


Admission Process of Paediatric Trauma Patients to Ward 19 (University Hospital Wishaw)

Scottish Trauma Network


The paediatric Scottish Trauma Network has three paediatric Major Trauma Centres (pMTC) in Aberdeen, Edinburgh and Glasgow. Children from NHS Lanarkshire feed into the West of Scotland Trauma Network with Royal Hospital for Children (RHC) in Glasgow as the pMTC.

The Scottish Ambulance Service (SAS) apply a paediatric trauma triage tool to all children who have suffered trauma to assist with the decision making regarding their primary destination. If the physiology or injuries found on assessment are suggested of major trauma, the patient will be transferred directly to pMTC. The exceptions will be those patients out with 45 minutes of RHC with no pre-hospital medical team available and those patients who are not stable enough to endure the transfer to RHC (primarily massive non-compressible haemorrhage and airway compromise).



Paediatric Trauma Triage Tool

Use this tool to triage all children under 16 years old
who have suspected major trauma



Clinical Judgement is important and valued.

If you are concerned that your patient's triage category does not reflect their needs, you require clinical or logistical advice please contact the **Trauma Desk** directly on

03333 990 211

or by airwave by placing a callback to your local area dispatcher who will arrange a callback from the Trauma Desk.

Triage Questions

Step 1
Assess your Patient's Physiology

Does your Patient have any of the following:

- Abnormal vital signs for age* not explained by pain or distress
- Abnormal conscious level
- Catastrophic haemorrhage

Step 2
Assess your Patient's Injuries

Does your Patient have any of the following:

- Penetrating injury to head, neck, torso
- Suspected open, depressed or basal skull fracture
- Suspected spinal injury with new onset neurology
- Significant bruising to chest or abdomen
- Traumatic amputation/mangled extremity proximal to wrist/hand
- Suspected pelvic fracture
- Multiple and/or single open long bone fracture
- Burns/scalds >20% BSA and/or facial or circumferential burns from flame

Step 3
Assess the Mechanism of Injury

Did any of the following occur:

- Traumatic death in same incident by same mechanism
- "Bull's eye" damage to windscreen or damage to "A" post (from pedestrian striking outside of vehicle)
- Ejection from motor vehicle
- Pedestrian/cyclist struck by vehicle at >20mph
- Uninterrupted fall over 2x patient's height (not bouncing down stairs)
- Bicycle handlebar injury with abdominal and/or groin pain

Step 4
Special Considerations

Are any of the following present:

- Bleeding disorder or anticoagulant treatment
- Isolated burns (liaise with trauma desk)
- Pregnancy >20 weeks
- Significant crew concern (discuss case with Trauma Desk prior to transfer)

Response Category

Should the airway become compromised and cannot be managed, consider conveying/diverting to the nearest locally designated Emergency Department

Major trauma centre care

Your Patient requires Major Trauma Centre (MTC) Care

- <45 minutes from MTC = convey to MTC
- >45 minutes from MTC = contact Trauma Desk

If you do not think your patient requires MTC, contact Trauma Desk

Remember to pre-alert the receiving hospital via airwave if you are managing a patient triaged to MTC

Trauma unit care

Your Patient requires Trauma Unit (TU) Care

- Convey to the nearest TU, or MTC if closer
- >45 minutes from TU/MTC contact Trauma Desk

If you do not think your patient requires TU/MTC, contact Trauma Desk

Local

Convey your patient to the nearest Local Emergency Hospital

- Your patient can be taken to the nearest hospital with an Emergency Department, regardless of designation

If you think your patient requires MTC, contact Trauma desk

Physiological Reference Ranges*

Age	RR	Pulse
<2Y	30-40	100-160
<2.5Y	25-30	95-140
5-11Y	20-25	80-120
>12Y	15-20	60-100

*Also refer to JRCALC Age-Per-Page for more physiological reference ranges

YES

NO

VERSION 9 (DRAFT)

Trauma Calls

Where there is a SAS pre-alert for paediatric trauma where there is a mechanism, anatomical finding, abnormal physiology or special considerations as per the Paediatric Trauma Team Activation criteria below, a Paediatric 2222 Major Trauma Call should be initiated.

There may be occasions when paediatric trauma patients may self-present with family. It is therefore possible that the clinician has already begun their assessment when it becomes apparent that the child meets the criteria for a Paediatric 2222 Major Trauma Call. In this scenario, if there is any concern about serious injury or deterioration, the child should be moved to Resus and Paediatric 2222 Major Trauma Call initiated.

If there is no concern of serious injury or deterioration based on the initial assessment, the case should be immediately escalated to the senior ED doctor for decision making and agreement that a Paediatric 2222 Major Trauma Call is not required.

Paediatric Trauma Team Activation

University Hospital Wishaw 

Mechanism	Physiology
Fall >3m Pedestrian/cyclist vs motor vehicle >20 mph Prolonged entrapment Strangulation/hanging Driveway run over injuries Handlebar injuries + abdominal/groin pain Near drowning High voltage electrocution Fall from or trampled by large animal Motor vehicles: <ul style="list-style-type: none">+ Intrusion >30cm+ Ejection+ Death in same incident+ >35mph+ Bullseye on windscreen+ Major vehicle deformity	GCS < 15 Absent vital signs Child <5 years with SBP <60 or HR >180 Child >5 years with SBP <70 or HR >160

Special Considerations

Burns >10% (child)
Inhalation/circumferential burns

Anatomy

Penetrating injury to head/neck/torso
Significant bruising to chest or abdomen
2+ proximal limb fractures
Crushed, degloved, mangled or pulseless extremity
Amputation proximal to ankle or wrist
Suspected pelvic fracture
Open, depressed, basal skull #
Spinal injury with new neurology
1+ open long bone fractures

Call 2222 to activate the trauma team
Team can be activated at any point in the patient journey
State 'paediatric trauma to resus' with an ETA
PATIENTS MAY SELF-PRESENT

Criteria in line with RHCG trauma call out criteria MPELPAEDTT_23_24702L

Imaging in Paediatric Trauma

Those children who have suffered a significant mechanism of trauma but whose physiological and injury assessment are not suggestive of major trauma continue to be brought to UHW for assessment. There needs to be a robust process for ensuring that this group of children with no apparent injuries but who have not been cleared by radiological assessment are observed in the correct place and that the correct teams are aware.

It should be noted that the threshold for the use of CT in paediatric patients is much higher than in adults given concerns regarding radiation exposure and therefore there is the potential for undifferentiated injuries. There are local and national guidelines to guide which patients require imaging ^{1, 2}.

Admission Process to Ward 19

When a decision is made to admit a child for observation to Ward 19 following trauma, the following criteria must be met:

- Appropriate surgical team aware
- Named surgical consultant
- Shared care accepted by surgical and paediatric team
- Contact details for who to contact in case of deterioration / concern
- Observations within expected range for the age of the child
- Plan for frequency of observations required on admission to Ward 19/20
- Any outstanding investigations required?
- Formal report of any imaging performed

Where there is any disagreement about whether the child should be admitted to UHW for observation between specialty teams, the decision making should be escalated to consultant level prior to the patient leaving the Emergency Department.

Where there is ongoing concern about suitability for admission to UHW vs transfer to RHC, the use of the Single Point of Contact (SPOC) based at RHC can be considered for advice.

Children under 5

Children under 5 would not be operated on at UHW unless in extremis. Any child under 5 who is being considered for admission for observation to Ward 19 should be discussed with and agreed by both a Consultant General Surgeon and Consultant Paediatrician. Where there is concern about the potential for deterioration requiring operative management, this should be discussed through the SPOC process for consideration of transfer to RHC.

References

1. [Major Paediatric Trauma - Imaging Flowchart \(scot.nhs.uk\)](https://www.scot.nhs.uk)
2. [Paediatric trauma protocols | The Royal College of Radiologists \(rcr.ac.uk\)](https://www.rcr.ac.uk)
3. [Major Trauma Single Point of Contact \(SPOC\) SOP – RHCG \(scot.nhs.uk\)](https://www.scot.nhs.uk)

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