**Royal Hospital for Children + Young People (RHCYP)**

**Paediatric Major Trauma Centre (PMTC)**

**TRAUMA TEAM (TT)**

**ROLES & RESPONSIBILITIES**

**Background**

RHCYP has a 3 level trauma team response. This approach aims to limit both the over and under triaging of major trauma.

Level 1– ‘**Code Red/Trauma MHP’**

Level 2– ‘**Trauma Team** response’

‘**Emergency Department response**.’ For those CYP not

**Objectives**

1. **To provide all major trauma patients with a consultant led team upon their arrival**
2. **To ensure C+YP are diagnosed and treated quickly and appropriately using a multidisciplinary approach**
3. **To ensure that >95% of Major Trauma patients have a trauma team activated**
4. **To ensure that no more than 50% of trauma team activations occur in patients with minor injuries**
5. **To accurately and clearly document the attendances and actions of the trauma team**
6. **To improve patient outcomes and experience of trauma in line with the Scottish trauma network initiative.**

Notification: The Scottish Ambulance Service (SAS) Trauma desk will where possible give a pre-alert that the SAS have been dispatched to an incident involving C+YP < 16 years. This is particularly relevant overnight when ED Consultant is on call from home. These pre-alerts should be discussed with the ED Consultant.

Some C+YP with major trauma may self present at ED. Following triage they require senior ED review and consideration of activation of Trauma call.

The pre-hospital/SAS team will give an ATMIST pre-alert to ED to inform them of an injured C+YP. This is documented on ATMIST sheet beside radio / phone.

**A**ge: Age / Sex / Name

**T**ime: Time of incident

**M**OI: Mechanism of incident

**I**njuries: Injuries, either seen or expected

**S**igns: Vital Signs, and whether they have improved or deteriorated over time

**T**reatment: Treatment given

A decision to make a trauma call is based on this information and consideration of the mechanism of injury.

**Type of Trauma call:**

**Level 1 Trauma Team Activation**

C+YP who meet any of the following criteria trigger Level 1 Trauma Team activation

* Suspected or confirmed active haemorrhage
* Pre-hospital Code Red activation
1. **Dial 2222 and state Level 1 Trauma Team Standby in Resus room, RHSC (or the location of the patient if not in resus)**
* This will activate the level 1 trauma team
* Consider activating ‘Code Red’ protocol prior to patient arrival

**2. Clinical Co-ordinator should retrieve 2 units of o-negative blood from the blood fridge in RHSC**

**3. ED Lead Nurse should ensure the blood warmer is primed and ready for use.**

**4. Trauma Team Leader (TTL) to consider alerting Neurosurgeon/Plastic Surgeon/Cardiothoracic Surgeon depending on the call.**

**Level 1 Trauma Team Members:**

EM consultant

ED Doctor (ENP) x 2

ED nurses x 2

Anaesthetic consultant

PCCU consultant

General Surgical Consultant

Radiology Consultant

Orthopaedic Registrar

Radiographer

PCCU charge nurse

Clinical Co-ordinator

Theatre Co-ordinator

Operating Department Practitioner (ODP)

**Level 2 Trauma Team Activation**

The following conditions mandate Level 2 Trauma Team activation.

* Obstructed Airway
* Inadequate breathing/ventilation or oxygenation
* Responding to pain only (M4) or unresponsive
* Medic One or EMRS Trauma Call if not level 1
* ED Consultant/ED Charge Nurse Discretion

IF THERE IS ANY DOUBT ACTIVATE THE TRAUMA TEAM

1. **Dial 2222 and state Level 2 Trauma Team Standby in Resus, RHSC (This will be the normal location but if different**

* This will activate the level 2 trauma team

**2. TTL to consider alerting neurosurgeon/ENT/Plastic Surgeon/Cardiothoracic Surgeon depending on the call.**

**Level 2 TT Members:**

EM Consultant

ED Doctor/ENP x 2

ED Nurses x 2

Anaesthetic Consultant

Operating Department Practitioner

PCCU Consultant

General Surgical Registrar

Orthopaedic Registrar

Radiology Consultant

Radiographer

PCCU charge nurse

Clinical Co-ordinator

OT Co-ordinator

**Level 3 Emergency Department (ED) Response**

All pre alerted trauma calls that do not fulfil the criteria for a Trauma Team response will have as a minimum

ED Doctor

Senior nurse

Nurse 2

A Trauma Team response can be called at any time but should be done early if there any clinical concerns.

**Trauma Team Member Roles**

The following is guidance on roles of TT members. Recognising skill mix and clinical situations vary the final roles will be allocated by the TTL preferably prior to arrival of the CYP.

**TRAUMA TEAM LEADER**

 (ED consultant or ED registrar with ED Consultant supervision)

 PRE- CYP ARRIVAL

* Aims to be hands off, at end of bed
* Ensures Trauma call has been activated
* Ensures team members book in with Scribe
* Ensures appropriate PPE worn by team
* Introductions, skill set and roles verbalised to team.
* Performs pre-arrival team briefing –(pre-alert ATMIST on white board)

ON ARRIVAL OF CYP

* Confirms no immediate life threats –airway + pulse check by airway doctor
* Receives succinct ATMIST handover from SAS
* Transfer onto trauma mattress and any clothes removed + covered
* Receives Primary survey examination results
* Prioritises investigations/ treatment and plans for movement to CT/ OT
* Ensure pelvic binder if mechanism consistent + haemodynamic compromise
* Ensure TXA if suspicious of bleeding + haemodynamic compromise
* Update team of main injuries and plan
* Aim to be in CT within 30 minutes of arrival (if required)
* Ensure relatives are updated / supported
* Stand down team members if not required
* Handover leadership if not transferring or if undertaking a procedure
* Handover to admitting team

 ON CYP Departure

* Check trauma booklet for completeness
* Ensure TRAK notes completed : \trauma <space>
* Co-ordinates and leads debrief
* IF CODE RED activated ensure BTS have been informed of CYP movement

**Airway Lead**

**(Anaesthetist, PICU/ ED Consultant, anaesthetic / PCCU / ANP registrar)**

PRE- CYP ARRIVAL

* Check in with scribe + wear PPE
* Receive pre-alert ATMIST handover
* Prepare airway equipment and drugs **(INFORM nurses priority of drugs)**

ON ARRIVAL OF CYP

* Communicate airway patency + PULSE to TTL/Scribe
* LISTEN TO ATMIST HANDOVER
* Manage airway, oxygenation and ventilation
* Ensure C spine protection
* ASSESS GCS + PUPILS
* Control patient movements in discussion with TTL
* Use intubation checklist prior to intubation
* Once intubated maintains ventilation by bagging / ventilator
* Ensures drugs for transfer, MR, sedative, pain, hypertonic saline, inotropes
* Ensures documentation completed
* Liaise with theatre co-ordi

DEPARTURE

* Assumes leadership if handover by TTL for transfer to CT/Theatre/PCCU

OTHER:

* **Lead role for transfusion in code red/MHP CYP in discussion with TTL**
* Arterial/central lines not routinely placed in ED. Delay transfer to CT/theatre

**AIRWAY ASSISTANT**

(Theatre ODA / PICU Nurse / Anaesthetic registrar / ED nurse)

PRE- CYP ARRIVAL

* Check in with scribe + wear PPE
* Receive pre-alert ATMIST handover
* Prepare airway equipment / drugs

ON ARRIVAL OF CYP

* Listen to ATMIST handover
* Apply high flow oxygen
* Assist airway lead with interventions ensuring MILS
* Sizes and inserts OG/NG as requested
* Prepare airway (SCRAM bag) equipment / drugs for transfer
* Prepare transport ventilator / bagging circuit
* Prepare anaesthetic machine in CT if required
* Helps with other tasks as required

ON DEPARTURE:

* Accompany CYP on transfer outwith ED

Other: Prime BELMONT Rapid infuser in OT if indicated

**PRIMARY SURVEY DOCTOR**

(Default ED registrar: PCCU registrar/ ANP / ENP Surgical registrar)

PRE- CYP ARRIVAL

* Check in with the scribe + Wear PPE
* Confirms skill level to TTL ??? IS THIS NEEDED
* Completes WETFLAG / Appropriate page in Book

ON ARRIVAL CYP

* Listen to ATMIST handover
* Reassure CYP
* Assist with transfer onto Trauma mattress / Trolley
* Undertakes primary survey clearly stating findings to TTL/scribe.
* <C>ABC
* Document neurology prior to muscle relaxant
* Takes an AMPLE history from parents
* Inform TTL and scribe of outcomes.
* Performs procedures as required and competent.
* Undertakes Secondary survey or if omitted document in the trauma booklet.

The pelvis/limbs/abdomen and genitals are examined by the Orthopaedic and General surgical team respectively.

**PROCEDURE DOCTOR**

**Default ED registrar: (PCCU ANP/ registrar, surgical registrar, ENP)**

PRE- CYP ARRIVAL

* Report to scribe + wears PPE
* Confirms procedural skills with TTL
* Prepares IV/ IO equipment

ON ARRIVAL CYP

* Gain large bore IV x 2 (inform TTL if unsuccessful after 2 attempts)
* Order + obtain FBC, U&E, LFT, amylase, Coagulation screen, Calcium, VBG and BTS tubes
* BTS tubes and forms completed correctly -> clinical coordinator
* Order imaging as requested by TTL. Ensure radiographer / radiologist aware
* Prescribes + administer drugs
* Assists with pelvic tilt if required
* Helps apply pelvic blinder / splints if indicated
* Performs other tasks as directed by TTL

**PROCEDURE NURSE**

Default: ED Nurse: (ENP, PCCU nurse, OT nurse, ODP)

PRE- CYP ARRIVAL

* Check in Scribe + wears PPE
* **Place trauma mattress on trolley (zip to feet end)**
* Prepare blood warmer (**prime with 0.9% saline**)
* Sets up for procedures as directed by TTL

ON ARRIVAL OF CYP

* Listens to ATMIST handover
* Performs CPR if required
* Assists with moving onto trauma mattress
* Assists with removing clothing with tuff scissors (discard clothing in bags)
* Assists in IV/IO access / bloods
* Assists with splints / dressings
* Administration of drugs
* Manage blood product transfusions – including checking and documentation

DEPARTURE OF CYP

* Ensures CD records are updated

**MONITORING NURSE (CYP named nurse)**

**Default ED NURSE (ENP / PCCU NURSE)**

PRE- CYP ARRIVAL

* Report to scribe + wears PPE
* Prepare Monitoring: ECG, SAO2, ETCO2, NIBP (3mins, QRS tone)
* Prepare tuff scissors / pelvic binder (if indicated)
* Prepare drugs as directed (RSI) / (TXA)

ON ARRIVAL OF CYP

* Listens to ATMIST handover
* Assists with transfer onto trauma mattress
* Attaches monitoring, take temp, -> Informs TTL / Scribe
* Cuts + removes clothing as required
* Cover CYP with blanket/ Bair hugger / transwarmer as indicated
* Administer drugs as prescribed
* Dipstix urine / pregnancy test/ swabs as appropriate
* Prepare for transfer (checklist) oxygen, suction, bag, fluid, notes, consent

DEPARTURE OF CYP

* Accompany CYP to destination via imaging if required.

**SCRIBE**

Default Senior ED Nurse (ENP)

This role is invaluable to the team. You must ensure you get the information you need and inform the TTL if you are not.

PRE- CYP ARRIVAL

* Wears PPE + Reports to TTL
* Assembles Documentation – Booklet, PEWS chart, fluids prescription
* **Remove stop clock activator from drug cupboard**
* Records Trauma Team members as they arrive
* Write pre-alert ATMIST on white board

ON ARRIVAL OF CYP

* Activates stop clock on CYP arrival (Stopclock – start/stop – reset)
* Update ATMIST white board from SAS handover
* Collect other information from SAS e.g. PRF
* Document primary survey results
* Record timeline of events / interventions / activation of major haemorrhage
* Record OBS: 15 minutely – Vital signs / GCS/ PUPILS.
* Documents bloods + tests taken (urinalysis / pregnancy test/ viral test)
* Place x2 ID wrist bands
* Inform the team leader for every 15 minutes that pass
* Tag clothing / evidence bags
* Ensure the transfusion nurse keeps a running total of blood and blood products transfused in a major haemorrhage.

ON DEPARTURE OF CYP

* Return clock activator to cupboard
* May also accompany CYP to CT/ OT/ PCCU

**Clinical Co-ordinator**

PRE- CYP ARRIVAL

* Report to Scribe
* Wears PPE
* Helps making up drugs / other tasks as required

ON ARRIVAL OF CYP

* Co-ordinate MHP/Code Red as per usual role
* Organises collection of RCC from the blood fridge (3 units – take as required) + BTS informed when CYP moved
* Liaises with OT Co-ordinator regarding OT availability as needed.
* Liaising with management and escalate as appropriate as per usual role.
* Gate keep on behalf of TTL as required
* Assist with drugs administration
* Ensures someone is assigned to look after CYP relatives
* Help where required.

**RADIOGRAPHER**

PRE- CYP ARRIVAL

* Liaise with TTL or nurse if members are not wearing lead.
* Book in with scribe

ON ARRIVAL OF CYP

* Ensure imaging requested on TRAK (Procedural Clinician or other)
* Liaise with TTL if team members are obstructing your chance to take X-rays.
* Radiographer should aim to have X-rays taken within 10 minutes of the arrival
* Inform TTL if there are delays in TRAK request.
* Ensure CT ready

**RADIOLOGIST**

Aim to complete the CT and have a hot report within 30 minutes of arrival in the ED.

* Introduce self
* Appropriate PPE
* Liaise with TTL regarding priorities of imaging
* Clear the CT scanner + communicate to TTL when CT is available if required
* Hot report immediately available after CT and written report within 1 hour

**SURGICAL REGISTRAR**

May be delegated roles by TTL (especially if multiple casualties)

PRE-CYP ARRIVAL

* Identify yourself to TTL / Scribe
* Wear PPE

ON ARRIVAL CYP

* Performs abdominal examination
* Inform surgical consultant early if theatre is likely
* Stay with the patient in resus/CT until stood down by TTL
* Discusses surgical plan/needs/priorities with TTL
* Liaise with theatres, anaesthetist, clinical co-ordinator and consultant early with plan for theatre or admission
* Assists with ordering imaging / tests as required
* Liaises with specialists as required
* Chest drain / urinary catheter if required
* Ensures actions and findings documented Trauma booklet / TRAK

**ORTHOPAEDIC REGISTRAR**

May be delegated roles by TTL (especially if multiple casualties)

PRE-CYP ARRIVAL

* Identify yourself to TTL / Scribe
* Wear PPE
* Specialty teams will assist with secondary survey and any advanced procedures as directed by the team leader and provide expertise in their specialist area.

ON ARRIVAL CYP

* Assists with secondary survey
* Assists with procedures as advised by TTL e.g. splinting
* Discuss plan with TTL
* Liaise with Consultant + others as required e.g. Theatre co-ordinator, anaesthetists
* Assists with ordering tests / images if required
* Document findings and actions on TRAK
* Liaises with specialists

**SAS PARAMEDIC/TECHNICIAN**

Ideally CYP arrive with a pre alert, fully undressed covered with blankets on scoop

ON ARRIVAL

* Introduce self and **State any immediate life threatening needs**
* If none then give 60 second ATMIST handover
* TTL will then ask for transfer of CYP via scoop onto trauma mattress.
* One crew will book the CYP in at reception whilst handover is occurring
* May be asked to help if not being retasked.

Family Support

(default:ED health assistant/ family support worker/ nurse / Doctor)

* Greets the family on arrival + stays with them throughout the resuscitation
* Identifies key personnel to the family.
* Updates the family with general information regarding their child’s care.
* Communicates any key information from the family to the team leader.
* Assists the family to contact any other relatives or support e.g. spiritual
* Provide refreshments where needed
* Remain with the family during any updates from medical staff

Runner

(Health care assistant / nurse)

* Ensures adequate PPE is worn
* Directs trauma team member to correct location
* Responsible for processing POC blood gas
* Responsible for organising blood tests to be relayed to labs.
* Responsible for obtaining O Neg blood from blood banks as directed by clinical co-ordinator
* Responsible for collecting any required kit from ED or elsewhere
* Drugs Nurse
* (ED / PCCU nurse)
* Must be clearly identifiable in this role + delineated by wearing a purple apron
* Must not be interrupted whist preparing drugs
* Prepares drugs as requested throughout resuscitation including RSI agents, emergency drugs, analgesia and antibiotics using resus guidelines and monographs.
* Prepares infusions / boluses for sedation as instructed.
* Checks all drugs, fluids and infusions with a second staff member.
* Ensures all drugs, fluids and infusions are adequately labelled, prescribed and signed for.
* Ensures CD records are updated, accurate and signed