

CHILDREN'S HEALTH MANUAL

Policy/Protocol

TITLE:	Trauma Team Activation	NUMBER:	1380
Sponsor:	Clinical Manager, Emergency Care and Trauma Program Medical Director, IWK Trauma Program	Page:	1 of 8
Approved by:	Policy and Practice Committee	Approval Date:	June 8 th , 2021
		Effective Date:	July 5, 2021
Applies to:	Children's Health Program – Trauma Team Response Members, IWK Trauma Program, Emergency Medicine, Air Medical Transport		

PREAMBLE

The primary goal of a Trauma Team Activation (TTA) is to ensure that the resources required to provide clinical care to severely injured patients are available in a timely manner.

POLICY STATEMENTS

1. The IWK Trauma Team must be activated to provide care for patients with major traumatic injuries who meet the established IWK Trauma Team Activation Criteria (see Appendix A for activation criteria; Appendix B for Trauma Team response members)
2. Patients who meet any criteria in step 1 or step 2 of the IWK Trauma Team Activation Criteria (appendix A) must receive a full TTA.
3. Patients who meet step 3 criteria but NOT step 1 or step 2 criteria (appendix A), will be considered an ED Trauma Alert. The patient will have an immediate assessment by the emergency physician (EP) to determine if a full or partial TTA is required.
4. Anyone making the decision to activate the Trauma Team must ensure that they advise the Emergency Department (ED) and the Trauma Team Leader (TTL) of the expected arrival time of the patient. This will ensure that care can be provided in the timeliest manner.

5. The IWK will accept care for all major pediatric trauma transfer patients under the age of 16 years from other health care facilities from Nova Scotia, New Brunswick, and PEI, and where appropriate, directly from the scene from EHS/Lifeflight. This acceptance will be independent of inpatient bed availability at the time of arrival. Should bed availability issues exist, the trauma patient will be accepted to receive life/limb saving intervention in the ED while alternate plans are considered and arranged.

GUIDING PRINCIPLES AND VALUES

The IWK is committed to providing specialized multidisciplinary trauma assessment, resuscitation, stabilization, and management of children and youth under the age of 16 years who have suffered a traumatic injury. The IWK is the only designated Level 1 Pediatric Trauma Centre in the Atlantic Provinces.

PROTOCOL

1. **The Trauma Team will be activated by calling the IWK switchboard at 3333. Trauma Team Members' pagers (see Appendix B) will be activated by switchboard and an appropriate overhead announcement indicating estimated time of arrival (ETA) will be made:**

- "Trauma Team Activation, ETA _____" (if ETA is known)
- "Trauma Team Activation, ETA Pending" (if ETA is unknown)
- "Trauma Team Activation Immediately" (if patient has already arrived in the ED)

Note: If more than one patient is expected who meet TTA criteria, the overhead announcement will indicate the number of patients expected.

2. **A Trauma Team Activation may be initiated through several routes:**

- Air Medical Control Physician advises the TTL and the ED that a patient meeting TTA criteria is expected by Air Medical Transport or Ground Emergency Health Services (EHS) Transport accompanied by the LifeFlight Team. The TTL will then notify the ED of the patient and initiate the TTA process.
- A referring hospital calls EHS/LifeFlight, requesting transfer of a patient to the IWK ED. The Air Medical Control Physician will notify the TTL and initiate a 3-way call between the referring facility, the Air Medical Control Physician and the TTL (unless EHS-Lifeflight Communications has already done so). If the TTL determines the patient meets criteria, they will initiate the TTA or a Trauma Consult depending on patient status (see Appendix A).

- EHS advises the ED charge nurse that they are transporting a patient (meeting TTA criteria) by Ground EHS. In collaboration with the EP and the ED charge nurse, the TTA process is initiated.
- The TTL advises the EP/charge nurse that a trauma patient is expected to arrive in the ED.
- A patient presents to the ED triage and meets TTA criteria. The ED triage nurse notifies the charge nurse. The ED charge nurse/EP will initiate the TTA process.

Note: A Trauma Team Activation may occur at any time during the patient's ED visit, regardless of the initial ED assessment. A change in the patient's status, or receipt of further information regarding the mechanism of injury, may necessitate a TTA. The EP will serve as the TTL until the arrival of the on-call TTL, at which time the responsibility for care will be handed over from the EP to the TTL.

If there are two (2) or more trauma patients at the same time, the TTL will manage the more critically injured patient. The ED physician or physician delegated by the TTL will manage the other patient(s). In the event of a situation that overwhelms the normal capabilities of the ED or a mass casualty event, a Code Orange will be called. See [Policy #1320 – Code Orange](#).

3. Upon receipt of the TTA notification via pager, team members will respond in the following manner:

- The TTL will call the ED to acknowledge receipt of their page and to give their ETA. The TTL may obtain patient information from the EP, charge nurse or triage nurse. Depending on the available information, the TTL will contact the on-call neurosurgery resident, and/or the radiologist to advise if their response to the ED is required. The TTL will present to the ED within an expected 20-minute response time.
- The EP will serve as the TTL until the arrival of the TTL, at which time the responsibility for care will be handed over from the EP to the TTL.
- Immediate Response Trauma Team members (see Appendix B) will proceed directly to the ED Trauma Room within a 30 minute response time. If there is an anticipated delay beyond the expected 30-minute response time they will notify the ED of their ETA, otherwise a call to acknowledge their response **should not** occur.

- The neurosurgery resident and the radiologist are not Immediate Response Trauma Team members. They may call the ED to request more information. They will be contacted directly by the TTL if available information indicates they are required to respond to the ED Trauma Room.
 - The TTL will notify the radiologist on call as early as possible if a Computed Tomography (CT) scan will be requested.
 - If the pre-hospital information indicates that a CT scan will likely be requested, the TTL may contact the radiologist to arrange for the CT technologist to be present before the arrival of the patient.
 - The radiologist is responsible for contacting the (CT) technologist if their presence is indicated. The in-house X-ray technologist will receive a page for the TTA, and if they are unavailable (e.g. In the OR), they will notify the TTL.
 - If the TTL determines that the patient will need immediate operative intervention, they will contact the Operating Room.
- 4. In the event of new information indicating a case does not require a Trauma Team response, or if the patient should expire before arrival, the TTL should be contacted by calling switchboard at 3333. The TTA can only be cancelled on the direction of the Trauma Team leader. Trauma Team members will be alerted by switchboard and the appropriate overhead announcement will be made:**
- “Trauma Team Activation Cancelled”
- 5. Trauma Patient No Refusal**
- All pediatric major trauma patients will be given priority for acceptance in transfer from other healthcare facilities to the IWK ED for assessment, resuscitation, and stabilization. This transfer may be accepted by the TTL (as a TTA or Trauma Consult), in collaboration with the EP and Air Medical Transport Physician, as well as in discussion with the most responsible physician for in-patient admission.
 - Transfer of the patient will not be delayed because of bed availability issues. Should bed availability issues exist, the trauma patient will be assessed and stabilized in the IWK ED while alternate plans are considered and arranged. These plans will require the involvement of the TTL, the EP, the admitting service, and the IWK Health manager or director on-call.

6. Trauma Tertiary Survey

- All admitted patients who were assessed by the trauma team (either by trauma team activation or trauma consult) will have a trauma tertiary survey completed to identify if there were any additional injuries that may have been missed during the trauma assessment. The tertiary survey will be completed by the general surgery service, usually within 24-48 hours after admission. The timing of the tertiary survey may be delayed depending on patient condition.

REFERENCES

American College of Surgeons Committee on Trauma (ACOS-COT). (2014). *Resources for Optimal Care of the Injured Patient*. Chicago, Illinois.

B.C. Children's Hospital (2018). Trauma Team Activation Criteria

Eastern Association for the Surgery of Trauma (EAST). (2010). *Practice Management Guidelines for the Appropriate Triage of the Victim of Trauma*.

Escobar, M.A. & Morris, C.J. (2016). *Using a multidisciplinary and evidence-based approach to decrease undertriage and overtriage of pediatric trauma patients*. Journal of Pediatric Surgery (51) pp. 1518-1525.

SickKids Trauma Program (2016). Trauma Team Activation Criteria

RELATED DOCUMENTS

Policies

[Policy #1320 – Code Orange](#)

Forms

Appendices

Appendix A – Trauma Team Activation Criteria

Appendix B – IWK Trauma Team Members

Appendix A – IWK Trauma Team Activation Criteria

IWK TRAUMA TEAM ACTIVATION CRITERIA

<p><u>STEP 1 (Physiologic): Does the patient have one or more of the following criteria (with ANY mechanism attributed to trauma)?</u></p> <ul style="list-style-type: none"> ➤ A: Suspected or Potential Airway Compromise <ul style="list-style-type: none"> - Severe maxillofacial injury - Unstable airway (i.e. obstruction) - Advanced airway in place ➤ B: Breathing: Respiratory Compromise ➤ C: Circulatory Compromise: <ul style="list-style-type: none"> - Unstable age-specific vital signs - Severe uncontrolled hemorrhage - Transfer patient receiving blood/resuscitation to maintain vital signs ➤ D: Disability <ul style="list-style-type: none"> - GCS < 12 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> UNSTABLE VITAL SIGNS <ul style="list-style-type: none"> • RR <10 or > 30 bpm; RR <20 infants • Bradycardia for age • Tachycardia & poor perfusion • SBP < 90 for >5 years • SBP < 80 for 1-5 years • SBP <70 for infants up to 1 year </div> <p style="font-size: 2em; color: #0070c0; margin-top: 10px;">YES</p>	<p style="font-size: 1.2em; margin: 0;">ACTIVATE TRAUMA TEAM (CALL 3333)</p>	
<p><u>STEP 2 (Anatomic) Does the patient have any of the following high-risk injuries?</u></p> <ul style="list-style-type: none"> ➤ Amputation proximal to elbow/knee ➤ Penetrating injury (e.g. gunshot wound, stabbing) proximal to elbow/knee ➤ Two or more suspected proximal long bone fractures ➤ Suspected head or spinal cord injury with neurological deficit ➤ Obvious pelvic fracture 	<p style="font-size: 2em; color: #0070c0; margin: 0;">YES</p>		
<p><u>STEP 3 (High Risk Mechanism) Was there a high-risk mechanism for injury?</u> (Including but not limited to)</p> <ul style="list-style-type: none"> ➤ Motor Vehicle Collision with any one or more of the following: <ul style="list-style-type: none"> - Ejection from vehicle - Rollover or High speed (>70 Km/hr) - Death of another occupant - Prolonged extrication ➤ Automobile vs. pedestrian or cyclist with significant impact ➤ Crash/flip of motorized vehicle with separation of rider ➤ High velocity impact (e.g. skier vs. tree, cyclist crash) ➤ Fall from height: <ul style="list-style-type: none"> - > 6 metres/20 feet OR more than 3 times victim’s height - 2nd storey or higher 	<p style="font-size: 2em; color: #0070c0; margin: 0;">YES</p>		<div style="border: 1px solid red; padding: 5px;"> <p style="margin: 0;"><u>ED TRAUMA ALERT</u></p> <p style="margin: 5px 0 0 0; font-size: 0.9em;">If patient meets Step 3 criteria only, ED physician to assess patient immediately on arrival.</p> <p style="margin: 5px 0 0 0; font-size: 0.9em;">If patient meets any of Step 1 or Step 2 Criteria at any time:</p> <p style="margin: 0 0 0 20px; font-size: 1.1em;">ACTIVATE TRAUMA TEAM</p> </div>
<p><u>STEP 4 (Logistical/Other)</u></p> <ul style="list-style-type: none"> ➤ Simultaneous arrival of 3 or more trauma patients (Consider Code Orange) ➤ ED physician/charge nurse/paramedic judgement 	<p style="font-size: 2em; color: #0070c0; margin: 0;">YES</p>		<div style="background-color: red; color: white; padding: 5px;"> <p style="margin: 0; font-size: 0.9em;">ACTIVATE TRAUMA TEAM Call 3333</p> </div>
<p style="color: red; font-weight: bold; margin: 0;"><u>Trauma Transfers From Another Facility</u></p> <p style="margin: 5px 0 0 0;">If patient has met any of Step 1 or Step 2 criteria (at any time), patient must be assessed by TTL on arrival to IWK Emergency Department (By Trauma Consult or Trauma Team Activation).</p> <p style="margin: 5px 0 0 40px;">Sending facilities should have trauma transfer request calls directed through EHS LifeFlight.</p> <p style="margin: 0 0 0 40px; font-weight: bold; font-size: 1.1em;">1-800-743-1334</p>			

Appendix B – Trauma Team Members

Immediate Response Member (expected 30 min response time; TTL 20 min response time)	Delayed Response Member
<p>Trauma Team Leader</p> <p>Emergency Physician (Until TTL arrives)</p> <p>Emergency Department Nurses</p> <p>General Surgery Staff or Fellow</p> <p>General Surgery Resident</p> <p>Orthopedic Resident</p> <p>PICU Resident or Staff</p> <p>Radiology Technologist</p> <p>Respiratory Therapist</p> <p>Social Worker (0830-1630 M-F)</p> <p>Spiritual Care/Psychosocial response: (M-F: 1600-0800hrs; weekends/holidays 24 hours)</p> <p>Laboratory Technician</p> <p>Blood Bank (Notified via overhead page. Does not present to trauma room)</p>	<p>Neurosurgery Resident (will call)</p> <p>Radiology Staff/Resident</p> <p>CT technologist (Radiologist will contact)</p> <p>Social Work: Individual page as needed during on-call hours: (Fri: 1600-2000 hrs Sat/Sun and holidays (0800-2000hrs)</p>

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District Health Authority/IWK Policies Being Replaced

IWK- 40008: Major Trauma Patient No Refusal

Version History

(To Be Completed by the Policy Office)

Major Revisions (e.g. Standard 4 year review)	Minor Revisions (e.g. spelling correction, wording changes, etc.)