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TITLE 836 INDIANA EMERGENCY MEDICAL SERVICES COMMISSION

ARTICLE 1.5 Trauma Field Triage and Transport Destination Requirements

836 IAC 1.5-1 Purpose

Authority: IC 16-31-2-7

Affected: [IC 10-14-3-12; IC 16-18; IC 16-21-2; IC 16-31-2-9; IC 16-31-3; IC 25-22.5-1-1.1; IC 25-23-1-1.1; IC 35-41-1-26.5]

Sec. 1. The purpose of this article is to provide a regulatory plan to ensure that injured patients in the pre-hospital setting are transported to the most appropriate hospital facility within the Indiana State Trauma System based on field assessment by emergency medical services personnel of the potential severity of injury, available transportation and hospital resources. (*Emergency Medical Services Commission, 836 IAC 1.5-1*)

836 IAC 1.5-2 Exceptions

Authority: IC 16-31-2-7

Affected: []

Sec. 2. This article does not apply to emergency medical services provider organizations that are transporting trauma patients from one acute care hospital to another acute care hospital. (*Emergency Medical Services Commission, 836 IAC 1.5-2*)

836 IAC 1.5-3 Definitions

Authority: IC 16-31-2-7

Affected: []

Sec. 3. The following definitions apply throughout this article.

(1) “ACS” means the American College of Surgeons, 633 N Saint Clair Street, Chicago, IL 60611-3211.

(2) “Appropriate acute care facility” means a hospital that provides in-patient services and has an emergency room staffed 24 hours per day by an in-house physician with an unrestricted Indiana medical license.

(3) “Field Triage Decision Scheme” means *the version of the National Trauma Triage Protocol as originally published in Centers for Disease Control and Prevention. Guidelines for Field Triage of Injured Patients Recommendations of the National Expert Panel on Field Triage. MMWR 2009;58 (No. RR-1):1-35 in effect on the date that the patient was provided with emergency medical services.*

(4) “Hospital” means an institution, a place, a building, or an agency that holds out to the general public that it is operated for hospital purposes and that it provides care, accommodations, facilities, and equipment, in connection with the services of a physician, to individuals who may need medical or surgical services.

(5) “Indiana state trauma system” means *the implementation of a comprehensive plan to optimize and continuously improve the trauma care provided to the state’s residents and visitors as designed by the Indiana State Health Department through their Indiana Trauma System Advisory Task Force and the Indiana Department of Homeland Security through the Indiana State EMS Commission and the Commission’s Technical Advisory Committee.*

(6) “Level I trauma center” means a regional *[ACS verified or state designated]* resource hospital that is central to the trauma care system, that provides total care for every aspect of injury, from prevention through rehabilitation, that maintains resources and personnel for patient care, education and research (usually in university-based teaching hospital), and provides leadership in education, research and system planning to all hospitals caring for injured patients in the region.

(7) “Level II trauma center” means a *[ACS verified or state designated]* hospital that provides comprehensive trauma care, regardless of severity of the injury, may be most prevalent facility in a community and manages the majority of trauma patients or supplements the activity of a Level I trauma center, may be an academic institution or a public or private community facility located in an urban, suburban, or rural area and, where no Level I Center exists, is responsible for education and system leadership.

(8) “Level III trauma center” means a *[ACS verified or state designated]* hospital that provides prompt assessment, resuscitation, emergency surgery, and stabilization and arranges transfer to a higher level facility when necessary, maintains continuous general surgery coverage, and has transfer agreements and standardized treatment protocols to plan for care of injured patients.

(9) “Level I pediatric trauma center” means *an ACS verified or state designated resource hospital that is central to the pediatric trauma care system, that provides total care for every aspect of injury, from prevention through rehabilitation, that maintains resources and personnel for patient care, education and research (usually in university-based teaching hospital), and provides leadership in education, research and system planning to all hospitals caring for injured pediatric patients in the region.*

Alternate proposed definition by TAC member:

an acute care hospital with resources to promptly and completely care for multi-system trauma patients less than 15 years of age. Prompt availability of these resources will be periodically verified by the ACS or by the Indiana State Health Department utilizing a published list of requirements developed by expert consensus. A level I pediatric trauma center will also be regularly engaged in research to improve trauma care, and education of all levels of pediatric trauma care providers.

(10) “Level II pediatric trauma center” means *an ACS verified or state designated hospital that provides comprehensive pediatric trauma care, regardless of severity of the injury, may be the most prevalent facility in a community and manages the majority of pediatric trauma patients or supplements the activity of a Level I pediatric trauma center, may be an academic institution or a public or private community facility located in an urban, suburban or rural area and, where no Level I Center exists, is responsible for pediatric education and system leadership.*

Alternate proposed definition by TAC member:

an acute care hospital with resources to promptly and completely care for multi-system trauma patients less than 15 years of age. Prompt availability of these resources will be periodically

verified by the ACS or by the Indiana State Health Department utilizing a published list of requirements developed by expert consensus.

(11) “trauma care” means care provided to patients at a high risk of dying from multiple and severe injuries, such as the following:

(A) combined system injury of two or more of the following: head, chest, abdomen, and extremities;

(B) in children, single system injury severe enough to cause shock, to require transfusion, *to require urgent surgical intervention*, or to necessitate observation or treatment in an intensive care unit.

(C) Central nervous system (CNS) injuries such as:

(i) spinal cord injury;

(ii) penetrating head injury;

(iii) depressed skull fracture;

(iv) open head injury;

(v) cerebral spinal fluid leak;

(vi) Glasgow coma score (GCS) less than 10;

(vii) deterioration in GCS of 2 or More;

(D) Lateralizing Signs. *[TAC member suggests deletion of this item]*

(E) Penetrating Injuries of the Head and Neck;

(F) Penetrating Injuries of the Trunk;

(G) Penetrating Injuries to the Extremities with neurovascular Interruption.

(H) The following chest injuries:

(i) wide Superior Mediastinum;

(ii) major chest wall injury;

(iii) cardiac Injury;

(iv) severe pulmonary contusion.

(I) Pelvic disruption with shock or evidence of continued hemorrhage or open pelvic injury.

(J) Secondary deterioration:

(K) Sepsis;

(L) Multiple organ system failure (deterioration in CNS, cardiac, pulmonary, hepatic, renal or hemopoietic systems);

(M) Renal failure requiring dialysis. *[TAC member suggests (K),(L), and(M) should be subparts of (J).]*

(12) “Trauma center” means a hospital that provides trauma care.

(13) “Traumatic event” means *an occurrence that results in bodily injury such as the following:*

(A) *motor vehicle collision*

(B) *motor cycle collision*

(C) *falls*

(D) *pedestrian struck*

(E) *sports related accident*

(F) *assault*

(G) *drowning*

(H) *burn*

(I) *all-terrain vehicle accidents.*

Alternate definition proposed by TAC member

an incident where one or more physical injuries occurs as a result of an external force on the body.

(Emergency Medical Services Commission, 836 IAC 1.5-3)

836 IAC 1.5-4 Transportation destination procedures-Adult

Authority: IC 16-31-2-7

Affected: []

Sec. 4. (a) On-scene time. Following patient extrication and ascertainment of scene safety, the on-scene time should be limited to ten (10) minutes or less. Emergency medical services personnel should not extend on-scene time beyond ten (10) minutes while waiting for air transport to arrive unless the on-scene waiting time is shorter than the ground transport time to the closest acute care facility. If the anticipated waiting time is longer than the ground transport time to the closest acute care facility, the air medical provider may be diverted to the receiving acute care facility. *[Comment from 2 TAC members that they don't agree with this cut-off time; no evidence that shorter scene time results in improved outcome . Suggested changed language is : On scene time. Following ascertainment of scene safety and patient extrication, the on-scene time should be minimized. Emergency medical services personnel should not extend on-scene time while waiting for air transport to arrive unless the on-scene waiting time is shorter than the ground transport time to the closest acute care facility.]*

Exception: Extenuating circumstances such as mass casualty events.

(b) Closest Trauma Center. Patients should be transported by ground or air to the closest Level I or Level II Trauma Center as measured by the shortest estimated transport time.

Exceptions:

1. Transport to a Level I or II Trauma Center other than the closest center is permitted if the difference in transport time is less than 5 minutes.
2. the closest trauma center is on ambulance or trauma diversion.

(c) Ground transport time of less than thirty (30) minutes. If ground transport time to a Level I or II Trauma Center is anticipated to be less than 30 minutes, all trauma patients meeting Step One, Two or Three criteria in the Field Triage Decision Scheme should be transported to the closest ACS Verified or State Designated Level I or II Trauma Center. *[Comment from TAC member that a more appropriate time might be 40-45 minutes, assuming the patient doesn't require extrication. Another TAC member asked "what mechanism exists for state designation of Level I or Level II trauma centers?]*

Exception: Airway or ventilation concerns that cannot be adequately stabilized for the anticipated transport time by available providers should be transported to the closest appropriate acute care facility.

(d) Ground transport time of greater than thirty (30) minutes. If ground transport time to a Level I or II Trauma Center is anticipated to be greater than 30 minutes the following apply *[Comment from TAC member that a more appropriate time might be 40-45 minutes, assuming the patient doesn't require extrication.]*:

(1) Total air transport time of less than forty-five (45) minutes. If total air transport time

(from dispatch to trauma center) is anticipated to be less than forty-five (45) minutes, Step One and Two patients should be transported by air to the closest Level I or II Trauma Center.

Exceptions:

1. weather or other local conditions prohibit air travel to the scene or to the closest Level I or II Trauma Center.
2. on-scene wait time would exceed time required to transport the patient to the closest appropriate acute care facility by ground. In this situation the air medical provider may be diverted to the receiving acute care facility.
3. airway or ventilation concerns that cannot be adequately stabilized for the anticipated transport time by available providers.
4. patients in cardiac arrest at the scene after blunt trauma should not be transported by air. *[TAC member suggests alternate text: Pulseless and apneic patients at the scene after blunt trauma should not be transported.]*

All exceptions should be transported to the closest appropriate acute care facility.

(2) Total air transport time is greater than forty-five (45) minutes. If total air transport time is anticipated to be greater than forty-five (45) minutes, Step One and Two patients should be transported by ground to the closest ACS Verified or State Designated Level III Trauma Center or, if there is no Level III Trauma Center within 30 minutes by ground transportation, to the closest appropriate acute care facility.

(e) Step Three patients should be transported by ground to the closest ACS Verified or State Designated Level III Trauma Center or, if there is no Level III Trauma Center within 30 minutes by ground transportation, to the closest appropriate acute care facility.

(Emergency Medical Services, 836 IAC 1.5-4)

836 IAC 1.5-5 Transportation destination procedures - Pediatrics

Authority: IC 16-31-2-7

Affected: []

Sec. 5. (a) Pediatric trauma patients (patients less than fifteen (15) years old) should be transported to a Level I or II Pediatric Trauma Center if one is available within the following transport time criteria.

Exceptions:

1. Transport to a Level I or II Pediatric Trauma Center other than the closest trauma pediatric center is permitted if the difference in transport time is less than 5 minutes.

2. the closest pediatric trauma center is on ambulance or trauma diversion.

(1) Where ground transport time is less than thirty (30) minutes, Step One, Two, and Three patients should be transported by ground to the closest ACS Verified or State Designated Level I or II Pediatric Trauma Center. *[TAC member asked “what mechanism exists for state designation of Level I or Level II trauma centers?]*

Exception: Airway or ventilation concerns that cannot be adequately stabilized for the anticipated transport time by available providers should be transported to the closest appropriate acute care facility.

(2) Where ground transport time is greater than thirty (30) minutes and total air transport time is less than forty-five (45) minutes, Step One and Two patients should be transported by air to the closest Level I or II Pediatric Trauma Center.

Exceptions:

- 1. weather or other local conditions prohibit air travel to the scene or to the closest Level I or II Pediatric Trauma Center.**
- 2. on-scene wait time would exceed time required to transport the patient to the closest appropriate acute care facility by ground. In this situation the air medical provider may be diverted to the receiving acute care facility.**
- 3. airway or ventilation concerns that cannot be adequately stabilized for the anticipated transport time by available providers.**
- 4. patients in cardiac arrest at the scene after blunt trauma should not be transported by air. [TAC member suggests alternate text: *Pulseless and apneic patients at the scene after blunt trauma should not be transported.*]**

(3) If there is no Pediatric Trauma Center within the above transport time criteria, pediatric trauma patients meeting the criteria in subdivision (1) and subdivision (2) above, should be transported to the closest non-pediatric Level I or II Trauma Center using the same transport time criteria.

(4) If transport times exceed the above parameters, pediatric trauma patients should be transported by ground to the closest ACS Verified or State Designated Level III Trauma Center, or if there is no Level III Trauma Center within 30 minutes by ground transportation, to the closest appropriate acute care facility.

The same exceptions listed under E.2, E.3 and E.4 also apply to pediatric patients.

(Emergency Medical Services Commission, 836 IAC 1.5-5)

836 IAC 1.5-6 Transportation destination procedures - Pregnancy

Authority: IC 16-31-2-7

Affected: []

Sec. 6. Pregnancy. Pregnant trauma patients who are beyond twenty (20) weeks gestation should be transported using the above transport time criteria contained in section 4 above. If the pregnant patient is not being transported to an ACS Verified or State Designated Trauma Center, the closest facility that provides both emergency medicine and obstetrical services should be selected. *(Emergency Medical Services Commission, 836 IAC 1.5-6)*

836 IAC 1.5-7 Transportation destination procedures - Multiple casualties

Authority: IC 16-31-2-7

Affected: []

Sec. 7. Multiple Casualties. If a traumatic event results in multiple casualties which, in the judgment of the providers in the field, and in consultation with local medical control, would result in the overwhelming of medical resources at the closest trauma center or appropriate acute care facility, less severely injured patients may be transported to the next closest trauma center(s) or appropriate acute care facilities as necessary.

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[TAC member comment: This section unnecessarily constrains a region's mass casualty plan. For example, in a metropolitan region, less severely injured patients may be transported to trauma centers or acute care facilities which are two or three radius iterations away from the scene to allow for immediate and some delayed patients to be equitable divided and sent to the core area hospitals. In a catastrophe, patients with minor injuries may not be transported to an acute care facility at all, but rather to an alternate treatment site or clinic. This clause could potentially create civil liability for a bad outcome in these cases if the patient was not transported to the sequentially-appropriate trauma center or acute care facility as written. (Emergency Medical Services Commission, 836 IAC 1.5-7)

836 IAC 1.5-8 Transportation destination procedures - Transport Across State Lines.

Authority: IC 16-31-2-7

Affected: []

Sec. 8. The provisions of sections 3 through 7 above should be applied for patients being transported across state lines. *[TAC member comment: This section seems to suggest that 1) out-of-state providers, who have not had adequate notification and opportunity to comment on the rule, be subject to them when they cross the state line into Indiana when a traumatic episode occurs just across the border, and 2) that Indiana ambulances must follow this triage and transport schema when transporting into an adjacent state, perhaps despite that state's trauma plan.]*

(Emergency Medical Services Commission, 836 IAC 1.5-7)

836 IAC 1.5-9 Provider Judgment and Local Medical Control.

Authority: IC 16-31-2-7

Affected: []

Sec. 9. Provider Judgment and Local Medical Control. Providers may decide independently, or in association with on-line medical direction, to transport a patient not otherwise meeting the criteria in Steps One through Three, or not otherwise specified in this article, to a trauma center. *(Emergency Medical Services Commission, 836 IAC 1.5-9)*

836 IAC 1.5-10 Advance notification

Authority: IC 16-31-2-7

Affected: []

Sec. 10. Providers shall provide advance notification to the receiving facility whenever possible to allow appropriate activation of resources prior to patient arrival. *(Emergency Medical Services Commission, 836 IAC 1.5-10)*

836 IAC 1.5-11 Patient choice

Authority: IC 16-31-2-7

Affected: []

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Sec. 11. The patient has the right to determine to which hospital they choose to be taken. If the patient is a minor or incompetent, the parent or legal guardian has the right to make that choice on the patient's behalf. If a protocol provides for transport to a specific facility, the patient, or parent or guardian where applicable, has the right to choose to be transported to a different facility.

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