



IDAHO TIME SENSITIVE EMERGENCY SYSTEM

TRAUMA | STROKE | STEMI

Level IV Trauma Center

2020 Application & Resource Toolkit



IDAHO DEPARTMENT OF
HEALTH & WELFARE

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About the Idaho TSE System

Why a TSE program?

The 2014, Idaho Legislature approved and funded a plan to develop a statewide Time Sensitive Emergency (TSE) system of care that addresses three of the top five causes of deaths in Idaho: trauma, stroke, and heart attack (a.k.a. STEMI). Studies show that organized systems of care improve patient outcomes, reduce the frequency of preventable death, and improve the quality of life of the patient.

How does the TSE program work?

The Idaho Department of Health & Welfare provides oversight and administrative support for the day-to-day operation of the program.

A governor-appointed TSE Council made up of healthcare providers and administrators and EMS agencies representing both urban and rural populations is responsible for establishing Rules and Standards for the Idaho TSE System. The Council is the statewide governing authority of the system.

The state has been divided into six regions. Each of these has a TSE Regional Committee made of EMS providers, healthcare providers and administrators, and public health agencies. The regional committees will be the venue in which a wide variety of work is conducted such as education, technical assistance, coordination, and quality improvement. The TSE Regional Committees will have the ability to establish guidelines that best serve their specific community as well as providing a feedback loop for EMS and healthcare providers.

What guiding principles are the foundation of the Idaho TSE System?

- Apply nationally accepted evidence-based practices to time sensitive emergencies;
- Ensure that standards are adaptable to all facilities wanting to participate;

- Ensure that designated centers institute a practiced, systematic approach to time sensitive emergencies;
- Reduce morbidity and mortality from time sensitive emergencies;
- Design an inclusive system for time sensitive emergencies;
- Participation is voluntary; and
- Data are collected and analyzed to measure the effectiveness of the system.

How often is a center verified, and how much does it cost?

A center is verified every three years and an onsite survey is required for every verification process. The onsite survey fee is \$1,500 and must be submitted with the application. Once the center is designated, the designation fee can be paid in three annual payments of \$4,000.

Whom do I contact about the application process?

Idaho Time Sensitive Emergency Program

P.O. Box 83720

Boise, ID 83720-0036

tse@dhw.idaho.gov

<https://tse.idaho.gov>

Program Supervisor Melissa Ball

Melissa.Ball@dhw.idaho.gov

(208) 334-2124

Program Specialist Stacy Connolly

Stacy.Connolly@dhw.idaho.gov

(208) 334-5526

Please do not hesitate to contact us with any questions or concerns. We would be happy to help in any way we can to assist you in meeting these standards.

Application Process

National Verification

To apply for a designation as a Level IV Trauma Center in Idaho **using an approved national accredited body for verification**, please do the following:

1. Print and complete the application. Submit one application per facility. A completed application includes:
 - a. Facility and Personnel Profile;
 - b. Certification Statement; and
 - c. A copy of the verification letter.
2. Obtain the required signatures on the Certification Statement.
3. Put the application in a binder with labeled, tabbed dividers between each section: Profile, Certification Statement, and verification letter.
4. Mail the completed application and year one designation fee (\$4,000) to:

[Make checks payable to Bureau of EMS & Preparedness](#)

Bureau of EMS & Preparedness
Time Sensitive Emergency Program
P.O. Box 83720
Boise, ID 83720-0036

Or for FedEx, UPS, etc.
2224 E. Old Penitentiary Rd.
Boise, ID 83712

The TSE Program staff will notify you within 10 business days to confirm the receipt of the application and check.

Application Process

State Verification

To apply for a designation as a Level IV Trauma Center in Idaho **using the State of Idaho for verification**, please do the following:

1. Print and complete the application. Submit one application per facility. A completed application includes:
 - a. Facility and Personnel Profile;
 - b. Certification Statement;
 - c. Pre-Survey Questionnaire (PSQ); and
 - d. Required attachments.
2. Obtain the required signatures on the Certification Statement.
3. Use the current edition of the TSE Standards Manual as a reference to understand the designation criteria.
4. Put the application in a binder with labeled, tabbed dividers between each section: Profile, Certification Statement, and verification letter.
5. Mail the completed application and onsite site survey fee (\$1,500) to:

[Make checks payable to Bureau of EMS & Preparedness](#)

Bureau of EMS & Preparedness
Time Sensitive Emergency Program
P.O. Box 83720
Boise, ID 83720-0036

Or for FedEx, UPS, etc.
2224 E. Old Penitentiary Rd.
Boise, ID 83712

The TSE Program staff will notify you within 10 business days to confirm the receipt of the application and check.

Application

Answer every question (circle either yes or no) and label all attachments. If you require additional space, please include a separate sheet. Once completed, print and sign the application (i.e. Certification Statement). Please contact the TSE Program staff if you have any questions or concerns regarding your application (208) 334-2124.

Personnel Profile:

Facility Name:		
Mailing Address:	City:	Zip:
Physical Address:	City:	Zip:
Phone:	County:	
Application Contact:		
Phone:	Email:	

Hospital Administrator/CEO:	
Phone:	Email:
Trauma Program Manager	
Phone:	Email:
Trauma Medical Director	
Phone:	Email:

Facility Profile:

Number of ED Beds:

Number of ED Beds Designated for Critical Patients (Trauma, Stroke, STEMI):

Number of Inpatient ICU Beds:

Annual ED Volume:

Annual Trauma Volume:

Local Population Size the Facility Supports:

Name of Nearest Tertiary Facility:

Number of Miles and Approx. Time by Ground:

CERTIFICATION STATEMENT

I, _____ (CEO/COO), on behalf of _____ (facility), voluntarily agree to participate in the Idaho Time Sensitive Emergency System and Idaho TSE Registry as an Level IV Trauma Center. We will work with Emergency Medical Services (EMS) and other facilities in our area to streamline triage and transport of trauma patients and participate in our Regional Time Sensitive Emergency Committee.

I certify that:

- A. The information and documentation provided in this application is true and accurate.
- B. The facility meets the State of Idaho criteria to be designated as a Level IV Trauma Center.
- C. We will notify the Time Sensitive Emergency Program Manager immediately if we are unable to provide the level of service we have committed to in this application.

Chair, Governing Entity

Date

Chief Executive Officer

Date

Trauma Medical Director

Date

Trauma Program Manager

Date

1. Trauma System

Time Sensitive Emergencies (TSE)

1.1 Is your staff involved in regional trauma system planning, development, and operation? YES NO

Center Mission

1.2 Attach a copy of the current resolution supporting the trauma center from the medical staff.

Refer to the *Toolkit* for sample.

Medical Staff Resolution (attachment)

1.3 Attach a copy of the current resolution supporting the trauma center from the hospital board.

Refer to the *Toolkit* for sample.

Hospital Board Resolution (attachment)

1.4 Do you have sufficient infrastructure, staff, equipment, and support to the trauma program to provide adequate provision of care? YES NO

EXPLAIN:

2. Description of Trauma Center

Description of the Trauma Center

2.1 Is your trauma program empowered to address issues that involve multiple disciplines? YES NO

EXPLAIN:

2.2 Can you provide initial resuscitation of the trauma patient and immediate intervention to control hemorrhage and to assure maximum stabilization prior to referral to an appropriate higher level of care? YES NO

EXPLAIN:

Trauma Leadership

Trauma Medical Director

2.3 Do you have a Trauma Medical Director with the authority and administrative support to lead the program? YES NO

Attach a copy of the Trauma Medical Director's job description.

Trauma Medical Director's Job Description (attachment)

2.4 Is your Trauma Medical Director current in ATLS? YES NO

2.5 Provide your Trauma Medical Director's CV supporting their personal involvement in patient care, staff education, and professional organizations.

Attach supporting documentation.

Trauma Medical Director's CV & ATLS Card (attachment)

2.6 Does your Trauma Medical Director work with midlevel providers to ensure appropriate orientation, credentialing, and skill maintenance? YES NO

EXPLAIN:

2.7 Is your Trauma Medical Director responsible for developing and directing the quality improvement program? YES NO

2.8 Is your Trauma Medical Director accountable for all trauma care and does he or she exercise administrative authority for the trauma program? YES NO

2.9 Does your Trauma Medical Director participate in the internal trauma QI process by attending at least 50% of meetings? YES NO

Attach supporting documentation.

TMD PIPS Attendance (attachment)

Trauma Program Manager

2.10 Do you have a Trauma Program Manager? YES NO

Does he or she show evidence of educational preparation and clinical experience caring for injured patients? YES NO

Attach the Trauma Program Manager's CV.

Trauma Program Manager's CV (attachment)

2.11 Is your Trauma Program Manager responsible for the use of internal trauma registry data for quality improvement and trauma education? YES NO

Refer to the *Toolkit* for sample.

Attach a copy of the Trauma Program Manager's job description.

Trauma Program Manager's Job Description (attachment)

2.12 Does your Trauma Program Manager work with your Trauma Medical Director to address the multidisciplinary needs of the trauma program? YES NO

EXPLAIN:

2.13 Does your Trauma Program Manager serve as a liaison to local EMS agencies and accepting centers? YES NO

This may be satisfied by participating in your Regional TSE Committee.

EXPLAIN:

3. Clinical Functions

3.1 Is the criteria for graded activation (priority level) clearly defined and continuously evaluated by the PIPS program? YES NO

Refer to the *Toolkit* for TSE Field Trauma Triage Guidelines and state requirements.

Attach a copy of the criteria for graded activation.

Criteria for Graded Activation (attachment)

3.2 Addressed in 3.1.

3.3 Can you provide the necessary human and physical resources to properly administer acute care consistent with ATLS? YES NO

EXPLAIN:

3.4 Do you have written protocols outlining which types of trauma patients a (including pediatric patients) the facility is capable of providing inpatient services?

YES NO

Refer to the *Toolkit* for sample.

Attach the transfer protocols.

Patient Transfer and Admit Protocol (attachment)

3.5 Do you have established protocols to ensure immediate and appropriate care of adult and pediatric trauma patient? YES NO

Trauma Team

3.6 Do you have defined criteria for which providers respond for each level of Trauma Team activation? YES NO

Refer to the *Toolkit* for sample.

Is the criteria reviewed annually? YES NO

Attach the Trauma Team graded activation response criteria.

Trauma Team Graded Activation Response Criteria (attachment)

3.7 Have all trauma/general surgeons, emergency providers, and midlevel providers on the Trauma Team completed ATLS at least once? YES NO

Attach supporting documentation.

Trauma Team ATLS Tracking Sheet (attachment)

3.8 Do your Trauma Team members participate in PIPS and TPOPPC?

YES NO

3.9 Are all Trauma Team physicians and midlevel providers credentialed by the medical staff and governing board? YES NO

Emergency Department

3.10 Are your physicians or midlevel providers in the ED on patient arrival for highest level activation, provided there is adequate notification from the prehospital providers? YES NO

Does the PIPS program demonstrate compliance with response time of 30 minutes at least 80% of the time? YES NO

Data point: Percentage of physician/APP response less than 30 minutes.

Data point: Average physician/APP response time. _____

3.11 Do you have emergency coverage by a physician or midlevel provider 24/7?
 YES NO

3.12 Addressed in 3.7.

3.13 Are your midlevel providers who participate in the initial evaluation of trauma patients current in ATLS? YES NO

Collaborative Clinical Services

Radiology

3.14 Do you have conventional radiology services (non-CT) available 24/7?
 YES NO

Laboratory

3.15 Do you provide laboratory services 24/7 for the standard analysis of blood, urine, and other body fluids, including microsampling when appropriate?
 YES NO

Attach a copy of the laboratory schedule and on-call policy.

Laboratory Schedule and On-call Policy (attachment)

3.16 Is the blood bank capable of blood typing and cross-matching? YES NO
Attach supporting documentation.

Blood Bank Capabilities (attachment)

3.17 Do you have a rapid transfusion protocol developed collaboratively between
the trauma service and the blood bank? YES NO

Refer to the *Toolkit* for sample.

Attach supporting documentation.

Rapid Transfusion Protocol (attachment)

Nutrition

3.18 Do you have nutrition support services available? YES NO

Attach supporting documentation.

Nutrition Services (attachment)

Social Services

3.19 Do you have social services? YES NO

Attach supporting documentation.

Social Services (attachment)

3.20 Do you screen all trauma patients for alcohol misuse? YES NO

Do you provide referral resources, if appropriate? YES NO

Attach supporting documentation.

Alcohol Intervention (attachment)

4. Prehospital Trauma Care

4.1 Do you participate in prehospital care protocol development? YES

NO

Attach supporting documentation.

Prehospital Trauma Care Training (attachment)

5. Interhospital Transfer

5.1 Do you have written transfer agreements in place with higher level trauma centers? YES NO

Refer to the *Toolkit* for sample.

Do you have written transfer agreements in place with specialty referral centers (e.g. burn, pediatric, and rehabilitation centers)? YES NO

[Transfer agreements must be available at the time of the on-site survey.](#)

5.2 Is there a mechanism for direct physician-to-physician contact for arranging patient transfer? YES NO

EXPLAIN:

5.3 Addressed in 5.1.

5.4 Addressed in 3.4.

6. PIPS

Visit the TSE website at <http://tse.idaho.gov/> to download a copy of *Developing a PIPS Program*.

6.1 Do you have a PIPS program to ensure optimal care and continuous improvement of care? YES NO

Attach a copy of your PIPS policy.

PIPS Policy (attachment)

If your PIPS policy does not address each item 6.2 to 6.24, please provide supporting documentation addressing each criterion with your PIPS Policy attachment.

6.2 Is your PIPS program supported by a reliable method of internal data collection that consistently gathers valid and objective information necessary to analyze and identify opportunities for improvement? YES NO

6.3 Are system and process issues (such as documentation and communication), clinical care issues (including identification and treatment of immediate life-threatening injuries), and transfer decisions reviewed by your PIPS program?
YES NO

6.4 Do you use clinical practice guidelines and protocols? YES NO

6.5 Are all process and outcome measures documented in a written PIPS plan and updated annually? YES NO

6.6 Does your PIPS process of analysis occur at regular intervals to meet the needs of the program? YES NO

6.7 Does your PIPS process demonstrate problem resolution (i.e. loop closure)? YES NO

6.8 Are you able to separately identify the trauma patient for review? YES NO

6.9 Does your PIPS program have audit filters to review and improve pediatric and adult patient care? YES NO

Attach a list of the audit filters.

Audit Filters (attachment)

6.10 Do you use an internal registry to support your PIPS program? YES NO
Please contact TSE program staff if you need help creating an internal registry.

6.11 Are deaths categorized as unanticipated mortality with opportunity for improvement, anticipated mortality with opportunity for improvement, or mortality without opportunity for improvement? YES NO

6.12 Does your PIPS program review the organ donation rate? YES NO

If you do not provide surgical services, skip to 6.15.

6.13 Does your PIPS program have defined conditions requiring the surgeon's immediate hospital presence? YES NO

6.14 Does your PIPS program ensure that the PACU has the necessary equipment to monitor and resuscitate patients? YES NO
Refer to the *Toolkit* for a list of required equipment.

6.15 Are all Trauma Team activations categorized by the priority of response and quantified by number and percentage? YES NO

Data point:

	Number	Percentage
Priority 1		
Priority 2		
Priority 3		

6.16 Does your PIPS program work with receiving facilities to provide and obtain feedback on all transferred patients? YES NO

If you do not provide surgical services, skip to 6.20.

6.17 Does your PIPS program evaluate OR availability and delays when an available on-call team is used? YES NO

6.18 Are delays in trauma surgeon response time monitored and reviewed for cause of delay and opportunities for improvement? YES NO

6.19 Do you admit more than 10% of injured patients to nonsurgical services?
YES NO

If yes, does your PIPS program demonstrate the appropriateness of that practice? YES NO

6.20 Does your PIPS program review the care of injured children? YES NO

If you do not have an ICU, skip to 6.23.

6.21 In centers with ICU, are transfers to a higher level of care reviewed to determine the rationale for transfer, adverse outcomes, and opportunities for improvement? YES NO

6.22 Does your PIPS program document that timely, appropriate care, and coverage are being provided in the ICU? YES NO

6.23 Do you perform a PIPS review of all admissions and transfers? YES NO

6.24 Do you have a policy to notify dispatch and EMS agencies when on divert status? YES NO

Refer to the *Toolkit* for sample.

Attach supporting documentation.

Hospital Diversion Policy (attachment)

6.25 Does the center have a diversion policy and tracks the occurrence of diversion through the PIPS program? YES NO

7. TPOPPC

Visit the TSE website at <http://tse.idaho.gov/> to download a copy of *Developing a TPOPPC*.

7.1 Do you have a TPOPPC? YES NO

Is the TPOPPC multidisciplinary? YES NO

Does the TPOPPC address, assess, and correct global trauma and system issues? YES NO

Does the TPOPPC:

a. Handle processes? YES NO

b. Meet regularly? YES NO

c. Take and require attendance of medical staff involved in trauma care? YES NO

d. Have minutes? YES NO

e. Work to correct all overall program deficiencies to continue to optimize patient care? YES NO

Attach a copy of your TPOPPC Policy.

TPOPPC Policy (attachment)

8. TSE Registry

8.1 Is your trauma data submitted to the Idaho TSE Registry within 180 days of treatment at least 80% of the time? YES NO

Attach a letter from the Idaho TSE Registry supporting your answer.

Idaho TSE Registry Letter (attachment)

8.2 Addressed in 8.1.

8.3 Does your trauma program ensure that registry data confidentiality measures are in place? YES NO

9. Outreach & Education

9.1 Are you engaged in public and professional education specific to trauma?

YES NO

Attach a list of public and professional trauma educational opportunities from the past 12 months.

Trauma Education Documentation (attachment)

10. Prevention

10.1 Do you participate in traumatic injury prevention and bases activities on local data? YES NO

Attach supporting documentation for all activities in the past 12 months.

Injury Prevention Documentation (attachment)

10.2 Do you have someone in a trauma leadership position that has injury prevention as part of his or her job description? YES NO

Refer to the *Toolkit* for sample.

Attach a copy of the job description.

Injury Prevention's Job Description (attachment)

11. Disaster Planning and Management

11.1 Do you meet the disaster-related National Incident Management System requirements? YES NO

Refer to the *Toolkit* for requirements.

11.2 Is your Trauma Medical Director a member of your disaster committee?

YES NO

11.3 Do you participate in regional disaster management plans and exercises?

YES NO

11.4 Do you have a disaster plan described in your Disaster Manual? YES NO
Refer to the *Toolkit* for sample.

[Disaster Manual must be available at the time of the on-site survey.](#)

12. Organ Procurement

12.1 Do you have written protocols for declaration of brain death? YES NO
Refer to the *Toolkit* for sample.

Attach supporting documentation.

Brain Death Protocol (attachment)

Medical Staff Resolution

WHEREAS, traumatic injury is the leading cause of death for Idahoans between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Idaho Time Sensitive Emergency System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOVED that the medical staff of [HOSPITAL] resolves to support the hospital's trauma program and to participate with initiatives in the furtherance of the standards published by the Idaho Time Sensitive Emergency System for Level IV Trauma Centers.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

Chief of Staff

Date

SAMPLE

Hospital Board Resolution

WHEREAS, traumatic injury is the leading cause of death for Idahoans between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Idaho Time Sensitive Emergency System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOVED that the medical staff of [HOSPITAL] resolves to support the hospital's trauma program and to participate with initiatives in the furtherance of the standards published by the Idaho Time Sensitive Emergency System for Level IV Trauma Centers.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

Chairman of the Board

Date

SAMPLE

Trauma Medical Director Job Description

Job Title: Trauma Program Medical Director

Reports to: Chief of Medical Staff

Qualifications:

1. MD, PA, or NP
2. Member in good standing of the hospital or clinic medical staff
3. Currently certified in Advanced Trauma Life Support (ATLS)
4. Three years clinical experience in emergency/trauma care
5. Two years administrative experience
6. Ability to establish and maintain effective interpersonal relationships
7. Ability to accept and implement change
8. Ability to solve problems and make decisions
9. Demonstrated history of positive relations with colleagues, support staff, hospital-based providers, administrators, and patients

Nature and Scope: The Trauma Medical Director is responsible for the ongoing development, growth and oversight/authority of the Trauma Program. The Trauma Medical Director is responsible for promoting high standards of practice through development of trauma policies, protocols, and practice guidelines; participating in performance improvement monitoring; and oversee staff education. He/she has authority to act on all trauma performance improvement and administrative issues and critically review trauma deaths and complications that occur within the center. Decisions affecting the care of trauma patients will not be made without the knowledge, input and approval of the Trauma Medical Director.

Principal Duties and Responsibilities:

Administration:

- Participate in the research, development, and writing of trauma policies, protocols and practice guidelines.
- Implement all trauma program policies and procedures as they pertain to patient care.
- Organize, direct and integrate the trauma program with all other departments and services within the hospital.
- Promote a cooperative and collaborative working environment among the clinical disciplines involved in trauma care.
- Maintain an effective working relationship with the medical staff, trauma service staff, administration and other departments.
- Assess need for equipment, supplies, and budget.
- Assist the Trauma Program Manager in developing and meeting the trauma program budgetary goals.
- Oversee, participate in, and develop projects that ensure the cost-effectiveness of care provided by physicians and hospital.

Program Initiatives:

- Develop and provide input on the development and maintenance of practice guidelines, policies, and methodologies for medical/surgical trauma care.
- Participate in site review by regulatory agencies.

- Organize, direct, and implement departmental practices to assure continued compliance with applicable laws including the guidelines established by the Idaho Time Sensitive Emergency System.
- Demonstrate positive interpersonal relationship with colleagues, referral MDs, hospital personnel, and patients/families in order to achieve maximum operational effectiveness and customer satisfaction.
- Assure transfer agreements are in place and in good standing; maintain relationship with receiving facilities; and foster collaborative relationships.
- Make appropriate referrals for specialty services and communicate regularly with referring physicians as appropriate.
- Provide trauma care leadership and consultation for emergency, surgery, and intensive care unit departments.
- Participate in regional and statewide activities affecting the trauma program.
- Attend local and national meetings and conferences to remain current regarding issues relevant to the performance of duties.
- Demonstrate consistent, efficient, cost effective, and quality trauma care at all times.
- Participate in trauma patient/family satisfaction projects as developed by hospital.

Performance Improvement:

- Determine and implement PI activities appropriate to the trauma program.
- Oversee the trauma PI program and participate in other quality initiatives that deal with the care of injured patients.
- Review and investigate all trauma PI inquiries in collaboration with the Trauma Program Manager and refer to the appropriate committees.
- Monitor compliance with trauma treatment guidelines, policies, and protocols.
- Assure that the quality and appropriateness of patient care are monitored and evaluated and that appropriate actions based on findings are taken on a consistent basis.
- Report quality of care issues promptly to appropriate individuals including Trauma Program Manager and hospital administration.
- Identify and correct deficiencies in trauma care policies, guidelines, and protocols.
- Consult with appropriate medical staff and administration regarding quality care issues and adverse outcomes; identify areas to improve patient care.
- Coordinate, schedule, and facilitate the PI peer review process.
- Assist the Trauma Program Manager in evaluating the effectiveness of corrective actions resulting from PI processes.

Clinical Education:

- Support the requirements for trauma CME by participating and assisting in the education and training of center personnel physicians and specialists.
- Provide education for hospital staff regarding trauma program policies and appropriate medical practices.

Community Outreach:

- Maintain relations with community organizations and legislative bodies whose activities relate to trauma care and injury prevention.
- Participate in hospital outreach activities as requested by administration.
- Develop and participate in trauma community education and injury prevention activities.
- Function as a liaison to other centers within the region.

Trauma Program Manager Job Description

Job Title: Trauma Program Manager

Department: Trauma Services

General Summary: Maintains responsibility and accountability for trauma services strategic development, regulatory compliance, and associated activities related to trauma care throughout the organization and within the community.

Principal Duties and Responsibilities:

- Adheres to the general [FACILITY] standards to promote a cooperative work environment by utilizing communication skills, developing interpersonal relationships and team building; following the hospital's and departmental policies and procedures contributing to the overall quality of services; staying informed of changes in policies and procedures.
- Establishes effective networks with colleagues throughout [FACILITY] and referral region; maintains interaction with all members of the healthcare team, administration, management, community, patients, and families; develops and supports forums for discussion and resolution of product line issues; defines annual goals and objectives for the trauma services.
- Ensures that trauma services are provided in accordance with [FACILITY] mission, strategic initiatives and all internal and external regulatory standards; implements the mission of the trauma services line; maintains accreditation, regulatory, and professional standards impacting trauma services.
- Monitors financial viability of department through operational and capital budget input, expense control, and quality improvement.
- Ensures clinical progression toward defined quality outcomes, patient and family satisfaction, cost effectiveness, and systems efficiency.
- Enhances commitment to teach and education within the referral area.
- Serves as a driving force to achieve trauma services goals and overall organizational strategic commitments to care; recognizes and responds to contemporary healthcare trends and reimbursement issues impacting healthcare delivery practices.
- Ensures age developmentally appropriate care is provided in accordance with care guidelines for specific age groups served.

Principal Duties and Responsibilities:

In addition to the job-specific responsibilities listed above, all employees are expected to support and model [FACILITY] mission, vision, values, fundamentals of teamwork, service philosophy (CREDO), and other organizational competencies e.g. quality management, fiscal responsibility, safety, and continuous learning. Employees will be held accountable for knowledge and effective application of these principles.

Required Qualifications:

Education:

- Associates degree in nursing.

Experience:

- 5+ years in trauma, emergency or critical care services (or equivalent education and/or experience).

Certification/Licensure:

- ID State RN licensure, certification from Trauma Nursing Core Course (TNCC), Basic Life Support (BLS) for Healthcare Providers, Advanced Cardiac Life Support (ACLS), and Pediatric Advanced Life Support (PALS).

Skills:

- Excellent oral, written, and interpersonal communication skills; strong analysis/problem solving skills; computer skills; proven leadership ability; excellent planning, budgeting and fiscal management; exceptional skill and nursing practice in the trauma environment facilitating identification of potential clinical situations impacting trauma outcomes; ability to analyze data abstraction relations to trauma registry; ability to educate; excellent presentation skills.

Preferred Qualifications:

Bachelor's degree in nursing or health related field with a minimum of 5 years emergency, trauma and/or critical care nursing experience; previous management, strategic planning, program development, and budgetary experience.

Working Conditions:

Physical Requirements:

- Work requires moderate physical exertion up to 33% of the time with ability to lift objects weighing 50lbs. or less.

Environmental Conditions:

- Work is performed under normal working conditions with adequate lighting and ventilation; reasonably anticipated exposure to blood and body fluids once per month or more.

Mental/Visual Requirements:

- Job duties frequently require intense concentration or attention to detail (35-65% of work time).

Criteria for Consideration of Transfer

Central Nervous System

- Penetrating injury/open fracture, with or without cerebrospinal fluid leak
- Depressed skull fracture
- GCS <14 or deterioration
- Spinal cord injury or major vertebral injury

Chest

- Major chest wall injury or pulmonary contusion
- Wide mediastinum or other signs suggesting great vessel injury
- Cardiac injury
- Patients who may require prolonged ventilation

Pelvis/Abdomen

- Unstable pelvic ring disruption
- Pelvic fracture with shock or other evidences of continuing hemorrhage
- Open pelvic injury; Solid organ injury

Major Extremity Injuries

- Fracture/dislocation with loss of distal pulses
- Open long-bone fractures
- Extremity ischemia

Multiple-System Injury

- Head injury combined with face, neck, abdominal, or pelvic injury
- Burns with associated injuries
- Multiple long-bone fractures
- Injury to more than two body regions

Co-morbid Factors

- Age >55 years; children <5 years of age
- Cardiac or respiratory disease
- Insulin-dependent diabetes; morbid obesity
- Pregnancy
- Immunosuppression

Secondary Deterioration (Late Sequelae)

- Mechanical ventilation required
- Sepsis
- Major tissue necrosis
- Single or multiple organ system failure (deterioration in central nervous, cardiac, pulmonary, hepatic, renal, or coagulation systems)

Response to Graded Activation

For each priority, the Trauma Team members are:

Priority 1 Activation

- Emergency provider (present within 30 minutes of patient's arrival)
- One or two emergency department RNs
- Nursing supervisor
- Emergency department tech or EMT
- Respiratory therapy
- Laboratory technician
- Radiology technician
- Emergency department unit secretary
- Security
- Social services or chaplain

Priority 2 Activation

- Emergency provider (present within 30 minutes of patient's arrival)
- Emergency department RN
- Nursing supervisor
- Emergency department tech or EMT
- Laboratory technician
- Radiology technician
- Emergency department unit secretary
- Security

Priority 3 Activation

- Emergency provider (present within 30 minutes of patient's arrival)
- Emergency department RN
- Emergency department tech or EMT

SAMPLE

Transfer Agreement Example

This agreement is made and entered into by and between [YOUR FACILITY NAME, CITY, STATE], a nonprofit corporation (hereinafter called [YOUR FACILITY]) and [RECEIVING FACILITY NAME, CITY, STATE], a nonprofit corporation, (hereinafter called [RECEIVING FACILITY]):

WHEREAS, both [YOUR FACILITY] and [RECEIVING FACILITY] desire, by both means of this Agreement, to assist physicians and the parties hereto in the treatment of trauma patients (e.g. burn, traumatic brain injuries, spinal cord injuries, pediatrics); and whereas the parties specifically wish to facilitate: (a) the timely transfer of patients and information necessary or useful in the care and treatment of trauma patients transferred, (b) the continuity of the care and treatment appropriate to the needs of trauma patients, and (c) the utilization of knowledge and other resources of both facilities in a coordinated and cooperative manner to improve the professional healthcare of trauma patients.

IT IS, THEREFORE, AGREED by and between the parties as follows:

PATIENT TRANSFER: the need for transfer of a patient from [YOUR FACILITY] to [RECEIVING FACILITY] shall be determined and recommended by the patient's attending physician in such physician's own medical judgement. When a transfer is recommended as medically appropriate, a trauma patient at [YOUR FACILITY] shall be transferred and admitted to [RECEIVING FACILITY] as promptly as possible under the circumstances, provided that beds and other appropriate resources are available. Acceptance of the patient by [RECEIVING FACILITY] will be made pursuant to admission policies and procedures of [RECEIVING FACILITY].

[YOUR FACILITY] agrees that it shall:

Notify [RECEIVING FACILITY] as far in advance as possible of transfer of a trauma patient.

Transfer to [RECEIVING FACILITY] the personal effects, including money and valuables and information relating to same.

Make every effort within its resources to stabilize the patient to avoid all immediate threats to life and limbs. If stabilization is not possible, [YOUR FACILITY] shall either establish that the transfer is the result of an informed written request of the patient or his or her surrogate or shall have obtained a written certification from a physician or other qualified medical person in consultation with a physician that the medical benefits expected from the transfer outweigh the increased risk of transfer.

Affect the transfer to [RECEIVING FACILITY] through qualified personnel and appropriate transportation equipment, including the use of necessary and medically appropriate life support measures.

[YOUR FACILITY] agrees to transmit with each patient at the time of transfer, or in the case of emergency, as promptly as possible thereafter, pertinent medical information and records necessary to continue the patient's treatment and to provide identifying and other information.

[RECEIVING FACILITY] agrees to state where the patient is to be delivered and agrees to provide information about the type of resources it has available.

Bills incurred with respect to services performed by either party to the Agreement shall be collected by the party rendering such services directly from the patient, third party, and neither party shall have any liability to the other for such charges.

This Agreement shall be effective from the date of execution and shall continue in effect indefinitely. Either party may terminate this Agreement on thirty (30) days notice in writing to the other party. If either party shall have its license to operate revoked by the state, this Agreement shall terminate on the date such revocation becomes effective.

Each party to the Agreement shall be responsible for its own acts and omissions and those of their employees and contractors and shall not be responsible for the acts and omissions of the other institutions.

Nothing in this Agreement shall be construed as limiting the right of either to affiliate or contract with any hospital or nursing home on either a limited or general basis while this agreement is in effect.

Neither party shall use the name of the other in any promotional or advertising material unless review and written approval of the intended use shall first be obtained from the party whose name is to be used.

This Agreement shall be governed by the laws of the State of Idaho. Both parties agree to comply with the Emergency Medical Treatment and Active Labor Act of 1986, and the Health Insurance Portability and Accountability Act of 1996 and the rules now and hereafter promulgated thereunder.

This Agreement may be modified or amended from time to time by mutual agreement of the parties, and any such modification or amendment shall be attached to and become part of the Agreement.

SAMPLE

YOUR
FACILITY:

RECEIVING
FACILITY:

SIGNED
BY:

SIGNED
BY:

DATE:

DATE:

Trauma Transfer Protocol

PURPOSE: Trauma patients who will be transferred out of this facility to a definitive care facility emergently must be identified early, assessed, treated quickly and transferred efficiently in order to provide them the best possible outcome.

POLICY: Patients to be transferred can often be identified before they arrive in the emergency department. Arrangements for emergency transfer can often begin the moment the emergency department staff is notified by EMS that they are en route with a major trauma patient. Other patients may require evaluation by the emergency department physician before the decision to transfer is made.

Once the decision to transfer has been made, it should not be delayed to obtain x-rays, CT scans, or laboratory results that do not immediately impact the resuscitation. At this point, the focus of the emergency department staff is on resuscitation and stabilization with the goal of minimizing the patient's length of stay in the emergency department.

Consideration should be given to whether the patient will be transferred via ground or air. Generally, seriously injured trauma patients should be transferred by air when possible. Consideration should be given to ground transport if the patient can be received by the definitive care facility sooner than if transported by air or if aero medical transfer is significantly delayed or unavailable for any reason.

Transport vehicles should be staffed by paramedics and/or nurses whenever possible. Trauma patients on whom invasive procedures have been performed or who have received medications must be transferred under the care of personnel who are adequately trained to manage their resulting condition. If necessary, a physician or nurse from this hospital may accompany the patient.

The following are conditions that should immediately activate emergency transfer procedures:

Central Nervous System

- Penetrating injury, open fracture, with or without cerebrospinal fluid leak
- Depressed skull fracture
- GCS \leq 14 on decontamination
- Spinal cord injury or major vertebral injury

Chest

- Major chest wall injury or pulmonary contusion
- Wide mediastinum or other signs suggesting great vessel injury
- Cardiac injury
- Patients who may require prolonged ventilation

Pelvis/Abdomen

- Unstable pelvic ring disruption
- Pelvic fracture with shock or other evidences of continuing hemorrhage
- Open pelvic injury; Solid organ injury

Major Extremity Injuries

- Fracture/dislocation with loss of distal pulses
- Open long-bone fractures
- Extremity ischemia

Multiple-System Injury

- Head injury combined with face, chest, abdominal, or pelvic injury
- Burns with associated injuries
- Multiple long-bone fractures
- Injury to more than two body regions

Co-morbid Factors

- Age >55 years; children <5 years of age
- Cardiac or respiratory disease
- Insulin-dependent diabetes; morbid obesity
- Pregnancy
- Immunosuppression

Secondary Deterioration (Late Sequelae)

- Mechanical ventilation required
- Sepsis
- Major tissue necrosis
- Single or multiple organ system failure (deterioration in central nervous, cardiac, pulmonary, hepatic, renal, or coagulation systems)

The following are conditions that should be considered for immediate transfer:

Central Nervous System

- GCS >10 and <14

Chest

- >2 unilateral rib fractures
- Patients who may require prolonged ventilation

Abdomen

- Solid organ injury

Major Extremity Injuries

- Open long-bone fractures
- Extremity ischemia

Multiple-System Injury

- Injury to more than two body regions

Co-morbid Factors

- Age >55 years; children <5 years of age
- Cardiac or respiratory disease
- Insulin-dependent diabetes; morbid obesity
- Pregnancy
- Immunosuppression

Secondary Deterioration (Late Sequelae)

- Mechanical ventilation required

SAMPLE

PURPOSE:

Before patient arrival:

1. After becoming aware that a trauma patient is en route who likely will require emergent transfer, the emergency department staff activates the trauma team and notifies the emergency department physician of the likelihood of transfer. Ascertain from EMS if they have already ordered aero medical transportation.
2. The physician identifies the appropriate mode of transfer (i.e. aero medical vs. ground) and qualifications of transferring personnel.
3. HUC contacts the appropriate aero medical and/or ground transportation, obtains ETA:
[INSERT CONTACT INFORMATION]
[INSERT CONTACT INFORMATION]
[INSERT CONTACT INFORMATION]

After patient arrival:

1. The physician identifies and contacts the receiving facility and requests the receiving physician to accept the transfer. The two should discuss the current physiological status of the patient and the optimal timing of transfer.
2. Before transfer, the physician should:
 - a. Ensure chest tubes are placed in presence of pneumothorax
 - b. Ensure at least two IV lines are established
 - c. Consider securing the airway with an endotracheal tube, LMA, or surgical airway if GCS <11
 - d. Consider sending additional blood, equipment, and supplies (i.e. medications, fluids, etc.) that the patient may need en route if not available in the transporting vehicle.
3. The HUC copies of all available documentation to accompany the patient:
 - a. EMS report
 - b. Resuscitation record
 - c. X-rays, CT scans
 - d. Lab results

SAMPLE

Criteria for Consideration of Transfer

Taken from *Resources for Optimal Care of the Injured Patient, COT/American College of Surgeons, 2014.*

- Pulse oximetry
- End-tidal carbon dioxide detection
- Arterial pressure monitoring
- Pulmonary artery catheterization
- Patient rewarming

Trauma Diversion Policy

PURPOSE: Occasions may arise when one or more essential hospital resources are functioning at maximum capacity or otherwise unavailable and it is in the best interests of the trauma patient to be directed to an alternative facility for care.

POLICY: The need to go on “trauma divert” is a rare situation, but might occur in the following circumstances:

- The emergency department is saturated; demand for critical patient care resources exceeds availability.
- Emergency department resources are fully committed due to an external disaster/multiple-casualty event.
- Emergency department resources are unavailable due to an internal disaster or catastrophic mechanical failure.

In such rare cases, the emergency department physician may make the decision to divert trauma patients for a short period of time. The need to remain on divert status should be reviewed at least hourly to provide for the shortest possible time on divert.

The diversion of trauma patients only pertains to incoming ambulance patients and not to walk-in patients. A patient incoming via ambulance while on “trauma divert” will be accepted if the EMS provider and monitoring physician determine that the patient is experiencing a condition such that transport to the next closest appropriate trauma hospital could reasonably result in increased morbidity or death. “Trauma divert” status is a request to EMS personnel to transport the patient to another facility. The patient or EMS personnel may decline the request to divert provided they have been properly apprised of the potential for delayed treatment affecting the care of the patient.

Ambulance patients who have arrived on hospital property will be admitted to the emergency department and evaluated by a physician regardless of the hospital’s diversion status.

PROCEDURE:

Going on divert:

1. The emergency department physician will decide on the need to go on “trauma divert”. The physician will notify the emergency department charge nurse.
2. The charge nurse notifies the following of “trauma divert” status:
 - a. Emergency department nursing staff
 - b. EMS dispatch center(s) (e.g. sheriff departments); request EMS personnel to call hospital early with patient information.
 - c. [NEIGHBORING HOSPITAL(S)]
3. The emergency department charge nurse begins a “Trauma Divert Tracking Log”.

When contacted by EMS with information regarding a seriously injured trauma patient, the emergency department staff person taking report notifies EMS crew that the hospital is on “trauma divert” and immediately puts the crew in contact with the emergency department physician. The physician will determine if the patient is to be seen in the emergency department or diverted to a nearby facility. The decision whether or not to divert must be accomplished very quickly in order to minimize the amount of time the patient spends in transit.

Going off divert:

1. The emergency department physician who initiated the closure must:
 - a. Continuously evaluate the need to remain on “trauma divert”.
 - b. Make the decision as to when the hospital is no longer on “trauma divert”.
 - c. Notify the emergency department charge nurse when no longer on “trauma divert”.
2. The charge nurse notifies:
 - a. Emergency department nursing staff
 - b. EMS dispatch center(s) (e.g. sheriff departments)
 - c. [NEIGHBORING HOSPITAL(S)]
3. The emergency department charge nurse completes the “Trauma Divert Tracking Log” and forwards it to the Trauma Program Manager.

SAMPLE

Injury Prevention Job Description

Job Title: Trauma Injury Prevention Coordinator

Reports to: Trauma Program Manager

General Summary: This position is responsible for the overall planning, development, and oversight of the Trauma Prevention Program for [NAME OF FACILITY]'s Trauma Center. The objectives of the program to:

1. Educate the community about injury prevention and trauma care; to indirectly decrease death and injury by improving trauma care within the region; and
2. Raise the visibility of [NAME OF FACILITY]'s Trauma Center through increasing public awareness by generating positive media coverage through community outreach.

Education/Outreach

- Assist Trauma Program Manager with development and implementation of injury prevention programs.
- Act as a liaison to other hospitals and community groups related to trauma prevention and outreach.

Preferred Qualifications:

- Capable of effectively handling multiple priorities.
- Experience in developing, overseeing, and evaluating the effectiveness of community benefit programs.
- Strong organizational and planning skills.
- Basic graphic design principles.
- Basic desktop publishing techniques.
- Strong media relations skills.
- Effective time management skills.
- Knowledge of communications theory and public relations techniques.
- Understanding of and recent experience in the healthcare environment.
- Public speaking.

Desired Qualifications:

Education:

- Current licensure as a Registered Nurse in the State of Idaho.

Experience:

- Experience in a trauma care setting.
- Skill in the use of Microsoft Office.
- Ties in the healthcare/safety community are a plus.
- Teaching and leadership experience.

SAMPLE

National Incident Management System (NIMS) Compliance for Healthcare Organizations

July 2015

The NIMS compliance activities are outlined in the Federal Emergency Management Agency (FEMA), National Integration Center, Incident Management Systems Division document entitled, “NIMS Implementation Activities for Healthcare Organizations”. Additional information on this document may be found at https://www.fema.gov/pdf/emergency/nims/imp_hos.pdf and <https://www.fema.gov/national-incident-management-system>.

Other Resources: https://www.fema.gov/pdf/emergency/nims/nims_training_program.pdf and <https://www.fema.gov/nims-training>

	NIMS Element
Adoption	<u>Element 1</u> Adopt the National Incident Management System (NIMS) throughout the healthcare organization to include appropriate departments and business units.
	<u>Element 2</u> Ensure Federal Preparedness grants and cooperative agreements support NIMS implementation (in accordance with the eligibility and allowable uses of the awards).
Preparedness: Planning	<u>Element 3</u> Revise and update emergency operations plans (EOPs), standard operating procedures (SOPs), and standard operating guidelines (SOGs) to incorporate NIMS and National Response Framework (NRF) components, principles and policies, to include planning, training, response, exercises, equipment, evaluation, and corrective actions.
	<u>Element 4</u> Participate in interagency mutual aid and/or assistance agreements, to include agreements with public and private sector and nongovernmental organizations.
Preparedness: Training and Exercises	<u>Element 5</u> Implement ICS-700: NIMS, An Introduction, ICS-100: Introduction to ICS, and ICS-200: ICS for Single Resources training to appropriate personnel.
	<u>Element 6</u> Implement ICS-800 National Response Framework (NRF): Introduction training to appropriate personnel.
	<u>Element 7</u> Promote and integrate, as appropriate, NIMS concepts and principles (i.e. the Incident Command System) into all healthcare organization-related training and exercises.

	NIMS Element
Communication and Information Management	<u>Element 8</u> Promote and ensure that hospital processes, equipment, communication, and data interoperability facilitate the collection and distribution of consistent and accurate information with local and state partners during an incident or event.
	<u>Element 9</u> Apply common and consistent terminology as promoted in NIMS, including the establishment of plain language communications standards.
Command and Management	<u>Element 10</u> Manage all emergency incidents, exercises, and preplanned (recurring/special) events with consistent application of ICS organizational structures, doctrine, processes, and procedures.
	<u>Element 11</u> Adopt the principle of Public Information, facilitated by the use of the Joint Information System (JIS) and Joint Information Center (JIC) ensuring that Public Information procedures and processes gather, verify, coordinate, and disseminate information during an incident or event.

Spending Plan Summary

(Required Information)

Proposed Project: Short description of project to be funded that provides context on the expenditure. For example, “training materials” alone would not be sufficient.

Requesting Entity Name: Legal name of entity that will receive the funds. If multiple partners will participate in one project include a line for each participating entity. For example, if five hospitals will be funded for a training or exercise, list each recipient on a separate line with the same project name.

Entity Authorized Representative: Contact person for project planning and verification of completion.

Justification of Need: Provide a strong justification of the need for the training or exercise participation in terms of preparedness gaps to be addressed or findings from past real events, exercises, or AAR-IPs. Federal grant requirements state that exercises and training must be gap-based. Justifications must identify gaps to be addressed.

Item(s) to be Purchased: List name and quantity of each item. Use multiple lines if needed.

Category Code: Select one from list below. Use a separate line for each funding category within an entity request and project.

- P – Personnel salaries including fringe
- S – Supplies and equipment
- T – Travel

Budget Detail: Refer to Training and Exercise guidance for budget detail necessary to meet federal budget requirements for audit purposes. The spending plan will not be approved if insufficient budget detail is provided. Attach a vendor quote for each asset or service contract that exceeds \$5,000 per item.

Amount Requested: Round to nearest whole dollar.

Partial Spending Plan versus Final Spending Plan Approval: A partial spending plan for an amount less than \$18,000 or a final spending plan for the total funding amount of \$18,000 may be submitted for approval. Both options are offered to allow funding to be used to support RHCC participation in trainings and exercises in the first half of the contract period as well as allow sufficient time for the RHCC to determine funding needs for a training or exercise in the second half of the contract period. For example, a partial spending plan could be used to send a coalition member to the National healthcare conference in December while allowing more time for exercise planning later in the year.

If a partial spending plan is submitted, a final spending plan for \$18,000 must be submitted for approval with the 2015 HPP Q2 report on or before January 15, 2016. If a partial spending plan is submitted, the final spending plan summary must contain the information from the partial plan as well as information for the remainder of the funding. This will ensure that a complete spending plan is

provided in one document. Information from the partial plan should be separated and clearly distinguished from new requests for the January submission. Regardless of when it is submitted, the final spending plan must include all projects and reflect a budget total of \$18,000.

End of Year Final Reporting: A final accounting of actual costs will be submitted with the HPP 2015 Q4 deliverables using the same spend plan template as was originally approved. Costs should be supported to the same level of detail as the original spend plan and should be consistent with invoices and receipts that are retained by the contractor. Additional NIMS documents are not needed unless a recipient was not fully NIMS compliant on the first spend plan submission within the 2015 subgrant period. A coalition consensus signature sheet is not needed. Separate realignment documentation is not needed. If the contractor has all of the required information in an internal format such as a fiscal report that may be substituted for the spend plan template, but the cover sheet and budget summary should be included with the final submission. Please update the cover to reflect a final report and date so records are clear for audit purposes.

Regional Healthcare Coalition Training & Exercise Spending Plan Summary

Proposed Project	Requesting Entity Name	Entity Authorized Representative	Justification of Need	Item(s) to be purchased	Category Code	Budget Detail	Amount Requested (round to whole)
BUDGET TOTAL							

Creating a Disaster Plan

1. Establish a hospital disaster committee consisting of the following:
 - a. Chair representative;
 - b. Vice-chair administrative representative;
 - c. Trauma surgeon representative;
 - d. Trauma service administrative representative;
 - e. Security representative;
 - f. Medical staff representation from surgery, anesthesiology, pathology, radiology, infectious disease, medicine, pediatrics, and emergency medicine;
 - g. Radiation safety officer;
 - h. Nursing staff representatives (ED, OR, inpatient);
 - i. Medical records representative;
 - j. Information technology representative;
 - k. Communications representative(s);
 - l. Social service representative;
 - m. Public relations representative;
 - n. Supply representative; and
 - o. Pastoral care representative.

2. Document potential disasters for the region.
 - a. Evaluate local geography, demographics, industry, and epidemiologic data for hazards.
 - b. Determine the regional history of natural hazards.
 - c. Sources of information about hazards could include fire department, law enforcement agencies, National Oceanic and Atmospheric Administration, US Army Corps of Engineers, and Department of Transportation (hazardous material on highways and railroads).

3. Establish interagency and inter-institutional agreements.

4. Determine realistic institutional capacity and capability.
 - a. Determine maximum number of beds, categories (i.e. ICU, ward, adult, pediatric, burn, etc.)

- b. Develop a protocol to assess inpatients for potential early discharge or relocation to make beds available for casualties.
 - c. Plan a mechanism to place a hold on elective and non-urgent surgery.
5. Determine desired and available basic and disaster supplies including inventory and emergency stockpile.
- a. Blood supply arrangements should be made with the Red Cross and other suppliers of blood and included in simulation exercise.
 - b. Stockpiles of reinforcement supplies available on a 24-hour basis should be located among commercial sources, other institutions, the military, and FEMA, so that they can be obtained readily by telephone.
 - c. Food, water, and energy needs should be considered for specific disasters: consider sources, amounts, and length of time.
6. Develop a flow chart of mass casualties through hospital areas ensuring the following:
- a. Patient flow is unidirectional (to avoid bottlenecks in ED and radiology).
 - b. Patient traffic does not enter and leave any area through the same door.
7. Designate hospital space for the following:
- a. Patient unloading area.
 - i. Ground vehicles require careful traffic control with provision for buses and trucks.
 - ii. Helicopters need a designated landing area.
 - b. Triage criteria should be developed according to types of injured patients seen and number of victims involved in the disaster.
 - c. A triage area should be designated. Depending on the configuration of the hospital, access to the triage area, and the number of patients involved, this area may or may not use the ED. Note; For mass casualties, an area other than the ED should be used. The ED should be reserved for patient care.
 - d. Critical stabilization area (usually the ED).
 - e. Preoperative area – immediate and delayed.
 - f. Operative area.
 - g. Postoperative area.
 - h. Burn treatment area.
 - i. Minor surgery area.

- j. Hazardous chemical or radioactive material decontamination areas and receptacles for contaminated materials.
 - k. Expectant area (for dying patients).
 - l. Morgue.
 - m. Psychiatric area within the institution or at nearby schools, hotels, or motels for psychiatrically trained medical, nursing, social service, and security personnel to work with the following:
 - i. People from the disaster area including rescue personnel;
 - ii. People disturbed by the news generated by the disaster; and
 - iii. Family, friends, and others.
 - n. Press conference room with space for many telephones and for minor amenities outside the patient-care perimeter.
 - o. Record and evidence area.
 - p. Recruitment and assignment office to assist in assessing and assigning volunteers.
 - q. Disaster support center including the following:
 - i. Administrative control center; and
 - ii. Communications center.
8. Develop a system to summon and assign personnel to designated patient-care areas. Call-up needs should consist of internal and external call-up. ED and other in-hospital personnel will be assigned as hospital first responders for key posts until external call-up can be affected. Keep assignments flexible and updated. Do quarterly updates of telephone number rosters. A designated reporting area, away from the ED, for sign-in should be established.
9. Personal Resources:
- a. Hospital disaster commander and emergency operating center liaison plus at least two alternates based in the disaster support center.
 - b. The triage officer should be a physician who has the knowledge necessary for optimally using the resources required to care for severely injured patients. Physicians need to be available for field triage as part of a disaster site medical team and for in-house triage as assigned by the disaster commander. Non-physician medical personnel may serve in this role in certain settings if properly trained.

- c. Physicians, nurses, a radiation safety officer, and administrative staff are assigned to specific patient-care areas. Develop an instruction packet for use in each patient-care area describing their specific functions during a disaster.
- d. A chief security officer in charge of the perimeter and other security to assist identifying various people, control the press, act as morgue officer under the pathologist's supervision, and inventory victims' valuables and evidentiary materials.
- e. Public relations-media person: One person using the press conference technique should be the sole communication link with the press.
- f. Patient transport personnel.

10. Provision for food and rest for disaster personnel:

- a. Shift schedules to allow regular rotations to equalize workload and prevent provider fatigue; and
- b. Critical incident stress management program to recognize and treat providers who show signs of stress, exhaustion, and/or emotional disability.

11. Communications system compatible with other EMS elements. Note: Consider the possibility that the present system might be overwhelmed or disrupted):

- a. Intra-agency operating center:
 - i. Emergency operating center.
 - ii. Fire department, law enforcement agencies, and ambulance and helicopter services.
 - iii. Predetermined method of radio frequency selection to be used by each agency.
 - iv. Provision for "secondary distribution" of casualties from overloaded facilities to those with more capacity to assure maximal casualty treatment.
- b. Inter-hospital system.

12. Establish medical record and patient identification systems including identification of triage category.

13. Define institutional and staff security.

- a. Secure perimeter of hospital.
- b. Secure perimeter of patient-care area.
- c. Provide for ready access to all areas of hospital through elevator control and in-hospital crowd control.

- d. Ensure personnel security – control and identification.
- e. Identify a designated area for members of the press.
- f. Perform regional hazard assessment.
 - i. Radiation protection.
 - ii. Hazardous material protection.
 - iii. Emphasis of neutrality in riot situations.

14. Debrief and counsel disaster and rescue personnel on a routine basis.

15. Critique each disaster response and modify the plan to reduce future errors within 24 hours of disaster.

16. Transfer agreements.

- a. Protocols should include the flexibility needed for disasters.

Brain Death Policy

PURPOSE: Criteria for determining brain death shall be established in accordance with accepted medical standards.

PROCEDURE:

1. Definition of Brain Death:

- A. Brain death is the absence of brain function when the proximate cause is known, can be demonstrated to be irreversible, and demonstrated by repetitive standardized criteria.
- B. Prerequisite: Acute Central Nervous System (CNS) catastrophe and involved clinical situations which can be documented by clinical and neuroimaging testing.
- C. Exclusion criteria:
 - i. Core temperature less than or equal to 95 degrees Fahrenheit or 32 degrees Celsius.
 - ii. Reversible electrolyte, metabolic, or endocrine disorder.
 - iii. Drug overdose or therapeutic mean substance intoxication or poisoning:
 - a) Sub-therapeutic barbiturate level is acceptable.
 - b) Discontinue all sedation and neuromuscular blockade.

2. Procedure for Brain Death Examination:

- A. The three cardinal findings in brain death are:
 - i. Coma or unresponsiveness (see Appendix A);
 - ii. Absence of brain stem function (see Appendix B); and
 - a) No pupillary reflex.
 - b) No facial sensation and facial motor response.
 - c) No ocular movement.
 - d) No oculovestibular reflex (caloric).
 - e) No gag reflexes.
 - f) No integrated motor response to pain. No localizing, withdrawal, extensor posturing, or flexor posturing.
 - iii. Apnea (see Appendix C).
- B. Brain Death Determination:
 - i. Must be done in the presence of a physician.
 - ii. Results will be recorded in the progress notes by documenting the supporting evidence and pronouncing brain death.
 - iii. In some instances, the test may need to be repeated at 12, 24, and 48 hours.
 - iv. Following the physician's declaration of brain death, the clinical coordinator should be notified to determine if the patient meets criteria for coroner notification. Such notification should occur at time of brain death determination rather than at the time of cardiac death.
- C. Pediatric Brain Death:
 - i. The same excluding criteria as for adults will be used for patients less than 14 years and less than 120lbs.
 - ii. Special instructions for individualized pediatric apnea tests are noted in Appendix D.

3. Appendix A: Coma or Unresponsiveness:

- A. No spontaneous movement, eye opening, or responses after commands.
- B. No movement elicited by painful stimuli, other than spinal cord reflex movements. Note:
 - i. Deep tendon reflexes are spinal cord reflexes.

- ii. Shivering, goose bumps, arm movements, reaching of the hands toward the neck, arching of the back, forced exhalation, and thoracic respiratory-like movements are possible after brain death and are likely release phenomena of the spinal cord including the upper cervical cord.

4. Appendix B: Absence of Brain Stem Function:

- A. No pupillary reflex.
 - i. Pupils are fixed and mid-position (4-9mm).
 - ii. No change after shining a strong light in each eye sequentially in a dark room.
- B. Facial sensation and facial motor response.
 - i. No corneal reflex to touch with a sterile cotton swab or tissue. Must touch the cornea and not the conjunctiva.
 - ii. No grimacing to deep pressure on nail bed, supraorbital ridge, or TM joint.
- C. Ocular movement.
 - i. No oculocephalic reflex (doll's eyes). Tested only if no c-spine instability.
 - ii. No eye movement in response to turning of head side to side at 30 degrees elevation.
- D. No oculovestibular reflex (caloric).
 - i. No eye movements within three minutes after irrigating each tympanic membrane sequentially with 50ml iced water for 45-60 seconds.
 - ii. Allow five minutes between testing on each side. Head of supine patient is elevated 30 degrees.
 - iii. Remove cerumen. Tympanic membranes must be intact.
- E. No gag reflexes. No retching or movement of the uvula after touching the back of pharynx or moving the endotracheal tube.
- F. No integrated motor response to pain. No localizing, withdrawal, extensor posturing, or flexor posturing.

5. Appendix C: Apnea Test:

- A. To reduce the incidence of barotrauma:
 - i. Oxygen catheter should be no longer than 50% of the inner diameter of the artificial airway to prevent excessive back pressure.
 - ii. Oxygen flow should be reduced to 4 LPM if the artificial airway is smaller than a size 6.5.
- B. Done with patient under direct physician visualization:
 - i. Verify patient's body temperature is greater than 95 degrees Fahrenheit.
 - ii. Verify levels of central nervous system depressants/neuromuscular blockers.
 - iii. Oxygenate the patient for at least ten (10) minutes with 100% FiO₂.
 - iv. Adjust ventilator for pCO₂ in the normal range.
 - a) If the patient is chronically hypercarbic then adjust the ventilator to the normal pH.
 - b) In this case, it is best to obtain a confirmatory test.
 - v. Obtain a baseline ABG.
 - vi. Disconnect the ventilator.
 - vii. Place oxygen catheter down endotracheal tube or trach at 6 liters per minute.
 - viii. Observe closely for respiratory effort.
 - ix. Monitor heart rate, heart rhythm, and blood pressure continuously.
 - x. Document vital signs and observations every two to three (2-3) minutes.
 - xi. Draw an ABG at six to ten (6-10) minutes.
 - xii. Discontinue test when:
 - a) Signs of respiratory effort, cardiac instability, or hypotension are observed.

- b) pCO₂ of 60 torr is reached.
- c) Patient has been off ventilator for ten (10) minutes.

C. Interpretation of the apnea test:

- i. If respiratory movements are absent and the PaCO₂ is greater than or equal to 60mm/Hg, and greater than or equal to 20mm/Hg rise above the pre-apnea test level, the apnea test is positive and supports the diagnosis of brain death.
- ii. If respiratory movements are observed, the apnea test is negative, and test should be repeated.
- iii. If the ventilator is reconnected early, but the PaCO₂ is greater than or equal to 60mm/Hg or greater than or equal to 20mm/Hg above baseline, the apnea test is positive and supports the diagnosis of brain death.
- iv. If the ventilator is reconnected early, but the PaCO₂ is less than 60mm/Hg and less than 20mm/Hg above baseline, then the result is indeterminate, and an additional confirmatory test can be considered.

D. In some equivocal cases cerebral blood flow testing may be an adjunct.

- i. Demonstration of absence of intracranial circulation by angiographic contrast or radioisotopic flow studies.
- ii. Somatosensory evoked potential with bilateral absence of N20-P22 response with median nerve stimulation.
- iii. Demonstration of absence of cerebrovascular blood flow following MRI/MRA imaging.

6. Appendix D: Pediatric Brain Death – Special Instructions:

- A. Set appointment time when the patient team can be present at the bedside under the direction of the Pediatric Neurologist team leader.
- B. Ensure and document that patient is normothermic and not under the influence of medications which suppress respirations.
- C. Pre-oxygenate the patient with 100% FiO₂ for fifteen to twenty (15-20) minutes.
- D. Adjust ventilator rate so that the patient's starting pCo₂ is between 35-40mm/Hg per TcPCO₂ monitor.
- E. After completion of hyperoxygenation and achievement of TcPCO₂ stabilization, draw ABG, and ensure that the gas levels correlate with the bedside TcPCO₂ monitor.
- F. Turn the ventilator to CPAP mode or CPAP level specified by the physician.
- G. Chart the patient's vital signs, SpO₂, TcCO₂, and independent respiratory efforts at one (1), three (3), five (5), seven (7), and ten (10) minute test periods.
- H. Draw a posttest ABG.
- I. Reinstate mechanical ventilation per physician order.

Resources:

Guidelines for the determination of death; report of the Medical Consultants on the Diagnosis of Death to the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. JAMA 1981; 246:2184-2186.

Practice parameters for determining brain death in adults (Summary statement). Quality Standards Subcommittee of the American Academy of Neurology. Neurology 1995; 45:1012-1014.

Guidelines for the determination of brain death in children. Task Force for the Determination of Brain Death in Children. Pediatric Neurology 1987; 3:242-243.

Current concepts: The diagnosis of brain death. The New England Journal of Medicine 2001; 344(16): 1215-1221.

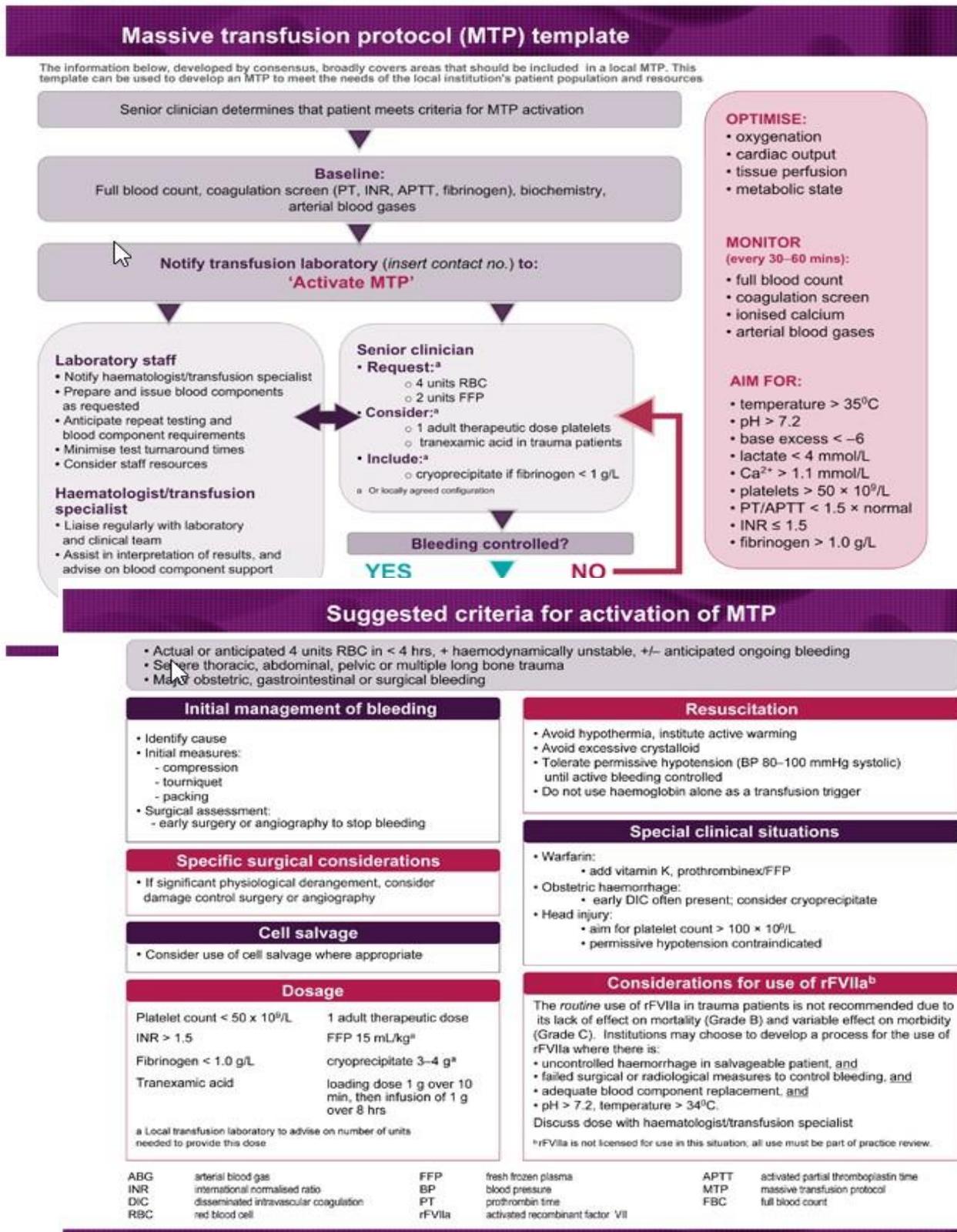
Practice Parameters: Determining Brain Death in Adults. Neurology 1995;45:1012-1014.

Sever Brain Injury to Neurological Determination of Death: A Canadian Forum. Canadian council for Donation and Transplantation, April 9-11, 2003, Vancouver, British Columbia.

Massive transfusion protocol template

An editable electronic template MTP is available on the NBA's website www.nba.gov.au

The MTP template is also shown in [Appendix C](#). Chapter 4 discusses local adaptation of the template MTP (4.10.1) and the development of guidelines on activation and cessation of the MTP (4.10.2).



Suggested criteria for activation of MTP

- Actual or anticipated 4 units RBC in < 4 hrs, + haemodynamically unstable, +/- anticipated ongoing bleeding
- Severe thoracic, abdominal, pelvic or multiple long bone trauma
- Major obstetric, gastrointestinal or surgical bleeding

ABG	arterial blood gas	FFP	fresh frozen plasma	APTT	activated partial thromboplastin time
INR	international normalised ratio	BP	blood pressure	MTP	massive transfusion protocol
DIC	disseminated intravascular coagulation	PT	prothrombin time	FBC	full blood count
RBC	red blood cell	rFVIIa	activated recombinant factor VII		

Additional Resources

American Burn Association

<http://ameriburn.org/>

American College of Surgeons – Committee on Trauma

<https://www.facs.org/quality-programs/trauma>

American Trauma Society

<https://www.amtrauma.org/default.aspx>

Association for the Advancement of Automotive Medicine

<https://www.aaam.org/>

Centers for Disease Control & Prevention, Guidelines for the Field Triage for the Injured Patient

<https://www.cdc.gov/mmwr/pdf/rr/rr5801.pdf>

Eastern Association for the Surgery of Trauma

<https://www.east.org/education/practice-management-guidelines/triage-of-the-trauma-patient>

Emergency Nurses Association

<https://www.ena.org/>

Resources for the Optimal Care of the Injured Patient 2006

<https://web4.facs.org/ebusiness/ProductCatalog/ProductCategory.aspx?id=26>

Society of Trauma Nurses

<https://www.traumanurses.org/>

TSE Field Trauma Triage Guidelines

Priority 1 (Focus: Physiology)

Airway/Breathing

- Actual or potential airway compromise:
 - Acute Hypoxia
 - RR < 10 or > 29 (adult)
 - Severe maxillofacial injuries
- Intubated/Supraglottic Airway/BVM
- Suspected inhalation injury

Event/Injuries/Findings

- Penetrating injury to head, neck, or torso
- High voltage electrical injury
- Bilateral femur fractures
- Complete amputation above the wrist or ankle
- Open skull fracture
- Child: Flail chest/Pelvic fracture/Pulseless extremity

Circulation

- CPR by medical provider
- Hypotension:
 - Adult: SBP < 90mmHg, HR > 130
 - Child: Age 1-9yrs: SBP ≤ 70 + (2x age in years)
 - Age < 1yr: SPB ≤ 70mmHg
 - Child HR: 0-12mths: > 180 or < 80bpm
 - ≥ 12mths-5yrs: > 160 or < 60bpm
 - 6-10yrs: > 140 or < 60bpm
 - ≥ 11yrs: > 120 or < 60bpm
- Any patient receiving blood/vasopressors

Disability

- GCS ≤ 12 attributable to trauma
- Bilateral extremity paralysis or suspected spinal cord injury

Priority 2 (Focus: Anatomy)

Event/Injuries/Findings

- Penetrating injury proximal to elbow/knee
- Unilateral motor deficit
- 2 or more broken extremities (any)
- Application of a tourniquet
- Open or displaced pelvic fracture
- Open femur or humerus fracture
- Crushed or mangled extremity
- Flail chest and/or palpable crepitus
- Burn involvement of face, airway, hands, feet, genitalia; **OR**
 - Adult: ≥ 20% TBSA
 - Child: ≥ 10% TBSA
- Pregnant(≥ 20wks) with vaginal bleeding
- Submersion with traumatic mechanism

Child *Pediatric is considered age ≤ 14yrs

Consider UPGRADING one level if:

- Pediatric: age ≤ 14yrs
- Adult: age ≥ 65yrs
- Significant co-morbidities

Priority 3 (Focus: Mechanism)

Event/Injuries/Findings

- Penetrating injury distal to elbow/knee
- Closed isolated femur fracture
- Loss of consciousness after injury
- GCS 13-14 after injury
- Pregnant(≥ 20wks) without vaginal bleeding
- Burn: Adult: ≤ 20% TBSA
- Child: ≤ 10% TBSA
- Amputation of one or more digits
- Sensory deficit of an extremity

Mechanisms

- Motor vehicle crash with
 - Death of co-occupant
 - Broken/bent steering wheel
 - Rollover
 - Extrication time > 20 minutes
 - > 12" intrusion into occupant space
 - Non-enclosed transport accident > 20mph
- Ejection from enclosed vehicle
- Motor vehicle vs. pedestrian/bike
- Fall 2x patient's height
- Significant animal-related injury

- Anti-coagulation other than Aspirin
- Hypothermia/Hyperthermia
- EMS DISCRETION



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