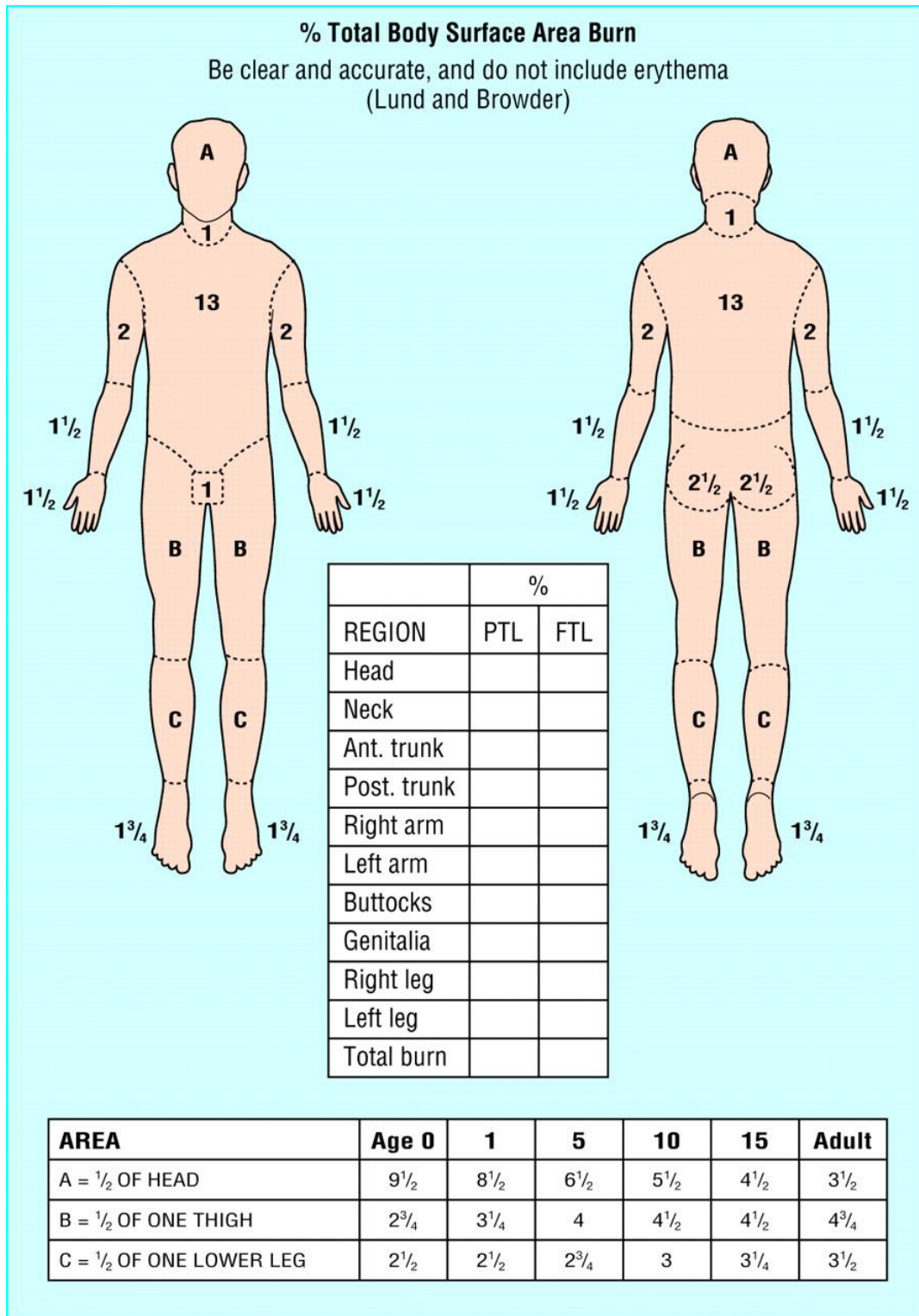
Note: assessment should take into account the person's skin pigmentation. In white skin, full thickness burns may be mistaken for unburnt skin. In pigmented skin, a superficial epidermal or dermal burn may not appear red.

Data from: [[Lloyd, 2012](#); [Wounds International, 2014](#); [Douglas, 2017](#)]

APPENDIX 2

Total body surface area (TBSA)

Appendix 2 Assessing Total Body Surface Area (TBSA)



PTL Partial Thickness Skin Loss

FTL Full Thickness Skin Loss

APPENDIX 3

First Aid of Burns/Scalds

Appendix 3

Immediate first aid should be given to a person with a Burn/Scald

- **When giving immediate first aid to a person with a burn:**
 - Avoid personal injury by checking the area is safe and wearing personal protective equipment, if necessary (for example, when treating chemical burns).
 - Assess the person's airway, breathing, and circulation.
 - Assess for other significant injuries or trauma that may be life-threatening and require emergency treatment, such as crush injuries, fractures, head injuries, or penetrating injuries.
- **For thermal burns:**
 - Stop the burning process (for example, extinguish flames using 'drop and roll' or smother them with a blanket).
 - Remove non-adherent clothing and potentially restricting jewellery.
 - Do not attempt to remove tar stuck to the skin.
 - Within 20 minutes of the injury, irrigate the burn with cool or tepid running water for 15–30 minutes.
 - Do not use ice or very cold water as it may cause vasoconstriction and may deepen the wound.
 - If water is not available, use wet towels or compresses.
 - Ensure the person is kept warm with coats, sheets, or blankets to avoid hypothermia, especially if cooling large areas of skin in children and the elderly.
 - Immediately after cooling, cover the burn using cling film.
 - The layers of cling film should be laid over the burn rather than wrapped circumferentially, to avoid the possibility of constriction.
 - If cling film is not available, use a clean, cotton sheet. Consider using a clean, clear plastic bag for burns to the hand.
 - Do not apply topical creams at this stage, as they will hinder later assessment of the wound.
 - Elevate the affected area if possible, to reduce the risk of oedema.
 - Offer pain relief, such as paracetamol or ibuprofen, for mild-to-moderate pain. Consider adding codeine for more severe pain.

- **For electrical burns**

- **Do not** approach a person connected to a high-voltage source (1000 volts or more).
- If the person has been injured by a low-voltage source (for example, domestic electricity supply [220–240 volts]):
 - Switch off the power supply if it is safe to do so, or remove the person from the electrical source using a non-conductive material (such as a wooden stick or wooden chair).
- Arrange immediate admission to Accident and Emergency Department

- **For chemical burns**

- Determine the causative chemical, where possible.
- Remove affected clothing. Brush the chemical off the skin if it is in a dry form.
- Irrigate the burn with copious amounts of water for about an hour.
- Do not attempt to neutralize chemicals as additional heat will be generated, which may increase tissue damage.
- Arrange immediate admission to Accident and Emergency Department

APPENDIX 4

Red Flags for non accidental injury

Appendix 4 – Red Flags for Non accidental Injury

- **Suspect non-accidental injury if a child or adult has a burn or scald with any of the following:**
 - Explanation for the injury is absent or unsuitable.
 - The person is not independently mobile.
 - The injury is on any soft tissue area that would not be expected to come into contact with a hot object in an accident (for example, the backs of hands, soles of feet, buttocks, or back).
 - The injury is in the shape of an implement (for example, a cigarette or iron from a contact burn).
 - The injury indicates forced immersion, for example, scalds:
 - To the buttocks, perineum, and lower limbs.
 - To limbs in a glove or stocking distribution.
 - To limbs with a symmetrical distribution.
 - With sharply delineated borders.

Consider the possibility of non-accidental injury if there is:

- Delayed presentation in seeking medical attention. Note that this may be due to effective first aid measures masking the severity of the injury.
- An unrelated adult presenting the child to healthcare services.
- Evasive or changing history.
- A trigger event such as soiling, enuresis, or minor misbehaviour by the person.
- History inconsistent with assessed development.
- A lack of parental or carer concern.
- A lack of appropriate supervision of a vulnerable person (may indicate neglect).
- Failure to engage with healthcare appointments or health promotion programmes (may indicate neglect).
- **Consider the possibility of non-accidental injury if on examination:**
 - The history given is incompatible with examination findings.
 - There are no splash marks in scald injuries (a fall into the bath will usually produce splash marks).
 - There are signs of restraint on upper limbs.
 - There is sparing of the flexion creases (suggests the child was in the fetal position when burnt).
 - There is central sparing of the buttocks (the 'doughnut sign'), may be found in submersion injuries if a person has been forcibly held down.
 - There are associated unrelated injuries (such as bruises of various ages).

APPENDIX 5

Referral Criteria to Specialist Burns Unit

Appendix 5 London & South East England Burn Network

The LSEBN serves a population of around 21 million people, living in London, the East of England, Kent Surrey and Sussex, Thames Valley and Wessex.

Burn Referral Guidelines: Criteria for Referral

Adults and children with the following injuries should be discussed with the local Burn Service

Cause

- Inhalation injury
- Deep dermal and full thickness
- Electrical
- Chemical
- Burns with trauma

Affected Area

- Face, hands, genitals, feet, joints, scalp, ears
- Circumferential

Size

- >1% Total Body Surface Area [TBSA] in children
- >3% TBSA in adults

Age

- Neonates (<28 days old)

Wound

- Not healed within 2 weeks
- Infected

DISCUSS

- Suspected non accidental injury, mental health history or self-harm
- Progressive non burn skin loss conditions (TENS, SSSS, Necrotising Fasciitis)
- Significant co-morbidity (eg diabetes) or immunocompromised patients
- Friction burns with full thickness skin loss
- Cold burns with full thickness skin loss
- Older people (60+)
- Children "unwell" with a burn (see below) *
- Any other case that causes concern

NHS
London and South East of England Burn Network

CONTACT DETAILS

www.trips.nhs.uk

St Andrews Burns Service
Broomfield Hospital (Chelmsford)
Adults/Children **01245 516037**

Chelsea & Westminster Hospital (London)
Adults **02033152500**
Children **02033153706**

Queen Victoria Hospital (East Grinstead)
Adults **01342 414440**
Children **01342 414469**

Stoke Mandeville Hospital (Aylesbury)
Adults and Children **01296 315040**

*** Toxic Shock Syndrome /Burns Sepsis Syndrome**
Seek early advice from local Burn Service
Consider treating with fluid resuscitation, IV antibiotics +/- FFP

MEDICAL EMERGENCY

**Any patient
Any size burn
Any of these symptoms
=
Risk of Toxic Shock Syndrome**

➔

- Temperature > 38°C
- Rash
- Diarrhoea and vomiting
- General malaise
- Not eating or drinking
- Tachycardia/tachypnoea
- Hypotension
- Reduced urine output

☎

If in doubt, seek early advice from local Burn Service

Telephone support and advice on initial care of any patient with a burn injury is available at all times

Approved by LSEBN CGG on December 2015

APPENDIX 6

Wound Photography Made Easy

TISSUE VIABILITY SERVICE WOUND PHOTOGRAPHY MADE EASY



Introduction

Wound assessment is an important process that allows clinicians, patients and carers to monitor the stages of healing detect the presence of complications and assess the effectiveness of treatment. These observations of the wound can then form the basis for clinical decisions including the selection of a suitable wound care regime.

Digital photographs are an important component of effective wound assessment and management. Digital photography in wound management adds objective visual confirmation to the written record and allows for continuous monitoring and evaluation. Wound photography may also be used for education and training and to support evaluations of products and devices, which may be published at a later date.

This made easy guide have been written to ensure best practice and standardisation of digital wound photography for the Tissue Viability Team.

Patient consent

The healthcare professional is responsible for ensuring the patient has given informed consent before any photography takes place. This consent will be documented in the patient's clinical record. If the Photograph is for wound evaluation, triage or for virtual advice from the tissue viability team then verbal consent can be obtained. A full explanation should be given to the patient for the reason the photograph is being taken. Photographs will not be used for any purpose other than for which consent has been obtained. If photographs are for the purpose of education and training or for a clinical evaluation and are likely to be published then written consent should be obtained for this purpose. Care should be taken to protect patient identity by ensuring that faces or any other obvious features are obscured. A copy of the patient consent form can be found on the Trust website.

Equipment

Wound images should be taken using a digital device Member of the tissue viability team will have access to a digital device which can take photographs e.g. Trust Ipad. Wound photograph should only be taken on Trust equipment. **Personal devices should not be used to take wound images.**

Taking photographs

Ensure the digital device is pre-set to record the date and time picture is taken. Care will be taken to protect patient identity by ensuring that faces or any other obvious features are obscured. Patient dignity and modesty

will be protected by ensuring minimum patient skin exposure. Genitalia will be covered to preserve dignity. If damage is around or on genitalia and safeguarding is a concern, clinical judgement should be used.

The wound and surrounding skin should be cleansed prior to the photograph being taken and a visual measurement scale used in each photograph with the date recorded on the scale. This will be placed next to the wound. Paper sterile ruler supplied in dressing pack should be used for this purpose. The patient's identification/initials can be added to the sterile ruler. Please leave blank or use patient number if the photography is to be used for educational purposes or for dressing/device evaluations which may be published. Blue paper towel should be used as a background to the image to ensure no background images such as furniture in the frame. The picture should be taken from a distance of between 25cm – 35cm. Follow up photographs will be taken with the patient in a similar position and from the same angle and distance to previous photographs to allow for comparison.

The iPad device should not come into contact with the wound. Clinician will ensure gloves are removed and hand washing undertaken between dealing with the patient/wound and using the digital device. Universal infection control principles should be followed.

Storage of photographs

All Trust staff will be professionally accountable for the correct storage of all images that they have taken. Photographs should be stored in the patients' electronic record system unless they are being used for education and training or agreed dressings device evaluation in which case they will be stored on the tissue viability service shared drive in the relevant evaluation folder. These images should not contain the patient's initials. Photos should be deleted from the device as soon possible after the picture has been added to the clinical record or the shared tissue viability drive.