Division of Trauma Critical Care and Acute Care Surgery

Faculty:

Preston B. Rich, MD	Division Chief, Full Professor, Program Director for Critical Care
Sean Montgomery, MD	Assistant Professor, Associate Program Director for Critical Care Medical Director SICU and ISCU
Elizabeth B. Dreesen, MD, MPH	Associate Professor, Trauma Medical Director
Anthony A. Meyer, MD, PhD	Chairman, Dept. of Surgery
Anthony G. Charles, MD	Associate Professor, Director of Adult ECMO
Sasha Adams, MD	Assistant Professor
Amy Alger, MD	Assistant Professor, Program Director for Acute Care of Surgery
Daryhl Johnson, MD	Assistant Professor
Michelle Brownstein, MD	Assistant Professor
Tammie Johnson	SRH Division Manager

Surgical Resident Curriculum for the Division of Trauma and Surgical Critical Care (General Surgery H Service, SRH)

Residency Years Included:

PGY1 X PGY2 X PGY3 X PGY4 X PGY5 X Fellow X

I. The Clinical Mission of the Division of Trauma and Critical Care

The Division of Trauma and Critical Care Surgery is a busy clinical service that provides care for patients with traumatic injury, elective and emergency general surgical conditions. The Service is responsible for evaluating and caring for all patients with multiple injuries (~1600 patients in 1 year). In addition, special interests include diseases of the biliary system, gastrointestinal diseases (eg. gastric, pancreatic, colorectal), and management of patients with simple and complex hernias. The Trauma and Critical Care Division faculty includes Drs. Anthony Meyer, MD, PhD (Department of Surgery Chairman), Preston Rich, MD (Division Chief), Renae E Stafford, MD, MPH (Chief of Surgical Critical Care), Elizabeth Dreesen MD (Assoc. Division Chief), Anthony Charles MD, MPH, Harry Marshall MD and Horacio Hojman MD. Phil Boysen, MD (Anesthesiology, DIO for UNCH GME from the Department of Anesthesiology has patient care, teaching and administrative roles on the Critical Care Consultation Service.

Surgery resident and fellow education is a specific aim of the Division of Trauma and Critical Care. Each rotation currently includes residents from postgraduate years (PGY) I, II, III, and V. This team of residents works cooperatively to provide preoperative, intraoperative, and postoperative care to the patient with trauma and critical care conditions. For the junior resident, special emphasis is placed on preoperative and postoperative management. Senior residents assist with the instruction of junior residents and focus and the intraoperative care of the surgical patient. The primary goal of instruction is to nurture the development of each surgical resident such that he/she can function at a high level of competence as a general surgeon. Although the clinical focus of the service is trauma and critical care conditions, the ultimate goal of resident training is to train residents to function independently as a general surgeon within the framework of the clinic and hospital setting. Each resident must know and understand the six core competencies put forth by the Accreditation Council of Graduate Medical Education.

The learning environment in the Division of Trauma and Critical Care will stress these core competencies and resident evaluation will be based on these principles.

Core Competencies:
1. Patient care.
2. Medical knowledge.
3. Practice-based learning and improvement.
4. Interpersonal and communication skills.
5. Professionalism.
6. Systems-based practice.

For trainees who wish to have specialized training in trauma, optional learning experiences include basic science laboratory investigation, surgical research related to shock, clinical research in trauma, and advanced clinical training focusing in surgical critical care.

II. Overview of the Division and Mission Statement

The Trauma and Critical Care Division of the UNC Department of Surgery and UNC Healthcare Systems is dedicated to fulfilling several missions including:

- To provide the highest quality care for injured and critically ill patients.
- To develop and implement multidisciplinary research programs designed to investigate the physiologic, metabolic, and pathologic states affecting patients with multiple-injuries.
- To provide high quality relevant education to medical students, residents, nurses, and paramedical personnel in areas relating to the care of the injured patient.
- To provide a rich clinical and research environment to facilitate the training of Critical Care Fellows.
- To provide Community Outreach Programs, to direct educational forums (e.g. ATLS, Rural Trauma Development Courses), and to advocate and implement injury prevention programs.

The University of North Carolina at Chapel Hill is home to UNC Hospitals' Level I Trauma Center. This established program serves as the lead institution for the MidCarolina Regional Advisory Committee (RAC) and actively participates in the State Committee on Trauma (COT). Dr. Rich, SRH Division Chief, is the immediate past Chair of the MidCarolina RAC. Approximately 1600 multiply injured patients and 600 burn patients are admitted annually to the Center and are cared for by a fully-staffed infrastructure which is certified through the North Carolina Office of Emergency Medical Services (OEMS). Patient care is overseen by ABS certified Trauma/Critical Care Specialists and is directed by the General Surgical Chief Resident with assistance from a senior resident and at least two junior residents. The Surgical Critical Care Fellows provide consultative and minute to minute care on the Surgical ICU service for trauma and non-trauma surgical patients.

The UNC Trauma System has a hospital trauma registry that interdigitates with the NC state trauma registry and the National Trauma Data Bank. Trauma System protocol development and application, quality improvement initiatives, and database information are managed by a fully staffed team of specialty-trained Trauma Program Staff.

UNC's Trauma Program supports an active Research Center with broad ranging investigative programs involving both clinical and basic scientific research. The Department of Surgery is funded by the National Institutes of Health/GMS via the T32 mechanism to provide structured and mentored research experiences through the Trauma Research Fellowship Program. The Trauma Center at UNC enjoys productive collaborative relationships with other campus-based Centers of Excellence. The UNC Highway Safety Research Center and the Injury Prevention Center are excellent resources and serve to further augment the strength of UNC's program.

Teaching is a central mission of the Division. Medical students, residents, fellows, and nurses participate in regularly scheduled teaching rounds. In addition to weekly General Surgery Grand Rounds, the Critical Care Service maintains a weekly Critical Care Grand Rounds schedule and hosts a critical care-specific mortality and morbidity conference in conjunction with the burn and trauma services. There is a trauma and acute care surgery case conference that alternates weekly with the morbidity and mortality conference. The Multi-disciplinary Trauma Conference (MTC) facilitates discussion amongst trauma specialists in related medical and surgical fields.

III. The Educational Mission

A primary mission of the Division is to train general surgeons to provide a high level of Trauma/Critical Care surgical experience appropriate to a general surgical practice, and to prepare selected trainees for additional specialty training in Surgical Critical Care at a certified Critical Care fellowship. The UNC Department of Surgery is home to an ABS certified Surgical Critical Care Fellowship based in the SRH Division, and trains two fellows per year.

Learning objectives are based upon post-graduate level and are based on the six clinical core competencies listed above. Each objective is graduated; i.e., each builds upon skills and attitudes learned in earlier years. Objectives reflect teamwork; i.e., the skills and responsibilities blend so that they complement contributions from other members of the physician team and recognize the input from nursing and other allied health professionals. Learning objectives for the first year on service (PGY 1) are longer and have more detail because of the many requirements for inculcation into a functioning surgical team.

IV. Learning Objectives

A. PGY I

I. Core Competency - Patient Care

1. To know up-to-present details of all assigned patients.
2. To gather and interpret essential and accurate information about the patient's health status, including
    a. Learning to obtain clinical information rapidly and effectively from family or caregivers of trauma patients
    b. Obtaining relevant information from nurses and hospital departments (e.g., radiology, laboratory, and hospital information systems),
    c. Obtaining information from referring physicians and referring hospitals.
3. To learn the principles of pre and postoperative management, including:
    a. Fluid and electrolyte management,
    b. Pharmacological management, including pain and sedation, antibiotic dosing and pharmacology,
    c. Recognition and management of respiratory distress and shock,
    d. Wound care, and

e. Follow-up and outpatient management, including referrals and resources for social work, rehabilitation and physical medicine.

4. To perform basic clinical procedures, including:
   a. Primary closure of incisions,
   b. Management of open and infected wounds,
   c. Venipuncture,
   d. Intravenous line placement, and
   e. Placement of urinary catheters.

II. *Core Competency - Medical Knowledge*

1. To expand the fund of knowledge from textbooks, journals, and electronic media.
2. To critically evaluate the literature based upon methodology and statistical techniques, a survey of related articles, and resident-initiated discussions with attending staff and other experts.
3. To participate in scheduled conferences.
4. To teach medical students.

III. *Core Competency - Practice-based learning and improvement*

1. To evaluate patients critically with the goal of generating a working diagnosis and treatment plan.
2. To understand the medical, surgical, and scientific bases of a patient's condition and his or her treatment plan.
3. To obtain consultations and other opinions regarding a patient's status, work-up, or hospital course when necessary.

IV. *Core Competency – Interpersonal and Communication Skills*

1. To present clinical information on work rounds clearly and concisely.
2. To write orders legibly.
3. To write progress notes legibly with sufficient detail so that patients' condition, status and care plans are clear.
4. To work effectively with attending staff and house staff colleagues in surgery and consultative services, medical students, nurses, ancillary personnel, pre-hospital personnel.

5. To keep senior residents and attending staff informed, particularly with "problem" cases, unstable patients, and changes in-patient condition and care plan.
6. To foster teamwork and a work environment based upon communication, respect, trust, and honesty.
7. To foster a social environment based upon tolerance for other opinions, backgrounds, and cultures.

V. *Core Competency - Professionalism*

1. To demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other health care providers.
2. To understand when expert medical advice is necessary.
3. To obtain expert medical, nursing, or other opinions when limits of knowledge, experience, and training are reached.

VI. *Core Competency - Systems-based practice*

1. To effectively transfer care when duty hours are completed.
2. To responsibly accept the on-call care responsibilities of patients who are not on the primary service.
3. To apply standardized care plans, and the rationale behind them, including:
    a. Bowel preparation procedures,
    b. Preoperative antibiotic regimens,
    c. S.B.E. prophylaxis,
    d. Tetanus prophylaxis,
    e. Universal precautions,
    f. Aseptic technique,
    g. Care of central lines,
    h. Care of gastrostomies/enterostomies, and
    i. Postoperative feeding regimens (e.g., gastric vs. post-pyloric regimens).
4. To attend care conferences on assigned patients.
5. To write notes with sufficient detail to satisfy the requirements of governmental agencies, health care payer organizations, including:

a. Admission histories, physical examinations, and care plans,
b. Daily progress notes, and
c. Discharge summaries.

B. PGY II

I. *Core Competency - Patient Care*

1. To be available to PGY I residents and medical students so that evaluations and treatments are completed in an appropriate and timely manner.
2. To participate in the evaluation of new patients and take new consultations, under the supervision of the PGY II and III, with the goal of identifying the major surgical problem and learning to develop plan for diagnosis and treatment.
3. To identify patients who are unstable, critically ill, and are developing new complications.
4. To be able to initiate treatment in the emergency room and intensive care setting.
5. To provide advanced trauma care and life support during trauma resuscitations.
6. To perform basic surgical procedures under supervision, including:
    a. Placement of chest tubes,
    b. Placement of central venous catheters,
    c. Hernia repair in adults,
    d. Resection of skin and subcutaneous lesions,
    e. Routine laparoscopic procedures (cholecystectomy).

II. *Core Competency - Medical Knowledge*

1. To contribute substantively in scheduled conferences.
2. To teach PGY I residents and medical students.

III. *Core Competency - Practice-based learning and improvement*

1. To contribute to work rounds so that diagnostic and treatment issues are identified and care tasks are initiated and completed in an appropriate and timely manner.

2. To provide information and resources so that the team understands the medical, surgical, and scientific bases of a patient's condition and his or her treatment plan.

IV. *Core Competency - Interpersonal and communication skills*

1. To instruct PGY I residents and medical students on presentation skills so that clinical information is clear and concise.
2. To review team orders and progress notes legibility, detail, and accuracy.
3. To provide informed opinions during consultations with other services in a thoughtful, respectful manner.
4. To advise patients and families in the decision making process.

V. *Core Competency - Professionalism*

1. By way of example and direct instructions to PGY I residents and medical students, to demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other health care providers.
2. To present deaths and complications to Morbidity and Mortality Conference on assigned patients.

VI. *Core Competency - Systems-based practice*

1. To assure that priorities of care and service duties are transferred completely and responsibly on changes in duty hours.
2. To responsibly accept the on-call care responsibilities of patients who are not on the primary service.
3. To supervise the application of standardized care plans and assure that junior residents understand the rationale behind them.
4. To identify problems and inefficiencies in the provision of patient care, and devise means of assessing and addressing them.

C. PGY III

a. *Core Competency - Patient Care*

1. To be available to PGY I/II residents and medical students so that evaluations and treatments are completed in an appropriate and timely manner.
2. To evaluate new patients and take new consultations, with the goal of identifying the major surgical problem and developing a plan for diagnosis and treatment.
3. To identify patients who are unstable, critically ill, and are developing new complications.
4. To be able to initiate treatment in the emergency room and intensive care setting.
5. To provide advanced trauma care and life support.
6. To perform basic surgical procedures under supervision, including:
    a. Placement of chest tubes,
    b. Placement of central venous catheters,
    c. Hernia repair in adults,
    d. Gastrointestinal procedures, and
    e. Routine laparoscopic procedures.

b. *Core Competency - Medical Knowledge*
1. To contribute substantively in scheduled conferences.
2. To teach PGY I and PGY II residents and medical students.

c. *Core Competency - Practice-based learning and improvement*
1. To contribute to work rounds so that diagnostic and treatment issues are identified and care tasks are initiated and completed in an appropriate and timely manner.
2. To provide information and resources so that the team understands the medical, surgical, and scientific bases of a patient's condition and his or her treatment plan.

d. *Core Competency - Interpersonal and communication skills*
1. To instruct PGY I residents and medical students on presentation skills so that clinical information is clear and concise.
2. To review team orders and progress notes legibility, detail, and accuracy.
3. To provide informed opinions during consultations with other services in a thoughtful, respectful manner.

4. To advise patients ands families in the decision-making process.

e. *Core Competency - Professionalism*

1. By way of example and direct instructions to PGY I/II residents and medical students, to demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other health care providers.
2. To present deaths and complications to Morbidity and Mortality Conference on assigned patients.

f. *Core Competency - Systems-based practice*

1. To assure that priorities of care and service duties are transferred completely and responsibly on changes in duty hours.
2. To responsibly accept the on-call care responsibilities of patients who are not on the primary service.
3. To supervise the application of standardized care plans and assure that junior residents understand the rationale behind them.
4. To identify problems and inefficiencies in the provision of patient care, and devise means of assessing and addressing them.

D. PGY V

a. *Core Competency - Patient Care*

1. To be available to residents and medical students so that evaluations, treatments, and consultations are completed in an appropriate and timely manner.
2. To take new patients and consultations, with the goal of assigning team resources to address them in an appropriate and timely manner.
3. To coordinate team efforts with multiple patients present multiple problems of varying urgency.
4. To coordinate hospital and physician resources for the transfer and care of critically ill patients from other institutions.

5. To provide trauma care where more than one patient is injured or admitted.
6. To perform advanced surgical procedures under supervision, including:
    a. Emergent thoracic procedures
    b. Exploratory laparotomies for trauma
    c. Advanced laparoscopy
    d. Complex and routine hernia repair in adults
    e. Emergency General Surgical Procedures
    f. Operatively manage the open abdomen

b. *Core Competency - Medical knowledge*

1. To contribute substantively in scheduled conferences.
2. To teach residents and medical students during work rounds and under "ad hoc" situations.

c. *Core Competency - Practice-based learning and improvement*

1. To lead work rounds on the Trauma Service so that diagnostic and treatment issues are identified and care tasks are initiated and completed in an appropriate and timely manner.
2. To provide information and resources so that the team understands the medical, surgical, and scientific bases of a patient's condition and his or her treatment plan.

d. *Core Competency - Interpersonal and communication skills*

1. To conduct work rounds so that clinical information is clear and concise.
2. To assure that team orders and progress notes are legible, detailed, and accurate.
3. To provide informed opinions during consultations with other services in a thoughtful, respectful manner.
4. To advise parents and patients in the decision-making process.

e. *Core Competency - Professionalism*

1. To obtain informed consent from patients.
2. By way of example and direct instruction to residents and medical students, to demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other health care providers.

3. To present death and complications in Surgery and SRH Morbidity and Mortality Conferences.

f. *Core Competency - Systems-based practice*

1. To assure that priorities of care and service duties are transferred completely and responsibly on changes in duty hours.
2. To responsibly accept the on-call care responsibilities of patients who are not on the primary service.
3. To assure the standardized care plans are applied, and that junior residents understand the rationale behind them.
4. To identify problems and inefficiencies in the provision of patient care, and devise means of assessing and addressing them.

E. Fellow

a. *Core Competency - Patient Care*

1. To be available to residents and medical students so evaluations, treatments, and consultations on trauma and critical care patients are completed in an appropriate and timely manner.
2. To take new patients and ICU consultations, with the goal of assigning team resources to address them in an appropriate and timely manner.
3. To coordinate team efforts with multiple patients with multiple problems of varying urgency.
4. To coordinate hospital and physician resources for the transfer and care of critically ill patients from other institutions.
5. To provide trauma care where more than one patient is injured or admitted and provide education oversight for resuscitations.
6. To direct the surgical critical care team on daily rounds and develop care plans.
7. To participate in the active evaluation and resuscitation of surgical patients in critical condition both in the ICU and on the floor or other patient care areas as part of the rapid response team.
8. To perform advanced surgical procedures under supervision, including:
    a. Participating, an a teaching assistant, in elective and urgent general surgery cases
    b. Serving as TA for exploratory laparotomies for trauma
    c. TA advanced laparoscopy cases

d. TA complex and routine hernia repair in adults, particularly cases related to the surgical management of post-traumatic open abdomens
e. Tracheostomies and gastrostomies, both percutaneous and open
f. Endoscopies on trauma/critical care patients

b. *Core Competency - Medical knowledge*
1. To contribute substantively in all scheduled conferences and moderate Critical Care Morbidity and Mortality conference.
2. To teach residents and medical students during work rounds and under "ad hoc" situations.
3. To supervise and lead discussion at journal club

c. *Core Competency - Practice-based learning and improvement*
1. To lead work rounds on the Critical Care Consultative Service such that diagnostic and treatment issues are identified and care tasks are initiated and completed in an appropriate and timely manner.
2. To provide information and resources so that the ICU and Trauma teams understand the medical, surgical, and scientific bases of a patient's condition and his or her treatment plan.
3. Active participation in ICU PI initiatives and hospital ICU quality and advisory committees

d. *Core Competency - Interpersonal and communication skills*
1. To conduct ICU work rounds so that clinical information is clear and concise.
2. To assure that team orders and progress notes are legible, detailed, and accurate.
3. To provide informed opinions during consultations with other services in a thoughtful, respectful manner.
4. To advise parents and patients in the decision-making process.

e. *Core Competency - Professionalism*
1. To obtain informed consent from patients.

2. By way of example and direct instruction to residents and medical students, to demonstrate compassion and integrity through respectful patient care, family interactions, and communication with other health care providers.
3. To present death and complications in Surgery and SRH Morbidity and Mortality Conferences.

f. *Core Competency - Systems-based practice*
1. To assure that priorities of care and service duties are transferred completely and responsibly on changes in duty hours.
2. To responsibly accept the on-call care responsibilities of patients who are not on the primary service.
3. To assure the standardized care plans are applied, and that junior residents understand the rationale behind them.
4. To identify problems and inefficiencies in the provision of patient care, and devise means of assessing and addressing them.

V. Didactic Curriculum

A. Weekly SRH Division preoperative service conference.
B. Daily rounds with the attending surgeon tailored to facilitate patient continuity of care and provide case-specific didactic learning.
C. Weekly Critical Care Conference.
D. Bi-Monthly Trauma, Critical Care and Burn Morbidity and Mortality Conference.
E. Bi-Monthly Trauma and Acute Care Surgery Case Conference
F. Monthly Multidisciplinary Trauma Conference/ Trauma Advisory Council.
G. Monthly Journal Review Conference.
H. Weekly Surgery Morbidity and Mortality Conference (with Divisions of General Surgery in the Department of Surgery).
I. Resident-as-Teacher conference (with Department of Surgery).
J. Weekly Department of Surgery Grand Rounds.
K. Monthly Combined Trauma and Emergency Medicine Teaching Conference

VI. Apprenticeship Curriculum- residents learn in a one: one or one: two fashion with faculty by participating in patient care activities.

1. Preoperative and postoperative clinics.
2. Operating room instruction.
3. Tutorial session for residents presenting at conferences.
4. Ward rounds.
5. General surgical call fosters independence and effective telephone communication skills.
6. Optional research including retrospective chart reviews, prospective studies, database outcomes analysis and laboratory investigation.

VII. Evaluation

Attending staff evaluates resident performance based upon the six core competencies relevant to his or her postgraduate level summarized above. The senior residents participate in the evaluation of the junior residents. End-of-the-rotation faculty meetings assess the strengths and weaknesses of the residents. Evaluation forms are completed and the residents are encouraged to meet with the faculty at the conclusion of rotation. Feedback is distributed during the rotation such that residents can address deficiencies. The faculty takes into account patient care, operative techniques, attitude, and communication with others. The opinions of paramedical personnel, patient's families, and others are considered during the evaluation process. The residents are encouraged to provide feedback to the faculty regarding the strengths and weaknesses of the surgical experience on the Trauma and Critical Care service.

SRH DIVISION (TRAUMA AND CRITICAL CARE)
MANUAL

RESPONSBILITIES:

Trauma/Critical Care Fellow

The Fellow will share primary responsibilities for all Surgery H Intensive Care Unit (ICU) patients with the chief resident. Primary responsibility means that the Fellow, under the direction of the Trauma Attending, will guide the care provided to Surgery H ICU patients by the Trauma ICU Resident. This care is inclusive. The Fellow and the Surgery H Chief Resident should communicate directly with each other and the Trauma Attending of the week regarding all patients on the service in the ICU on a daily basis.

The Fellow will also direct the Critical Care Consult Service (CCCS) under the supervision of the Critical Care Consult Service Attending. When not off-unit due to other responsibilities, it is expected that the on-service CC Fellow will maintain a daytime presence in the ICU's to provide oversight. The CCCS provides consultative care to patients on non-SRH surgery services in the ICU. It is general practice that Neurosurgery selectively consults the CCCS. The minimum amount of care provided to a patient by the CCCS is complete management of ventilators, lines, sedation, and a detailed system by system analysis. Services may request that the CCCS provide for complete patient management while in the ICU. Communication with the primary service chief resident and/or fellow is paramount and should be performed at least daily. When patient management emergencies arise, prompt communication with the primary team is critical. Patients may be located in the TICU, SICU, NSICU, CTICU, and on occasion the MICU, CCU, BICU and PACU.

The Fellow will oversee all procedures performed in the ICU and those performed in the ED or floor on trauma patients when the SRH Chief is unavailable. These procedures include the placement of central lines (new access or change over wire; COW), arterial lines, nasoenteric feeding devices (Corpak), bronchoalveolar lavage procedures (BAL), bronchoscopies, Foley catheter placements, percutaneous gastrotomies and tracheostomies. After hours, if the fellow is not available, the senior in-house should supervise all procedures, particularly the placement of central lines and pulmonary artery catheters as directed by ICU protocol and policy (see appendix). If the Resident placing the line is a PGY-3 or greater, no further supervision is needed if the Resident has previously demonstrated competency under direct supervision. The Senior in-house, CC Fellow, Chief Surgery Resident and the on-call Attendings are always available for support should the need arise.

The CC Fellow will respond to all Adult Red Trauma Activations (Definition: age 16 years or greater; age 15 or younger generates a Pediatric Surgery/PICU response) during the day, when not involved in SICU duties. The Fellow will serve as back-up to the Chief Resident when the Chief is also present. In the absence of the SRH Chief, the Fellow will take primary responsibility for the resuscitation, assuring adherence to the Red Trauma Resuscitation protocols and providing management oversight.

The fellow, whenever in house, is responsible for replying to all surgical rapid response team calls along with the ICU bed commander, ICU charge nurse and respiratory therapist

In the morning, the Fellow will perform informal rounds with the Trauma ICU Resident and chief resident on all SRH patients residing in the ICU. Any patients with particularly complex care issues should be examined and reviewed at the bedside. Additionally, the CC Fellow will round with the CCCS team on all CC consults. The Fellow should round with the CCCS team prior to attending rounds so that a concise presentation can be provided. Any complex consultative patients should be discussed with the primary team immediately.

The CC Fellow may oversee SRH operative cases when needed. This may occur when the Chief Resident is unavailable or when more than one room is running concurrently.

If board eligible, the CC Fellow would be expected to take 1-3 primary trauma/acute care surgery calls per month with close Attending back-up.

SRH Chief Resident:
The SRH Chief Resident will be responsible (under supervision of the attending) for the general planning, oversight, and conduct of the activities of the Trauma and General Surgery components of the SRH service. The Chief Resident will have final authority, after consultation with the Attending of record, to schedule operations. This authority is inclusive, after appropriate discussion with the Fellow, of bedside tracheostomies, PEGs, and dressing changes on SRH patients. Each morning on rounds, the Chief Resident will review the operative plan for the day, including concise presentation of the pertinent case-specific peri-operative issues.

The Chief Resident will be expected to be either the primary surgeon or the teaching surgeon (TA) on elective and emergent surgical cases. If the Chief Resident is unavailable, then the CC Fellow can serve this role if available. The Chief Resident will respond to all Adult Red Trauma activations when not otherwise occupied in the OR or the clinic.

In the event the CC Fellow is occupied with other responsibilities, the Chief Resident will be available to supervise all ICU procedures that occur on SRH patients or on the CCCS. If the Resident performing the procedure is a PGY-3 level or above, and has demonstrated appropriate competence (see appendix), the CC Fellow or the Chief Resident need only to be immediately available for support should it be required. At night, this available support is to be provided by the senior in-house Resident, CC Fellow, Chief Surgery Resident and on-call Attending.

Each day the Chief Resident will round with the floor intern, the ISCU Resident, and the SRH Surgery consult Resident, on all floor patients, general surgery and trauma consults, and SRH patients residing in the ISCU. The Chief Resident will be expected to maintain a detailed understanding of the medical/surgical needs of all SRH patients residing on the general care floor, those in the ISCU, and the SRH general surgery consults.

The SRH Chief Resident will function in a leadership role, with direct SRH Attending supervision and involvement, in the Thursday SRH general surgery new-patient and follow-up clinics, which begin at 9:00am on the 3rd floor of the Ambulatory Care Center. The clinic is staffed by two attending physicians, the trauma/acute care surgery (TACS) attending of the week and the TACS attending for the following week, thereby facilitating the operative scheduling of patients. In this clinic, all patients seen by junior level Residents will present their findings and plan directly to the SRH Chief Resident or attending. Once a plan has been synthesized and, if appropriate, an OR date has been scheduled, the Chief Resident will then discuss all patients with one of the two SRH Attendings present. An administrative assistant will be present in this clinic to facilitate the scheduling process. A UNC financial counselor will be able to assist with any financial considerations.

Surgery Trauma Intensive Care Unit (STICU) Residents:
The STICU Resident is a PGY-2 Surgery Resident and or emergency medicine resident. These STICU residents will have primary responsibility for the SRH patients admitted to and cared for in the ICU. This care is inclusive. The PGY-2 General Surgery Resident will have primary decision making responsibilities, under the supervision of an attending, as well as hold responsibility for presentation of the SRH ICU patients on rounds. The STICU Residents should directly communicate with the CC Fellow prior to rounds. Any acute issues should be promptly addressed. The STICU Residents are expected to attend all conferences and clinics when patient care issues do not otherwise interfere. To facilitate transfer of patient care information, the STICU Residents must maintain a detailed patient care list, updated prior to morning rounds.

PGY-3 General Surgery Resident:

The PGY-3 General Surgery Resident will have primary responsibility for the evaluation and care continuity of General Surgery and Trauma consults. The PGY-3 General Surgery Resident will see all Yellow Traumas within 30 minutes of alert and promptly communicate findings and a tentative plan to the SRH Chief Resident or CC Fellow. General Surgery consults should be seen within one (1) hour of receiving the consult. All consults should be rounded on prior to rounds and discussed with the SRH Chief Resident. The Chief Resident will present the consult patients on rounds. A detailed consult list should be maintained by the PGY-3 General Surgery Resident.

Interns:
The PGY-1 Residents on the SRH service will have primary responsibility for the SRH patients who reside on the General Care floor Units. These units are primarily 5 Bedtower (5BT), 5 West (5W), and 4 Andersen (4ADN). Occasionally SRH patients will be located on other floors such as Womens' and Childrens' (W&C) and 6 Neuroscience (6NS), but efforts will be made to cluster SRH patients on SRH primary wards as hospital capacity allows. The General Care interns are expected to pre-round on all floor patients prior to rounding with the SRH Chief Resident to facilitate transfer of information. PGY-1 Residents must maintain a detailed and updated patient care list, available for morning rounds. PGY-1 Residents are expected to attend all educational conferences and clinics unless they are post-call. Every effort should be made to facilitate discharges before noon everyday. This often requires significant preparation and early planning discussions with the SRH social workers and discharge planners. A daily progress note Progress Note must be written on every floor patient **by a physician** everyday. Medical student notes cannot be entered into the medical record and signed by a resident. These do not serve as a daily progress note. Similarly, discharge summaries created by a medical student and signed by a resident are not sufficient as a summary. A discharge summary must be created by and signed by a resident. All progress notes should be directed in WebCis to the service attending for the week. Discharge summaries should be directed to the Trauma Attending of the week at the time of discharge, rather than admission (which often dictates the "Attending" on the Webcis lists). Follow-up should be arranged on Tuesdays (ACC 3rd floor 9am-1pm) for Trauma patients or Thursdays (ACC 3rd floor 9-4pm) for General Surgery patients.

CONSULTATIONS
All Yellow Trauma Activations will be evaluated within 30 minutes of alert by the 3rd year General Surgery Resident. Pertinent findings and an inclusive plan will subsequently be discussed with the Chief Resident who will present the pertinent findings and medical decision making process to the SRH Attending on call. In the event that the 3rd Year general surgery Resident is unavailable, the 2nd Year General Surgery or Emergency Medicine Resident may respond to the Yellow Trauma Activation within the 30 minute time period.

All general surgery consults will be seen by the PGY-2 or PGY-3 general surgery or emergency medicine resident as soon as is practical. Generally, no longer than one (1) hour should pass between the time the consult is called and the patient is seen. The patient should be discussed with the Chief Resident who will then communicate directly with the on-call Attending. Every effort should be made to determine a disposition for the consult within the one (1) hour time frame. To this end, it is important that a General Surgery Resident be the first responder to the consult. If the PGY-3 Resident is unavailable, then the PGY-2 General Surgery Resident will have primary responsibility for the evaluation of general surgery consults. In extreme cases, a non-surgery Resident may be the first responder to general surgery consults. However, the one (1) hour time frame for a disposition should still be adhered to.

PROCEDURES:
All procedures, including operations, floor, and ICU procedures (including lines), require a standard JCAHO-compliant "time out" prior to performance of the procedure.

In general, all procedures will be supervised by either the SRH Chief Resident or the CC Fellow. If the Resident performing the procedure is a PGY-3 or greater, and has previously demonstrated competence with the procedure, then the Chief Resident or CC Fellow needs to only be immediately available for the procedure. Between 7am and 5pm no procedures will take place in the ICU without first notifying the on-call CCCS Attending. A 10 minute warning must be given to the Attending prior to performing the procedure. If the on-call CC Attending is not available, the on-call Trauma Attending should be notified. Procedures should generally be clustered within the morning hours between 10am and noon. Procedures that require 10 minute pre-notification of the Attending by page include all central lines (new sticks & COW), Swan- Ganz manipulations or placement, placement of nasoenteric feeding devices (either nasogastric or nasojejunal), thoracostomy tube placement, bronchoscopies, Foley catheters placed by the Surgical Critical Care team, PEGs and trachs. Major dressing changes should be consider as procedures, clustered in the morning procedure time frame, and generate an Attending 10 minute pre-notification by page. Similarly, major dressing changes on the floor, procedures on SRH patients, or procedures requested consulting services should generate a similar sequence. If there is no Attending response within 10 minutes continue with the procedure assuming appropriate supervision.

ATTENDINGS:
During day time hours (7am-5pm), two (2) Attendings will be assigned primary patient care responsibilities and a third will be immediately available for back-up. One will have primary responsibility as the Trauma/Acute Care Surgery (TACS) Attending and the other as the ICU Consult (CCCS) Attending. The Trauma Attending will have primary responsibility for all SRH patients (floor, ISCU, and ICU), and the General Surgery consults. This Attending will assume primary medical decision making responsibility for

the week period of coverage. The trauma Attending will be present, within 20 minutes, for all Adult Red Trauma Activations which occur between the hours of 7am and 5pm Monday - Friday. This evaluation will include appropriate documentation and billing as well as the capture of all pertinent procedures. The Trauma Surgery Attending will be primarily responsible for all new general surgery consultations and patient transfers between the hours of 7am and 5pm on SRH call days. Should the TACS attending and the ICU attending be busy, a third SRH attending will be available to staff consults, procedures, respond to traumas and answer questions.

The ICU Consult (CCCS) Attending will have primary responsibility for all non-trauma ICU patients. This responsibility will be inclusive of rounding and teaching obligations as well as appropriate documentation. In addition, the ICU Consult Attending will take primary responsibility for all appropriate ICU-related procedures between the hours of 7am and 5pm and generate notes on non-trauma ICU and ISCU patients. The Trauma Attending will be responsible for similar scope on the SRH Trauma and General Surgery patients. The roles of the Trauma and CCCS Attendings will be necessarily interchangeable to facilitate coverage of all duties during the day.

Night call for Attendings will occur on a rotating basis. The call schedule will be distributed to the paging service, Air Care, and the ER. Any changes to the Attending call schedule require resubmission of an updated schedule to the ED, paging service, and members of the SRH service. Night-time call will include primary responsibility for the SRH patients, consult patients, and new consultations and admissions occurring between the hours of 5pm and 7am. During the day hours, call back-up will be assured by the 2-Attending call schedule (CCCS and Trauma). At night, this responsibility will be shared, on a rotating basis, by the 2 Attendings of record for the week. All on-call Attendings must be immediately available for a 20-minute response, by both pager and cell-phone, should the paging system become temporarily inactive. Back-up call can be covered by pager/cell-phone or by home phone at night to limit Red Alert pages. Attendings must provide current numbers to paging.

Weekends: Weekend rounds will be covered by the TACS Attending and the ICU attendings for that week to provide continuity. TACS Call coverage is also provided by these same attendings. The only exception to this will occur approximately 1 out of 5 weeks when an Anesthesia Attending is serving as the ICU Consult Attending. In this event, the Anesthesia ICU Consult Attending will continue to round through the weekend on the ICU and the Trauma Attending will round on the SRH service. However, a second trauma attending will take call and provide back-up for trauma and acute care.

CONTINUITY OF CARE:

With the implementation and **strict adherence to the 80 hour work week**, combined with the night-float Resident coverage system, facile communication of patient related information is critical. It is expected that information about admissions occurring during the

night time hours will be communicated directly and thoroughly from the night float senior in-house directly to the Trauma Chief Resident or, in the absence of the Chief Resident, to the covering CC Fellow. All new admissions and consultations from the previous night will be presented at 7:30am at the beginning of rounds to the SRH group. An up-to-date trauma list must be maintained on all SRH patients and SRH consult patients. This list should provide enough detail to maintain access to the pertinent information necessary to effectively care for all patients.

It is the responsibility of the resident to maintain compliance with the 80-hour workweek restrictions. Any perceived challenges to this requirement must be brought to the immediate attention of the attending.

CONFERENCES:
It is expected that all available Residents and medical students on the SRH Trauma Critical Care service will attend educational and administrative conferences.

CRITICAL CARE CONFERENCE:
This conference will take place in the Burnett-Womack 4050 Conference Room on Mondays from 12-1pm.

TRAUMA RESEARCH FELLOWSHIP/ TRAUMA TRAINING GRANT:
This conference occurs in 2127 Bioinformatics at 4pm on Mondays. This is a research conference where presentations occur from Trauma Research Fellows and invited guests. It is sustained by an NIH Funded T32 trauma research grant. Attendance at this conference is encouraged but not required.

MULTIDISCIPLINARY TRAUMA CONFERENCE:
Multidisciplinary trauma conference occurs on a monthly basis. It generally convenes at 4pm in the 4th floor Anderson Conference room. Important trauma related system issues and patient M&Ms are discussed in this forum on a multidisciplinary level. All SRH/CC Residents and students should attend unless required to be out of hospital by hour restrictions.

GENERAL SURGERY GRAND ROUNDS:
On Wednesdays, all Residents and students are expected to attend Grand Rounds at 7:15am in the Old Clinic Bldg. The SRH Chief and CC Fellow should assure that all are in attendance *before* the commencement of the presentation.

GENERAL SURGERY MORBIDITY AND MORTALITY CONFERENCE:

General Surgery Morbidity and Mortality occurs at 5pm Wednesdays in the OR classroom. All SRH related morbidities and mortality cases are to be presented in this forum. The SRH Chief is responsible for compiling a complete list of all SRH M&M's.

SRH CASE CONFERENCE AND TRAUMA CONFERENCE:
Following consult and inpatient discussions, the Chief Resident will present the upcoming OR schedule for the week. On alternating Tuesdays at noon, SRH conferences will be held. The Trauma Conference will consist of Attending- directed case presentations centering on the management of severely injured patients. On alternating weeks, the conference will consist of a Trauma Morbidity and Mortality conference. A list of all trauma related Morbidity and Mortality that occurred since the last trauma M&M should directed to the SRH administrative offices by the SRH Chief Resident on the preceding Monday. The Resident assigned to present the case should be prepared for a detailed discussion of the M&M including presentation of all pertinent radiological studies and the extant literature.

ICU JOURNAL CLUB:
Occurs on average every other month and is hosted by a faculty member at their home. This is in addition to the weekly ICU teaching conference which on occasion may also be a journal club. Additionally, residents are invited to attend a combined UNC/Duke critical care conference that is scheduled intermittently.

SRH JOURNAL CLUB**:**
Once a month, the SRH/ Critical Care teams will be invited to an Attending's home for SRH/Critical Care Journal Club. The SRH Chief Resident should select three (3) appropriate journal articles for review, assign a primary discussant for each, and distribute them one (1) week prior to the meeting to facilitate discussion.

JOINT TRAUMA/EMERGENCY MEDICINE DIDACTIC CONFERENCE
Once a month, at 10 am Wednesday, a joint conference is held in the W&C's conference room. The Chief resident will be expected to use half of the hour to discuss a case, and the other half will be directed by an EM resident.

SRH SURGICAL SCHEDULE AND PROCEDURES:
SRH currently has operative time on the following days:
Mondays: Main OR, full day
Tuesdays: Trauma clinic 9-12
Wednesdays: Main OR, full day

Thursdays: 8am: case conference 8:30 a.m. multidisciplinary trauma conference
Fridays: Main OR, full day

It is expected that the Chief Resident or the Trauma/Critical Care Fellow will be present for all operations that take place on the service. It is expected that the Trauma Chief Resident will assign cases to appropriate junior Residents at least the day before they are scheduled such they will have time to read and prepare for their involvement in the cases. Whoever is acting as the Primary surgeon and will be taking RRC credit for the case is expected to be in the room for induction of anesthesia. In addition, that person is to have seen the patient in the pre-op area prior to surgery to confirm consent, mark the operative site, follow-up on laboratory exams, and document such in a pre-op Surgeon's note. The primary surgeon will also be responsible for the same-day dictation of the case unless the Attending for that case relieves the primary surgeon of that duty. Additionally, the primary surgeon will be responsible for transporting the patient to the PACU or to the ICU with the Anesthesia Consultants.

DOCUMENTATION:
General Surgery and Trauma consultations and admissions:
All consultations and SRH admissions require a noted documented in WEBCIS on the inpatient consultation note system. This is true for patients admitted to the night-float service as well as those admitted during the day to the SRH cadre of Residents. These notes should be directed to the Attending of record; from 7am-5pm, this will be the Trauma Surgery Attending of the week and from 5pm-7am it will be Trauma Surgery Attending on-call.

All ICU procedures require a complete ICU procedure note documented in WebCis. Tracheostomies and PEG's are considered operations and as such operative notes should be dictated the day of procedure.
All operative notes must be dictated within 12 hours of completion of the procedure. The primary Resident surgeon responsible for the case is responsible for the dictation unless specifically told otherwise by the Attending of record.

RESTRAINT ORDERS:
A list of all patients requiring restraints will be provided to the Critical Care Consult Resident by the ICU Charge Nurse by 12 pm. This list should be reviewed and all pertinent orders signed by noon. This list is then placed in the SICU bin for review by the ICU Attending of the week. This signed document is then taken back to the SRH Division office and kept.

ICU AND FLOOR PROGRESS NOTES:

All progress notes are to be entered into WebCis daily. ICU notes are routed to the ICU attending for signature and daily progress notes on SRH patients in ISCU and on the floor are routed to the TACS attending for the week.

CLINIC NOTES:
All clinic notes are to be entered into the hospital dictation system. The SRH code for a new patient encounter is 395201, the SRH code for a follow up encounter is 395202. These notes should then be directed to the Attending of record. The primary Resident who is responsible for the initial evaluation should perform the dictation after discussing the case with the SRH Chief Resident or attending.

CALL RESPONSIBILITIES:
CC FELLOW:
The on-service CC Fellow will be available from 7am to 5pm weekdays and will take call from home nights and weekends. When the CC Fellow is on-service, call will consist of supervising and providing oversight for the TICU Resident and the resident covering the CCCS. The on-service CC Fellow will be responsible for keeping track of hours spent in the hospital and must conform to ACGME guidelines. If the CC Fellow is nearing the work hour limits, the CC Fellow should notify the Attendings on call for the week. Arrangements must be made to ensure compliance with work hour limitations. The CC Fellow should be sure to have 4 days off averaged over 4 weeks. This is most easily accomplished if the on-service and off-service CC Fellows co-ordinate weekend clinical responsibilities. In general, the critical care fellows will rotate call weekends. This will provide the appropriate time off in a four week cycle and provide continuous ICU coverage by a fellow. The on-service CC Fellow and the Chief Surgery Resident should also coordinate their schedules so that they are not concurrently unavailable. In the unusual event that the on-service CC Fellow and the Chief Surgery Resident must both be unavailable, the off-service CC Fellow will take the place of the Surgery Chief Resident.

SRH CHIEF SURGERY RESIDENT:
The Chief Surgery Resident will be available from 7am-5pm weekdays but take home call for the SRH service nights and weekends. The SRH Chief Resident will be responsible for keeping track of hours spent in the hospital and must conform to ACGME guidelines. If the Chief Surgery Resident is nearing the work hour limits, the Resident should notify the Attendings on call for the week. Arrangements must be made to ensure compliance with work hour limitations. The Chief Surgery Resident should be sure to have 4 days off averaged over 4 weeks. This is best accomplished by taking 2 weekends off a month. The on-service CC Fellow and the Chief Surgery Resident should coordinate their schedules so that at both are not unavailable on the same weekend. If the on-service CC Fellow and the Chief Surgery Resident are off on the same weekend, the off service CC Fellow will take the place of the Surgery Chief Resident.

STICU RESIDENTS:
The STICU Residents will take in-house primary call for the STICU patients on a rotating basis. The STICU Resident will also cross cover the CCCS on some call nights. The CC Fellow and the Chief Surgery Resident should be kept up to date with any significant patient management changes. The Trauma Attending and the CCCS Attending should be notified of patient management changes by the CC Fellow or the Surgery Chief Resident if this is deemed appropriate by the CC Fellow or the Chief Surgery Resident. The STICU Resident should respond to all Adult Red Trauma Activations. The post-call resident should leave by noon on post-call days. Care should be formally transferred to the on-call STICU resident or the CC Fellow prior to leaving the hospital. Transfer of care should be preceded by "running the list" with the on call resident to be sure that all patient care issues are addressed.

PGY-2 SURGERY RESIDENT:
The PGY-2 Surgery Resident will take STICU Resident call on a rotating basis. The post-call resident must leave by noon on post-call days. Care of the CCCS consult patients should be transferred to the on-call STICU resident, the Surgery Chief Resident or the CC Fellow prior to leaving the hospital. Transfer of care should be preceded by "running the list" with the on call resident to be sure that all patient care issues are addressed.

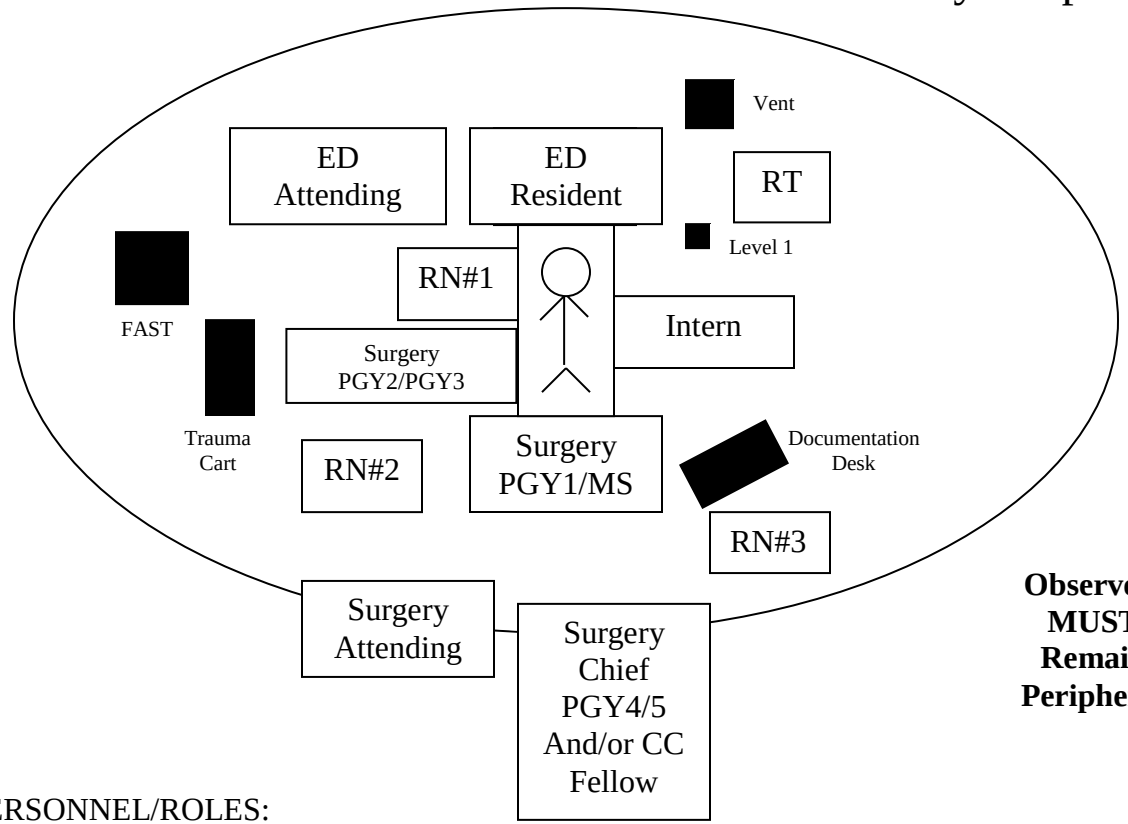
INTERNS:
Interns should take in-house call as determined by the Administrative Chief Surgery Residents. Every effort should be made to ensure that the post-call intern is sent home by noon. When the Intern is post-call, transfer of care regarding the General Care floor patients should occur formally prior to leaving the hospital. The PGY-2 General Surgery Resident should cover the floor patients, after appropriate transfer of information, in the absence of any interns. If multiple Interns are assigned to the SRH service, the post-call intern should formally transfer care to the remaining Interns prior to leaving the hospital. If there are no other Interns on the service, then the post-call Intern should transfer information on floor patients directly to the PGY-2 SRH General Surgery Resident. If the PGY-2 General Surgery Resident is not available, the floor patients should be covered by the next highest level resident on the service following formal transfer of information.

CRITICAL CARE CONSULT SERVICE:
The Critical Care Consult Service will consist of the CC Fellow, a junior level Anesthesia Resident, a PGY-2 surgery resident and any other Residents rotating on the service. The CCCS will provide, at a minimum, ventilator management, sedation management, and line management on all consulted patients. Additionally, the CCCS will provide daily recommendations regarding patient care issues. The members of the CCCS will round on and write notes . The CC Fellow should round on all patients on the CCCS prior to rounds.

Residents on the CCCS should take call on a rotating basis. The call schedule is determined by the administrative chief resident. While on call, the CCCS Resident should respond to all Adult Red Trauma Activations if available and not involved in patient care. Patient care issues should be discussed with the CC Fellow and the Primary Team. When there is no CCCS resident on call, the on-call TICU PGY-2 or PGY-3 Resident will cross-cover the CCCS. Adequate transfer of information on CCCS patients to the on-call physician must be performed prior to leaving for the day. The CCCS residents should not leave until at least 5pm.

Effective communication between the primary team and the CCCS is expected. This includes, but is not limited to, informing the primary team when there are acute issues and alerting the primary team of the daily CCCS recommendations.

UNC Trauma Program
Resuscitation Positions/Primary Responsibilities



Observers MUST Remain Peripheral

PERSONNEL/ROLES:

1. Surgery attending
2. ED attending – supervise airway
3. Surgery chief resident (PGY 4 or 5) "Captain"- overseer, assign and help with procedures as needed
4. Surgery junior resident (PGY 2 or 3) – ABC's, call out to recorder, secondary survey

5. ED resident- airway, HEENT part of secondary survey
6. Surgery intern and/or medical student – cut off clothes, ABG, DRE, foley, warm blankets, go get CXR/AP pelvis from radiology
7. RN#1- initial vital signs, peripheral IV, labs
8. RN#2- "runner"
9. RN#3- recorder
10. Respiratory Therapist

TRAUMA PROTOCOL:

1. Patient moved from stretcher to bed field report given.
1. Ultrasound is present and ACTIVE
2. Airway, Breathing assessment as soon as on ED bed by ED resident and ED attending.
2. Vitals within one minute of arrival. These should be obtained by palpation (both blood pressure and heart rate) and then confirmed by placement of non-invasive monitors. Performed by RN #1.
3. Remove Clothes
3. Labs- CBC, Chem 1-7, PT/PTT, T&S by RN#1 along with PIV placement if needed. If no PIV needed then RN#1 attempts to draw labs peripherally. If labs unable to be obtained peripherally within 3 minutes of arrival then a femoral vein puncture should be performed by the PGY2 using a 20cc syringe and an 18 gauge needle.
4. ABG by PGY1 with first attempt at L radial artery. If unavailable or unable, then femoral artery puncture using a long 22 gauge needle and an ABG syringe should be performed.
5. If central venous access is needed, should be performed by PGY2 Surgery?ED resident. A swan-introducer should be placed via subclavian vein if patient is stable. If patient is unstable, a femoral CVL should be placed.
6. If chest tube needed should be placed by surgery PGY2.
7. CXR, and AP pelvis
5. Secondary survey
6. Roll/DRE/Foley
7. U/S Fast exam
8. CT scan: Head, Cspine, Chest, Abd/pelvis automatically ordered unless cancelled by the Surgery attending or Chief resident.

MATERIALS:

1. Central line (cordis kit)
    -sterile gloves
    -mask
    -betadine
    -sterile towel pack
    -4X4 boat
    -IV bag with new line flushed and ready

2. Chest tube
    -Chest tube tray: #10 blade, large Kelley clamp X 2, scissors, needle driver, 0 silk suture X 3
    -36 Fr straight
    -betadine
    -4X4 boat
    -sterile gloves
    -mask
    -wide cloth tape
    -pleurevac
    -mayo stand
    -sterile water

3. Cricothyroidotomy
    -betadine
    -sterile gloves
    -4X4 boat
    -sterile towels
    -mayo stand
    -cricothryroidotomy kit
        - scalpel (15 blade and 11 blade)
        - hemostat x 2
        - trach hook
        - Army Navy retractor x 2

- Needle driver
- 2-0 Silk on SH needle

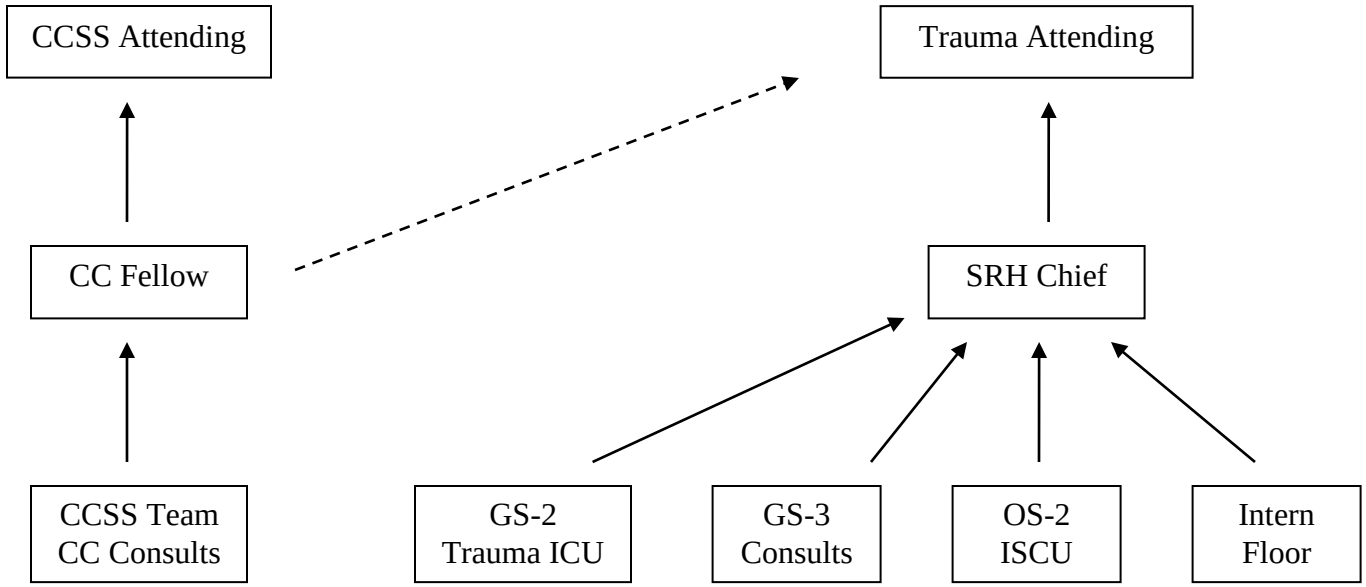
4. Thoracotomy
   -thoracotomy tray: #10 blade, heavy scissors, haith retractor X 2, needle driver, 3-0 prolene X 2, 4-0 prolene X 2, 0 silk suture, big felt pledgets, lipsche knife with mallet, "C" vascular clamps (renal artery pedicle clamp) X 2, Crayford clamp (aortic cross clamp), debakeys X 4, 3 packs of lap sponges, metzenbaum scissors X 2, 16 Fr. Foley catheter.
   -two suction setups
   -sterile gloves
   -mask
   -sterile gowns X 3
   -mayo stand

5. ABG
   -Butterfly needles
   -stopcock
   -ABG syringe
   -2x2's
   -roll of tape

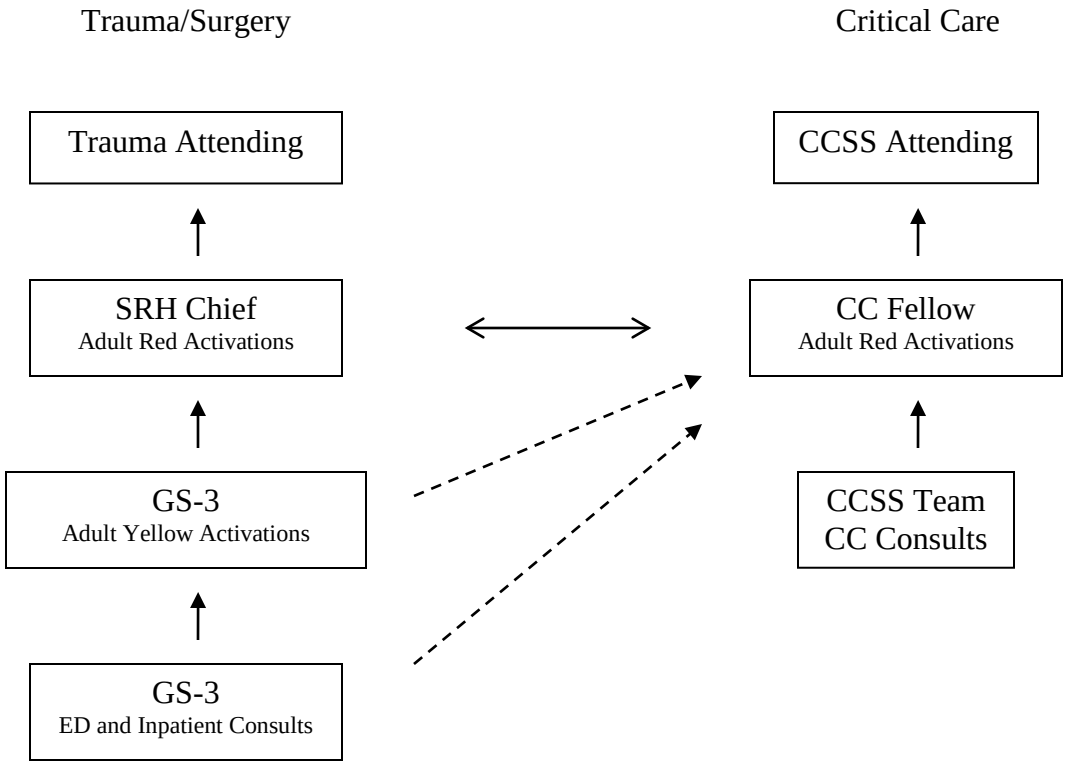
6. Level I infuser

7. U/S machine
   -ultrasound gel
   -towels

Trauma and Critical Care Service
Inpatients



Trauma and Critical Care Service
Consults



	Venipuncture or IV catheter	Arterial puncture	Percutaneous arterial catheter	Cut-down arterial catheter	Percutaneous central catheter	Cut-down central catheter	Pulmonary artery catheter	Catheter change over wire	Nasogastric feeding tube, intubated	Paracentesis	Thoracentesis	Tube thoracostomy	Bronchoscopy	Tracheostomy	Gastrostomy	Lumbar puncture	Endotracheal intubation
PGY-1	#	#	#	•	+	•	•	•*	•*	+	+	+	-	-	-	+	-
PGY-2	#	#	#	•	#	•	•*	#	#	#	#	#	-	-	-	#	-
PGY-3	#	#	#	•	#	•	#	#	#	#	#	#	-	-	-	#	-
PGY-4	#	#	#	#	#	#	#	#	#	#	#	#	-	-	-	#	-
PGY-5	#	#	#	#	#	#	#	#	#	#	#	#	-	-	-	#	-
PGY-6 & above	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Faculty	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#

LEGEND:
+ Can perform the procedure directly supervised by PGY-2 or above
• Can perform the procedure directly supervised by PGY-4 or above
- Can perform the procedure directly supervised by Faculty
* Can perform the procedure after five (5) directly supervised, successfully performed procedures
# Can perform the procedure

	Removal drain	Removal tunneled central catheter	Removal of chest tube													
PGY-1	#	+	#													
PGY-2	#	#	#													
PGY-3	#	#	#													
PGY-4	#	#	#													
PGY-5	#	#	#													
PGY-6 & above	#	#	#													
Faculty	#	#	#													

LEGEND:

+ Can perform the procedure directly supervised by PGY-2 or above
• Can perform the procedure directly supervised by PGY-4 or above
- Can perform the procedure directly supervised by Faculty
* Can perform the procedure after five (5) directly supervised, successfully performed procedures
# Can perform the procedure