Whittington Health

Trauma management – Care of the injured patient

Version:	9.0
Ratified by:	Clinical Guidelines Committee (original) Multidisciplinary Trauma Group
Date ratified:	May 2015
Name of originator/author:	Robert Pinate – PDN ED/Chair of MTG
Name of responsible committee/individual:	Multidisciplinary Trauma Group Dr Rachel Landau – Trauma lead
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Review date:	3 years hence
Target audience:	All staff involved in trauma care

Revision Chronology:		
Version Number	Effective date	Reason for change
1-7 draft documents	April 2010 - July 2011 – not effective in Trust	Significant changes to the NELETN which impacted directly on the guideline.
8	July 2011	Finalised guideline ratified by the MTG and Clinical Guidelines Committee
9	May 2015	Revised guideline ratified by the MTG

A Whittington Health Clinical Management Guideline

Trauma management – Care of the injured patient

Date:	January 2015
Author:	Dr Rachel Landau
Speciality:	Trust wide
Owner:	Multidisciplinary Trauma Group (MTG)

Relevant to: All staff involved in trauma care

Key words/terms: Team leadership, secondary transfer, trauma network, patient handover, call out criteria, team membership, stand down procedure.

Activation of the trauma team is via switchboard: Dial 2222 and state adult/paediatric trauma team and location.

➢ 1. Background and introduction

Trauma remains the leading cause of death in children and young people in England, Europe and America (1). As a proportion of total attendances to the Emergency Department (ED), trauma accounts for only one per 1,000 emergency cases admitted and yet have a disproportionate cost to society as it affects predominantly the youngest in our community (2). A joint report from the Royal College of Surgeons of England and the British Orthopaedic Association in 2000 made it clear that trauma should be managed following Advanced Trauma Life Support (ATLS)® (3) or equivalent guidelines. This guideline provides guidance on the management of trauma and in particular the team structure, leadership and handover of care.

There have been considerable changes to the management pathways for trauma patients in London since the launch of the pan-London trauma networks and these will be reflected in this document,

Since 2010 Whittington Health has been a designated Trauma Unit (TU) within the North East London and Essex Trauma Network (NELETN). The Major Trauma Centre (MTC) for the network is the Royal London Hospital and, as such, receives all trauma transfers including neurosurgery

➢ 2. Trauma Team activation criteria

2.1 Trauma Team activation criteria is set out in appendix 1 are based on guidance from London Ambulance Service (4), ATLS (3) and Royal College of Surgeons of England (2).

2.2 The activation criteria should not be regarded as an exhaustive list. Clinical staff should activate the trauma team where they believe the patient would benefit from their input.

➢ 3. Composition of the trauma team and activation

	Adult	Paediatric 16yrs and under
ED SpR/Middle Grade Team leader (ST4 or above where possible)	√	√
Anaesthetic SpR	√	√
ODA	√	√
Orthopaedic SpR *	√	√
Surgical SpR #	√	√
ED Nurse 1	√	√
ED Nurse 2	√	√
ED Nurse 3	√	√
Paediatric SpR	×	√
Radiographer	√	√
Scribe	√	√

* = See 3.2
#= See 3.3

3.1 All team members will attend immediately as for cardiac arrests.

3.2 Orthopaedic registrars are off site between 20:00 and 08:00 seven days a week. During these hours the surgical FY2/SHO will cover orthopaedics and call the Ortho SpR as required or directed by the team leader.

3.3 Surgical Middle Grade on-site cover is 24 hours a day

- Travelling time to hospital must enable adherence to the following standard: “The service should be able to deliver emergency laparotomy with 30 mins of arrival” at the hospital (5)

3.4 ED junior medical staff (FY2s and ST1s) must participate in trauma calls as required.

3.5 A team member will be assigned to the scribe role, see section 5.

3.6 Emergency bleeps are tested daily for adult and paediatric teams. All team members must respond to the test bleep as instructed by switchboard.

➢ 4. Team leadership

4.1 The team leader role will be carried out by the ED SpR/Middle Grade who must hold an ATLS or ETC qualification.

4.2 In the event there is no ED SpR/Middle Grade, the most senior member of staff with appropriate experience and training (ATLS/ETC) should assume the team leader role.

4.3 The trauma team leader should allocate roles to each member of the team, according to their level of skill. The resuscitation should follow ATLS® guidance (2).

4.4 The trauma team leader should remain with the patient until transfer to the care of one of the inpatient teams or to another hospital (2).

➢ 5. Documentation

5.1 The trauma team members will use the NELETN trauma proforma for all documentation during the initial resuscitation and management phase.

5.2 A member of the trauma team will be assigned to the scribe role and will complete pre-hospital information, primary survey findings, chronology and record observations.

5.3 All team members must document and sign their attendance and clinical findings on their designated pages in the proforma.

5.4 Separate paediatric neurological observations charts must be used in children under five years of age.

5.5 All areas of the injury summary on page 10 must be completed by the team leader.

➢ 6. Imaging

6.1 Imaging is a core component of the primary and secondary survey.

6.2 As detailed in point 3 the radiographer on duty must attend all trauma calls on activation of the trauma bleep system without delay.

6.3 Focussed assessment sonogram in trauma (FAST)

- There is a mobile ultrasound machine suitable for FAST held at all times in ED.
- FAST should be performed on trauma patients where:
  a. It is clinically indicated.
  b. Where there are personnel available who are suitably trained to carry out FAST.
- A negative FAST scan does not preclude the need for further FAST assessments and/or CT scanning.

6.4 CT – The radiology department have developed a major trauma protocol for CT scanning, see appendix 2.

➢ 7. Safe transfers within the hospital

7.1 In the event of any transfer within the hospital a safe level of medical and nursing supervision must be maintained with the patient as directed by the team leader in keeping with the clinical needs of the specific patient. Medical and nursing staff must accompany patients to and from the Imaging Department.

7.3 Full portable monitoring and ventilation is available in the ED and should be utilised as required.

7.3 Full documentation must be maintained throughout the patients transfer and whilst in areas where investigations/imaging may be taking place.

7.4 All intubated patients must have a nurse escort in addition to the anaesthetic team as detailed in the Intensive Care Society 2011 Guidelines for the transport of the critically ill adult (www.ics.ac.uk) and the Whittington's "Transport of the Critically Ill Patient - Guideline and Checklist"2013.

7.5 All patients in full spinal immobilisation must be transferred with portable suction immediately available.

➢ 8. Secondary transfer protocol

8.1 NELETN have developed a network wide protocol for secondary transfers to the MTC , see appendix 3 and 4.

8.2 Page 22 of the trauma proforma contains contact details for the MTC

8.3 The purpose of the protocol is to facilitate timely transfers of patients to the MTC for definitive care in a situation where this care cannot be delivered at the Whittington or when the patient requires tertiary care from multiple specialties.

8.4 Upon patient acceptance by the MTC, the LAS clinical coordination desk must be contacted to initiate a 'critical care transfer'.

8.5 Inter-hospital transfer mandates the presence of a suitably skilled and qualified clinician to accompany the patient to the MTC. This ensures not only the safest possible transfer but also a full and comprehensive handover at the receiving centre.

8.6 If the patient requires anaesthetic support for transfer to a secondary hospital the anaesthetist must discuss this with the anaesthetic consultant on-call prior to transfer.
Detailed guidance is given in 'Guidelines for the transport of the critically ill adult', 2011, Intensive Care Society; which is available on the Trust intranet as well as the Whittington's "Transport of the Critically Ill Patient - Guideline and Checklist" 2013.

8.7 Head injuries
All head injuries requiring transfer should be referred to the Royal London Hospital where they will be accepted via the ED automatic acceptance policy.

➢ 9. Burns

9.1 London and South east of England Burn Network (LSEBN) provide network wide guidance on the management of burns.

- Trauma calls should be initiated for burns as per trauma call out criteria (appendix one).
- Referral criteria differ for adults and children:
  The LSEBN have provided a guideline on burns in children and adults – see appendix 5.

9.2 LSEBN Children's burn referral guideline – November 2010 - appendix 5:

- The referral criteria should be used as a guide only.
- Where there is a child protection concern this **must** be discussed with the paediatric consultant on-call prior to transfer 24/7.
- There will be a sub-set of patients who can be competently managed at the Whittington and may not need transfer, generally for burns <10% and not affecting 'critical areas'. If in doubt discuss with the paediatric consultant on-call.

9.3 Where to transfer to:

As part of the NELETN our burns centre of choice is Broomfield Hospital. However, it is acknowledged that there may be circumstances where the Chelsea and Westminster Hospital service may be more suitable. Both centres can be used from the Whittington.

9.4 Transfer documentation:

Should be completed on the LSEBN "Burns Transfer Information" document which includes guidance on fluid resuscitation. Copies will be held in the burns draw and in the trauma folder held in resus.

➢ 10. Patient handover

10.1 The team leader may, at an appropriate time, handover the care of the patient to an inpatient team.

10.2 The handover should be clearly documented in the trauma proforma detailing to whom the care has been assigned and any outstanding tasks/investigations.

➢ 11. Trauma team stand down

11.1 Members of the trauma team must only leave once stood down by the team leader.

11.2 The team leader may stand down the entire trauma team if the needs of the patient require emergency medicine input only.

➢ 12. Governance

12.1 Governance structure:
The governance structure is shown in appendix 6.

12.2 Audit:

The Trust is a member of the Trauma Audit and Research Network (TARN). Patients presenting to the Whittington who fulfil the TARN inclusion criteria will be entered onto the TARN system. Main points:

- The Trust has a dedicated TARN steering group who identify, review and input data into TARN.
- TARN provides a statistical base to support clinical audit and development of the trauma service.
- TARN is a national trauma audit database which publishes its results in the public domain (on-line).
- TARN produces monthly clinical and quarterly comparative reports.
- TARN reports, prepared by the MTG, will be presented quarterly to the Clinical Governance committee.

In addition to TARN data the TARN steering group produces monthly reports looking at:

- Number of trauma calls per month
- Number of trauma call patients included in TARN
- Number of trauma call patients not included in TARN
- Number cardiac arrest calls which are related to trauma

12.3 Risk issues will be discussed as a standing item at all MTG meetings. The purpose of this is to review any specific risk issues and provide feedback where necessary. In addition risk issues will be escalated as appropriate. This does not replace the standard risk management procedures as established in the Trust.

12.4 Process for monitoring compliance with this guideline:
The audit process as outlined in 12.2 will facilitate the identification of non-compliance, such as the non-attendance of key personnel at a trauma call. This will then be managed through the risk framework as described in 12.3.

➢ 13. Repatriation and Rehabilitation

13.1 As part of the NELETN the Whittington observes the network repatriation policy. This policy ensures timely transfer of patients from a Major Trauma Centre back to their 'home' hospital for continued care and rehabilitation.

13.2 Given the scale of issues involved in not just repatriation but also in-patient management and rehabilitation a separate guideline is being developed by the Trauma Rehabilitation Group and will not be covered in this guideline.

➢ 14. References

1. Department of Health (1999) *Saving Lives: Our Healthier Nation.* Stationary Office, London.

2. Royal College of Surgeons of England and the British Orthopaedic Association (2000) *Better Care for the Severely Injured.* Royal College of Surgeons of England, London.

3. American College of Surgeons Committee on Trauma (2004) *Advanced Life Support for Doctors, seventh edition.* American College of Surgeons, Chicago.

4. London Ambulance Service (2010) Major Trauma Decision Tree. London, HfL.

5. Healthcare for London (2009) Designation criteria for trauma centres. London, HfL.

➢ 15. Additional relevant documents/guidelines

1. Resuscitation policy: Available on the Whittington Hospital intranet

2. Major haemorrhage in adults 2010: Available on the Whittington Hospital Intranet.

3. Transport of the Critically Ill Patient - Guideline and Checklist" 2013: Available on the Whittington Hospital Intranet.

➢ 16. Abbreviations and glossary:

ATLS – Advanced Trauma Life Support

CT – Computed Tomography

ETC – European Trauma Course

FAST – Focussed Abdominal Sonogram in Trauma

LAS – London Ambulance Service

LSEBN – London and South East Burns Network

MTC – Major Trauma Centre

MTG – Multidisciplinary Trauma Group

NELETN – North East London and Essex Trauma Network

STU – Specialist Trauma Unit

TARN – Trauma Audit and Research Network

➢ **Appendix one**

Criteria for activating a trauma call

Step	Assessment	Status	Action
Step one	Assess **vital signs and GCS**	▪ Cardiac arrest – activate cardiac arrest AND trauma team ▪ Respiratory rate <10 or >29 ▪ SaO2 < 90% ▪ Pulse >100 ▪ Systolic BP < 90 mmHg ▪ Unconsciousness >5mins or GCS <13 Children: ▪ Cardiac arrest – activate cardiac arrest AND trauma team ▪ Respiratory rate >40 ▪ Pulse >120 ▪ Cap refill >2 sec ▪ Unconsciousness >5mins or GCS <13	Trauma call
Step two	Assess **anatomy of injury**	• Chest injury with altered physiology • Suspected pelvic fracture • Two or more long bone fractures • Suspected open and/or depressed skull fracture • Spinal trauma suggested by abnormal neurology • Traumatic amputation proximal to the wrist/ankle • Trauma with facial and/or circumferential burns • Time-critical burns (>20%) Children in addition to above: • Fracture of one long bone • Burns >10%	Trauma call
Step three	Assess **mechanism of injury**	• Penetrating trauma to neck, chest, abdomen, back, groin and buttock • Traumatic death in same passenger compartment • Person trapped under a vehicle including 'one unders' • Bullseye windscreen and/or damage to 'A' post of vehicle • RTA with roll over, extensive damage to vehicle, extrication time >20 mins or ejected from vehicle • High speed RTA (>30 mph) • Falls from a height > 1-2 metres Children in addition to above: • Pedestrian child with speed >10mph • Cyclist vs. car where child was knocked off bicycle	Trauma call
Step four	Assess **special circumstances**	Patients who have sustained trauma but do not fit any of the criteria above but are: • > 55years of age • Pregnant (> 20 weeks) • Known bleeding disorder • Morbidly obese • Trauma associated with alcohol intoxication or substance misuse • Other clinical considerations e.g. Mental Health ot Learning Disabilities	Consider trauma call with ED MG/Consultant

Based on LAS (2010), ATLS (2004) and Royal College of Surgeons of England (2000)

➢ **Appendix two**

CT WHOLE BODY TRAUMA PROTOCOLS

ALL WHOLE BODY TRAUMA CALLS TO BE DISCUSSED WITH RADIOLOGIST PRIOR TO SCANNING TO DETERMINE WHICH PROTOCOL IS REQUIRED.

URINARY CATHETER TO BE CLAMPED PRIOR TO PT LEAVING E.D

PROTOCOL 1: HAEMODYNAMICALLY STABLE TRAUMA PT

SCAN:

1. STANDARD HEAD CT
2. C-SPINE (C1-T1). REFORMATS:
   AX/SAG/COR BONE
3. CHEST/ABDO/PELVIS (C/A/P) POST IVC 150MLS @ 3ML/SEC
   - CHEST @ 25SECS POST IVC
   - ABDO/PELVIS (A/P) @ 65 SECS POST IVC

   REFORMATS:
   AX/SAG/COR T&LSPINE 2mm BONE (+coronal pelvis if pelvic trauma)
   COR 3mm CHEST/ABDO/PELVIS SOFT TISSUE

PROTOCOL 2: HAEMODYNAMICALLY UNSTABLE TRAUMA PT (? BLEED)

SCAN:

1. STANDARD HEAD CT
2. C-SPINE (C1-T1). REFORMATS:
   AX/SAG/COR BONE
3. CHEST/ABDO/PELVIS POST IVC 150MLS @ 3MLS/SEC
   - ARTERIAL C/A/P @ 25SECS POST IVC
   - PORTAL VENOUS A/P @ 65SECS POST IVC
   - DELAYED A/P @ 125 SECS POST IVC

   REFORMATS:
   AX/SAG/COR T&LSPINE 2mm BONE (+coronal pelvis if pelvic trauma)
   COR 3mm C/A/P SOFT TISSUE

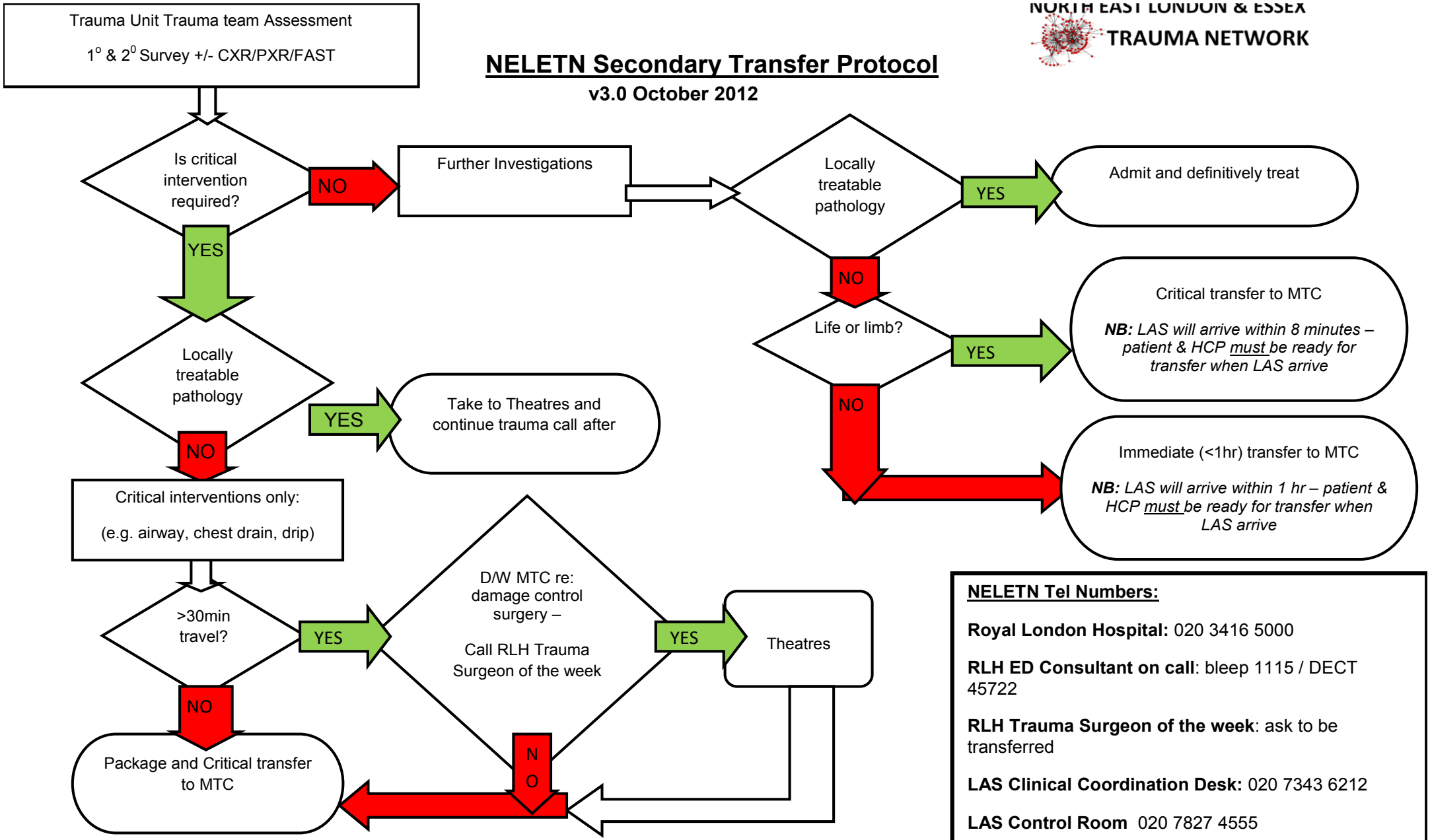
July 2011 – approved by the Whittington Radiology Board Based on the RCR guidance: Standards of practice and guidance for trauma radiology in severely injured patients, RCR 2011

➢ **Appendix three**

NORTH EAST LONDON & ESSEX TRAUMA NETWORK

NELETN Secondary Transfer Protocol

v3.0 October 2012



NB: - London Trauma System Performance Framework standards apply;

- This protocol is to be read in conjunction with the NELETN MTC Automatic Acceptance Policy and London Trauma System Transfer of Care Policy

NELETN Tel Numbers:

Royal London Hospital: 020 3416 5000

RLH ED Consultant on call: bleep 1115 / DECT 45722

RLH Trauma Surgeon of the week: ask to be transferred

LAS Clinical Coordination Desk: 020 7343 6212

LAS Control Room 020 7827 4555

Level one – Haemodynamically stable – pathology can be met by local resources – investigate and treat locally – e.g. long bone fracture

Level two – Haemodynamically unstable single system injury (excludes unstable penetrating thoracic injury – see level 6) that can be dealt with by local resources – move directly to theatre – do not delay – trauma call can be continued post theatre – e.g. abdominal stabbing, blunt trauma to spleen.

Level 3 – Stable pathology requiring specialist intervention at MTC – not time critical – organise Immediate transfer via LAS – e.g. Max Fax trauma, burn

Level 4 – Time critical Pathology requiring specialist intervention at MTC – Organise Critical Transfer via LAS – e.g. Extradural requiring Neurosurgery, ischaemic limb

Level 5 – Stable patient with multisystem injuries – requires transfer to MTC – D/W Trauma Consultant re immediate/critical transfer.

Level 6 – Unstable multisystem trauma or unstable penetrating thoracic trauma that cannot be stabilized by the facilities available at the TU. These patient require immediate (critical) transfer to MTC for Interventional Radiology or Vascular/Trauma/Cardiothoracic surgery. The patient should be escorted by the most experienced doctor and nurse available. The decision to transfer will be made at consultant level by the receiving Consultant trauma Team lead at the MTC.

It is vital to understand that for Level 6 patients, time is of the essence. Early identification, packaging and transfer of these patients may be life saving. The doctor/Trauma team looking after the patient should consider the TU as a pre-hospital service. They should only perform interventions that meet the patients critical care needs (e.g. Intubation, thoracostomy, application of pelvic/limb splints) and package the patient to enable immediate critical transfer. Misplaced attempts to stabilize/ further investigate these patients prior to transfer are futile and will lead to delay and ultimately death of the patient.

NB. In TU's at the outer edges of the network, Level 6 patients may not survive the prolonged transfer required to reach the MTC. In these cases the MTC Trauma consultant will liaise with the MTC Trauma surgeon who will discuss with the on call surgical consultant at the TU the need for damage control surgery prior to definitive transfer.

➢ **Appendix four – Please note guidance in section 9 – Burns**

Where there is a child protection concern this **must** be discussed with the paediatric consultant on-call prior to transfer 24/7.

CHILDREN'S BURN REFERRAL GUIDELINES

LONDON & SOUTH EAST OF ENGLAND BURN NETWORK (LSEBN) – Version 2 (November 2010)

REFERRAL CRITERIA FOR SPECIALISED BURN SERVICE

- Consider if >1% Total Body Surface Area (TBSA) Partial Thickness (PT) burn
- All deep dermal and full thickness (FT), circumferential burns and burns involving the face, hands, soles of feet, perineum
- All burns associated with smoke inhalation, electrical shock or trauma
- Severe metabolic disturbance
- Children with burn wound infection
- All children 'unwell' with a burn (see below)
- Unhealed burns after 2 weeks
- Neonatal burns of any size
- All children with burns and child protection concerns
- Progressive non burn skin loss condition (TENS, SSSS)
- Any other case that causes concern

MEETS CRITERIA FOR REFERRAL TO SPECIALISED BURN SERVICE

CALL LOCAL BURN SERVICE

St Andrews Centre, Broomfield Hospital (Chelmsford)	01245 516037
Chelsea & Westminster Hospital (London)	0203 3152500
Queen Victoria Hospital (East Grinstead)	01342 414469
Stoke Mandeville Hospital (Aylesbury)	01296 315040
National Burn Bed Bureau	01384 215576
Children's Acute Transport Service (CATS)	0800 0850003

GIVE FLUID / FAST AS BELOW

AGE	BURN SIZE (TBSA)	FLUID
LESS THAN (<) 3/12 OLD	< 10% TBSA FT or PT BURNS	• Feed as Normal
	≥ 10% TBSA BUT < 20% TBSA FT or PT BURNS	• Feed as Normal • IV fluid resuscitation according to Parkland Formula only • Do not give IV Maintenance Fluid
	≥ 20% TBSA FT or PT BURNS	• Keep NBM • IV fluid resuscitation according to Parkland Formula • Give IV Maintenance Fluids
OLDER THAN (>) 3/12 OLD	< 10% TBSA FT or PT BURNS	• Keep NBM • Consider giving IV Maintenance Fluids
	≥ 10% TBSA FT or PT BURNS	• Keep NBM • IV fluid resuscitation according to Parkland Formula only • Do not give IV Maintenance Fluid

UNWELL: Toxic Shock Syndrome / Burns Sepsis Syndrome – ANY OF:

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

Seek advice from local Burn Service and consider treating with fluid resuscitation, IV antibiotics +/- FFP

GENERAL INFORMATION

IV Access
All children with Burns ≥ 10% but <30% Total Body Suface Area (TBSA) should have one well secured IV cannula
All children with burns ≥ 30% TBSA should have 2 well secured IV cannulae
Consider Central Access if Patient Unstable

IV Resuscitation Fluids
All children with Burns ≥ 10% TBSA will receive fluid according to the Parkland Formula:-
4 ml/Kg/% burn over 24 hrs from the time of injury given ½ in the 1st 8 hrs & ½ in the 2nd 16 hrs given as Hartmann's fluid

IV Maintenance Fluids
100 ml/Kg over 24 hrs for 1st 10 Kg.
Plus 50 ml/Kg over 24 hrs for 2nd 10 Kg
Plus 20 ml/Kg over 24 hrs for each additional Kg
Give as 0.45% Sodium Chloride and 5% Glucose solution

Fluid Balance
All children receiving IV Fluids should have fluid balance documented on the LSEBN Transfer Document (located on the LSEBN Website)

Catheterisation
All children with burns ≥ 20% TBSA should have an appropriate size catheter.
Consider catheter if burn 10-19% TBSA
Consider for all perineal burns

Suspected Smoke Inhalation or Airway Compromise
Give oxygen and seek anaesthetic review

NOTE: Referral Criteria for Specialised Burn Centre
Burn ≥ 30% TBSA
(Consider CATS Transfer)
Burn ≥ 20% TBSA Full Thickness (FT)
Burn ≥ 15% TBSA in ≤ 1 year old
Burn + inhalation injury or need to ventilate
Burn + Major Trauma
Burn + requirement for inotropic support
Burn + requirement for renal support
Burn + base deficit >6 and deteriorating
Burn + O_2 Requirement > FIO_2 of 50%

For cases that do not meet the criteria for referral:

Continue local care + give advice to observe for signs of Toxic Shock Syndrome (Refer to "Unwell")

Discharge when wound healed with advice to moisturise and protect from sun until skin loses pink colour

LSEBN Published November 2010
www.lsebn.nhs.uk

➢ **Appendix four – Please note guidance in section 9 – Burns**

ADULT BURN REFERRAL GUIDELINES

LONDON & SOUTH EAST OF ENGLAND BURN NETWORK (LSEBN) – Version 1 (November 2010)

REFERRAL CRITERIA FOR SPECIALISED BURN SERVICE

- Consider if >3% Total Body Surface Area (TBSA) Partial Thickness (PT) burn
- All deep dermal and full thickness (FT) burns
- All burns associated with electrical shock
- All burns associated with chemical burn
- All burns associated with non accidental injury
- All burns to face, hands, perineum, feet
- All burns circumferential to limbs or trunk or neck
- All burns with inhalation injury
- All burns not healed within two weeks

Discuss with local burn service

- All burns with other injury
- All burns with significant co-morbidity or pregnancy
- All infected burns
- Any other case that causes concern

MEETS CRITERIA FOR REFERRAL TO SPECIALISED BURN SERVICE

CALL LOCAL BURN SERVICE

St Andrews Centre, Broomfield Hospital (Chelmsford)	**01245 516037**
Chelsea & Westminster Hospital (London)	**0203 3152500**
Queen Victoria Hospital (East Grinstead)	**01342 414440**
Stoke Mandeville Hospital (Aylesbury)	**01296 315040**
National Burn Bed Bureau	**01384 215576**

For cases that do not meet the criteria for referral:

Continue local care

Discharge when wound healed with advice to moisturise and protect from sun until skin loses pink colour

GENERAL INFORMATION

IV Access

All adults with Burns ≥ 10% ensure secure IV access

Consider Central Access and an Arterial Line if Patient Unstable

IV Resuscitation Fluids

All adults with Burns ≥ 15% TBSA should receive fluid according to the Parkland Formula:-
4 ml/Kg/% burn Hartmann's over 24 hrs from the time of injury giving ½ in the 1st 8 hrs & ½ in the 2nd 16 hrs.

Discuss with burn service all patients where fluid overload is a concern, e.g. elderly or cardiac patient

Catheterisation

All adults with burns ≥ 20% TBSA or intubated, should have an appropriate size catheter.
Consider catheter if burn 15-19% TBSA
Consider for all perineal burns

Fluid Balance

All adults receiving IV Fluids should have fluid balance documented on the LSEBN Transfer Document
(located on the LSEBN Website)

Suspected Smoke Inhalation or Airway Compromise

Give oxygen and seek anaesthetic review

Antibiotics

If transferring to a burn service, do not give antibiotics unless the burn is infected.

Dressings

If transferring to a burn service, do not apply creams or ointments.

Apply a single layer of cling-film.

Fasting Requirements

If transferring patient to a burn service, discuss the need to keep "nil by mouth" (NBM)

Temperature Control

Ensure patient is kept warm at all times, particularly during transfer

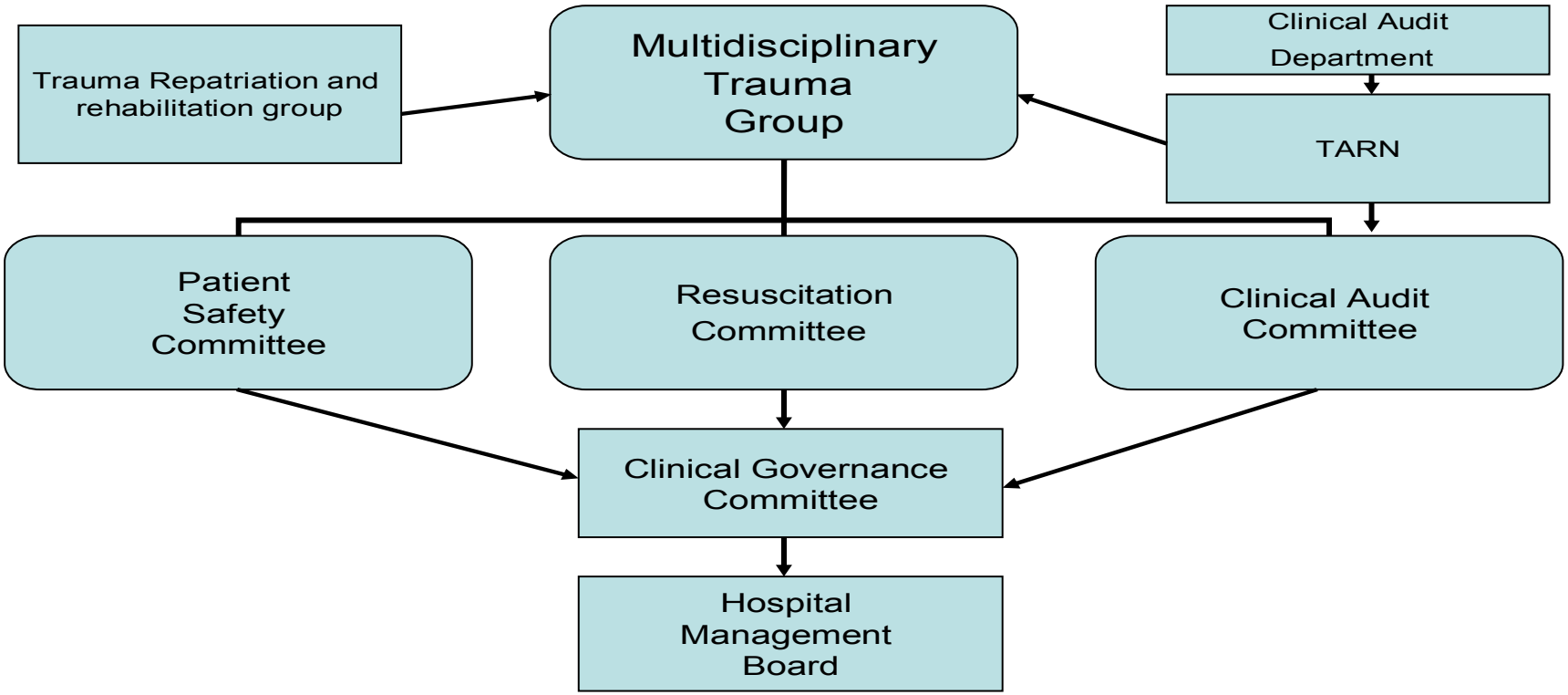
LSEBN Published November 2010
www.lsebn.nhs.uk

➢ **Appendix five**

Whittington Health NHS

NORTH EAST LONDON & ESSEX TRAUMA NETWORK

Trauma Unit – Clinical Governance Structure



Appendix A

Plan for Dissemination and implementation plan of new Procedural Documents

To be completed and attached to any document which guides practice when submitted to the appropriate committee for consideration and approval.

Acknowledgement: University Hospitals of Leicester NHS Trust

Title of document:	**Trauma management – Care of the injured patient**		
Date finalised:	**May 2015**	**Dissemination lead: Print name and contact details**	**Ext 3628** **Bleep 2859**
Previous document already being used?	**Yes**		
If yes, in what format and where?	**Guideline - Intranet**		
Proposed action to retrieve out-of-date copies of the document:	**Delete previous copy from intranet**		
To be disseminated to:	**How will it be disseminated/implemented, who will do it and when?**	**Paper or Electronic**	**Comments**
All specialities involved in trauma care	**Trauma lead members of the MTG** **Induction**	**Both**	
Is a training programme required?	**On-going – trauma training programme by speciality and trauma simulation**		
Who is responsible for the training programme?	**Multiple – resuscitation department and specialities**		

Appendix B

Equality Impact Assessment Tool

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

Impact (= relevance) 1 Low 2 Medium 3 High	Evidence for impact assessment (monitoring, statistics, consultation, research, etc	Evidential gaps (what info do you need but don't have)	Action taken to fill evidential gap	Other issues
Disability	**1**			
Gender	**1**			
Age	**1**			
Sexual Orientation	**1**			
Religion and belief	**1**			

Once the initial screening has been completed, a full assessment is only required if:

- The impact is potentially discriminatory under equality or anti-discrimination legislation
- Any of the key equality groups are identified as being potentially disadvantaged or negatively impacted by the policy or service
- The impact is assessed to be of high significance.

If you have identified a potential discriminatory impact of this procedural document, please refer it to relevant Head of Department, together with any suggestions as to the action required to avoid/reduce this impact.