TRAUMA SERVICE - ROUTINES AND PROTOCOL REVIEW*
[* From 1989 - 2003 QA ISSUES]

I. NO PATIENT IS TRANSFERRED TO ANOTHER SERVICE OR FACILITY DURING THE FIRST 24 HOURS OF ADMISSION. The only exception may be a pediatric patient with single system orthopedic injury. Each case will be reviewed by the PI process.

II. Documentation on the Trauma Service
A. Procedures in resuscitation should be documented in progress notes. There are progress notes with a stamp on them that outline the info that needs to be documented. They should also be dictated as an operative note.
B. No medical student can do the formal H & P form. Only residents should fill out the hospital H&P. The Attending physician must cosign the H & P. The code status must be checked off. The day-to-day "oversight" responsibility for this is the senior resident's who is on trauma.
C. Written operative notes must be in chart immediately postoperatively. The dictated note must be done within 24 hours, but should be dictated immediately after the procedure.
D. Medical student notes in the chart must be cosigned. Cosignatures must be from a licensed physician. An intern is not yet a licensed physician.
E. Documentation requirements on the Trauma Service are in the Trauma Manual - Chapter 19. (Documentation requirements and outlines of notes for "every occasion").
F. Everyone who touches or assesses the patient in a meaningful way in resuscitation or the ED should write an admission note.
G. There is a JCAHO requirement for addressing abnormal lab values in chart.
H. Blood product transfusion consents: Patients who are able to sign permission, must sign a blood transfusion consent form.
I. Operative permits signed in trauma situations: If the patient is unable to sign for himself, the operating surgeon write a progress note stating specifically the indications for the surgery, the patient’s inability to consent and inability to contact family, and also have a 2nd surgeon sign for emergent operative consent.
J. Preoperative notes for all patients should include discussion of risks/benefits/alternative choices with the patient or his family.
K. Clinic - patients seen in clinic need to have their charts passed by the Attending for cosignature.
L. Time progress notes - put times as well as dates for all progress notes. This is especially important for the Tertiary Head to Toe exam by the senior examiner and for serial physical exams of the abdomen, chest, cspine, etc.

III. Patients arriving by Helo or ambulance should be met by the Emergency Medicine Resident from the ED. - Prior to patient arrival the EM resident should go to the helo pad to meet patient and transport to resus suite.

IV. BSI/Universal Precautions in Resuscitation Suite
A. Do not stick needles in mattresses. There are needle disposal units in the room.
B. Double gloving is suggested
C. Gowns/goggles precautions are to be worn for all patients. A 1991 study demonstrated a 3% HIV rate and 18% Hep B rate for all trauma / emergent admissions to UCSDMC

V. OPERATING ROOM RESUSCITATION
A. Criteria for OR Resus
   a. Penetrating trauma with cardiac arrest.
   b. Witnessed Blunt arrest with one vital sign.
   c. Hypotensive patients who are unresponsive to fluid challenges in the prehospital. (i.e. < 90 sys)
   d. Major external hemorrhage - uncontrolled (amputation above knee or elbow).
   e. Direct injury to airway with serious compromise
B. While still en route to the hospital, do not change patient's place of destination at the last minute. A paramedic in the field, MICN radio nurse, resuscitation nurse or senior trauma physician can call an OR Resus as long as the patient is more than 5 minutes ETA. Once the decision has been made, do not change the decision. There is often not enough time to move either the trauma team or paramedics to another destination. In addition, the doctor escorting the patient from the ED door will not be aware of the new destination.

VI. C-spine Work up and Management
A. Normal trauma routine for clearing C spines includes 3 radiographic views initially, combined with clinical exam or clinical clearing of the spine. A patient with competing pain, any intoxicating substance or any head injury should not have the clinical motion exams attempted until sensorium is cleared (usually the next morning).
B. Patients with any spinal fracture should have a radiologic exam of the entire spine.
C. “C-spine precautions”
   - Bedrest.
   - Hard collar at all times.
   - Transported flat on a gurney.
   - Bed flat*
     1. “T-L spine precautions”-
     - Bed Flat; pt may be in slight reverse Trendelenburg.
D. *In some low risk patients, after T-L spine has been cleared the senior physician may use his judgment and write the C-spine precautions order to include “HOB may be up 30 degrees.”
E. Clinically clearing the Cspine includes examination/soliciting for pain or tenderness with palpation. The patient should be instructed to slowly move his head side to side (without assistance) then to the back and then to the front and to stop at any time if he has any tenderness.
F. Correct procedure for obtaining patient guided flexion/extension Reviews of c-spine:
   1. A physician must be in x-ray with patient to supervise patient movement during the films. (Write on the order with doctor with pager #)
   2. The patient should be allowed to move his own neck in flexion/extension exams. If the patient experiences pain or tenderness the exam should be stopped.
G. Order or progress note must be written in order for nursing staff to leave the collar off.
H. Any patient with complaints of pain or soreness of the C-spine should be kept in a Philadelphia collar (or changed to a soft collar) regardless of their radiographic exam results. He should wear the collar until he returns to trauma clinic.
I. Patients who will wear a Philadelphia collar for extended periods of time that are at risk for skin breakdown can have an Aspen collar placed. Please ask the Trauma Coordinator.

VII. **DVT/PE prophylaxis** (See protocol for Div of Trauma)

A. **Use of Venodynes versus ordering the Trauma Duplex Protocol.**
Venodynes should be ordered separately from ordering the Trauma Duplex Protocol. (Venodynes are not used if patient is admitted only for overnight admission.)
B. **Trauma Duplex Protocol:** Physicians should order Trauma Routine Duplex Protocol only on patients with High Risk. The patient will receive a screening Duplex the first week of admission by the Ultrasound Lab; serial duplexes will be done weekly thereafter. The results of the Duplexes can be found in the computer under "Reports/Results" Radiology.
C. Patients with filters still need venodynes and weekly Duplex screening.
D. When immobile patients are transferred to nursing homes, SNF, extended care facilities, etc the discharge summary/orders should include recommendations for DVT prophylaxis - sub q Heparin or Coumadin.

VIII. **Radiology:**

A. Wet readings by Radiology should be documented as such by Trauma Service in the progress notes - especially since subsequent care is based on readings. If dry readings done by Staff Radiologists are different from wet readings, the radiologist will immediately notify the Chief Resident or Attending.
B. Patients admitted as a transfer with outside CT scans or x-rays can have an “official” reading of the films if an order is written and Radiology notified.
C. A senior member of the house staff accompanies the trauma patient to CT Scan.

IX. **Trauma Team Activation:**

A. Any ED trauma patient can have the Trauma Team Activation done and the patient moved to the Resuscitation Suite at the order of the ED attending or Senior Trauma Service physicians.
B. Trauma Consult Protocol in ED - the Trauma Attending, Trauma Fellow or Chief resident must see the patient within 30 minutes of Consult requests by the ED.
C. Single System Neurosurgery patients admitted via the ED or directly to a hospital bed are to be seen by Trauma Service.
D. Any pediatric trauma patients admitted by the ED to the hospital are to be seen by the Trauma Service (notified by the ED).

X. **Resus Room Coordination:** Daytime resus's are too crowded. Dr 1 should ask extraneous people to leave.
A. “Pre admission game plan” should be articulated.
B. Dr 1 should articulate patient's plan of diagnostic work up within first 5 minutes of admission.
C. House staff/med students should be familiar with the room and all supplies. No one should have to ask another team member for an IV catheter or tray. Use the scavenger hunt list to familiarize yourself.

D. All Trauma Service physicians should feel comfortable intubating patients.

E. Techniques/Routines: Everyone should feel comfortable and know how to assist/perform the following at their level of responsibility:
   1. Cutdown technique
   2. Chest tube placement/removal

F. Burn/Pediatric/Elderly (>62 y/o) Patients:
   1. IV Fluids will be put immediately on IVAC's in resus.
   2. The nurse will need fluid maintenance rate order early in resus (and supplement with Bolus).

G. As of August 2001, Blood Alcohol and Urine Toxicology should be sent as routine.

H. Talk to patients in resuscitation before beginning a procedure, especially rectal exams and Foley catheters. Talk to families early.

I. Women of reproductive age with R/O BAT who cannot give a history and may have undetected pregnancy will have a screening ultrasound prior to DPL. (3/94)

J. Do not staple scalp wounds as a definitive repair.

XI. The Tertiary Survey: The "morning after" head to toe physical reexamination must be done and documented by a senior examiner. (See Critical pathway "Major Nonoperative Trauma Critical Path)

XII. Patients with low hematocrits (<30) on the med surg ward who tolerate po should receive Ferrous sulfate 325mg TID and Colace QD while in hospital. At discharge, if eating normally they should take the Ferrous sulfate bought over the counter.

XIII. Obtain a consult for all adolescent patients age 13 to 19 years of age by paging the adolescent attending on call (Drs Friedman, Loper, or Adams) thru the page operator. Do not call the pediatric residents. Do not delay discharge of a patient waiting for a consult; schedule the patient with an adolescent clinic follow-up appointment. At the time of discharge, the dc instructions must include an appointment with the Adolescent Clinic.

XIV. Chest tubes placement/removal. Only R3 or above can place chest tubes in ventilated patients. All other chest tube placements must be supervised by an R3 or above. Awake patients should receive pre-procedure analgesia (MS and/or Versed). Chest tube removal is a 2-person project. An R2 or above should be present.

XV. All central line catheter placements should be supervised by an R3 resident or above on ventilated patients.

XVI. Trauma MD will need to assist with completion of essential financial forms & may contacted directly by the Patient Services Representative (PSR).

XVII. Female patients of childbearing age who for a prolonged time frame are unable to give a good history (and lack family to give a good history), i.e., comatose, depressed LOC, etc., should have a pregnancy screening test sent to the lab.
XVIII. Limit the number of people who accompany the patient in CT scan (office) to 1 attending, 1 RN, 2 residents, 1 med student.

XIX. Use the organ injury scales for all documentation of all intra-abdominal injuries wherever possible. Please note these are on the internet www.aast.org

XX. Until a patient is declared brain dead, the Trauma Service writes all orders on patient; LifeSharing is an assistive service.

XXI. ALL trauma patients should be scheduled for at least 1 Trauma Clinic appointment upon discharge.
   A. For DC’s on Monday/Tuesday Appointment for same week Friday
   B. For DC’s on Wed or later Appointment for next week Friday

XXIII. Extubation of Patients
   A. Extubation of ICU patients – no extubations after 9:00 p.m. unless Trauma Attending agrees and is present.
   B. --Post-operative neck surgeries (includes spine operations and neck explorations) – extubation is not done unless Trauma Attending is consulted first. To extubate, an Attending must be present.
   C. --Extubation of patients with known history of “difficult airway” or “difficult intubation” – no extubation unless Trauma Attending or Dr Wilson (Critical Care Attending) agrees and is present. (Includes patients status post anesthesis with difficult airway/intubation and/or significant soft tissue neck injury.)

XXIV. Trauma Center Bypass Status
   A. Only the Trauma Attending can place the Trauma Center on Trauma Bypass. Trauma Bypass means that the prehospital personnel (MICN radio nurse, paramedics, Base Hospital physician) will divert injured major trauma victims from UCSDMC to other trauma hospitals.
   B. Trauma Bypass is a different status other county bypass reasons/status, e.g. ED saturation, Hospital full, or No ICU beds. Even if the hospital is on ED saturation, Hospital full or No ICU beds bypass status, this does not mean we are automatically on Trauma Bypass.
   C. On occasion, Children’s Hospital Trauma Center will have no ICU beds. When this occurs they will call the UCSDMC Trauma Surgeon on call, and notify him that the Pediatric Age Specific bypass plan is enacted. That means that pediatric patients 10 to 14 years of age will be sent to UCSDMC Trauma Center until Children’s Trauma Center is off bypass.

XXV. Notify the Medical Examiner’s Office (858-694-2895) of any death >2 weeks or if an autopsy is not done or denied.

XXVI. Planning for Discharges
   A. Every morning, the Chief or senior resident should provide the attending with a list of all patients who would be ready for discharge that day. They will discuss any details that
might be needed for discharge and see that patient as needed in order to facilitate discharge.
B. Once the approval for discharge is given, the senior resident contacts the junior resident to get the process moving. Also, Case Managers are notified so that they can assist.
C. The resident should also attempt to identify any patient who might be able to be discharged the following day and discuss these patients with the attending.
D. Discharge orders are to be written by 10:00 AM so that the patient leaves the hospital by at least 2:00 PM.
E. All labs and x-ray orders are to have the words “PENDING DISCHARGE” if the patient’s discharge is dependent on the results of these tests.

RESUS SUITE LAB TESTS AS OF 7/7/04

**Routine Labs are:**
- ABG + Hgb
- Clot to hold or Type & Screen
- Blood Alcohol and Urine Tox Screen

**Head Labs (Patients w GCS<13 or + Head CT)**
- Routine Labs as above plus PT/PTT, INR and Platelet Count

**Comorbid/Elder Labs:**
- Discuss with Attending – Ask attending/fellow

**Females of Child-bearing age:**
- HCG or if unsure, ask the attending/fellow