



## London Major Trauma Decision Tool (adults and children 12–18)

### Step 1

#### Assess vital signs and level of consciousness

- 1A Glasgow coma score less than 14
- 1B Sustained systolic blood pressure less than 90mmHg
- 1C Respiratory rate less than 10 or greater than 29bpm

Yes to any one

Convey to nearest **Major** Trauma Centre. Ensure pre alert call is passed on PD09.

Should the airway become compromised and cannot be managed consider conveying /diverting to the nearest Trauma Unit



### Step 2

#### Assess anatomy of injury

- 2A Chest injury with altered physiology
- 2B Traumatic amputation/mangled extremity proximal to wrist/ankle
- 2C Penetrating trauma below the head above the knees (not arms)
- 2D Suspected open and/or depressed skull fracture
- 2E Suspected pelvic fracture
- 2F Spinal trauma suggested by abnormal neurology
- 2G Open fracture of the lower limb proximal to the ankle
- 2H Burns/scald greater than 30 percent
- 2I Facial burns with complete skin loss to lower half of face
- 2J Circumferential burns from a flame injury

Yes to any one

Convey to nearest **Major** Trauma Centre. Ensure pre alert call is passed on PD09.

#### Handover and pre-alert call

- C CAD
- A Age of patient
- T Time of injury
- M Mechanism of injury
- I Injuries found and suspected
- S Signs (vital)
- T Treatment given or required

### Step 3

#### Assess mechanism of injury

- 3A Traumatic death in same passenger compartment
- 3B Falls >20 ft (two storeys)
- 3C Person trapped under vehicle or large object (including 'one unders')
- 3D Bullseye to the windscreen and/or damage to the 'A' post of the vehicle caused by impact of individual outside of the vehicle

Yes to any one

Convey to nearest **Major** Trauma Centre. Ensure pre alert call is passed on PD09.

Only patients triggering the trauma tree should be taken to a Major Trauma Centre, unless the patient is within the normal catchment of that emergency department. In this case you note L T in the trauma tree trigger box on the PRF.

### Step 4

#### Assess special patient consideration. Patients who have sustained trauma but do not fit any of the above criteria but are:

- 4A Older patients (>55years)
- 4B Pregnant (>20 weeks)
- 4C Known to have bleeding disorder or receiving current anti-coagulation therapy e.g. warfarin or novel oral anticoagulant agent
- 4D Morbidly obese

Yes to any one

Patient **may** benefit from going to a **Major** Trauma Centre. Contact The Clinical Hub on PD09.

Is your patient at risk of significant bleeding?  
**Signs of Shock (diaphoretic)?**  
Consider **Tranexamic Acid**.  
Do not delay on scene.

### Step 5

#### Assess system consideration. Patients who have sustained trauma but do not fit any of the above criteria but there is:

- 5A Significant crew concern only when discussed with a Trauma Paramedic within EOC

Yes to any one

Patient **may** benefit from going to a **Major** Trauma Centre. Contact The Clinical Hub on PD09.

Sponsored by an educational grant from Promethes Medical, supplier of trauma equipment to the London Ambulance Service NHS Trust.



# London Major Trauma Decision Tool (children under 12)

## Step 1

### Assess vital signs and level of consciousness

- 6A** Glasgow coma score less than 14
- 6B** Inappropriate behaviour post injury (too quiet or inconsolable)
- 6C** Abnormal vital signs not explained by other cause for example crying, pain responses

Yes to any one

Convey to nearest **Major Trauma Centre**. Ensure pre alert call is passed on PD09.

## Step 2

### Assess anatomy of injury

- 7A** Significant bruising to chest or abdomen
- 7B** Traumatic amputation/mangled extremity proximal to wrist/ankle
- 7C** Penetrating trauma below the head above the knees (not arms)
- 7D** Suspected open and/or depressed skull fracture
- 7E** Suspected pelvic fracture
- 7F** Significant degloving (soft tissue) injury
- 7G** Spinal trauma suggested by abnormal neurology
- 7H** Open long bone fracture (with significant soft tissue injury)
- 7I** Multiple fractures (long bone)
- 7J** Burns/scald greater than 20 percent
- 7K** Facial burns with complete skin loss to lower half of face
- 7L** Circumferential burns from a flame injury

Yes to any one

Convey to nearest **Major Trauma Centre**. Ensure pre alert call is passed on PD09.

## Step 3

### Assess mechanism of injury

- 8A** Traumatic death in same passenger compartment
- 8B** Uninterrupted fall over twice the patient's height (not bouncing down stairs)
- 8C** Person trapped under vehicle or large object (including 'one unders') crying, pain responses
- 8D** Bullseye to the windscreen and/or damage to the 'A' post of the vehicle by impact of individual outside of the vehicle
- 8E** Bicycle injury resulting in abdominal and/or groin pain (thrown from or impacted on handle bars)
- 8F** Ejection from inside car, van or lorry
- 8G** Fall from or trampled by large animal

Yes to any one

Convey to nearest **Major Trauma Centre**. Ensure pre alert call is passed on PD09.

## Step 4

### Assess special patient consideration. Patients who have sustained trauma but do not fit any of the above criteria but are:

- 9A** Known to have bleeding disorder or receiving current anti-coagulation therapy e.g. warfarin or novel oral anticoagulant agent

Yes to any one

Patient **may** benefit from going to a **Major Trauma Centre**. Contact The Clinical Hub on PD09.

## Step 5

### Assess system consideration. Patients who have sustained trauma but do not fit any of the above criteria but there is:

- 0A** Significant crew concern only when discussed with a Trauma Paramedic within EOC

Yes to any one

Patient **may** benefit from going to a **Major Trauma Centre**. Contact The Clinical Hub on PD09.

## Children's Vital Signs

### Respiratory rate

Age	Breaths/min
<1 year	30-40
1-2 years	25-30
2-5 years	25-30
5-11 years	20-25

### Pulse rate

Age	Beats/min
<1 year	110-160
1-2 years	100-150
2-5 years	95-140
5-11 years	80-120

## Glasgow Coma Score

### Eye opening

Spontaneous	4
To speech	3
To pain	2
None	1

### Verbal response

Orientated	5
Confused	4
Inappropriate words	3
Incomprehensible sounds	2
No verbal response	1

### Motor response

Obeys commands	6
Localised pain	5
Withdraws pain	4
Abnormal flexion	3
Extensor response	2
No response	1

### Modified verbal response >4 years old

Appropriate words, social smiles, fixes and follows objects	5
Cries but is consolable	4
Persistent irritable	3
Restless, agitated	2
Silent	1