EMERGENCY DEPARTMENT TRAUMA CALL CRITERIA GUIDELINE

This document is to be read in conjunction with the following SCH Randwick, Emergency Department Clinical Guidelines:

- SCH.C.16.T.0.1 Emergency Department Resuscitation Roles for Trauma
- SCH.C.16.T.0.2 Emergency Department Trauma Call Criteria Flowsheet
- SCH.C.16.T.2 Trauma Manual Primary Survey
- SCH.C.16.T.2.x1 Trauma – Major Trauma Form

TRAUMA AT SYDNEY CHILDREN'S HOSPITAL AND IN THE EMERGENCY DEPARTMENT

Sydney Children’s Hospital at Randwick (SCH,R) is one of three Paediatric Major Trauma Services in New South Wales. It provides comprehensive acute and chronic care for injured children and adolescents up to 16 years of age. In addition to providing clinical care, The Trauma Service performs the roles of data collection; quality assurance, guideline development; research, educational and preventative activities related to childhood injury.

Children with injuries may present directly to the Emergency Department (ED) either with relatives or by ambulance sometimes bypassing other hospitals with the aim of transporting the child to a Paediatric Major Trauma Service. Many children seen in Emergency have initially been assessed and managed at other hospitals prior to them being transferred for ongoing care. Regardless of the manner in which a child with traumatic injury presents, it is important to follow a systematic approach to their assessment utilising the expertise and resources of the ED and hospital Trauma Team as appropriate. The Trauma Call System aims to streamline treatment of such patients.

TRIAGE AND TRAUMA TEAM ACTIVATION

Seriously injured children presenting to the Emergency Department may be managed either by the Emergency Department staff alone or with the assistance of the hospital Paediatric Trauma Team notified by pager through the hospital switchboard.

The Trauma Call system is an efficient method of informing staff about the expected or actual arrival of a child with potentially serious injuries to enable early detection and management of these injuries.

Potentially seriously injured children presenting to the Emergency Department at Sydney Children’s Hospital are triaged using a two tiered response system.

A trauma call, either PAEDIATRIC TRAUMA STANDBY or PAEDIATRIC TRAUMA ATTEND should be activated according to the flowsheet below.
**SCH ED TRAUMA CALL CRITERIA**

### MECHANISMS OF INJURY

- MVA or MBA- pedestrian or passenger
- Fall >3m or twice the child’s height
- Immersion
- Burn or high voltage injury
- Explosion or major crush injury
- Any significant blunt or penetrating force

### INJURIES

**AND/OR**

- Burn > 10% body surface area or airway at risk
- Penetrating injury – head/neck/torso/pelvis
- Head/Neck – open injury, severe facial injury, airway risk
- Spine – with weakness or paraesthesia
- Chest – haemopneumothorax, flail segment
- Abdomen – rigid or distended abdomen, crush injury, macroscopic haematuria.
- Pelvis – suspected fracture
- Limb – open fracture or dislocation, major vascular injury, major crush/amputation proximal to digits or greater than 2 long bone fractures.

**AND/OR**

- Abnormal vital signs for the child’s age
- Not fully alert (<V on AVPU or GCS <13)
- Cold, pale, clammy
- Abnormal vital signs for the child’s age

### SIGNS AND SYMPTOMS

- Airway at risk, hoarseness or stridor, respiratory distress
- Not fully alert (<V on AVPU or GCS <13)
- Cold, pale, clammy
- Abnormal vital signs for the child’s age

### TREATMENTS

**A** - Airway support

**B** - Assisted ventilation

**C** - >20ml/kg fluid or blood

#### CALL 777

**"PAEDIATRIC TRAUMA ATTEND IN SCH EMERGENCY"**

Trauma Team must attend ED. Contact 21000 if unable.

### CHANGE FROM “STANDBY” TO “ATTEND” AT ANY STAGE IF REQUIRED

A “PAEDIATRIC TRAUMA ATTEND” call should be activated whenever experienced senior staff are not available to rapidly assess and manage children with potentially serious injuries in the Emergency Department.
PAEDIATRIC TRAUMA ATTEND

This call should be activated when an injured child presents with either abnormal vital signs or has evidence of significant injuries or requires airway, breathing or circulatory support as per “SCH ED Trauma Call Criteria” above.

Calls should be activated prior to the patient’s arrival if the information provided by the Ambulance Service via the “Bat” phone suggests the patient is likely to meet the criteria and the patient’s arrival is imminent.

This call should also be activated when there are multiple children presenting with potentially serious injuries. It also should be used when experienced ED Staff are unable to promptly assess and manage any child with potentially serious injuries. There should be a low threshold to activate this call overnight when there are fewer ED medical staff who may be less experienced in managing Paediatric Trauma patients.

Paediatric Trauma Calls generally should be activated by the senior doctor in Emergency in discussion with the nursing clinical coordinator. Overnight the nursing clinical coordinator in ED can activate these calls in consultation with the ED registrar. The Paediatric Trauma Team is activated by calling switchboard on 777 and stating that there is a “PAEDIATRIC TRAUMA ATTEND IN SYDNEY CHILDREN’S HOSPITAL, EMERGENCY DEPARTMENT”.

On receiving this pager alert, Paediatric Trauma Team members are expected to attend ED promptly and assist with managing the injured child. Their role in the patient’s management should be guided by the Team Leader with reference to the Paediatric Trauma Team Roles Guideline. If unable to attend or to arrange for a colleague to do so, Paediatric Trauma Team members should inform the senior doctor in ED on Ext 21000.

PAEDIATRIC TRAUMA STANDBY

This pager message is used to inform Paediatric Trauma Team members that a trauma patient is in ED without all of these staff being expected to attend. It should be used where a paediatric trauma patient appears to be stable with no obvious significant injuries; has normal vital signs and doesn’t require resuscitation (see “SCH ED Trauma Call Criteria” above).

A Paediatric Trauma Standby call may also be used when stable injured children are transferred from other hospitals where assessment and treatment for their injuries has commenced. These patients should be promptly assessed by ED on arrival. If they meet Trauma Attend criteria or if ED staff require the Paediatric Trauma Team to assist with their management, a Paediatric Trauma Attend call should be activated.
Paediatric Trauma Standby Calls can be activated by either the senior ED doctor or overnight by the ED nursing clinical coordinator. These staff should liaise with each other before putting out a call. Calls are activated by contacting switchboard on 777 and stating that there is a PAEDIATRIC TRAUMA STANDBY IN SYDNEY CHILDREN’S HOSPITAL, EMERGENCY DEPARTMENT.

On receiving a Paediatric Trauma Standby pager message, Paediatric Trauma Team members, other than the surgical registrar, are welcome but not expected to attend or contact ED. They will be specifically contacted if required.

On receiving a Paediatric Trauma Standby call, the surgical registrar is expected to respond promptly by either attending ED or calling the senior doctor in ED on Extension 21000 to determine whether and how soon they are required to attend to assist in management of the patient. Unless a Paediatric Emergency Fellow or Staff Specialist advises otherwise, the surgical registrar should review all patients for whom a Paediatric Trauma Standby Call is activated between 11pm and 8am where generally there are less staff experienced in managing paediatric trauma available.

There should be a low threshold for changing a PAEDIATRIC TRAUMA STANDBY call to PAEDIATRIC TRAUMA ATTEND if at any stage the patient’s condition changes, increased clinical resources are required or criteria are met on receipt of new information.

PAEDIATRIC TRAUMA TEAM MEMBERS

The following staff make up the Paediatric Trauma Team and should attend ED promptly when a Paediatric Trauma Attend call is activated:

- ED Fellow or Staff Specialist (ext 21000 or pager when at home)
- ED Junior Medical Staff
- ED Nursing staff
- Surgical Registrar (page 44685)
- CICU Doctor (page 44182 or ext 21140)
- CICU nurse (page 46665 or ext 21143)
- Anaesthetics Registrar (page through switchboard)
- Social Worker (on call from home after hours)
- Porter (page 44177)
- Paediatric Radiographer (page 44565)
- Hospital Coordinator (page 44103)
- Admitting Officer/ After hours Paediatric Registrar (page 44104)
- After Hours Paediatric Ward RMO (page 44113)
- After Hours Paediatric Ward Junior Registrar (page 44137)
The following additional staff are also notified by pager of a Trauma Call but not expected to attend. They should be individually contacted if their assistance is required.

- ED Fellows and Senior Medical Staff
- ED Nursing Unit Manager and Nurse Educators
- CICU Nursing Unit Manager or Nurse in Charge
- Director of Trauma
- Trauma Clinical Nurse Consultant
- Trauma Clinical Nurse Specialist
- Chief RMO  
  (page 44112)

The General Paediatric Surgeon on call should be informed early either by the surgical registrar or ED senior medical staff if the patient is likely to require urgent surgery.  
e.g. Penetrating Injury to the head, neck, torso or abdomen (e.g. gun shot, stabbing, other object)

- Blast Injuries  
- Multiple severely injured patients  
- Patients requiring blood resuscitation en route to hospital  
- Patients being transferred requiring urgent CT, radiological intervention or surgery

If urgent subspecialty surgical or radiology involvement is required, the appropriate registrar should be contacted as soon as practical through the switchboard (e.g. Neurosurgical, Orthopaedics, ENT, Plastics, Ophthalmology, Radiology). For out of hospital transfers these staff should be contacted prior to the patient’s transfer and be involved in management decisions from the outset.

REFERRAL OF TRAUMA PATIENTS TO SYDNEY CHILDREN’S HOSPITAL

Injured children are referred to Sydney Children’s Hospital ED or CICU from metropolitan, regional and rural hospitals at various stages of assessment or management. Generally children less than 16 years of age referred following major trauma should be accepted for transfer to Sydney Children’s Hospital. For transfers from other hospitals, the surgical registrar should be involved in accepting the patient and in advising on management in discussion with the Paediatric Surgeon on call. Decisions about transport of the patient should be discussed with the ED doctor in charge and where there are concerns about the patient’s needs during transport, NETS should be consulted on 1300 362 499. Where NETS is engaged to assist in decisions about management of the child including transport, the paediatric surgeon, the surgical registrar and the doctor in charge of ED should be involved in the teleconference. The ED doctor in charge should also notify CICU and any subspeciality service about any patient potentially requiring their care.
CODE BROWN

In the case of expected multiple casualties with the potential to overwhelm the capacity of the Emergency Department consider activating a CODE BROWN (External Emergency). The Staff Specialist in charge or on call for ED and the nursing Clinical Coordinator should be involved in making this decision. This call should be activated through the switchboard who will contact the Health Functional Area Coordinator. The response involves the entire hospital campus as well as Emergency Services and is coordinated outside the Emergency Department.

ADMISSION OF TRAUMA PATIENTS TO HOSPITAL

All children for whom a Paediatric Trauma Attend call has been activated and who require hospital admission should be admitted primarily under the care of the General Paediatric Surgeon on call who will coordinate care in consultation with subspecialty teams as required. For patients requiring admission in whom a Paediatric Trauma Standby Call has been activated, the admitting doctor may be the General Surgeon on call or another specialist. It is the responsibility of the surgical registrar involved in the initial call to ensure a tertiary survey is performed and documented in the notes of each of these children.

REFERENCES


6. Nuss KE, Dietrich AM and Smith GA. Effectiveness of a pediatric trauma team protocol. Pediatric Emergency Care 2001; 17: 96-100


9. Reference was also made to Trauma related guidelines and protocols of other health services including those of the John Hunter Hospital, The Children’s Hospital at Westmead, The Royal Children’s Hospital, Melbourne; St George Hospital, Kogarah and the Ambulance Service of New South Wales.
CONTRIBUTORS

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REVISION AND APPROVAL HISTORY

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