ILLINOIS REGION 4 TRAUMA PLAN

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ILLINOIS EMS REGION 4 TRAUMA PLAN

Section 1. Purpose

Participants in the Trauma System of Region 4 of the State of Illinois share a commitment to the organized, comprehensive and timely care of persons who are injured and critically ill. They believe that the ability to respond appropriately to the needs of trauma victims require the cooperation and skills of the entire healthcare team.

Section 2. Authority

This Trauma Region Plan is developed under the authority of the Illinois Administrative Code, Title 77, Chapter 1, Subchapter F, Part 515.220

The plan establishes and implements agreements of cooperation for the review and coordination of services within the Trauma Region 4

Section 3. Boundaries

A. Region 4 boundaries include the following counties:

Madison, St. Clair, Monroe, Randolph, Bond, Clinton, Washington

B. A listing of all hospitals in the region and hospitals affiliated with the region by county are as follows.

Madison County	
1. Alton Memorial Alton, Illinois	Resource Hospital
2. OSF Saint Anthony's Hospital Alton, Illinois	Resource Hospital
3. Anderson Hospital Maryville, Illinois	Resource Hospital
4. Gateway Regional Center Granite City, Illinois	Participating Hospital (Anderson)
5. HSHS St. Joseph's Hospital Highland, Illinois	Associate Hospital (HSHS St. Elizabeth's Hospital)
Bond County	
6. HSHS Holy Family Hospital Greenville, Illinois	Participating Hospital
St. Clair County	
7. Touchette Regional Hospital Centreville, Illinois	Participating Hospital (SWIL)
8. Memorial Hospital Belleville, Illinois	Resource Hospital (SWIL)
9. Memorial Hospital-East Shiloh, Illinois	Associate Hospital (SWIL)

10. HSHS St. Elizabeth's Hospital O'Fallon, Illinois	Resource Hospital
Clinton County	
11. HSHS St. Joseph's Hospital Breese, Illinois	Participating Hospital (HSHS St. Elizabeth's Hospital)
Monroe County	
None	
Randolph County	
12. Red Bud Regional Red Bud, Illinois	Participating Hospital (SWIL)
13. Sparta Community Hospital Sparta, Illinois	Participating Hospital (SWIL)
14. Chester Memorial Hospital Chester, Illinois	Participating Hospital (SWIL)
Washington County	
15. Washington County Hospital Nashville, Illinois	Participating Hospital in Region 5 by waiver (Good Samaritan)
Greene County - EMS Region 3 per EMS Act	
16. Boyd Memorial Hospital Carrollton, Illinois	Participating Hospital in Region 4 by waiver (OSF Saint Anthony's)
Macoupin County – EMS Region 3 per EMS Act	
17. Community Memorial Hospital Staunton, Illinois	Participating Hospital in Region 4 by waiver (Anderson)
Fayette County - EMS Region 6 per EMS Act	
18. Fayette County Hospital Vandalia, Illinois	Participating Hospital in Region 4 by waiver (Anderson)

C. REGIONAL TRAUMA CENTERS

Illinois Designated Trauma Centers	
Barnes-Jewish Hospital	Level I Trauma Center
SSM Cardinal Glennon Children's Hospital	Level I Pediatric Trauma Center
St. Louis Children's Hospital	Level I Pediatric Trauma Center
SSM Saint Louis University Hospital	Level I Trauma Center
SIH Memorial of Carbondale	Level II trauma center
NON -Illinois Designated Trauma Centers	
Mercy St. Louis Hospital	Level I trauma center – Not IL designated
Mercy South	Level II trauma center – Not IL designated
SSM Depaul Hospital	Level II trauma center – Not IL designated
SSM St. Joseph Lake St. Louis	Level III trauma center – Not IL designated

Section 4: Participants of Illinois Region 4 Trauma Committee

A. Voting Members of the committee will include:

1. Trauma Medical Directors from each trauma center (4)

2. Trauma Program Manager from each trauma center (4)
3. Administrative Representative from each trauma center (4)
4. EMS Medical Director from one resource hospitals (1)
5. Private ground ambulance representative (1)
6. Public ground ambulance representative (1)
7. EMT from highest level practicing in region (1)
8. ED practicing physician in region (1)
9. Trauma Nurse Specialist from a trauma center (1)
10. EMS System Coordinator (from different system than EMS Medical Director) (1)

B. Every two years, the members of the Trauma Center Medical Directors Committee shall rotate serving as Committee Chair, and select the ground ambulance representative providers, EMT, emergency physician, EMS System Coordinator and TNS who shall serve on the Advisory Committee. [210 ILCS 50/3.25 (e)]
C. IDPH Regional EMS Coordinator (non-voting)

Section 5. System Management

A. Process for Changing Plan and Conduct of Regional Trauma Committee Meetings

1. The Regional Trauma Advisory Committee may meet quarterly and amend the Trauma Region Plan at any meeting of the Regional Trauma Committee.
2. All meetings of the Regional Trauma Committee will be governed by Robert's Rule of Order and will be open meetings, subject to contrary provisions of the Trauma Region Plan. The Director of one of the Level I Trauma Center or their designee will chair the Regional Trauma Committee. The Director may appoint subcommittees from time to time to assist the full Committee. The chair will rotate every 2 years between the 4 Level I trauma Centers from Missouri.
3. Any amendment of the Trauma Region Plan shall comply with Emergency Medical Services and Trauma Center Code.
4. Special Meetings. Special meetings of the Committee may be called by or at the request of the Chairperson or any two (2) Committee members.
5. Place of Meeting. The Chairperson may designate any place within Region 4 as the place of the meeting.
6. Notice of Meeting: Written or printed notice, stating the place, time and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than five (5) days before the date of the meeting, either by person- or by email, or at the direction of the person or persons calling the meeting, to each without objecting to the form or notice of that meeting at the commencement of the meeting, shall be deemed to have waived any objections to the form of notice.
7. Each regular member shall have one vote. That individual shall vote in person or by

written proxy executed prior to and in attendance of the meeting.

8. Quorum. Fifty-one percent (51%) (rounded to the highest whole number) of the Committee members present in person constitutes a quorum at any meeting of theCommittee; provided that if less than a quorum are represented at any meeting, a majority of the members so present may adjourn the meeting.
9. Majority Control. The vote of a majority of the Committee members present at a meeting at which a quorum is present shall be necessary for the adoption of any matter voted upon by the Committee.

Section 6. Pre-Hospital Care

A. Field Triage

B. All traumatically injured patients should be evaluated using the Region 4 Field Triage tool adapted from the American College of Surgeons Committee on Trauma (ACS-COT) 2021 version. (Appendix I)

Patients meeting Red Criteria, Medical Control will be notified, Field Trauma Treatment Protocols (Approved Region 4 SOG's and Treatment Protocols) will be initiated with rapid transport according to their Resource Hospital Medical Control and/or preferentially to Regional Trauma center within boundaries.

1. Red and Yellow Criteria of the Minimum Trauma Field Triage Criteria from Section 515. Appendix C of the - Illinois Administrative Code - will be used for trauma field triage. Please refer to Appendix I of this document.

   For mass causality incidents the Region 4 Standard Operating guidelines (SOGs) for Start Triage will be used. Please refer to Appendix II of this document.

2. If the patient does not meet the field triage guidelines for trauma:
   a. Consideration will be given to transport the patient to the hospital of his/her choice.
   b. If a family member is at the scene of the emergency and that person has Power of Attorney for health care, then he/she can request that the victim be transported to a specific hospital.
   c. If the patient is less than 18 years of age and not critically injured, the parent can request that the child be transported to a specific hospital.

C. Transport

1. If the scene is within 60 minutes of a trauma center, the patient should be transported directly to the appropriate level trauma center with EMS discretion.
2. Call for ILS/ALS assist per EMS systems protocol
3. Bypass Policy for Region 4 is covered in EMS Regional plan.

Section 7. Trauma Care

A. Personnel

All patients will be seen initially by the Emergency Department Physician and/or a Registered Nurse.

B. Patient Evaluation

Patients who are not classified as trauma prior to arrival shall be evaluated to assess whether they should be classified as a trauma patient.

Treatment as per hospital protocols

Section 8. Pediatric Care

Region 4 has adopted EMSC Guidelines "Inter-facility consultation and/or transfer for evaluation of non-trauma and trauma pediatric medical patients."

Section 9. Inter-Hospital Transfer

A. The following list should help to identify patients who would benefit from Trauma Center transfer:

Suspected Child or Elder Abuse

Requiring blood to maintain vital signs

Signs or symptoms of shock for age

Penetrating injuries to the torso and concern for internal injury (T shirt and bikini brief area)

Patients requiring mechanical ventilation

Deterioration in central nervous system, cardiac, pulmonary, hepatic, renal or hematologic systems

Penetrating/open injuries of skull

Altered Mental Status due to trauma

Continued Glasgow Coma Scale less than 15

Glasgow Coma Scale deterioration of 2 points or more

Hemothorax

Pneumothorax

Spinal cord injury

Pelvic fracture

Two or more long bone fractures
Wide superior mediastinum
Cardiac injury

Chest

Pelvis

Multiple System Injury

- Burns

- Burns meeting American Burn Association (ABA) criteria should preferentially be transferred to a burn center capable of treating traumatic injuries.

Secondary Deterioration related to trauma

- Sepsis
- Single or multiple organ system failure
- .

B. Transfers will be handled by institutional transfer agreement.

Transfer Agreements
Each hospital participating in the Trauma Region Plan should have transfer agreements as follows (Per EMS Act this is a guideline for level I and Level II Trauma Centers):

Non-Trauma Hospitals
Level I Trauma Centers
Nearest Level II Trauma Centers

Participating Trauma Hospitals
Level I Trauma Center
Nearest Level II Trauma Center

Level I Trauma Centers

For services outside the current resources of the transferring trauma center e.g. Burn Center, Spinal Cord Center, Rehabilitation Center.

C. Trauma patients being transferred to a Level I or Level II facility or to more specialized care should be enroute to tertiary destination within two hours after arrival when stabilized within the capabilities of the referring institution.

D. Several conditions exist in which rapid definitive surgical treatment significantly affects the patient outcome (e.g., aortic injury, acute epidural). In an effort to minimize the time prior to specialized surgery, the Emergency Physician at the initial hospital may initiate the transfer process to definitive care prior to surgical consult after acceptance from trauma center if the specialized services are not immediately available.

E. The transferring physician may write orders governing care during patient transport (in the absence of specific transport protocols).

F. While the responsibility for transport is shared by both the receiving and transferring physicians, the primary responsibility for transferred patients rests with the party that arranges the transportation.

Section 10. Data Collection

A. Participation Agreements

Each hospital agrees to participate in providing trauma patient care and maintaining data collection specific to the institution's level of involvement.

B. Items of Data Collection

1. Trauma centers will provide to the Region 4 Committee a quarterly summary of PI data and response for loop closure on the audit filters listed below for PI purposes:
   a. Primary vs Transfer
   b. Average scene time
   c. Activation Levels
   d. ED Disposition
   e. Average ED LOS at referring hospitals prior to transfer
   f. Highest ISS

C. All information submitted for QI shall be confidential.

D. Trauma Centers

Trauma Centers will comply with Trauma Center Uniform Reporting Requirements as per Section 515.2050 of the Act.

Section 11. Quality Assurance

A. Regional Data

The data compiled by hospitals and Trauma Centers for Region 4 will be submitted to the Chairperson of the Region 4 Committee or their designee will be compiled and summarized and presented to the Trauma Region 4 Committee at its regularly scheduled meeting. As necessary the data will be reviewed by a subcommittee of the Trauma Region Committee and any perceived system problems relating to identification, triage, transport or hospital care will be identified and investigated further as appropriate. These will be discussed at the Trauma Region Committee meeting where proposals for resolution of these issues will be made and action taken as appropriate and as provided by IDPH rule.

B. IDPH State Trauma Registry Data

As Region-specific data from the State Trauma Registry becomes available it will be scrutinized by the Trauma Region Committee to identify strengths and weaknesses of the Trauma region plan. The Trauma Region Committee will develop identifiers to assist in the evaluation of the performance of the Regional Trauma System. Specific facilities will not be identified in reports.

Section 12. Region Wide Disaster Preparedness Plan

A Regional Disaster Plan has been developed by Region 4. It is included in the EMS Regional Plan.

Appendix I Minimum Trauma Field Triage Criteria

Appendix I

Region 4 Field Trauma Triage of Injured Patients

If a trauma center is within 60 minutes of scene, consider direct transport.

RED CRITERIA

High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
• Penetrating injuries to head, neck, torso, and proximal extremities • Skull deformity, suspected skull fracture • Suspected spinal injury with new motor or sensory loss • Chest wall instability, deformity, or suspected flail chest • Suspected pelvic fracture • Suspected fracture of two or more proximal long bones • Crushed, degloved, mangled, or pulseless extremity • Amputation proximal to wrist or ankle • Active bleeding requiring a tourniquet or wound packing with continuous pressure	**All Patients with a Mechanism of Injury** • Unable to follow commands (motor GCS < 6) • RR < 10 or > 29 breaths/min • Respiratory distress or need for respiratory support • Room-air pulse oximetry < 90% **Age 0–9 years** • SBP < 70mm Hg + (2 x age in years) **Age 10–64 years** • SBP < 90 mmHg or • HR > SBP **Age ≥ 65 years** • SBP < 110 mmHg or • HR > SBP

Injured patients meeting any one of the above RED criteria should be transported to a Level I Trauma Center within the geographic constraints of the regional trauma system

YELLOW CRITERIA

Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
• High-Risk Auto Crash – Partial or complete ejection – Significant intrusion (including roof) • >12 inches occupant site OR • >18 inches any site OR • Need for extrication for entrapped patient – Death in passenger compartment – Child (age 0–9 years) unrestrained or in unsecured child safety seat – Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height > 10 feet (all ages)	**Consider risk factors, including:** • Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy > 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric trauma center **If concerned, take to a trauma center**

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

Appendix II REGION 4 STANDARD OPERATING PROCEDURES (SOPs)

START TRIAGE PLAN

The START plan (Simple Triage & Rapid Treatment) was developed to be used in the event of a mass casualty incident (MCI). This plan allows Rescuers, EMTs & Paramedics to triage a patient at a MCI in 60 seconds or less. The plan is based on three observations of each patient:

1. Respiration
2. Circulation
3. Mental Status

START Principles:

The START plan calls for rescuers to correct the main threats to life, obstructed airways and severe arterial bleeding. The START plan utilizes the Triage Card which classifies patients into four different areas for treatment. It is a system that quickly and accurately categorizes victims into treatment groups. The plan is simple to learn and simple to retain. It is extremely useful in the MCI setting by maximizing the efficiency of the rescuers.

The Triage Team must evaluate and place the patients into one of four categories.

Deceased (BLACK) – No ventilations present even after attempting to reposition the airway.

Immediate (RED) – Ventilations present only after repositioning the airway. Also place into this category if respiratory rate is greater than 30 per minute. Delayed capillary refill (greater than 2 seconds) or the patient is unable to follow simple commands.

Delayed (YELLOW) – Any patient who does not fit into either the immediate or minor categories.

Minor (GREEN) – Separate from the general group at the beginning of the triage operation. Also known as the "walking wounded". Direct patients away from the scene to a designated safe area. Use these patients to control bleeding and assist in airway maintenance of immediate patients.

START Procedures:

RESPIRATORY

- Every patient will be assessed for ventilation rate & adequacy.
- If a patient is not breathing, check for foreign objects causing obstruction in the mouth. Remove loose dentures.
  - Reposition the head, using cervical spine precautions if this does not delay assessment.
  - If the above efforts do not initiate respiratory efforts, TAG THE PATIENT BLACK
- Victims who have respirations less than 30 per minutes are NOT TO BE TAGGED AT THIS TIME. ASSESS THESE PATIENTS FOR PERFUSION.

PERFUSION

- The best method to assess perfusion is capillary nail bed refill.
  - Press nail beds or lips, then release. Color should return to the area within two seconds.

  - If it takes more than two seconds, the patient is showing signs of inadequate perfusion and MUST BE TAGGED RED.
  - If the color returns within two seconds, the patient is NOT TAGGED UNTIL THE MENTAL STATUS IS ASSESSED.
- If capillary refill cannot be assessed, palpate the radial pulse. In most cases, if the radial pulse cannot be felt, the systolic blood pressure will be below 80 mmHg.
- Hemorrhage control techniques will be incorporated into this section. Control significant bleeding by direct pressure and elevate the lower extremities.
- Utilize the "walking wounded" to assist the hemorrhage control on himself or another patient.

MENTAL STATUS

- The mental status evaluation is used for patient whose respirations and perfusion are adequate. To test mental status, the rescuer should ask the victim to follow a simple command such as, "open and close your eyes", or "squeeze my hands".
- If the patient cannot follow these commands, then TAG THE PATIENT RED.
- If the patient can follow these commands, TAG THE PATIENT GREEN.
- Only after all patients have been triaged can patients be treated. The above procedures should take no more than 60 seconds per patient.

TRIAGE TAGS

- Triage tags are completed during transportation to the hospital or in the treatment area if there is time. To fill out the tag properly, follow these instructions:
  - enter time of triage
  - enter date
  - enter other important information (history, treatment, etc…)
  - enter vital signs and the time taken in indicated areas
  - enter injuries on the diagram
  - enter name (if able to obtain)
  - enter address with city and state (if able to obtain)
  - EMT's rendering treatment will enter IV's drugs, and other treatments
  - tear off all colored areas below the determined priority and retain
  - attach tag SECURELY and in a CLEARLY VISIBLE area
- The corner of the tag marked with a cross is removed in the treatment section prior to moving to a medical facility. These should be given to the Sector Officer in that area.
- The corner marked with an ambulance is to be removed prior to the actual removal of the patient from the treatment area to a medical facility. It is to be retained by the crew until the end of the MCI. These are then given to the Sector Officer in charge of Transportation.