MANAGEMENT OF THE CRITICALLY INJURED CHILD IN THE EMERGENCY DEPARTMENT AT ST GEORGE HOSPITAL (SGH)

1. Purpose	To describe Clinical Care Responsibilities for a severely injured child at SGH
2. Risk Rating	High
3. National Standards	1 - Clinical Governance Standard 5 - Comprehensive Care Standard
4. Employees it Applies to	ED, Trauma, ICU, Anaesthetic, Paediatric and Surgical Speciality medical and nursing staff attending to an injured child

5. PROCESS

5.1 AIM

The aim of these guidelines is to provide severely injured paediatric patients (less than 16 years of age), presenting to St George Hospital, with optimal multidisciplinary clinical care, prior to their transfer to a Level 1 Paediatric Trauma Service (PTS)

5.1.1 Justification

As St George Hospital (SGH) is not a designated Level 1 Paediatric Trauma Service (PTS), ambulance services aim to transport severely injured children to the nearest designated PTS as outlined in Protocol T1. Occasionally, however, severely injured children will be transported to SGH Emergency Department by ambulance as haemodynamic instability, severe head injuries, unrelieved airway obstruction or imminent life or limb threat make this imperative, or because they are transported by private vehicle. SGH must therefore have an established response to stabilize such patients and provide life or limb saving interventions prior to their transfer to the PTS for definitive care. This capability will necessarily involve various clinical services, including but not limited to SGH Trauma Service, Paediatrics, Neurosurgery, Orthopaedic Surgery, Anaesthesia, Intensive Care and Emergency Medicine.

5.2 ROLES AND RESPONSIBILITIES

5.2.1 ED trauma team leader

- Will be responsible for the early identification of paediatric patients whose injuries or potential injuries merit transfer to a PTS.
- This determination will often be made after consultation with the SGH on-call Trauma Surgeon, Neurosurgeon, Orthopaedic Surgeon or other relevant subspecialty service e.g vascular, ENT.
- The on-call Trauma Surgeon should be promptly notified of all severely injured paediatric patients arriving in the trauma resuscitation room.

5.2.2 On-call Trauma Surgeon

- The on-call Trauma Surgeon will be responsible for determining the need for emergency surgical intervention at SGH.
- When neurotrauma is present, this responsibility will fall to the on-call **Neurosurgeon**. Similar responsibility will fall to the **Orthopaedic Surgeon** if there are injuries requiring emergency orthopaedic stabilisation, the **ENT Surgeon** etc. Should the patient have multiple indications for surgery by two or more surgical specialists (eg, subdural hematoma and ruptured spleen), the ultimate decision on the order and timing of surgery will fall to the on-call Trauma Surgeon.

- Close and frequent communication between the various relevant surgical specialities, at a consultant level, is essential to the process of setting rational and safe surgical priorities.

5.2.3 Paediatric Service

- Early involvement by the **Paediatrics Service** in the multidisciplinary care of the severely injured child may often be desirable and will be at the discretion of the senior clinician(s) involved in the patient's care.

5.2.4 Anaesthesia Service

- Early involvement by the **Anaesthesia Service** is mandatory, as frequently these patients will either have complex airway problems or will require emergency surgery in the operating theatre. Since the on-call anaesthetist is automatically notified by the current trauma paging system of all arriving trauma patients, his/her attendance at the trauma resuscitation is usually assured.
- Should the on-call anaesthetist determine that he/she requires the input/assistance of a second anaesthetist or of one with more paediatric anaesthesia experience, he/she will have the option to call in either the back-up on-call anaesthetist or one of several anaesthetists designated by the Department of Anaesthesia as "Paediatric Anaesthesia Specialists."

5.2.5 Intensive Care Service

- Early involvement by the **Intensive Care Service** is mandatory, as frequently these patients will require ICU care prior to their transfer to the PTS. Since the on-call ICU resident / registrar / fellow is automatically notified by the current trauma paging system of all arriving trauma patients, his/her attendance at the trauma resuscitation is usually assured.
- It will be the responsibility of the ICU resident / registrar / fellow who responds to the trauma page to promptly contact the on-call ICU consultant when it appears likely that the child will require ICU admission.

5.2.6 Post-operative care

- The location of any postoperative care (eg.: Recovery ward, ICU, etc.) will be determined by the Anaesthetic and ICU consultants.

5.2.7 Paediatric retrieval service

- The **Paediatric Retrieval Service, NETS 1300 362 500** should be notified of an impending transfer to the PTS as soon as the injured child is assessed as critically injured. The senior clinician(s) involved in the patient's care will communicate with the Retrieval Service the specifics of the patient's condition and to establish the transport requirements and timing.
- Paediatric Acute Trauma Care Hotline (PATCH). Stable children that require less urgent transfer to a PTS can be referred to **PATCH 9382 1000. (Appendix 1)**
- It is imperative that the subspecialty Surgical and ICU consultants at the receiving PTS accept care for the child and obtain accurate and timely reports of the patient's medical history and progress prior to transfer. All relevant nursing and medical personnel should communicate directly with their counterparts at the receiving facility in order to assure that important information is not overlooked or misinterpreted. Additionally, the following items should accompany the patient on transfer:
    a) Complete printout of the electronic medical record
    b) Digital or 'hard' copies of any relevant radiologic studies

- It is understood that all medical and nursing staff attending to critically ill paediatric trauma patients at SGH are providing a service that is often beyond their expertise and job description but is necessary and appreciated in the unique circumstances outlined above.

6. Cross References	SGH BR757 *Paediatric Surgical Service Level Agreement – St George Hospital*
7. Keywords	Paediatric Trauma
8. Document Location	SGH-TSH Business Rule intranet page under ED, Trauma, Paediatrics, Anaesthetics, ICU
9. External References	Nil
10. Consumer Advisory Group (CAG)	Not applicable
11. Implementation and Evaluation Plan	**Implementation:** The document will be published on the SGH-TSH business rule webpage and distributed via the monthly SGH-TSH CGD report. **Evaluation:** Monitoring IMS+, incidents tabled for discussion at department Patient Safety & Quality Committee meetings
12. Knowledge Evaluation	Q1: What is the role of the ED trauma team leader? *A1:* Will be responsible for the early identification of paediatric patients whose injuries or potential injuries merit transfer to a PTS. Q2: What is the role of the on-call Trauma Surgeon? *A2:* The on-call Trauma Surgeon will be responsible for determining the need for emergency surgical intervention at SGH. Q3: When should the Paediatric retrieval service be notified? *A3:* The Paediatric Retrieval Service, NETS 1300 362 500 should be notified of an impending transfer to the PTS as soon as the injured child is assessed as critically injured
13. Who is Responsible	Medical Director Emergency Department, SGH

Approval for: **MANAGEMENT OF THE CRITICALLY INJURED CHILD IN THE EMERGENCY DEPARTMENT AT ST GEORGE HOSPITAL (SGH)**	
Nurse Manager (SGH)	Name/position: Melanie Lax Nurse Manager | Emergency Department Date: 18.10.2022
Medical Head of Department (SGH)	Name/position: Jacqui Weeden, Director, Emergency Department Date: 30.09.2022
Executive Sponsor	Name/Position: Hayley Smithwick, Divisional Director Date: 08.11.2022
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Revision and Approval History				
Revision Date	Revision number	Reason	Coordinator/Author (Position)	Revision Due
Nov 2022	0	New	Kate Jarrett (A/CNC)	Nov 2024

General Manager's Ratification
Name: Angela Karooz (SGH) Date: 09.12.2022

Appendix 1

PATCH

Paediatric Acute Trauma Care Hotline

The Sydney children's Hospitals Network
care, advocacy, research, education

DO YOU HAVE AN INJURED CHILD THAT FULFILS MAJOR TRAUMA CRITERIA?

HIGH RISK INJURIES

- Head injury with
  - CSF leak
  - Penetrating wound
  - Skull Fracture (CT or otherwise)
  - Contusion, ICH, SAH (CT)
- Penetrating injury: neck, chest, abdomen
- Bleeding in chest or abdomen (clinical or imaging findings)
- Flail chest / Pneumothorax
- Major fractures
  - 2 or more long bones
  - Any spinal fracture
  - Any pelvic fracture
- Spinal cord injury
- Burns*
- Complex limb injury
  - Compound fracture
  - Amputation
  - Degloving, crush
  - Compartment syndrome
  - Neurovascular injury

ALTERED PHYSIOLOGY

- **A**irway / **B**reathing
  - Compromise (Between the Flags red zone**)
  - Deteriorating
  - Requires intubation and ventilation
- **C**irculation
  - Unexplained tachycardia and/or hypotension (Between the Flags red zone**)
  - Shock (compensated or uncompensated)
  - Transfusion requirement
- **D**epressed or **D**eteriorating level of consciousness, GCS < 14

HIGH RISK MECHANISMS

- Transport
  - Entrapment with compression
  - Significant blunt or penetrating force/intrusion
  - Pedestrian/cyclist impact
  - Motorcyclist impact
  - Ejection from vehicle
  - Prolonged extraction
- Other incidents
  - Fall (with significant injury)
  - Significant blunt/ penetrating head/ chest/abdomen
  - Suspected non-accidental injury
  - Explosion
  - Major crush
  - -Electrocution*
- Drowning

Does your child have ANY high risk injury and/or ANY altered physiology?

YES

Call NETS 1300 362 500

NO

ANY high risk mechanism, other injuries, not sure or need advice?

Call PATCH at SCH
ED Consultant: (02) 9382 1000

*Isolated Paediatric Burns – see NSW Clinical Practice Guidelines: burns management https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0009/250020/Burn_Patient_Management_-_Clinical_Practice_Guidelines.pdf

** NSW Between the flags – http://webapps.schn.health.nsw.gov.au/epolicy/policy/3183/download