IDAHO TIME SENSITIVE EMERGENCY SYSTEM
TRAUMA | STROKE | STEMI

Level III Trauma Center

Application & Resource Tool Kit

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IDAHO DEPARTMENT OF HEALTH & WELFARE

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TSE Frequently Asked Questions

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. 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 and Welfare provides oversight and administrative support for the day-to-day operation of the program.

A governor-appointed TSE Council made up of health care providers, EMS agencies, and administrators of hospitals representing both urban and rural populations is responsible for establishing Rules and Standards for the 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 Regional TSE Committee made up of EMS providers, hospital 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 Regional TSE Committees will have the ability to establish guidelines that best serve their specific community in addition to providing a feedback loop for EMS and hospital providers.

What guiding principles are the foundation of the TSE system?

- Apply nationally accepted evidence-based practices to time sensitive emergencies;
- Ensure that standards are adaptable to all facilities wishing 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 does a center need to be verified?

Every three years.

How much does it cost to be verified and designated?

Verification is done once every three years. The on-site survey fee is $3,000 and must be submitted with the application. Designation is valid for three years. The designation fee may be paid in three annual payments of $8,000 or in one payment of $24,000.

Whom do I contact if I have questions about the application process?

Idaho Time Sensitive Emergency Program

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Application Process

To apply for designation as a Level III Trauma Center in Idaho **using the ACS**:

1. Print and complete the application. Submit one application per facility. A completed application includes:
   A. Facility and Personnel Profile;
   B. Certification Statement;
   C. A copy of the pre-review questionnaire (PRQ) from the ACS; and
   D. A copy of the ACS site review

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, PRQ, and ACS site review.
4. Mail the completed application and year one designation fee ($8,000) to:

   Make checks payable to: Bureau of EMS and Preparedness

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

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

TSE Program staff will notify you within 10 business days of receipt of the application and confirm that the application is complete.

Application Process

To apply for designation as a Level III Trauma Center **using the State of Idaho for verification:**

1. Complete and print the application. Submit one application per facility. A completed application includes:
   A. Facility and Personnel Profile;
   B. Certification Statement;
   C. Pre-Survey Questionnaire; and
   D. Required Attachments
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, (PSQ) Pre-Survey Questionnaire, and Attachments.
4. Mail the completed application and on-site survey fee ($3,000) to:

   Make checks payable to: Bureau of EMS and Preparedness

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

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

TSE Program staff will notify you within 10 business days of receipt of the application and confirm that the application is complete.

Application for Level III Trauma Center Designation

A. Hospital and Personnel Profile

Hospital Name:		
Mailing Address:	City:	Zip:
Physical Address:	City:	Zip:
Phone:	County:	
Application Contact and Title:		
Phone:	E-Mail:	

Hospital Administrator/Chief Executive Officer:	
Phone:	E-Mail:
Trauma Program Manager:	
Phone:	E-Mail:
Trauma Medical Director:	
Phone:	E-Mail
Emergency Department Medical Director:	
Phone:	E-Mail:
Emergency Department Nursing Director:	
Phone:	E-Mail:

B. Certification Statement

I, _____ (CEO/COO), on behalf of _____ (hospital), voluntarily agree to participate in the Idaho Time Sensitive Emergency system as a Level III Trauma Center. We will work with emergency medical services and other hospitals 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 III Trauma Center.

C. We will participate in the Idaho TSE Registry; and

D. We will notify the Time Sensitive Emergency Program Manager immediately if we are unable to provide the level of trauma service we have committed to in this application.

_____	_____
Chair, Governing Entity (Hospital Board)	Date
_____	_____
Chief Executive Officer	Date
_____	_____
Trauma Medical Director	Date
_____	_____
Trauma Program Manager	Date

C. Pre-Survey Questionnaire

Answer every question. If you require additional space, please include a separate sheet. Once complete, print and sign the application (Certification Statement). Label all attachments and place them in the "Attachments" section. Do not hesitate to contact the TSE program staff if you have any questions regarding your application. (208) 334-4904

1. Trauma System

Time Sensitive Emergencies (TSE)

1.1 Is your staff sufficiently involved in national, state, and regional trauma system planning, development and operation? ◯ Yes ◯ No

Explain:

Center Mission

1.2 Attach a copy of the current resolution supporting the trauma center from the medical staff (See sample on page 55). Label as "Attachment #1".

1.3 Attach a copy of the current resolution supporting the trauma center from the hospital board (See sample on page 56). Label as "Attachment #2".

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

Explain:

1.5 Do you have adequate administrative support and defined lines of authority that ensure comprehensive evaluation of all aspects of trauma care? ◯ Yes ◯ No

Attach a copy of your organizational chart. Label as "Attachment #3.

Explain:

2. Description of Trauma Center

Description of the Trauma Center

2.1 Are all of your trauma facilities on the same campus? ◯ Yes ◯ No

2.2 Is your trauma program empowered to address issues that involve multiple disciplines?

Yes No

Explain:

2.3 How many injured children (age 14 or less) do you admit or transfer annually?

Provide figures for the previous two years.

Year	# of children admitted or transferred for injury

If either year was greater than 100, do you have:

A. A pediatric ED area? Yes No

B. A pediatric intensive care area? Yes No

C. Appropriate resuscitation equipment? Yes No

D. A pediatric-specific trauma PIPS program? Yes No

2.4 Explain how trauma patients can be referred to your center and what resources your center can provide.

2.5 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

2.6 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 job description (See sample on page 57). Label as "Attachment #4".

Explain:

2.7 Is the Trauma Medical Director a board-certified surgeon or an ACS Fellow? ◯ Yes ◯ No

Attach supporting documentation. Label as "Attachment #5".

2.8 Is the Trauma Medical Director current in ATLS? ◯ Yes ◯ No

2.9 Attach a list of the Trauma Medical Director's external trauma-related CME for the last three years. Label as "Attachment #6".

2.10 Does your Trauma Medical Director participate in trauma call? ◯ Yes ◯ No

Attach the trauma call schedules for the most recent 3-month period. Label as "Attachment #7".

**Note: If the job description for the Trauma Medical Director does not address the authorities and responsibilities listed in 2.11 - 2.22, attach supporting documentation. Label as "Attachment #8".*

2.11 Provide a copy of documents supporting the Trauma Medical Director's personal involvement in patient care, staff education, and professional organizations. Label as "Attachment #9".

2.12 Does your Trauma Medical Director have sufficient authority to set qualifications for the trauma service members? ◯ Yes ◯ No

2.13 Does your Trauma Medical Director define and approve the roles of the emergency physicians and trauma surgeons? ◯ Yes ◯ No

Explain:

2.14 Does your Trauma Medical Director have the authority to correct deficiencies in trauma care and to exclude from trauma call the trauma team member who do not meet specified criteria? ◯ Yes ◯ No

Explain:

2.15 Does your Trauma Medical Director have the authority to recommend changes to the trauma team based on performance review?

Yes No

Explain:

2.16 Does your Trauma Medical Director have the responsibility and authority to determine each general surgeon's ability to participate on the trauma team through the trauma PIPS program and hospital policy?

Yes No

Explain:

2.17 Does the structure of the trauma program allow the Trauma Medical Director to have oversight and authority for care of injured patients who may be admitted to individual surgeons?

Yes No

Explain:

2.18 Does your Trauma Medical Director have the responsibility and authority to ensure compliance with verification requirements?

Yes No

Explain:

2.19 Is your Trauma Medical Director involved in the development of the center's bypass protocol.

Yes No

Explain:

2.20 Does your Trauma Medical director document the dissemination of information to the PIPS committee?

Yes No

Explain:

2.21 In circumstances when attendance is not mandated, does your Trauma Medical Director ensure and document the dissemination of information from the PIPS program? ◯ Yes ◯ No

Explain:

2.22 Does your Trauma Medical Director ensure and document the dissemination of information and findings from the TPOPPC to the noncore surgeons on the trauma team? ◯ Yes ◯ No

Explain:

2.23 Is your Trauma Medical Director accountable for all trauma care and does he/she exercise administrative authority for the trauma program? ◯ Yes ◯ No

Explain:

Trauma Program Manager

2.24 Does your Trauma Program Manager have clinical experience caring for injured patients?

Yes No

Does your Trauma Program Manager have a minimum of 16 hours of trauma-related continuing education per year?

Yes No

Attach a list of the Trauma Program Manager's trauma-related continuing education for the last 12 months. Label as "Attachment #10". Also attach a copy of the Trauma Program Manager job description (See sample on page 60). Label as "Attachment #11".

3. Clinical Functions

3.1 Is the criteria for graded activation (priority level) clearly defined and continuously evaluated by the PIPS program (See state recommendations on page 62)?

Yes No

Attach a copy of your criteria for graded activation. Label as "Attachment #12".

Explain:

3.2 Addressed in 3.1

3.3 Does your trauma service retain responsibility for its patients and does it coordinate all therapeutic decision?

Yes No

Explain:

3.4 Is the trauma surgeon kept informed of and does he/she concur with major therapeutic and management decisions made by the ICU team?

Yes No

Explain:

3.5 Is there a method to identify injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and informal discussions with individual practitioners?

Yes No

Explain:

3.6 As the local trauma authority do you assume the responsibility for providing training for prehospital and hospital based providers? ◯ Yes ◯ No

Explain:

3.7 Do you have established protocols to ensure immediate and appropriate care of the adult and pediatric trauma patient? ◯ Yes ◯ No

Trauma Team

3.8 Do you define and annually review the criteria for all levels of trauma team activation? ◯ Yes ◯ No

Attach a copy of the current criteria. Label as "Attachment #13".

Explain:

3.9 Have all general surgeons, emergency providers, and midlevel providers on the trauma team completed ATLS at least one? ◯ Yes ◯ No

Attach a table with these headings: Provider Name, Provider Title, and Date of ATLS Completion. Label as "Attachment #14".

3.10 Is your trauma team fully assembled within 30 minutes of notification or patient arrival (whichever is shorter) with an achievement rate of 80%? ◯ Yes ◯ No

Attach supporting documentation. Label as "Attachment #15.

3.11 Do you trauma team members participate in PIPS and TPOPPC? ◯ Yes ◯ No

Explain:

3.12 Are your trauma team physicians and midlevel providers credentialed by the medical staff and governing board? ◯ Yes ◯ No

Explain:

Emergency Department

3.13 Does your ED have a designated Emergency Physician Director? ◯ Yes ◯ No

Is he/she supported by an appropriate number of additional physicians to ensure immediate care for injured patients? ◯ Yes ◯ No

Explain:

3.14 Do emergency physicians cover in-house emergencies? ◯ Yes ◯ No

If yes, does the PIPS program demonstrate the efficacy of this practice? ◯ Yes ◯ No

3.15 Does coverage of emergencies in the ICU leave the ED with appropriate physician coverage.

◯ Yes ◯ No

Explain:

3.16 Do you have ED physicians who are not board-certified? ◯ Yes ◯ No

If Yes, are they current in ATLS? ◯ Yes ◯ No

If yes, attach supporting documentation. Label as "Attachment #16".

3.17 Are the emergency physicians on the call panel regularly involved in the care of injured patients?

◯ Yes ◯ No

Explain:

3.18 Attach a table that includes: the name of each emergency provider that takes trauma call, the trauma related CME they have accrued in the last 3 years, and the internal educational opportunities that they have participated in. Label as "Attachment #17".

3.19 Name of the emergency physician representative to PIPS:

Name of the emergency physician representative to TPOPPC:

3.20 Name of the emergency physician that participates in the prehospital PIPS program:

3.21 Does your emergency medicine representative or designee to the TPOPPC attend at least 50% of those meetings? ◯ Yes ◯ No

3.22 Is there a designated emergency physician available to the Trauma Medical Director for PIPS issues that occur in the ED? ◯ Yes ◯ No

Explain:

General Surgery

3.23 Do all of your trauma surgeons have privileges in general surgery? ◯ Yes ◯ No

3.24 Do your trauma surgeons:

A) Respond promptly to activations? ◯ Yes ◯ No

B) Remain knowledgeable in trauma care principles whether treating locally or transferring to a center with more resources? ◯ Yes ◯ No

C) Participate in PIPS activities? ◯ Yes ◯ No

3.25 Based on your answers in 2.3, if you admitted or transferred more than 100 injured children in either of the last two years, are your trauma surgeons credentialed for pediatric trauma care by the center's credentialing body? ◯ Yes ◯ No

3.26 Does you center provide general surgical coverage 24/7? ◯ Yes ◯ No

3.27 Is the on call trauma surgeon always dedicated to the trauma center while on duty?

Yes No

Explain:

3.28 Attach a backup call schedule for trauma surgery for the previous three months. Label as "Attachment #18".

3.29 Are seriously injured patients admitted to or evaluated by an identifiable surgical service staffed by credentialed trauma providers?

Yes No

Explain:

3.30 Is the trauma surgeon on site in the ED within 30 minutes of patient arrival 24/7 with an 80% achievement rate as monitored by the PIPS program? ◯ Yes ◯ No

3.31 Is your on call trauma surgeon involved in the decisions regarding diversion?

◯ Yes ◯ No

3.32 Is the trauma surgeon core group adequately defined by the Trauma Medical Director?

◯ Yes ◯ No

Explain:

3.33 Does the general surgery core group take at least 60% of the total trauma call hours each month?

◯ Yes ◯ No

Attach supporting documentation. Label as "Attachment #19".

3.34 Do the core trauma surgeons attend at least 50% of the PIPS meetings? ◯ Yes ◯ No

3.35 Attach a table that includes: the name of each trauma surgeon, the trauma related CME they have accrued in the last 3 years, and the internal educational opportunities that they have participated in. Label as "Attachment #20".

3.36 Are all of your general surgeons that take trauma call current in ATLS? ◯ Yes ◯ No

Attach supporting documentation, including the date of the most current ATLS completion. Label as "Attachment #21".

Orthopedic Surgery

3.37 Do your have orthopedic surgery available? ◯ Yes ◯ No

Explain:

3.38 Do all of your orthopedic surgeons have privileges in general orthopedic surgery?

◯ Yes ◯ No

3.39 Are all of your orthopedic surgeons board-certified? ◯ Yes ◯ No

3.40 Is there orthopedic team dedicated call and a backup call system? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.41 Is there an orthopedic team member present in the ED within 30 minutes of consultation by the surgical trauma team leader for multiple injured patients 24/7 with an 80% achievement rate?

Yes No

3.42 Attach a table that includes: the name of each orthopedic surgeon, the trauma related CME they have accrued in the last 3 years, and the internal educational opportunities that they have participated in. Label as "Attachment #22".

3.43 Name of the orthopedic surgeon designated to PIPS and TPOPPC:

Does this designee attend at least 50% of these meetings? Yes No

3.44 Is the design of the backup call system the responsibility of the trauma team liaison?

Yes No

Has it been approved by the Trauma Medical Director? Yes No

3.45 Has the orthopedic PIPS liaison accrued and average of 16 hours annually or 48 hours of external trauma-related CME? Yes No

Do you have supporting documentation? Yes No

Collaborative Clinical Services

Anesthesia

3.46 Are anesthesia services available 24/7? Yes No

3.47 Are anesthesia services on site within 30 minutes of notification for emergency operations and airway problems 24/7 with an 80% achievement rate as monitored by the PIPS program?

Yes No

3.48 Are anesthesia services present for all operations? Yes No

3.49 Are anesthesia services promptly available for airway problems. ◯ Yes ◯ No

Explain:

3.50 Have all of the anesthesiologists taking call successfully completed a residency program?

◯ Yes ◯ No

Attach a table with the following headings: the anesthesiologist taking trauma call, the name of the facility where they completed their residency, and the date it was completed (month and year). Label as "Attachment #23".

3.51 Are CRNAs taking trauma call? ◯ Yes ◯ No

If yes, is the anesthesiologist on call advised, promptly available at all time, and present for all operations if requested by the CRNA? ◯ Yes ◯ No

Explain:

3.52 Is an anesthesiologist designated to the PIPS and TPOPPC? ◯ Yes ◯ No

Does he/she attend at least 50% of these meetings? ◯ Yes ◯ No

Operating Room (OR)

3.53 Is the OR adequately staffed and immediately available? ◯ Yes ◯ No

Explain:

3.54 Are operating rooms promptly available to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization, and compartment decompression.

◯ Yes ◯ No

Explain:

3.55 Does the OR have:

A. Rapid infusers? ◯ Yes ◯ No

B. Thermal control equipment for patients and resuscitation fluids? ◯ Yes ◯ No

C. Intraoperative radiologic capabilities? ◯ Yes ◯ No

D. Equipment for fracture fixation? ◯ Yes ◯ No

E. Equipment for endoscopic evaluation (bronchoscopy and gastrointestinal endoscopy)? ◯ Yes ◯ No

F. Equipment necessary for craniotomy? ◯ Yes ◯ No
(Not needed if your center does not offer neurosurgery services)

3.56 Is there a mechanism for documenting trauma surgeon presence in the OR for all trauma operations?
◯ Yes ◯ No

Explain:

Post-Anesthesia Care Unit (PACU)

3.57 Does the PACU have the necessary equipment to monitor and resuscitate patients (See page 63 for a list of required equipment). ◯ Yes ◯ No

3.58 Does the PACU have qualified nurses available 24/7 as needed during the patient's post anesthesia recovery phase? ◯ Yes ◯ No

3.59 Is the PACU covered by a call team from home? ◯ Yes ◯ No

If yes, does the PIPS program document that nurses are available and delays are not occurring?

◯ Yes ◯ No

Explain:

Radiology

3.60 Do you have conventional radiography and CT available 24/7? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.61 Do you have MRI capability available 24/7? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.62 Do you have an in-house CT technologist 24/7? ◯ Yes ◯ No

If no, does the PIPS program document response time? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.63 Do you have staff available on site or via telemedicine within 30 minutes of notification for the interpretation of radiographs 24/7 with an 80% achievement rate. ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.64 Is critical information verbally communicated to the trauma team? ◯ Yes ◯ No

Explain:

3.65 Is diagnostic information communicated in a written form and in a timely manner?

◯ Yes ◯ No

Explain:

3.66 Are changes in interpretation monitored by the PIPS program? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.67 Do final reports accurately reflect communications, including changes between preliminary and final interpretations? ◯ Yes ◯ No

Explain:

3.68 Do you have policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Intensive Care Unit (ICU)

3.69 Does the ICU have the necessary equipment to monitor and resuscitate patients (See page 64 for the list of required equipment)? ◯ Yes ◯ No

3.70 Do you admit neurotrauma patients? ◯ Yes ◯ No

If yes, do you have intracranial pressure monitoring equipment? ◯ Yes ◯ No

3.71 Is a qualified nurse available 24/7 to provide care during the ICU phase? ◯ Yes ◯ No

3.72 Does the patient:nurse ratio exceed 2:1 for critically ill patients in the ICU? ◯ Yes ◯ No

3.73 For a critically ill patient, is there a mechanism in place to provide prompt availability of ICU physician coverage 24/7? ◯ Yes ◯ No

Explain:

3.74 Does the trauma surgeon remain in charge of trauma patients in the ICU? ◯ Yes ◯ No

Explain:

3.75 Do you have a surgical director or co-director for the ICU who is responsible for setting policies and administration related to trauma ICU patients? ◯ Yes ◯ No

Explain:

Medical Consultants

3.76 Do you have internal medicine specialists available? ◯ Yes ◯ No

Respiratory Therapy

3.77 Do you have a respiratory therapist available (or on call) to care for trauma patients 24/7?

◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Laboratory

3.78 Do you have laboratory services available 24/7 for the standard analysis of blood, urine, and other body fluids, including microsampling when appropriate? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.79 Do you have the capability for coagulation studies, blood gases, and microbiology?

◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.80 Is your blood bank capable of blood typing and cross-matching? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.81 Does your blood bank have an adequate amount of red blood cells, fresh frozen plasma, platelets, cryoprecipitate, or appropriate coagulation factors to meet the needs of injured patients?

◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Nutrition

3.82 Are nutrition support services available? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Social Services

3.83 Do you have social services? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.84 Do you screen all trauma patients for alcohol use? ◯ Yes ◯ No

Do you provide a brief intervention if appropriate? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Dialysis

3.85 Do you have dialysis capabilities? ◯ Yes ◯ No

If no, do you have a transfer agreement with a facility that has dialysis capabilities?
◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

Rehabilitation

3.86 Do you provide physical therapy services? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

3.87 Do you have rehabilitation services within the facility? ◯ Yes ◯ No

If no, do you have a transfer agreement with a freestanding rehabilitation hospital?
◯ Yes ◯ No

Attach supporting documentation. Label as “Attachment #24”.

4. Prehospital Trauma Care

4.1 Do you participate in prehospital care protocol development and the PIPS program?

Yes No

Explain:

5. Interhospital Transfer

5.1 Is the decision to transfer an injured patient to a specialty care facility in an acute situation based solely on the needs of the patient?

Yes No

5.2 Are there transfer protocols in place with higher level trauma centers as well as specialty referral centers (e.g. burn, pediatric, and rehabilitation centers)?

Yes No

Attach a list of protocols and/or agreements. Label as “Attachment #25”.

5.3 Is there a mechanism for direct physician-to-physician contact for arranging patient transfer?

Yes No

Explain:

5.4 Do you have in place written protocols with a referral burn center? ◯ Yes ◯ No

Attach a list of transfer protocols. Label as "Attachment #26".

5.5 Do you have a plan, approved by the Trauma Medical Director, that determines appropriate transfer of patients with neurologic injury when no neurosurgical coverage is present? ◯ Yes ◯ No

5.6 Do you have guidelines for addressing which patients (including pediatric patients) should be transferred and the safe transport of those patients? ◯ Yes ◯ No

Attach supporting documentation. Label as "Attachment #27".

6. PIPS

6.1 Do you have a clearly defined PIPS program for the trauma population? ◯ Yes ◯ No

Explain:

6.2 Is your PIPS program supported by a reliable method of data collection that consistently gathers valid and objective information necessary to identify opportunities for improvement?

◯ Yes ◯ No

Explain:

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 decision reviewed by the PIPS program? ◯ Yes ◯ No

Explain:

6.4 Do you use a risk stratified benchmarking system to measure performance and outcomes? ◯ Yes ◯ No

Explain:

6.5 Do you use clinical practice guidelines, protocols, and algorithms derived from evidence-based validation resources to achieve benchmark goals? ◯ Yes ◯ No

Explain:

6.6 Are all process and outcome measures documented in a written plan and updated annually?

Yes No

Explain:

6.7 Do you demonstrate a clearly defined PIPS program for the trauma population? Yes No

Are all process and outcome measures documented in a written PIPS plan and updated annually?

Yes No

6.8 Does the process of analysis occur at regular intervals to meet the needs of the program?

Yes No

6.9 Does the process of analysis include multidisciplinary review? Yes No

Attach a list of the disciplines represented on the PIPS committee. Label as "Attachment #28".

6.10 Does the process demonstrate problem resolution (loop closure)? Yes No

Explain:

6.11 Are you able to separately identify the trauma patient population for review?

Yes No

Do you have supporting documentation? Yes No

6.12 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. Label as "Attachment #29".

6.13 Do you use the registry to support the PIPS program? Yes No

Explain:

6.14 Are deaths categorized as unanticipated mortality with opportunity for improvement, anticipated mortality with opportunity for improvement, or mortality without opportunity for improvement?

Yes No

6.15 Does the PIPS program review the organ donation rate? Yes No

Explain:

6.16 Does the PIPS program have defined conditions requiring the surgeon's immediate hospital presence?

Yes No

Attach supporting documentation. Label as "Attachment #30".

6.17 Does the PIPS program ensure that the PACU has the necessary equipment to monitor and resuscitate patients?

Yes No

Explain:

6.18 Are all trauma team activations categorized by the priority of response and quantified by number and percentage?

Yes No

6.19 Does the PIPS program work with receiving facilities to provide and obtain feedback on all transferred patients?

Yes No

Explain:

6.20 Does the PIPS program evaluate OR availability and delays when an on-call team is used?

Yes No

Explain:

6.21 Does the PIPS program document the appropriate timeliness of the arrival of the MRI technologist?

Yes No

Explain:

6.22 Does the PIPS program document the availability of the anesthesia services and the absence of delays in airway control or operations?

Yes No

Explain:

6.23 Is the trauma surgeon's presence in the ED (30 minutes with an 80% achievement rate) confirmed and monitored by the PIPS program? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

6.24 Do you admit more than 10% of injured patients to nonsurgical services? ◯ Yes ◯ No

If yes, does the PIPS program demonstrate the appropriateness of that practice? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

6.25 Does your trauma center treat injured children (age 14 or less, and entered into the trauma registry)? ◯ Yes ◯ No

If yes, is the care of injured children reviewed through the PIPS program? ◯ Yes ◯ No

Explain:

6.26 Are transfers to a higher level of care reviewed to determine the rationale for transfer, adverse outcomes, and opportunities for improvement? ◯ Yes ◯ No

Explain:

6.27 Does your PIPS program document that timely and appropriate care and coverage are being provided in the ICU? ◯ Yes ◯ No

Explain:

6.28 Does your PIPS program review transfers to ensure appropriateness? ◯ Yes ◯ No

Explain:

6.29 Does your PIPS program review the appropriateness of the decision to transfer to retain major orthopedic trauma? ◯ Yes ◯ No

Explain:

6.30 Do you care for neurotrauma patients? ◯ Yes ◯ No

If yes, do you have a performance improvement program that demonstrates appropriate care?

◯ Yes ◯ No

6.31 Are the results of analysis documented and do they define corrective strategies?

◯ Yes ◯ No

Explain:

6.32 Do you have a system to notify dispatch and EMS agencies when on divert status?

◯ Yes ◯ No

Attach a copy of your divert policy (See sample on page 65). Label as "Attachment #31".

7. 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 process? ◯ Yes ◯ No

B. Meet regularly? ◯ Yes ◯ No

C. Take attendance? ◯ Yes ◯ No

D. Have minutes? ◯ Yes ◯ No

E. Work to correct all overall program deficiencies to continue to optimize patient care? ◯ Yes ◯ No

7.2 Does your TPOPPC require attendance for medical staff active in trauma resuscitation to review systemic and care provider issues, as well as propose improvements to care of the injured?

◯ Yes ◯ No

Explain:

7.3 Does your TPOPPC have participation from:

A. General surgery? ◯ Yes ◯ No

B. Orthopedic surgery? ◯ Yes ◯ No

C. Neurosurgery (if you provide neurotrauma care)? ◯ Yes ◯ No

D. Emergency medicine? ◯ Yes ◯ No

E. Anesthesia? ◯ Yes ◯ No

7.4 Is your TPOPPC chaired by the Trauma Program Medical Director or designee?

◯ Yes ◯ No

7.5 Do identified problem trends undergo multidisciplinary peer review by the TPOPPC?

◯ Yes ◯ No

7.6 Is there documentation reflecting the review of operational issues and, when appropriate, the analysis and proposed corrective actions? ◯ Yes ◯ No

Explain:

8. TSE Registry

8.1 Is trauma registry data collected, analyzed, and used to support the PIPS program?

Yes No

Explain:

8.2 Is your trauma data submitted to the TSE Registry (Idaho Trauma Registry) within 180 days of treatment at least 80% of the time?

Yes No

Attach a letter from the TSE Registry (Idaho Trauma Registry) supporting your answer. Label as "Attachment #32".

8.3 Do you have a process in place to verify that TSE Registry data is accurate and valid?

Yes No

Explain:

8.4 Does the trauma program ensure that registry data confidentiality measures are in place.

Yes No

Explain:

9. Outreach & Education

9.1 Are you engaged in public and professional education? Yes No

Attach a list of public and professional educational opportunities from the most recent 12-month period. Label as "Attachment #33".

9.2 Do you provide a mechanism for trauma-related education for nurses involved in trauma care?

Yes No

Explain:

10. Prevention

10.1 Do you participate in injury prevention? ◯ Yes ◯ No

Attach supporting documentation for all activities in the past 12 months. Label as "Attachment #34".

10.2 Do you have a prevention coordinator with a job description and salary support?

◯ Yes ◯ No

Attach a copy of the job description. Label as "Attachment #35."

10.3 Do you base injury prevention activities on local data? ◯ Yes ◯ No

Explain:

10.4 Can you demonstrate collaboration with or participation in national, regional, or state injury prevention programs? ◯ Yes ◯ No

Explain:

11. Disaster Planning and Management

11.1 Do you meet the disaster-related requirements of the Joint Commission? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

11.2 Is a trauma surgeon a member of your disaster committee? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

11.3 Do you perform drills that test your hospital's disaster plan that are conducted at least every 6 months? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

11.4 Do you have a disaster plan (See *Creating a Disaster Plan* on page 67) that is described in your Disaster Manual? ◯ Yes ◯ No

Do you have supporting documentation? ◯ Yes ◯ No

12. Organ Procurement

12.1 Do you have an established relationship with a recognized organ procurement organization? ◯ Yes ◯ No

Explain:

12.2 Do you have written policies for triggering notification of the organ procurement organization?

Yes No

12.3 Do you have written protocols for the declaration of brain death (See example on page 71)?

Yes No

Sample 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 RESOLVED 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 V Trauma Centers.

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

SAMPLE

_____

Chief of Staff

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 RESOLVED that the board of directors of [HOSPITAL] resolve to provide the resources necessary to achieve and sustain a Level V Trauma Center designation.

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

SAMPLE

_____

Chairman of the Board

MADE-UP MEMORIAL MEDICAL CENTER
Position Description

JOB TITLE: Trauma Medical Director

DEPARTMENT: Trauma Services

REPORTS TO: Chief Medical Officer
Trauma Service Director

GENERAL SUMMARY:

The Trauma Medical Director is the Trauma Surgeon who has been assigned by the hospital to lead the medical multidisciplinary activities of the Trauma Service. The role of the Trauma Medical Director will be to pursue the full development of the trauma center in terms of quality of care, volume, scope of services and cost-effectiveness, and to organize and manage the overall physician/surgeon component of the trauma service.

QUALIFICATIONS:

Member of good standing of the medical staff of the hospital.
Duly licensed to practice medicine in the state of Idaho.
Board certified in General Surgery specialty.
Board certified in Critical Care.
Demonstrates a work history of positive collegial relations with colleagues, support staff, hospital-based providers, administrators, and patients.
Demonstrates advanced competency in surgical critical care.
Maintains currency in ATLS, ACLS, PALS.

RESPONSIBILITIES:

A. **Clinical**

Oversees all aspects of the multidisciplinary care from the time of injury through discharge.
Develops, coordinates and provides input on the development and maintenance of practice guidelines, policies, and methodologies for trauma medical/surgical patient care.
Demonstrates consistent, efficient, cost effective, quality trauma medical/surgical care at all times.
Maintains utilization of ancillaries and pharmacy costs within accepted managed care standards.
Reports quality of care issues promptly to appropriate individuals, including Director Trauma Services; Risk Manager; and Administration.
Meets established health information and hospital standards for documentation and turnaround times.
Coordinates, chairs, and participates in all relevant trauma medical QA/PI and peer review activities as required by the Medical Staff, Trauma Services, and Hospital.
Makes appropriate referrals for specialty services and communications regularly with referring physician as appropriate.
Manages patients in consultation with referring physicians and provides feedback regarding clinical care in the trauma region.

SAMPLE

Coordinates the transition of the patient to sub acute care.

B. **Communication**

Collaborates with the Director Trauma Services to establish trauma program goals and objectives consistent with those of the hospital and ensure that those of the trauma service are being met.

Consistently demonstrates positive interpersonal relationships with colleagues, hospital personnel, and patients/family in order to achieve maximum operational effectiveness and customer satisfaction.

C. **Managerial**

Authority for determining each surgeon's ability to participate in the trauma program through trauma PIPS program & hospital P&P. Trauma Medical Director can correct deficiencies in trauma care or exclude surgeons from call.

Performs and participates in an annual review (credentialing) process of all Trauma Surgeons and Co-specialist providing trauma care at Made-up Memorial Medical Center.

The Trauma Medical Director has the authority to remove members from/appoint members to the trauma panel annually.

In conjunction with the representatives from the co-specialties will recommend and approve qualified medical/surgical trauma team privileges. Excludes from trauma call those medical/surgical trauma team members who do not meet established designation/ verification criteria and requirements.

Establishes a physician case management process which fosters cost-effective, high quality patient care.

Oversees, participates and develops projects that ensure cost-effectiveness of care provided by physicians and hospital.

Coordinates, participates and chairs trauma, educational, quality assurance and multi-disciplinary meetings.

Ensures establishment of physician/surgeon call schedules for all specialties.

Ensures compliance of the trauma medical/surgical care with all regulatory and trauma designation/verification requirements including ACS, JCAHO, OSHA, EMTALA and local designating agencies.

Develops strategic relationships with referring hospitals and physicians.

Maintains relations with community organizations and legislative bodies whose activities relate to trauma care and injury prevention.

Coordinates and participates in trauma surgeon recruitment, trauma service marketing, and community education/prevention activities.

Participates in trauma patient/family satisfaction projects.

Assists the Director Trauma Services in developing and meeting the Trauma Service budgetary goals.

D. **Education/Training/Research**

Participates in the education/training of hospital personnel, trauma surgeons, and co-specialists.

Participates in the development of providing/coordinating ATLS courses in local area.

Adheres to Trauma Service guidelines and assists in the education and training of hospital personnel.

Oversees, participates in, and coordinates all Trauma related research.

Represents ABC Medical Center Trauma Services as the Trauma Director by lecturing on trauma topics at organization education opportunities.

Participates in the education of faculty and professional students as requested and approved

SAMPLE

by Made-Up Memorial Medical Center and allowed by professional practice commitment.

Provides, on a semi-annual and PRN basis, educational trauma case presentations to regional facilities which have referred patients to Made-Up Memorial Medical Center Trauma Services. The educational session will be open to pre-hospital, nursing, ancillary and physician staff.

ORGANIZATIONAL RELATIONSHIPS:

Adheres to all Made-Up Memorial Medical Center policies/procedures.

SAMPLE

MADE-UP MEMORIAL MEDICAL CENTER

Trauma Program Manager Job Description

JOB TITLE: Trauma Medical Director

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.

RESPONSIBILITIES:

Adheres to the general Made-Up Memorial Medical Center standards to promote a cooperative work environment by utilizing communication skills, developing interpersonal relationships and team building; following MUMC 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 Made-Up Memorial Medical Center 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 Made-Up Memorial's 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 community outreach and education within the referral area.

Serves as unifying 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.

ORGANIZATIONAL RESPONSIBILITY STATEMENT:

In addition to the job-specific responsibilities listed above, all employees are expected to support and model Made-Up Memorial's Mission, Vision, Values, Fundamentals of Teamwork, Service Philosophy (CREDO), and other organizational competencies e.g. quality management, fiscal responsibility, safety

SAMPLE

and continuous learning. Employees will be held accountable for knowledge and effective application of these principles.

REQUIRED QUALIFICATIONS:

Education

Specialized training beyond a Bachelor's Degree

Experience

10+ 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), Pediatric Advanced Life Support (PALS), Certified Emergency Nurse (CEN) and/or Critical Care Registered Nurse (CCRN)

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:

Master's degree in nursing or health related field with a minimum of 8-10 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 50 lbs 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 (34-65% of work time)

This position description is a brief summary of the major responsibilities and qualifications required for this position. It is not a list of all duties the position incumbent may be asked to perform.

SAMPLE

Trauma Triage Guidelines

These guidelines were approved for statewide use by the Idaho Time Sensitive Emergency Council on July 14, 2015.

Priority 1

- SBP of 90 or less, respiratory rate <10 or >30
- Tachycardia HR >130 AND meet Priority 2 criteria
- Age specific hypotension in children
  - <70mmHg + 2 x age)
  - HR > 200 or < 60
- Respiratory compromise/obstruction
- Intubation
- Inter-facility transfer patients receiving blood to maintain vital signs
- GCS 8 or less with mechanism attributed to trauma
- Major limb amputation
- Pregnancy >20 weeks gestation with leaking fluid or bleeding or abdominal pain that also meets Priority 3 criteria
- Open skull fracture
- Paralysis of an extremity
- Penetrating injury to abdomen, head, neck, chest or proximal limbs including the knee and elbow
- Emergency MD Discretion

Priority 2

- GCS 9 to 13
- Chest tube/ needle thoracotomy
- Pelvic fracture (suspected)
- Two obvious long bone fractures (femur/ humerus)
- Flail chest
- Near drowning
- Ejection from ENCLOSED vehicle
- Burns > 20% BSA OR involvement of face, airway, hands, or genitalia
- Sensory deficit of an extremity

Priority 3

- Death of same car occupant
- Extrication time > 20 minutes
- Fall 2 x patient's height
- Auto vs. bike OR auto vs. pedestrian
- Non-enclosed wheeled or mechanized transport > 20 mph
- Horse ejection or rollover
- 12" intrusion into occupant space or vehicle
- "Star" any window or windshield
- Rollover
- Broken/bent steering wheel
- Trauma mechanism w/ change in LOC
- Amputation of one or more digits
- 10-20% TBSA (second or third degree)

Essential PACU Equipment

Taken from *Resources for Optimal Care of the Injured Patient, COT/American College of Surgeons, 2006.*

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

Essential ICU Equipment

Taken from *Resources for Optimal Care of the Injured Patient, COT/American College of Surgeons, 2006.*

- ☐ 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:

<u>Going on divert:</u>

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
    b. [NEIGHBORING HOSPITAL(S)]
3. The emergency department charge nurse begins a "Trauma Divert Tracking Log."

SAMPLE

When contacted by EMS with information regarding a seriously injured trauma patient, the emergency department staff person taking report notifies the 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 of 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 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
    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

Creating a Disaster Plan

1. Establish a hospital disaster committee consisting of the following:
    a. Chair;
    b. Vice-chair administrative representative;
    c. Trauma surgeon representative;
    d. Trauma service administrative representative;
    e. Security representative;
    f. Medical staff representative 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 representatives;
    l. Social service representatives;
    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 (for example, ICU, ward, adult, pediatric, burn), and locations.
    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 hospital inventory and emergency stockpile.
    a. Blood supply arrangements should be made with the Red Cross and other suppliers of blood and included in simulation exercises.

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. (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; and
    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. Personnel resources:
    a. Hospital disaster commander and emergency operating center liaison plus at least 2 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 roll 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 in 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: 1 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 (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.

Made-Up Memorial Medical Center

Title: Determining Brain Death

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

Procedure:

I. 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:

1. Core temperature less than or equal to 95° Fahrenheit or 32° Celsius.
2. Reversible electrolyte, metabolic or endocrine disorder.
3. Drug overdose or therapeutic mean substance intoxication or poisoning:
   a) Sub-therapeutic barbiturate level is acceptable.
   b) Discontinue all sedation and neuromuscular blockade.

II. Procedure for Brain Death Examination:

A. The three cardinal findings in brain death are:

1. Coma or unresponsiveness (see Appendix A),
2. 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 reflex
   f) No integrated motor response to pain. No localizing, withdrawal, extensor posturing, flexor posturing.
3. Apnea (see Appendix C).

B. Brain Death Determination

1. Must be done in the presence of a physician.
2. Results will be recorded in the progress notes by documenting the supporting evidence and pronouncing brain death.
3. In some instances, the test may need to be repeated at 12, 24, and 48 hours.

SAMPLE

4. Following physician 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

1. The same excluding criteria as for adults will be used for patients less than 14 years and less than 120 pounds.
2. Special instructions for individualized pediatric apnea tests are noted in Appendix D.

III. 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.

C. Note:

1. Deep tendon reflexes are spinal cord reflexes.
2. 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.

IV. Appendix B: Absence of Brain Stem Function:

A. No pupillary reflex.

1. Pupils are fixed and mid position (4-9 mm).
2. No change after shining a strong light in each eye sequentially in a dark room.

B. Facial sensation and facial motor response.

1. No corneal reflex to touch with a sterile cotton swab or tissue. Must touch the cornea and not the conjunctiva.
2. No grimacing to deep pressure on nail bed, supraorbital ridge or TM joint.

C. Ocular movement.

1. No oculocephalic reflex (doll's eyes) (tested only if no c-spine instability).
2. No eye movement in response to turning of head side to side at 30° elevation.

D. No oculovestibular reflex (caloric).

1. No eye movements within three minutes after irrigating each tympanic membrane sequentially with 50 ml iced water for 45-60 seconds.
2. Allow five minutes between testing on each side. Head of supine patient is elevated 30°.
3. Remove cerumen. Tympanic membranes must be intact.

E. No gag reflex. No retching or movement of the uvula after touching the back of pharynx or moving the endotracheal tube.

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V. Appendix C: Apnea Testing:

A. To reduce the incidence of barotrauma:

1. Oxygen catheter should be no larger than 50% of the inner diameter of the artificial airway to prevent excessive back pressure.
2. 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:

1. Verify patient's body temperature is greater than 95º Fahrenheit.
2. Verify levels of central nervous system depressants/neuromuscular blockers.
3. Oxygenate the patient for at least ten (10) minutes with 100% FiO2.
4. 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.
5. Obtain a baseline ABG.
6. Disconnect the ventilator.
7. Place oxygen catheter down endotracheal tube or trach at six liters/minute.
8. Observe closely for respiratory effort.
9. Monitor heart rate, heart rhythm, and blood pressure continuously.
10. Document vital signs and observations every two to three minutes.
11. Draw an ABG at six to ten (6-10) minutes.
12. 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:

1. If respiratory movements are absent and the PaCO2 is greater than or equal to 60 mm/Hg, and greater than or equal to 20 mm/Hg rise above the preapnea test level, the apnea test is positive and supports the diagnosis of brain death. (What if the PaCO2 is less than 60 off vent?)
2. If respiratory movements are observed, the apnea test is negative and test should be repeated.
3. If the ventilator is reconnected early but the PaCO2 is greater than or equal to 60 mm/Hg or greater than or equal to 20 mm/Hg above baseline, the apnea test is positive and supports the diagnosis of brain death.
4. If the ventilator is reconnected early but the PaCO2 is less than 60 mm/Hg and less than 20 mm/Hg above baseline, then the result is indeterminate and an

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additional confirmatory test can be considered.

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

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

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

A. Set appointment time when the treatment 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 35-40 mm/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.

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Additional Resources

Links to Additional Resources

American Burn Association: www.ameriburn.org

American College of Surgeons – Committee on Trauma: http://facs.org/trauma/index.html

American Trauma Society: www.amtrauma.org

Association for the Advancement of Automotive Medicine: http://aaam.org/

Centers for Disease Control & Prevention, Guidelines for the Field Triage for the Injured Patient: http://www.cdc.gov/FieldTriage/

Eastern Association for the Surgery of Trauma: http://www.east.org/resources/treatment-guidelines/triage-of-the-trauma-patient

Emergency Nurses Association: 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: http://www.traumanurses.org/

Joint Commission Emergency Management http://www.jointcommission.org/emergency_management.aspx