Barking, Havering and Redbridge University Hospitals NHS Trust

STANDARD OPERATING PROCEDURE: RECEPTION OF MAJOR TRAUMA AT QUEEN'S HOSPITAL

Introduction

This SOP complements the Trust Major Trauma Policy and applies to any patient deemed to be a victim of Major Trauma by an EM Consultant, EM Registrar (ST4+ or equivalent) or other ATLS, APLS or ATNC Provider. It applies to all patients including paediatric and maternal trauma patients and internal transfers from King George to Queen's.

The SOP includes the decision tool for activation of the Trauma Team, team composition and team roles and responsibilities. It relates to the initial period of the trauma patient's care and applies until the patient has left the Emergency Department. Role cards are included to assist team members new to the Trust or team to perform their roles efficiently and effectively.

Background

This SOP has been developed to update and replace the current Trauma Team Guideline which was ratified in February 2009. Since this time there has been a change to some team members' Job Descriptions and there have been updates in the management of Major Trauma, especially regarding Major Haemorrhage. It has been ratified by the Trauma Committee on 8th December 2014.

Contents

TRAUMA TEAM ACTIVATION

Ambulance or HEMS Blue Calls for Trauma

08:00 – 22:00:
On receipt of a Trauma Blue Call the Senior Nurse in the Resuscitation room ('resus') will discuss the case with the Resus Consultant and together they will decide whether to put out a Trauma Call. This decision will be guided by the information given by the ambulance service/HEMS Team and the conditions and staffing in the ED at the time. The trauma activation tool (Appendix 1) below may be used as a guide.

If a Consultant is not immediately available the Resuscitation Room Nurse will discuss the case with the EM Tier 1 Registrar and they will use the trauma activation tool (Appendix 1).

For HEMS patients the Resus Nurse will inform Security (to secure the helipad) and Porters (to take a trolley to the helipad) whether or not a trauma call is put out.

22:00 – 08:00:
On receipt of a Trauma Blue Call triggering the trauma activation tool (Appendix 1), the Senior Nurse in the Resuscitation room will put out a Trauma Call.

Other Patients

08:00 – 22:00:
The RAT or Triage clinician will discuss any patient who meets any of the criteria on the trauma activation tool (Appendix 1) with the RAT Consultant immediately. The Consultant will see the patient directly and the Nurse will arrange a space in the resuscitation room. The Consultant and Nurse will decide whether to put out a Trauma Call. This decision will be guided by the patient's condition and the conditions and staffing in the Emergency Department at the time.

If a Consultant is not immediately available the assessing person will advise the ED Tier 1 Registrar and put out a trauma call.

22:00 – 08:00:
The RAT or Triage clinician will put out a trauma call for any patient who meets any of the criteria on the trauma activation tool (Appendix 1). They will ask a colleague for help to advise the Duty EM Tier 1 Registrar and move the patient to the resuscitation room.

How to Put Out a Trauma Call

Is the patient adult, paediatric or maternal?

A trauma call can be put out by dialling **2222** and saying "Adult/Paediatric/Maternal Trauma Call to ED Resus". Where the ED has been alerted by the Ambulance Service or HEMS an ETA can also be added.

Switchboard will then alert the relevant staff.

TRAUMA TEAM COMPOSITION

To Attend Immediately:

- EM Consultant (8am-10pm)
- PEM Consultant (when on duty – paediatric calls only)
- EM Tier 1 Registrar (ST4+ or Equivalent) (10pm-8am)
- EM Resus Doctor
- EM Nurse 1
- EM Nurse or EDA 2

- Surgical Registrar (ST3+ or equivalent)
- Surgical SHO (F2, ST1-2 or equivalent)

- Anaesthetic Registrar (ST3+ or equivalent)
- ODP, Anaesthetic nurse or Anaesthetic SHO (F2, ST1-2 or equivalent)

- Orthopaedic SHO (F2, ST1-2 or equivalent)

- Paediatric Registrar (ST3+ or equivalent) (Paediatric and Maternal calls only)
- Paediatric SHO (F2, ST1-2 or equivalent) (Paediatric and Maternal calls only)

- Obstetric Registrar (ST3+ or equivalent) (Maternal Calls only)

Other Staff, including students are welcome to attend particularly for training purposes

To Be Available for Telephone Advice within 5 minutes and Attend within 30 Minutes:

- EM Consultant (10pm-8am)
- Surgical Consultant
- Anaesthetic Consultant
- ITU Registrar
- ITU Consultant
- Orthopaedic Registrar
- Orthopaedic Consultant
- Neurosurgical Registrar
- Neurosurgical Consultant
- Haematology Consultant or Registrar
- Transfusion Practitioner (in hours)
- Paediatric Consultant
- Registrars and/or Consultants from other specialties as necessary

TRAUMA TEAM RESPONSIBILITIES

Key Principle:

These responsibilities apply to all patients, regardless of age or mechanism of injury.

On the Team's Arrival

- The EM Consultant or Tier 1 Registrar (or the ED resus doctor in exceptional cases where these are not available) will allocate role cards to team members as they arrive
- Team members will sign in on the front page of the trauma booklet
- Team members will don lead aprons, plastic aprons and gloves as appropriate
- Team members will ensure that they understand their role
- The Team Leader will give a short brief on the known details of the patient
- If the patient is awaited team members will prepare equipment needed for their role

On the Patient's Arrival

- No member of the team is to touch the patient without the permission of the team leader or ambulance/HEMS crew, *except*:
    - The airway manager if the airway appears to be at immediate risk or a ventilated patient does not appear to be ventilating;
    - The primary survey doctor if there appears to be significant uncontrolled external haemorrhage
- The patient will be moved across to the ED trolley and the oxygen will be transferred to the wall supply, but otherwise the patient will be left on the ambulance/HEMS crew's monitor/ventilator (on which they have been stabilised) during handover
- The ambulance/HEMS crew have significant information to impart and they know whether or not the patient is well enough to wait for 2-3 minutes for this information to be imparted, and will state if this is not the case. The team will therefore listen quietly to the handover without touching the patient or performing any other tasks. The scribe will take contemporaneous notes of the handover in the trauma booklet
- The scoop will be removed at the earliest opportunity
- Clothes should be routinely removed to allow the whole of the patient's body to be examined. Underwear may be retained in conscious patients for dignity but the primary survey doctor must inspect inside it. Patients should be covered with a blanket
- The team will perform the tasks delegated to them by the team leader and according to their role cards and skill level
- During the primary survey, haemorrhage control will be actively employed. This may include direct pressure/haemorrhage-control suturing to wounds, pressure dressings, CAT tourniquets, traction splinting of long-bone fractures, stabilisation of other fractures and pelvic splinting. Accurate recording of the time of application of tourniquets is essential.

- The pelvis will NOT be ‘sprung’ during examination but a pelvic sling applied if there is any clinical suspicion of open-book fracture.

- The patient will not be log-rolled unless they are haemodynamically normal, there is no suspicion of major haemorrhage (internal or external) or pelvic fracture and they are fully conscious and able to comply with the examination. PR examination is not routinely required unless there is a specific indication

- All patients will receive at least two sets of observations even if apparently uninjured

- The use of oxygen will be reviewed early to reduce oxygen free radical production

- Except in exceptional circumstances (i.e. the patient is clearly uninjured) at least one point of intravenous or intra-osseous access will be obtained. A second will be required for any patient with haemodynamic abnormality or those undergoing intubation.

- Permissive hypotension will be employed in the resuscitation room; hypotensive patients must be discussed with the EM (& any other relevant) Consultant(s) and transferred for definitive care as soon as possible. IV fluids will not be hung unless an active decision has been made to give them. Where fluid is required this will be given as titrated ~250ml (adults) or 5-10mls/kg (children) boluses. In blunt trauma patients titration will be to a peripheral pulse, no evidence of confusion (if conscious) and a BP sufficient to perfuse the vital organs (in adults ~80mmHg without head injury and ~100mmHg with head injury.) In penetrating trauma titration will be to a central pulse.

- Any patient who has a significant haemorrhage (internal or external) requiring blood and/or product transfusion will receive a tranexamic acid bolus 15mg/kg up to 1g (usually given in 5% glucose over 10-20 minutes) followed by an infusion of 15mg/kg up to 1g over 6 hours

- Blood and blood products will be given according to the massive transfusion policy or paediatric massive haemorrhage flowchart and in normal working hours a transfusion practitioner will be called to assist

- Mannitol or hypertonic saline will be given as advised by the neurosurgical registrar or Consultant to patients with significant head injury

- Analgesia will be offered and given at the earliest opportunity

Post-Primary Survey

Immediately after the primary survey, the team leader (in conjunction with the team) will decide the patient’s next phase of management. Options are:

1. The patient needs to be transferred directly to the Major Trauma Centre
2. The patient needs to go to theatre for immediate life-saving (damage control) surgery
3. The patient needs to go to the CT scanner but specific resuscitation measures (e.g. intubation; chest drainage) are required first
4. The patient needs to go to the CT scanner and can go immediately
5. The patient can be managed primarily in the resuscitation room (but may need transfer elsewhere at a later stage)

- If 1-3 apply, the patient deteriorates at any time or the Team Leader subsequently considers it necessary to transfer the patient to another hospital (e.g. MTC; burns unit; PICU) they should notify the EM Consultant (if not already present) immediately

- Fluid resuscitation alone should not delay transfer to CT/definitive care. Fluid may be given in transit; however the team must remember that hypovolaemic patients tend to tolerate significant movement poorly

- If the patient needs theatre for resuscitative/emergency surgery the relevant Surgical and Anaesthetic Consultants must be notified by their Registrars or SHOs

- The team leader (or a nominated deputy, able to perform any procedure that the patient may require) will accompany the patient to the CT scanner (if required)

- The team leader will release team members if possible after they have written in the trauma booklet

Post Surgery, CT or X-ray (if indicated)

The team leader (with relevant members of the team) will decide whether the patient needs transfer to another hospital, admission at Queen's or they may be discharged if the secondary survey is normal.

- If the patient needs admission at Queen's, the team leader will decide which specialty or specialties the patient will need care from. If this is a single specialty the registrar will be called (if not still in attendance) to perform a secondary survey and arrange admission. If this is more than one specialty, the team leader will ask the relevant Registrars to contact their Consultants for a face-to-face meeting at the patient's bedside to plan patient's care. The relevant Consultants will attend if in the hospital; if not their registrar may deputise for them with telephone input from the Consultant

- If the patient may go home if the secondary survey is normal, this will be completed by the team leader who will then discharge him/her or refer/arrange treatment as required

Transfers Out of the Hospital

- The EM Consultant will be informed of all potential major trauma transfers out of the ED to other hospitals and will liaise with the receiving hospital as appropriate

- The team leader will apply the ED transfer SOP to decide the appropriate escort

- The team will complete their section of the patient's notes in the trauma booklet

- The resus nurse will book an ambulance with the appropriate level of urgency, copy the notes and sent them with the patient. This should include a printout of the patient's observations from the monitor

- The team leader will ensure that any images are transferred via the IEP link to the receiving hospital, that any verbal reports are documented and copied and that any written reports are sent to the hospital *even if they are received after the patient has left the hospital*.

SPECIAL CASES

Traumatic Cardiac Arrest: Blunt

Potentially salvageable patients in traumatic cardiac arrest may have 1 of 5 causes:

- Primary (medical) cardiac arrest causing, not resulting from trauma
- Hypoxia
- Hypovolaemia
- Tension Pneumothorax
- Cardiac Tamponade

All patients should therefore receive:

- Oxygen and good ventilation via an ETT (preferably) or LMA (if unable to intubate)
- Good quality CPR unless this is interfering with surgical interventions
- 2 litres (20-40ml/kg in paediatrics) intravenous fluid
- Bilateral thoracostomies (these may be left open unless there is return of output)
- There is little evidence for CPR and adrenaline in true traumatic arrest (vs a primarily medical arrest) and a theoretical possibility for harm; however CPR should be performed unless it interferes with a procedure (usually thoracostomy). Adrenaline may be given or omitted at the team leader's discretion
- In true traumatic cardiac arrest if there is no return of circulation once all the measures above have been completed further resuscitation is futile

Traumatic Cardiac Arrest: Penetrating

Potentially salvageable patients are those who arrest due to:

- Hypoxia
- Hypovolaemia
- Tension Pneumothorax
- Cardiac Tamponade

All patients should therefore receive:

- Oxygen and good ventilation via an ETT (preferably) or LMA (if unable to intubate)
- Good quality CPR unless this is interfering with surgical interventions
- 2 litres (20-40ml/kg in paediatrics) intravenous fluid
- Bilateral thoracostomies (these may be left open unless there is return of output)
- Patients with penetrating trauma to the chest or upper abdominal region need a thoracotomy for cardiac tamponade within 10 minutes of arrest (or when peri-arrest). Needle thoracocentesis is unlikely to be effective. Do not look for signs of tamponade (which are often absent in this group of patients) or wait for ultrasound confirmation
- Open cardiac massage may be employed post-thoracotomy but if the heart is empty this will be futile
- In the event of a shockable rhythm post-thoracotomy, close the chest as far as you are able and apply external defibrillation as normal
- There is little evidence for CPR and adrenaline in true traumatic arrest (vs a primarily medical arrest) and a theoretical possibility for harm; however CPR should be performed unless it interferes with a procedure (thoracostomy or thoracotomy). Adrenaline may be given or omitted at the team leader's discretion
- If there is no return of circulation once all the measures above have been completed further resuscitation is futile
- N.B. If you get a return of circulation post thoracotomy the external mammary arteries (and possibly also the intercostal vessels) will bleed and should be ligated

Paediatric Trauma

- This SOP also applies to paediatrics (except where stated otherwise)
- The paediatric registrar and/or PEM Consultant will assist with procedures at which they may be more proficient than others such as IV or IO access
- S/he will also consider whether there are any Safeguarding concerns and act accordingly
- In an emergency any paediatric patient may be intubated in the ED but only patients over the age of 1 year may be routinely anaesthetised for surgical procedures; children under 1 year should be referred to the Royal London Hospital
- Seriously injured children may be transferred direct to the MTC in the same way as adults. CATS are not routinely requested to assist with these transfers due to the time delay but they may be considered for patients who are not time critical.
- Although children with isolated head injuries may be referred direct to the neurosurgical team at GOSH, the Trauma Network advises that wherever possible they go to the MTC first as occasionally other significant injuries are missed. The neurosurgical team at Queen's will not operate on children under 16 years (except in immediately life-threatening cases, in discussion with their paediatric neurosurgical colleagues) but will advise whether such a delay to transfer would not be in the child's best interests.

Maternal Trauma

- This SOP also applies to pregnant patients (except where stated otherwise)
- While all women of child-bearing age should be considered to be pregnant unless they have tested negative, this should not stop them receiving imaging which is in their best interests
- Recognisably pregnant patients should be nursed with a wedge under the scoop to tilt them to their left side if possible; otherwise a member of the team should perform manual displacement of the uterus
- If a patient is recognisably pregnant, an obstetric registrar will be called if she is seriously injured to consider and if necessary perform a peri-mortem Caesarian Section. If an obstetrician is not immediately available the EM or Surgical Consultant or Registrar should proceed with this if indicated and they have been trained to do so
- Pregnant patients will be observed by an obstetric team even if apparently uninjured
- The obstetric registrar will advise on the use of anti-D injection
- A paediatric team should also be activated to seriously injured pregnant patients to care for the baby if a peri-mortem Caesarian Section is carried out

Patients Transferred in from Other Hospitals (including KGH)

- Patients transferred to Queen's from KGH will be re-trauma called on arrival
- Tertiary (neurosurgical) trauma patients transferred in from other hospitals will be re-trauma called in resus on arrival unless they have an urgent need for surgery. If they go straight to theatre they may be returned to resus afterwards and re-trauma called. Wherever possible the neurosurgical or neuro-intensive care team will liaise with the EM Consultant on acceptance of the referral to facilitate this.

Trauma Team Leader Role Card

You will be:

- Usually an EM Consultant or Tier 1 Registrar (or training under their supervision)
- Alternatively a Consultant or Registrar from another relevant Specialty

and

- Be an ATLS (or APLS for paediatric calls) provider *or* have equivalent competence

Prior to the Patient's Arrival

- Allocate role cards; ensure all sign the front of the trauma booklet
- Give a short brief on the known details of the patient and outline your expectations
- Ensure relevant staff and equipment are ready

On the Patient's Arrival

- Direct the team to ensure that CABC issues are managed immediately, transfer is smooth, the team listens to the handover, a primary survey, measurement of observations & initial treatment are completed & recorded. Do not perform procedures yourself unless there is no-one else trained to perform them

Post-Primary Survey

- Notify the EM Consultant immediately if: transfer to the MTC or theatre is required; the patient is too unwell for internal or external transfer or you have any concerns
- Consider whether you can release any team members (and thank them)
- Accompany the patient to the CT scanner if CT required

Post CT or X-ray (if indicated)

- Decide whether the patient needs transfer out, admission or possible discharge
- Read and check the notes and add your own

Transfers Out

- Notify the EM Consultant
- Liaise with the receiving hospital
- Use the Transfer SOP to ensure an appropriate escort if required
- Ensure notes (including CT reports) are sent with the patient & images sent via IEP

Admissions – Single Specialty

- Call the relevant Registrar to perform a secondary survey & take over care

Admissions – Multiple Specialty

- Chair a meeting with the Consultants/Registrars from the appropriate Specialties to plan the next stage of care then handover to the agreed team(s)

Possible Discharges

- Perform a Secondary Survey and manage the patient as appropriate

Nurse 1 Role Card

You will be:

- Usually a Band 6+ Nurse (or training under their supervision)

and

- ATNC (or APLS for paediatric calls) trained *or* have equivalent competence

During the call you will supervise and assist Nurse/EDA 2 if necessary

Prior to the Patient's Arrival

- Put out the trauma call (in discussion with the EM Consultant/Tier 1) on 2222
- Start and sign the front page of the trauma booklet
- Attend/assist with the team leader's brief
- Ensure that there is a suitable, clean and stocked cubicle to receive the patient

On the Patient's Arrival

- Assist with transfer and listen to the handover
- Assist with scoop removal
- Connect the patient to the monitor and set the BP to cycle at an appropriate interval
- Assist Nurse 2 and Doctors with procedures or resuscitative treatment as necessary

Post-Primary Survey

- Ensure that nursing notes and appropriate charts are commenced
- Provide treatment as necessary, including analgesia/drugs/fluids
- Be responsible for safe blood transfusion if transfusion practitioner not present
- Assist with the placement of a plastic scoop if the patient needs to go to CT
- Accompany the patient to the CT scanner if CT required

Post CT or X-ray (if indicated)

- Liaise with the team leader regarding ongoing care needs and provide or delegate these as required
- Consider whether the trauma raises a safe-guarding concern and if so act accordingly

Transfers Out

- Use the Transfer SOP to agree an appropriate escort if required
- Ensure notes (including CT reports) are copied and sent with the patient
- Ensure that the patient's correct demographics are obtained and recorded

Admissions and Possible Discharges

- Continue or delegate ongoing nursing care as appropriate
- Ensure that the patient's correct demographics are obtained and recorded

Nurse 2 Role Card

You will be:

- A trained nurse or ED Assistant

Prior to the Patient's Arrival

- Request pre-registration pack from Reception
- Print patient wristbands and blood request forms
- Sign the front page of the trauma booklet
- Attend the team leader's brief
- Assist Nurse 1 as requested to prepare to receive the patient

On the Patient's Arrival

- Assist with transfer and listen to the handover; apply a wristband
- Assist with scoop removal
- Unless otherwise directed by the team leader cannulate the patient and draw blood
- Provide Manual In-Line Stabilisation of the spine if the patient requires intubation
- Assist with the placement of a plastic scoop if the patient needs to go to CT

On-going care

- Ensure that you make appropriate notes in the trauma booklet
- Assist nurse 1 with delegated tasks

Airway Manager Role Card

You will be:

- An anaesthetic Registrar ST3+ or equivalent (or training under their supervision)

or

- Less commonly an EM Consultant or ST4+ (or equivalent)

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief
- Ensure you have easy access to equipment or drugs that might be required

On the Patient's Arrival

- Intervene immediately if the patient clearly has airway or ventilatory compromise
- Otherwise, assist with transfer and listen to the handover
- Assist with scoop removal
- Advise the team leader if patient needs urgent airway intervention
- Manage airway/ventilation as required; if any difficulty ask for Consultant to be called
- Advise team leader of any changes or drugs required/given
- If the patient is conscious take a focussed history & advise the team of details
- Inform the patient what is happening
- Assist with the placement of a plastic scoop if the patient needs to go to CT

Ongoing Care: Intubated Patients

- Provide or delegate ongoing anaesthetic care including transfer out if appropriate
- Liaise with/advise team leader regarding patient's condition
- Liaise with/advise ITU Registrar/Consultant of patient
- Write only your own interventions/interactions with the patient in the notes

Ongoing Care: Unintubated Patients

- Write only your own interventions/interactions with the patient in the notes prior to being released by the team leader

Airway Assistant Role Card

You will be:

- An ODP, anaesthetic nurse or SHO

or

- Less commonly an EM Nurse with training in this role

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend/assist with the team leader's brief
- Prepare equipment or drugs that might be required

On the Patient's Arrival

- Assist the airway manager to intervene immediately if necessary
- Otherwise, assist with transfer and listen to the handover
- Assist the airway manager to manage airway/ventilation as required

Ongoing Care

- Assist the airway manager until released by them
- Document only your own interventions with the patient in the trauma booklet

Doctor 1 Role Card

You will be:

- Usually a Surgical Registrar ST3+ (or training under their supervision)
- Alternatively a Consultant or Registrar from another relevant Specialty

and

- Be an ATLS (or APLS for paediatric calls) provider *or* have equivalent competence

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief

On the Patient's Arrival

- If there is obvious uncontrolled external haemorrhage manage this immediately
- Otherwise, assist with transfer and listen to the handover
- Assist with scoop removal
- Perform a primary survey and call out your findings to the team leader & scribe

Post-Primary Survey

- Discuss your findings with the team leader to guide the patient's ongoing care
- If you are the surgical registrar, inform your Consultant and prepare for theatre if the patient needs immediate resuscitative/damage control surgery. If you are not the surgical registrar, liaise with him/her (or with the Consultant if s/he is in theatre)
- Assist doctor 2 with any procedures if required
- Assist with the placement of a plastic scoop if the patient needs to go to CT
- Accompany the patient to the CT scanner if CT requested by the team leader

Post CT or X-ray (if indicated)

- Write only your own interventions/interactions with the patient in the trauma booklet
- Discuss the patient's ongoing care needs with the team leader and provide care as requested

Doctor 2 Role Card

You will be:

- Usually the EM Doctor allocated to Resus (Any grade)
- Alternatively a Surgical or Orthopaedic SHO (F2 or ST1-2)

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief

On the Patient's Arrival

- Assist with transfer and listen to the handover
- Assist with scoop removal
- Assist with cannulation/bloods if Nurse 2 requests; perform or assist with resuscitative procedures (e.g. chest drainage) and prescribe analgesia, medication or blood at the team leader's request
- Perform cricoid pressure if requested by the airway manager

Post-Primary Survey

- Request the relevant radiology as directed by the team leader
- Assist with the placement of a plastic scoop if the patient needs to go to CT
- Perform any monitoring/care procedures (e.g. catheterisation) as requested by the team leader
- Call other persons (e.g. registrars from other teams) as requested by the team leader

Post CT or X-ray (if indicated)

- Write only your own interventions/interactions with the patient in the trauma booklet
- Provide any other care that the team leader requests

Scribe Role Card

You will be:

- Usually the Orthopaedic SHO (F2 or ST1-2)
- Alternatively a Surgical or EM SHO (F2 or ST1-2)

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief

On the Patient's Arrival

- Listen to and record the details of the handover
- Record the details of the primary survey as called out by Doctor 1
- Record decisions made by the team leader and team
- Record interventions made by the team and the name of the person performing them
- Ensure notes entries are dated, timed and signed
- If you are the orthopaedic SHO, call your registrar to attend if there are any significant orthopaedic injuries

Post-Primary Survey

- Ensures that notes on the relevant pages are complete
- Once this is done, ask the team leader to check your entries and gain his/her consent to leave

Paediatric Registrar Role Card

You will be:

- Usually a Paediatric Registrar (ST3+); alternatively a Paediatric or PEM Consultant or under their supervision for training

And

- Be an APLS provider or have equivalent competence

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief

On the Patient's Arrival

- Assist with transfer and listen to the handover
- Assist Nurse 2 and Doctor 2 to perform any procedures as appropriate
- Advise the team leader regarding issues such as paediatric analgesic doses

Post-Primary Survey

- Assist doctor 2 with any procedures and provide advice to the team leader as required
- Consider any Safeguarding concerns and act appropriately

Post CT or X-ray (if indicated)

- Assist the paediatric SHO with parent liaison if required
- Write only your own interventions/interactions with the patient in the trauma booklet
- Discuss the patient's ongoing care needs with the team leader and provide care as agreed
- Provide assistance if patient requires (for example) referral to CATS or PICU

Paediatric SHO Role Card

You will be:

- Usually a Paediatric SHO (F2, ST1-2)

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief

On the Patient's Arrival

- Obtain a collateral history from the parents/carers
- Remain with the parents/carers and explain to them what is happening
- Encourage the parents/carers to remain involved with the child's care

Post-Primary Survey

- Remain with the parents/carers and explain to them what is happening

Post CT or X-ray (if indicated)

- Write only your own interventions/interactions with the patient or parents/carers in the trauma booklet
- Discuss the patient's ongoing care needs with the team leader and paediatric registrar and provide care as agreed

Obstetric Registrar Role Card

You will be:

- Usually an Obstetric Registrar (ST3+); alternatively an Obstetric Consultant or under their supervision for training

Prior to the Patient's Arrival

- Sign the front page of the trauma booklet
- Attend the team leader's brief
- Prepare for Peri-Mortem Caesarian Section if there appears to be any indication for it; if time advise the team how it will be performed and how they can help
- Ensure that a paediatric/neonatal team is also in attendance

On the Patient's Arrival

- Advise the team leader if peri-mortem Caesarian Section is necessary and perform it if required
- Advise the team leader on the need for (or otherwise) and dose of anti-D

Ongoing Care

- Admit relevant patients for foetal monitoring if admission is not required under another specialty
- Advise other specialties regarding obstetric care of trauma patients admitted under them

Appendix 1: Trauma Team Activation Tool

Adults and Children 12 years and older

Physiology:

- GCS <14
- Systolic Blood Pressure <90mmHg
- Respiratory Rate <10 or >29

Anatomy:

Head and Spine:

- Suspected open and/or depressed skull fracture
- Suspected spinal trauma with abnormal neurology

Torso:

- Chest injury with altered physiology
- Suspected pelvic fracture
- Penetrating trauma

Musculo-Skeletal:

- Traumatic amputation/mangled extremity proximal to wrist/ankle
- Open fracture of the lower limb proximal to the ankle

Burns:

- Burns/scald greater than 30 percent
- Burns causing possible airway compromise
- Circumferential burns

Mechanism:

- Traumatic death in same passenger compartment
- Falls >20 ft (two storeys)
- Person trapped under vehicle or large object
- Person vs vehicle

Clinician Concern:

- Ambulance Service or EM Clinician Concern

This tool is based on the London Ambulance Service Major Trauma Decision Tool.

Appendix 1: Trauma Team Activation Tool

Children under 12 years

Physiology:

- GCS <14
- Inappropriate behaviour post injury (too quiet or inconsolable)
- Abnormal vital signs

Anatomy:

Head and Spine:

- Suspected open and/or depressed skull fracture
- Suspected spinal trauma with abnormal neurology

Torso:

- Significant bruising to chest or abdomen
- Suspected pelvic fracture
- Penetrating trauma

Musculo-Skeletal:

- Traumatic amputation/mangled extremity proximal to wrist/ankle
- Open fracture of the lower limb proximal to the ankle

Burns:

- Burns/scald greater than 30 percent
- Burns causing possible airway compromise
- Circumferential burns

Mechanism:

- Traumatic death in same passenger compartment
- Falls >20 ft (two storeys)
- Person trapped under vehicle or large object
- Person vs vehicle

Clinician Concern:

- Ambulance Service or EM Clinician Concern

Children's Vital Signs

Age	Respiratory rate (per min)	Pulse rate (per min)
<1 year	30–40	110–160
1–2 years	25–30	100–150
2–5 years	25–30	95–140
5–11 years	20–25	80–120

Glasgow Coma Score

Eye opening		Verbal response 4+ years		Verbal response <4 years		Motor response	
Spontaneous	4	Orientated	5	Appropriate words, social smiles, fixes/follows	5	Obeys commands	6
To speech	3	Confused	4	Cries but consolable	4	Localised pain	5
To pain	2	Inappropriate words	3	Persistent irritable cry	3	Withdraws from pain	4
None	1	Incomprehensible sounds	2	Restless, agitated	2	Abnormal flexion	3
		No verbal response	1	Silent	1	Extensor response	2
						No response	1

This tool is based on the London Ambulance Service Major Trauma Decision Tool.