Trauma Call

Plymouth Hospitals NHS
NHS Trust

Tactics, Techniques and Procedures

Action:	EM Consultants, Middle and Junior Grades, ED Nursing Staff and HCAs ITU Consultants and Middle Grades GS Consultants, Middle and Junior Grades T&O Consultants, Middle and Junior Grades Radiology Consultants and Middle Grades IR Consultants Coordinating Trauma Consultants, and MTCCs ED Porters				
Info:	Duty Floor Anaesthetist Paediatric Anaesthetist				
Related documents:	Traumatic Cardiac Arrest SOP Damage Control Surgery SOP Paediatric Trauma Call and DCS SOP				
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Authors:	Trauma Call Working Group				

Types of trauma call

1. On the basis of the information provided in the pre-hospital ATMIST report, there are three tiers of response:

- Emergency Department (ED) trauma call
- Hospital trauma call
- CODE RED hospital trauma call

Criteria for ED and hospital trauma calls are described in the trauma call activation policy document and remain unchanged. In outline:

Mechanism plus normal physiology = ED trauma call
Mechanism plus abnormal physiology = Hospital trauma call

CODE RED hospital trauma calls are activated at the discretion of the ED consultant and nurse in charge in response to ATMIST information that indicates that activation of the massive transfusion policy (MTP) is required.

The type of trauma call (hospital/ED) activated must be annotated on the ED ATMIST form by the consultant/nurse in charge.

Trauma team activation

2. ED trauma calls are activated by making the following announcement over the intercom:
   - *"ED trauma call in x minutes"*.

3. Hospital trauma calls and CODE RED hospital trauma calls are activated by calling switchboard (2222), stating the following:
   - *"Adult trauma team to ED Resus"* or
   - *"Paediatric trauma team to ED Resus"*.

No time should be given and no distinction between CODE RED and non-CODE RED calls should be passed to switchboard.
Notify switchboard 15 minutes before expected patient arrival (if less than 15 minutes then make the call immediately).
At the same time notify staff in ED by making the relevant announcement over the intercom:

- *"Hospital trauma call in x minutes"* (default 15 minutes), or
- *"CODE RED hospital trauma call in x minutes"* (default 15 minutes).

If a second/third etc hospital trauma team is required, call switchboard (2222) and state:

- *"Second/third etc adult trauma team to ED Resus".*

At the same time notify staff in ED by making the relevant announcement over the intercom:

- *"Second/third etc hospital trauma call in x minutes".*

4. If a second/third etc hospital trauma team is required the default position is for the registrar trauma team member (crit care, trauma & orthopaedics and general surgery) to inform his/her consultant to that effect.

MTC Major Incident

5. The ED consultant and ED senior nurse have the discretion to put the *MTC Major Incident* onto 'standby' or 'declared' status (Appendix 7) after the simultaneous arrival of the third or fourth hospital trauma call patient. Phone switchboard and state:

- "*Major Trauma Centre Major Incident standby (*or *declared)".*

Staffing for trauma calls

6. All trauma patients should have consultant input in their care.

ED trauma calls may led by an ED registrar, middle grade doctor or ED consultant (with trainee 'buddy' if possible).
CODE RED hospital trauma calls and hospital trauma calls will be led by an ED consultant (with trainee 'buddy' if possible).
The three tiers of trauma call require different staffing:

ED trauma call	Hospital trauma call	CODE RED Hospital trauma call
Trauma team leader ED registrar/MG/consultant*	Trauma team leader ED consultant *	Trauma team leader ED consultant *
Primary survey ED doc	Primary survey A: anaes BCD: GS/T&O	Primary survey A: anaes BCD: GS/T&O
		Trauma line inserter
		Ultrasound doc
* trainee buddy-up if possible		Rapid infuser nurse 1
		Rapid infuser nurse 2
	ED doc	ED doc
	Airway nurse	Airway nurse
Circulation nurse	Circulation nurse	Circulation nurse
Drug nurse	Drug nurse	Drug nurse
Scribe (HCA)	Scribe (HCA)	Scribe (HCA)
		ED porter

Note:
For hospital trauma calls and CODE RED hospital trauma calls the ED team are joined by:

- Anaesthetic registrar
- Trauma and orthopaedics registrar (T&O)
- General surgical registrar (GS)

The T&O and GS registrars must update their consultant within 30 minutes of patient arrival.

Preparation for trauma call

7. At the morning and evening doctor/nurse handover the consultant/nurse-in-charge will nominate trauma team roles for that shift and annotate the daily plan accordingly.

8. On hearing the trauma call announcement over the intercom system, staff assigned trauma team roles should attend the resus room ASAP. On arrival in resus please sign in with the scribe and write your first name on the trauma bay whiteboard.

9. The trauma team leader (TTL) and circulation nurse / scribe will complete the 'trauma bay preparation' checklist (Appendix 1) and write a summary of the ATMIST on the trauma bay whiteboard.

10. Prior to arrival of the patient the TTL will BRIEF the trauma team (both ED and hospital). The brief will include:

- ATMIST summary.
- Outline of 'Plan A'.
- Any specific instructions to the team members.
- *Requests for information prior to this time* ("What's coming in ?") *should be deferred to the trauma bay white board and the TTL brief.*

Running the trauma call

11. *The following order should be followed:*

- Start the clock when the ambulance trolley is alongside the ED trolley
- *The scribe should call time elapsed every 5 minutes ("5 minutes", "10 minutes" etc).*
- Move the patient onto ED trolley.
- Whole trauma team STOP and listen to handover (unless catastrophic external haemorrhage, airway obstruction or traumatic cardiac arrest; see TCA SOP).

- Carry out the disrobing sequence and remove the patient from the scoop or extrication board (via scoop). Oxygen should be applied.

The following actions are then undertaken simultaneously:

- Application of monitoring
- Primary survey *****
- Vascular access (circ nurse) (subclavian trauma line for CODE RED calls)
- Primary survey x-rays ******
- Ultrasound, for CODE RED calls (by assigned ED doctor)
- Provision of analgesia (drug nurse)

***** An ED doctor will undertake the primary survey for ED trauma calls.
For all hospital trauma calls and CODE RED hospital calls:

- A is assessed by the anaesthetist.
- BCD is assessed by the trauma & orthopaedic or general surgery registrar.

****** All patients will have a CXR, although this may change when CT is located in ED. Shocked patients should have a PXR (because some patients may go to theatre for damage control surgery on the basis of a PXR). The management of non-shocked patients who are going to have a CT may not be changed by a PXR, so PXR may be omitted at the discretion of the TTL.

12. The *Ten Minute Trim*:
The TTL updates the team with a quick summary so far and the plan for the next 20-30 minutes. For example "*Team update: Chest is probably uninjured but there may be intra-abdominal bleeding. Plan is for pan-CT; we aim to leave resus in five minutes. We will take two units of blood with us but leave the Belmont infuser in resus".*

13. Prior to moving from ED resus, the transfer checklist (printed in the trauma booklet) (Appendix 3) should be completed by the TTL and the anaesthetist / circ nurse / scribe. Unless expediting a patient to theatre, all trauma patients should return to ED Resus on completion of CT (this decision ultimately lies with the TTL).

14. On return to ED Resus the TTL should further update the remaining team members. For example "*Team update: The CT shows a splenic subcapsular haematoma with no active bleeding. Nil else on first look at CT. The plan is…".*

Damage Control Surgery (DCS)

15. Ext **55400** is the dedicated phone line to theatres for communication concerning shocked patients. *This number must only be used if sanctioned by the TTL or surgical consultant. It must not be used for other calls to theatre*.

16. TTL or surgical consultant only can sanction the following calls to theatre (via dedicated phone line x55400). These calls can be made after receiving ATMIST (if highly likely), after assessment of the patient in the resus room, or after CT:

- ***'Damage Control Surgery standby'***
- ***'Damage Control Surgery declared'***
  (TTL must talk to surgical consultant who will perform the operation prior to making this call)
- ***'Damage Control Surgery stand-down'*.**

Interventional Radiology (IR)

17. IR is usually undertaken *after* CT. The on-call interventional radiologist is contacted via switchboard. The TTL must ensure that the relevant speciality surgical consultant is involved in the decision to undertake IR.

Handover of trauma patients

18. The TTL is responsible for the patient until formally handed-over to another clinical team or, if care can be completed in-house, until ED discharge. The TTL should accompany the patient to theatre or interventional radiology, complete the notes, and formally handover their care using the ATMIST format (normally to an anaesthetist).

Debrief

19. Every opportunity should be taken to debrief the trauma team using the structured debrief proforma (Appendix 6). The timing of this debrief is at the discretion of the TTL.

Education and training

20. Adequate staffing of trauma calls is designed to give optimum care for patients and provide high quality training. Every effort should be made to involve medical and nursing trainees in consultant-supervised practice.

21. The weekly trauma review / governance meeting commences at 0815 every Friday in the ED seminar room (Stewart room).

22. In-situ simulation sessions of trauma pathway from patient arrival to theatre, particularly for damage control surgery cases, should be supported.

Appendix 1 Trauma bay preparation checklist

(This challenge-response checklist is to be completed by the circulation nurse and the Trauma Team Leader (TTL) after receipt of the ATMIST for all trauma calls)

Challenge question
Is the Resus bay prepared ?
'Unidentified patient' pack collected from reception (hospital trauma calls) ?
ATMIST form attached to trauma booklet ?
Bay expanded by moving radiation shields ?
Team names on the bay whiteboard and trauma booklet ?
Lead and plastic aprons on all patient-contact staff ?
ED radiographer (52492) and receptionist notified ?
CT notified of likely CT time? (x52100)
Paediatric doses calculated / printed ? (if relevant)
Training opportunities considered ?

Additional CODE RED questions
Has CODE RED intercom announcement been made ?
Has the Massive Transfusion Protocol been activated? (Ideally 30 minutes before expected patient arrival; inform Blood Bank [x52828 or bleep 0871])
Have 2 *rapid infuser* nurses been nominated ?
Is the *rapid infuser* set up and run through ?
Has a trauma line doctor been identified ?
Has an ultrasound doctor been identified ?
Are RSI drugs drawn and labelled?
Consider informing theatre (x55400) of 'Damage Control Surgery standby'. TTL or surgical consultant sanction only.

Checklist completed by	
Time	

Appendix 2 ED roles in trauma call (nursing)

Circulation Nurse

Listen to the Trauma Team Leader (TTL) team brief. On the arrival of the patient, help to move patient from ambulance trolley onto trauma trolley, listen to handover then:

1. Administer high flow oxygen.
2. Assist in the disrobing of the patient (to skin), and removal of the patient from the scoop / board.
3. Insert a large bore cannula in an antecubital fossa or forearm, and draw off bloods. Yellow, purple, blue and pink bottles, and a venous blood gas. Secure IV access, and flush the line with normal saline. Confirm verbally to the TTL that your IV access is patent, or identify that you have been unsuccessfully (the TTL may then delegate this role to another team member).
4. Liaise with TTL re requirement for point-of-care INR (CoaguChek).
5. Label the blood yourself and counter-sign. Ensure that samples are 'podded' to the laboratory.
6. Inform the scribe and TTL of these actions.
7. Assist in attachment of monitoring to patient: ECG, BP and SpO2.
8. Where clinically indicated prepare the ETCO2 monitoring.
9. Be prepared to organise a trolleys for:
    a. urinary catheter insertion on return from CT (but do NOT delay the transfer to perform this task).
    b. arterial line insertion.

Airway Nurse

Listen to the Trauma Team Leader (TTL) team brief. On the arrival of the patient, help to move patient from ambulance trolley onto trauma trolley, listen to handover then:

1. Ensure the airway trolley is sealed prior to use.
2. Liaise with the ICU doctor with regard to ETT size. Assist in the preparation of equipment.
3. Check suction equipment.
4. Check trolley O2 (must be > half full).
5. Provide cricoid pressure if required (do not release pressure until asked to do so by the ICU doctor).
6. Once the ICU doctor has confirmed that the ETT is secure, prepare for transfer to CT (including monitoring equipment and transfer bag).
7. Liaise with ICU doctor re further drugs will be required prior to transfer; the circulation nurse will assist with the preparation and checking of these.
8. When ready to transfer, verbalise this to TTL.

Drug Nurse

Listen to the Trauma Team Leader (TTL) team brief. On the arrival of the patient, help to move patient from ambulance trolley onto trauma trolley, listen to handover then:

1. Take charge of the Resus room keys.

2. Following the pre-arrival TTL brief, discuss with the TTL the likely medications required.

3. Medications should be drawn up in accordance with Trust guidelines. Label all syringes, including saline. Keep the ampoules with the syringes.

4. CODE RED patients will be given tranexamic acid (TXA). A stat dose of TXA will be given if not given by ambulance crew; an 8 hour infusion of TXA will be given if stat dose has been given by crew.

5. Verbalise to the Trauma Team Leader (TTL) what medications are prepared.

6. They will liaise with the ICU doctor and inform the scribe that the drugs are ready ie Sedation ready yes/no, Analgesia ready yes/no.

7. Inform the TTL and scribe when drugs are given.

8. Ensure that all medications are correctly prescribed on a drug chart and singed for by administering staff.

Rapid infuser (Belmont) nurses (x2)

Listen to the Trauma Team Leader (TTL) team brief. On the arrival of the patient, help to move patient from ambulance trolley onto trauma trolley, listen to handover then:

1. The two rapid infuser nurses will ensure that the Massive Transfusion Policy has been activated. Check with the TTL.

2. Following the team brief, the rapid infuser nurses will discuss with the TTL whether the blood / products are to be collected prior to the patients arrival, or when directed.

3. The rapid infuser nurses will ensure the machine is switched on, and in good working order.

4. The nurses will run through the rapid infuser giving set 100mls of 0.9% normal saline to prime the line.

5. The rapid infuser nurses will liaise with the ED porter and Blood Bank (x52828 or bleep 0871) re collection of blood / products once directed by the TTL.

6. The rapid infuser nurses will check the blood / products, as per Trust policy, once they have been collected by the ED porter.

7. Working together, the two rapid infuser nurses will ensure that the patient's identity has been checked and that the correct blood / products are administered. *Trauma team members must not interrupt the rapid infuser nurses whilst they are performing these checks.*

8. The rapid infuser nurses will keep the scribe updated as to amount and time of administration of blood / products.

9. The rapid infuser nurses will liaise with the TTL and then Blood Bank regarding on-going blood / product requirements.

10. A rapid infuser nurse will use the intercom system to call for an ED porter to collect further blood / products stating '<u>an immediate response required please</u>'.

Scribe

Listen to the Trauma Team Leader (TTL) team brief.

1. Ensure that the trauma booklet is initiated prior to patient arrival and contains the ATMIST sticker.

2. Ensure that that all members of the team sign in on the trauma booklet and write their first name on the trauma bay whiteboard.

3. Prompt a nursing colleague to start the clock when the ambulance trolley is alongside the ED trolley.

4. Call time elapsed every 5 minutes (“5 minutes”, 10 minutes” etc).

5. Document any additional information provided by the ambulance crew at handover.

6. Ensure that the patient has a wrist band.

7. Maintain a chronological record of events throughout the patient’s journey (+ 1 min, + 2 mins etc).

8. Document vital signs on arrival and then throughout patient’s journey.

9. Inform the TTL if any key observations have not been identified or if there is a change in the observations.

10. Keep a log of all blood / blood products transfused, and ensure that they have been prescribed.

11. Keep a log of all medications given and ensure that they have been prescribed.

12. Prior to transfer to CT / theatre the scribe will run through the transfer checklist with the TTL.

ED Porter

For 'CODE RED' hospital trauma call.

1. Attend the ED resus room after hearing a 'CODE RED' hospital trauma call announcement on the intercom system.

2. Listen to the team brief given by the TTL (Trauma Team Leader). This will give you the expected time of arrival of the patient.

3. Collect blood / blood products from the Blood Bank (they will already be aware that you are on your way) as requested by the rapid infuser nurses or TTL.

4. Deliver the blood / products to the resus room, informing the rapid infuser nurses and scribe that the blood products have been delivered.

5. Check that the TTL is happy that you 'stand down' in order for you to return to your normal duties.

Appendix 3 Transfer checklist

(This challenge-response checklist must be completed by the TTL and scribe / anaesthetist / circulation nurse prior to leaving ED Resus)

Challenge question	
Is CT / theatre ready for the patient?	
CT request form done?	
GFR > 30 ? (if < 30 TTL to discuss with radiologist)	
ID band on patient?	
Patient briefed ?	
Primary survey XRs reviewed ?	
Sharps check ?	
Bleeding wounds controlled?	
Adequate analgesia given? (plan for next 30 minutes)	
Does the patient need IV antibiotics now?	
TXA given ?	
Pregnancy status considered ?	
Cannula for contrast ?	
Intubation required prior to CT ?	
Hypertonic saline required prior to CT ?	
Adequate oxygen on trolley ?	
Portable suction checked ?	
Sufficient drugs ? (sedation / paralysis / vasopressors)	
Sufficient blood / products ?	
Belmont infuser moving with patient ?	
Unused blood / products returned to Blood Bank ?	
Transfer bag ?	
Monitoring ?	
Spare monitor battery ?	
Charging leads for the infusion pumps ?	
Four staff for transfer in CT?	
Escort required ?	
Other staff stood down ?	
For Damage Control Surgery declared patients:	
TTL direct communication with surgical consultant ?	
Theatre aware of **Damage Control Surgery declared** status ?(x55400)	
Destination theatre confirmed ?	
Blood Bank informed of destination theatre ? (x52828 or bleep 0871)	
Theatre lift held ?	
=> TTL to go with patient to theatre, and handover in ATMIST format	

Appendix 4 Major Trauma Centre Major Incident cascade list

(Activated at the discretion of the ED consultant and nurse-in-charge after the simultaneous arrival of the third or fourth hospital trauma call patient)

Standby group:
On call manager
Site manager / acute care team coordinator
Duty senior nurse
On call Trust director
Press and communications officer

Plus following if *declared*:
Theatre co-ordinator
Sterile and disinfection unit (SDU)
Blood Bank
Consultant anaesthetist
Consultant radiologist
Consultant ITU
Consultant orthopaedic surgeon
Consultant general surgeon
Consultant paediatric anaesthetist

Appendix 5 Log roll

Log roll should be done *after* CT (as part of the secondary survey) except for penetrating trauma patients when looking at the back is part of the primary survey. In patients with unstable C/T/L injuries or with significant pelvic fractures the log-roll may be modified (10-15 degrees only) or deferred.

Log roll is sometimes useful in low acuity patients in whom clinical clearance of C/T/L spine and pelvis is being considered (and no CT).

Appendix 6 Debrief form

Trauma / Cardiac Arrest Team Leader Hot Debrief Form		
Date	Age Sex	Outline
Trainer	Hospital no	

	Learning points
Preparation prior to patient arrival	
Team organisation	
Clinical plan	
Interventions	
Temporal flow	
Patient safety	
Crowd control	
Conflict resolution	
What if	
Documentation	

DW 02.10.12