

DEPARTMENT OF SURGERY

GOALS AND OBJECTIVES

2009-2010



SUNY
DOWNSTATE
Medical Center

www.downstatesurgery.org

DEPARTMENT OF **SURGERY**

SUNY DOWNSTATE MEDICAL CENTER

Goals and Objectives

General/Vascular Surgery

These are the competencies based goals and objectives for the general surgery/vascular surgery services at all our sites. Many aspects of these competencies are general and apply equally to all services.

Patient Care

PGY1

- Develop and perfect the art of history taking, physical examination
- Understand the initial approach to the surgical patient, and
 - develop a differential diagnosis for the new patient, or one for a new problem on a patient already on the surgical service
 - develop a treatment plan
 - present the patient to the senior resident and the attending
- Write daily notes on the assigned patients, and all patients on whom the individual resident was the operating surgeon or the first assistant.
- Entries into medical record should be legible, and the signature should be followed with a stamp or printed name, with contact information (e.g. beeper number).
- Notes should reflect all sections of the SBAR, SOAP acronyms, or other hospital-accepted routes of communication (**SBAR**-Situation, Background, Assessment, and Recommendation. **SOAP**-Subjective, Objective, Assessment, Plan).
- All notes should explain the need for continued hospitalization.
- Patients should have pain assessment- the resident should assess the degree of pain on an appropriate scale and document it on the progress note.

The notes will be read by the faculty member and countersigned. The residents will be given feedback by the faculty on the progress notes.

- Understand the chain of command on the surgical service:
 - Inform senior resident and attending of new admissions, or changes in status of patients already on the service
 - When in doubt, call senior resident, chief resident or attending on the service
 - In an emergency call for help from any available resident, nurse, code team escalation and inform the responsible attending
- Develop basic surgical clinical skills:
 - Phlebotomy
 - IV line placement
 - Nasogastric tube placement
 - Suturing and knot tying

- Recognition and correct application of various surgical devices, i.e. retractors, stapling devices
- Assistance in the operating room
- Complete credentialing in Tier I invasive procedures

PGY2

- Improve in the clinical and didactic skills developed as a PGY1
- Consultations
 - Become familiar with evaluation process of patient referred for consultation from the ED or from other services
 - Develop a differential diagnosis, treatment plan for consulted patients
 - Present the patient to the senior or the chief resident, and the surgical attending.
- Immediately upon seeing the patient, place a consult on the chart, and inform the primary service that the patient has been seen. It is acceptable not to have a finalized plan of care in the initial note, as long as the patient is assessed promptly by the senior/chief resident, and the surgical attending, and the plan of care is not only defined and finalized but also communicated to the primary service.
- Become credentialed in Tier II and if possible in Tier III invasive procedures
- Improve on the basic surgical skills, i.e. suturing, knot tying, use of mechanical staplers.
- Develop understanding of commonly performed surgical operations and their related anatomy, (e.g. inguinal herniorrhaphy, hemorrhoidectomy, soft tissue tumor resection, cholecystectomy).
- Become familiar with the new technologies, i.e. laparoscopic equipment, sonography, sentinel lymph node biopsy
- Develop leadership skills to become role model to your interns
- Teach the medical students
- Check X-Rays, blood work, understand how to interpret basic films
- In addition to ward rounds, round on and legibly document visits to
 - the patients you operated on every day
 - consults for your service

PGY3

- Continue to improve skills developed as a junior resident.
- Assume a more visible supervisory and leadership role in the surgical team.
- Become the resident responsible for the consultations on your service
 - Coordinate and supervise PGY2s evaluative and consultative services and skills.
- Become an active liaison between the primary service, chief residents, and the surgical attendings.
- Become credentialed in the TIER III invasive procedures, and some of the Tier IV procedures.
- Become familiar with the more extensive surgical procedures, i.e. colectomy, exploratory laparotomy, basic and some of the advanced laparoscopic techniques and procedures.

- Show graded and progressive levels of complexity and responsibility by more
 - Participation in the basic and clinical sciences curriculum
 - clinical assignments of the junior residents

PGY4

- Improvement of skills developed in earlier years.
- Become credentialed in all tiers of invasive procedures.
- On services where you are the most senior level resident (e.g. Lutheran Medical Center, Transplant, CT)
 - Establish complete responsibility of running the service under the direction of the supervising surgical attending.
 - Coordinate all conferences in collaboration with the site director or attending responsible.
- Coordinate care for all patients on the service and consults.
- Scrub in operations on cases of complexity and variety suitable for the most senior resident on the service.
- Coordinate the in-house and outpatient experience that will assure optimal continuity of care.
- Present morbidities and mortalities on the service at the weekly Saturday Chief Resident Leadership Conference.
 - Participate in the selection process for the cases for the Friday morning institution-wide Case Conference.

PGY5-Chief Resident

- Supervise all aspects of management of the surgical patients on the respective services
- Provide leadership to the entire team of the surgical residents and medical students
- Assist faculty in daily clinical and educational activities of the department.
- Act as a teaching assistant to the junior residents, when appropriate under the supervision of the surgical attending
- Coordinate the multidisciplinary conferences with other services and assignment of the presentations to the senior and junior residents.
- Establish total continuity of care, and accept responsibility for the patients on the service, and even those on whom the chief resident was the operating surgeon on other services (e.g. when on call or covering other service).
- Assure that the outpatient experience for every rotation that optimizes the continuity of care.
- Assure that all clinical assignments in the chief year will be at the integrated sites.
- The operative cases will be of complexity appropriate for the chief resident.

Medical Knowledge

All scheduled conferences are “protected time” from routine clinical duties. Only in an event of a medical emergency the resident will be excused from attending the conference.

PGY1

- The conferences are program-wide and institution specific
- All residents are expected to attend 80% of conferences
- All residents, except those on call at the sites other than at the SUNY Downstate campus, are expected to attend the weekly Friday Morning Case Conference.
 - The Case Conference is every Friday at 7AM at Downstate
 - It is followed monthly with a Grand Rounds Guest Speaker
 - Topics for the Case Conferences are available on the Department’s website (www.downstatesurgery.org)
 - All residents are encouraged to read up on the topic in advance.
 - Power Point presentations from each conference are available on the Department’s website for review and preparation for the Department’s quizzes.
- All residents are expected to participate in the ACS web-based Core Curriculum at each site.
 - The chief residents will assign aspects of the presentation that will be appropriate for the level of the resident.
 - The resident is expected to become a candidate member of the ACS to be eligible for the ACS curriculum
 - The resident is expected to read the assigned topic and be prepared for the conference
- For each site-specific conference,
 - Residents will receive orientation from the chief residents on the service and the faculty site director as to where and when the conferences are held.
 - Residents are expected to come prepared for each conference
- The residents at all levels are expected to read standard surgical texts.
- All categorical residents will participate in the annual in-training ABSITE examination
 - Residents are expected to achieve a score of no less than 75% correct
 - After receiving scores, residents should review their results, and direct self-learning based on the results
- Residents are expected to teach medical students
- Residents are expected to come to the operating room prepared to discuss the particular case, regional anatomy, pathophysiology, steps of the operation.

PGY2

- The requirements above for the PGY’1s serve as the foundation from which the residents will acquire the habits for life-long learning and critical self-evaluation.
- PGY2’s will be assigned presentations commensurate with increased knowledge, ability and maturity.
- Residents should begin reading of surgical journals and focus on both
 - Broad based surgical knowledge
 - Reading focused on particular surgeries or clinical problems they encounter
 - Focus reading for potential research opportunities after the PGY2.
- Concentration on the basic science in preparation for the ABSITE “junior” exam

- Preparation for the assigned cases
- Expand teaching responsibilities to medical students and interns

PGY3

- Continue to build on the medical knowledge foundation of the previous two years
- Prepare more in-depth, researched, preparation for the assigned cases.
- Preparation of the Power Point presentation for the Friday Morning Case Conference.
- Reading of the standard surgical texts, ACS curriculum, and supplemented by the journals.
- Preparation for the ABSITE “senior’ exam.
- Preparation for presentations at the departments and multi-specialty conferences
- Utilization of web-based resources, such as PubMed, WebMD, and on-line journals
- Teaching of the medical students and junior residents.
- Preparation for and participation in the semi-annual mock oral examination, which is patterned after the ABS Certifying exam.

PGY4/5

- Building on the medical knowledge foundation of the previous three years
- Preparation of the Power Point presentation for the Friday Morning Case Conference.
 - Assist junior residents in preparation and execution of the talks, anticipate questions
- Preparation for the Morbidities and Mortalities Conferences at each rotation site.
- Presentation of the cases at the Saturday Morning Chiefs Leadership Conference.
 - Help choose the cases to present, who will present, and schedule the presentation
- Begin preparation for the ABS Qualifying examination after completion of the residency.
- Participation in the “Residents as Teachers” workshop.
 - Didactic sessions with the faculty advisor
 - Practical sessions with the faculty advisor
 - Bring the program to the junior residents and medical students
- Participation in the End-of –Life-Curriculum during the Saturday morning Chiefs Leadership Conference.

Practice-based Learning and Improvement

PGY1/PGY2

The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement.

- Use internet resources, as well as the standard surgical texts to optimize learning.
- Develop on-going personal learning projects, which includes:
 - Resident patient care portfolios- the form is on the department’s web site.
 - Maintenance of accurate, timely, and updated ACGME web-based operative log

- Maintenance of accurate, up-to-date credentialing for invasive procedures
- Timely submission of the ‘chits’ required by our GME office for documentation of credentialing
- Incorporation of all formal presentations into Teaching Portfolios/CV’s
- Review of ABSITE results and learn about topics which were not answered correctly, to direct self-study
- Prepare for assigned elective operative cases by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.
 - Come prepared to the OR- technically and in fund of knowledge
- Participation in morbidity and mortality conferences and the associated Quality Assurance process at each site.
- Participation in evidence-based, campus wide, ACS Core Curriculum.
- Use the Department’s patient care portfolios to reflect on
 - The care rendered to the patient in the context of the global health care environment
 - The resident’s appreciation of own contribution to the care of the patient.
- Review of the faculty and chief residents filled global assessment form/monthly evaluation to understand the resident’s own weaknesses and strengths.
- Assure participation in meeting and discussing with the faculty mentor/advisor, and the program director during regularly scheduled meetings the evaluations, and plan of correction if needed.

PGY3/PGY4

- Continue to develop Practice-based Learning and Improvement from the junior years.
- Evaluations:
 - As more opportunities present to evaluate the performance of the senior residents our feedback and evaluations carry more importance, and will allow for an objective evaluation.
 - Through feedback, deficiencies are better understood and the strengths will become more apparent. Residents should therefore take the opportunity and thoroughly review their evaluations, and use them as an objective guide for improvement.
 - For identified deficiencies, residents should track the changes in evaluations for that topic. Also, consultation with their mentor to help institute change is encouraged.
 - If a technical deficiency is noted on the evaluation, residents should use the department’s resources (animal and inanimate labs), and faculty to work on the particular deficiency.
- Leadership skills
 - Resident at this level should become a leader to the junior residents, and students. Active teaching, using techniques from our ‘Resident as Teachers’ program, of topics or skills will reinforce knowledge on particular topics.
- Teaching skills
 - Participate in the Department’s ‘Residents as Teachers’ program. Faculty based, resident based and even video-taped sessions are valuable tools to understand individual style when presenting, and the associated strengths and weaknesses.
 - Using the techniques assimilated in these workshops to become a more effective teacher and a leader.

- Preparation for the formal discussions and presentations using the library, SUNY's information technology, other resources available at the Medical School, and the on-line resources.
- Residents participate in the Friday Morning Case Conference.
 - Since Power Point presentations are presented at a formal meeting, posted on the Department's web-site, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.

PGY5

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.
- Residents are responsible for running entire surgical services, resident schedules, cross covering of services, assignment of cases, coordination of care for patients.
- Residents are responsible for junior residents and students on their service
- Residents establish themselves as leaders and diplomats of the Department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

Interpersonal and Communication Skills.

PGY1

- From the beginning of training, residents are expected to develop communication skills that result in effective and professional communication with patients, patients' families and members of the health care team. They are expected to
 - Participate in the outpatient clinics and ward rounds.
 - Take appropriate history and performing a physical exam.
 - Document accurate and appropriate information in the patient's medical record.
 - Create the plan of care and presentation of the patient to the faculty member in charge of the patient.
 - Initiate the plan of care discussion with the patient
- The resident should be present when the attending assesses the patient and discusses the disease process and plan of care with the patient.
 - Residents should participate in the discussion with the patient's family members.
- When asking for consultation, residents should provide accurate information to the consulting service, such as when a radiological test is requested or a specialist is requested.
- Hand writing must be legible, and the signature should be followed with a stamp or printed name, and contact information (beeper number).
- Effectively and professionally communicate with all members of the health care team, including
 - Discharge planning for admitted patients.
 - Provide the necessary information to the social service, case managers, and when necessary assistance with the required forms in preparation for the discharge.
- Residents should appreciate and respect different ethnic and religious beliefs of the patients.

- When needed, should use the translation services, which are easily available at all our sites.
- The residents are expected to be teachers and role models to the medical students, and extensive series of workshops entitled “Residents as Teachers” was undertaken by the department with assistance from the Dean’s office.

PGY2

- As the level of clinical responsibility increases, the importance of the ability to communicate effectively will become more important.
- Residents at this level will be seeing patients in the Emergency Department, and as consultants for in-house patients.
 - When a consultation is requested, the response to the consultation must be prompt and courteous to the referring service. Remember that you are building habits and frequently relationships that will become important to you in the future.
 - Assess the patient, and in a non-emergent situation allow yourself time to think.
 - Don’t feel pressured to come up with the immediate diagnosis, or plan of care. Seek opinions from your seniors and other physicians if needed.
 - Reflection and thought are very useful to the surgeon and the patient.
 - Do not be influenced by the opinion of others, and evaluate the patient and the data independently, without any preconceptions.
 - Discuss your impression with the patient, the referring team, and the senior/chief resident or a surgical attending.
- These concepts hold true for evaluating the patients anywhere in the hospital, or in the outpatient facility.
- If the situation is urgent, immediately summon help. You always have an option of calling for help from senior physicians around you, calling a code or activating the Rapid Response Team. Make sure your supervising residents and attendings know the situation.

PGY3

- Based on the foundation of information and experience acquired in the junior years, residents at this level need to communicate professionally and effectively at a more advanced level.
 - The outline above should be reviewed.
 - Accurate communication with residents at all levels, students, different services, and attendings is more important than ever.
- Remember that frequently the information you will have to convey will be to those with less experience than you.
 - Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.
- Write timely and legible consultations.
- Resident as role models is important- you should assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient’s families courteously and professionally.

- Remember that most times these will be lay people, who are in a stressful environment and sick. Effectively communicate with the vocabulary that will be understandable to the patient. Request a translator if needed.
- Communicate with consulting services courteously, professionally and accurately. Conflicts may arise, and management of these conflicts reflects on the resident, the service, the attending, the Departments and our entire profession.

PGY4/PGY5

- Become a leader of the surgical team using graduated experiences of the prior years.
 - Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
 - Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader, and a communicator.
 - Be patient!
 - Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critique.
 - If you have to counsel or reprimand a junior resident do it privately.
 - Do not insult anyone! We work in the environment that is diverse and cultural sensitivities should be taken into account when we talk to the patients and other health care team members.
 - If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
 - Escalate to the supervising attending any unresolved matters.
 - Always act professionally, and withdraw from a potentially more difficult situation. Report the matter to the supervising attending, day or night.

Professionalism.

PGY1/PGY2

- Residents are expected to be ethical and professional.
- Professionalism is expected in all clinical arenas-bedside, operating room, outpatient department, and hallways/elevators.
- Respect patient privacy.
 - Do not discuss anything related to patient care issues in public places.
 - HIPPA training will assist with understanding patient privacy issues and legal aspects of patient confidentiality.
- Lectures on physician impairment are given annually by the Department.
 - These will define and address the prevalence of the problem, effects on a physician as a person and how it may potentially affect physician’s personal life and impact the patient care.
 - Confidential addresses and telephone numbers will be distributed for those who wish to have a consultation or a confidential referral to an appropriate agency.
- The residents are expected to act professionally towards all members of the health care team and other co-workers.

- Workshops on the topic of “Sexual harassment in the work place” are given, and residents are expected to participate. **If at any time any resident feels that they felt persecuted, harassed, or threatened in any form they should immediately report their concerns to the program director, or his designee, or the Department’s sexual harassment officer, and the appropriate action and referrals will be made.**
- The Department’s Annual lecture on physician stress, mental illness and suicide will help the resident to identify signs of stress in themselves and their colleagues.
- Timely record completion is expected, including
 - medical records, operative dictations, and discharge summaries
 - residency operative logs, submission of the credentialing ‘chits’ for procedures
 - evaluations of rotations, annual evaluations of attendings and the program
- Remember that the hospital is the workplace for us, but for the patients it is temporary home.
 - Be respectful to the patients
 - Patients’ rooms are therefore their private space, which we enter out of necessity.
 - Knock on the door, if the door to the room is closed.
 - Most of the time there are two patients in the room, and to get to the patient away from the door you will have to traverse the space of a person. A quick apology, a greeting and a smile will make the intrusion much less offensive.
 - Surgeons frequently make rounds in the very early hours, and with large teams. Try to awaken the patient gently, and ask permission to examine them.
 - Close the curtain, respecting the patient’s privacy.
 - Although frequently difficult to maintain privacy in a small room make every effort to do so.

PGY3/PGY4

- Lead by example
 - Show compassionate patient care which is ethical and respectful.
- Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the supervising attending. Follow the patient after the surgery with daily progress notes.
- Communicate with the attending surgeon daily to coordinate the post-operative care of the patient.
- When appropriate provide the patient with the pertinent information, deferring to the attending surgeon discussions dealing with difficult matters, such as complications, and prognosis and treatment plan in cancer patients.
 - Be present when these discussions do take place, as this will provide you with the important lessons for the future. It is also usually comforting to the patient to see familiar faces when receiving bad news.
- Dress appropriately with attention to personal and hospital hygiene.

PGY5

- Lead by example
 - At this stage of your training you are expected to be a leader in a professional organization.
 - The position of a chief surgical resident perceived to be one of great power, responsibility and brevity.

- But, there must be a sense of humility and appreciation that physicians are lifelong students at various stages of personal and professional development.
- Treat your juniors as you wanted to be treated by your chief when you were an intern.
- Treat your patients as you would want to be treated if you were in their place.

Systems-based Practice.

PGY1

- Residents are expected to demonstrate awareness
 - Differences between hospitals
 - Differences between health care systems, insurance companies
 - National QA initiatives such as the Joint Commission, core measures, SCIP programs, DVT prophylaxis and must work effectively in their context.
- Resident's portfolios address the issues of resident's involvement in the care of a particular patient. It gives the resident an opportunity to reflect on how they contributed to the care of the patient in the contexts above and how they felt as a participant.
- Participation in the multiple multi-disciplinary conferences is valuable in demonstrating and teaching the residents the practice of medicine in the context of a global health care delivery.
- Case management conferences are important for demonstrating the close and necessary ties between clinical and other services, especially in the discharge planning arena.
- Familiarization with the Joint Commission standards, National Patient Safety Goals, New York State Department of Health 405 Regulations are mandated and the instruction given.
- HIPPA regulations, patient privacy issues are to be understood and respected. Instructions are given to the residents.
- Participation in the Department's Quality Assurance process is assured.
- The residents are required to comply with the department's administrative policies:
 - ACGME operative logs
 - Submission of 'chits' for credentialing for invasive procedures
 - Program and attendings' evaluations
 - Monitoring of the news and developments on the department's web-site, and periodic checking of the emails, as important communications are sent to the residents through e-mail.

PGY2/PGY3

- Participation in Department Quality Assurance projects, such medicine reconciliation, perioperative use of antibiotics, DVT prophylaxis protocol implementation will provide the residents with valuable experience and appreciation of health care delivery in a more global context.
- Participation in discharge rounds will provide the residents with understanding of the discharge process, steps necessary to arrange for social services, arranging for the visiting nurse or home health aids.

- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.
- The residents will be able to incorporate this acquired appreciation of the multi-specialty approach to patient care in their own practice.

PGY4/PGY5

- Senior and chief residents are expected to not only understand the above issues of System-Based Practice, but also appreciate the differences at each site where they rotate, as every institution is unique. They should help the junior residents to navigate through the difficulties that working in an unfamiliar institution may pose.
- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex cases with an unexpected outcome are discussed in a multi-specialty group involving hospital and nursing administration in addition to the clinical services.
- Participation in the Resident Subcommittee of the GME Committee provides our residents with hands-on involvement in charting the academic course of the institution. Residents' concerns are discussed, and then presented by the resident representative at the GME Committee.

Goals and Objectives Surgical Critical Care (SICU-Kings County Hospital)

Goals- Critical Care is an integral aspect of surgical training that brings together all of the skills of general surgery, including diagnostic techniques, operative techniques, and patient care. The goal of the ICU rotation is to provide PGY2 and PGY4 residents with understanding of the critically ill patient that allows them to provide safe, competent care. The rotation will give the resident the necessary background knowledge to care for the critically ill surgical patient as well as an understanding of the multi-disciplinary nature of critical care in the pre and postoperative care of surgical patients.

Patient Care-

Residents will be expected to provide patient care that is effective, compassionate, appropriate and up to date for the treatment of the critical care surgical patient. The resident will learn the importance of a systematic approach to the patient as well as the technical skills necessary to perform the common procedures encountered in the SICU.

PGY2

- Become familiar with the various modes of mechanical ventilation
- Understand the appropriate use of the various modes of ventilation
- Interpret flow, pressure and volume waveforms displayed on the ventilator.
- Understand and use various weaning techniques from the ventilator including criteria and techniques for extubation.
- Display the necessary skills to manage airways in the ICU.
- Display the necessary skills for safe placement of central lines
- Initiate appropriate treatment and diagnostic evaluations of an acutely decompensating patient.

PGY4

- Become a leader in the patients care team in the SICU
- Prepare the team for attending bedside teaching rounds
- Coordinate the care of the patient with the Trauma and General Surgery teams
- Supervise junior residents who are not credentialed in some invasive procedures and help them get credentialed
- Log the non-operative trauma cases and complex cases into the ACGME log.

Medical Knowledge

Residents will be expected to acquire knowledge regarding the anatomy, physiology and pathophysiology of the organ systems involved in critical care medicine.

PGY2/PGY4

The residents at the PGY2 and at the PGY4 levels will be exposed to the same clinical curriculum at the bedside rounds and didactic conferences. The senior PGY4 resident on the service is expected to be the leader of the team and teacher to the junior residents, as the senior residents have significant experience and knowledge acquired in the past years. Exposure and experience with Endoscopy, such as bronchoscopy, EGD and PEG under the direction of the surgical attendings provided.

- Cardiovascular System
 - Hemodynamic patterns and diagnostic workup of shock and cardiac failure
 - Diagnosing and managing Cardiac Arrhythmias
 - Diagnosis and management of Cardiac Ischemia and Infarction
 - Understand the concepts of oxygen delivery and consumption and be able to work with the formulas
 - Understand the mechanics, indications and interpretation of various hemodynamic parameters including CVP, Wedge, Cardiac Output, SVR
 - Understand the impact of cardiovascular problems on other organ systems.
- Respiratory System
 - Understand basic respiratory physiology, including work of breathing, neural control of breathing, compliance and resistance.
 - Blood Gas interpretation as well as differential diagnosis and management (see renal section below)
 - Differential diagnosis and diagnostic approach to respiratory failure
 - Understand the pathophysiology of obstructive lung disease and restrictive lung disease
 - Understand the cause, diagnosis and management of ARDS
 - Understand the physiologic effects of mechanical ventilation on cardiovascular function.
 - Diagnosis and Management of Ventilator and Hospital acquired pneumonia as well as protective strategies to prevent them.
 - Prevention, Diagnosis and Management of Pulmonary Embolism.
- Neurologic
 - Understand the pharmacology and use of
 - sedatives, pain
 - medication and paralytics in the ICU
 - Understand the physiology, treatment and techniques of management of intracranial pressure as well as the indication for ICP monitoring
 - Understand the diagnostic workup, pathophysiology and management of ICU delirium and decreased mental status
 - Understand the differential diagnosis and workup of neurological deficits,
 - Seizure management and diagnostic issues.
 - Learn how to manage Closed Head Injuries in concert with neurosurgery.
- Endocrine
 - Understand the response to stress in the surgical patient
 - Understand the differential diagnosis, diagnostic approach and treatment of DKA and hyperosmolar coma.
 - Understand the importance of and techniques of glucose control in the ICU in both diabetic and non-diabetic patients

- Understand the concepts of relative adrenal insufficiency and its evaluation and management in critically ill patients.
- Renal, acid-base and Electrolyte.
 - Understand the diagnostic workup and management of acute renal failure.
 - Understand the concepts of renal blood flow, clearance, and GFR.
 - Understand the criteria and methods of hemodialysis including CAVHd and CVVH
 - Differential diagnosis and workup of electrolyte abnormalities as well as management
 - Differential Diagnosis and workup of Acid-base abnormalities as well as management.
- Nutrition
 - Understand and be able to perform a nutritional assessment
 - Calculating caloric, protein and other nutritional needs
 - Understand the variety as well as placement techniques of a variety of enteral feeding tubes.
 - Understand the indications for TPN and be able to formulate TPN orders.
 - Understand the indications for enteral feeds and be able to write enteral feeding orders with indicated formulations.
 - Understand the unique nutritional needs of hepatic and renal failure patients.
- Gastrointestinal
 - Understanding the pathophysiology and management of hepatic cirrhosis including Portal Hypertension.
 - Understand the pathology, diagnosis and management of hepatic failure.
 - Understand the pathology, diagnosis and management of pancreatitis as well as normal pancreatic anatomy and function
 - Understand the differential diagnostic workup and management of GI Bleeding.
 - The pathology and management of abdominal compartment syndrome.
- Hematologic
 - Understand the indications and usage of blood products.
 - Understand the workup and management of anemia
 - Understand the workup and management of hypercoagulable states and coagulopathies.
- Infectious Disease.
 - Understand the diagnosis, workup and management of septic shock.
 - Understand the importance of early goal directed therapy in sepsis
 - Understand the microbiology, pathology and treatment of infections in the surgical patients including, pneumonia, Intra-abdominal sepsis, catheter related sepsis and urosepsis
 - Understand the pharmacology, indications and appropriate use of antibiotics in the ICU including prophylactic use.

Practice Based Learning

PGY2

The SICU resident will reevaluate their care of the patient and review relevant literature. Residents in the SICU will identify areas for improvement and implement strategies to continually improve their patient care.

PGY4

The senior resident will assist the junior resident to evaluate and assess the junior resident's patient care. Portfolios entries are mandated for all residents.

Interpersonal and Communication Skills

PGY2

The care of the critical care patient is a complex multidisciplinary procedure that requires the coordination of many different disciplines. The resident should develop leadership skills that will enable him/her to maximize the effectiveness of the diverse critical care team. The resident should be able to develop interpersonal skills and communication skills that facilitate and result in effective communication across disciplines as well as an effective exchange of information between health care providers, families and administrators. The resident will learn to interact professionally and respectfully with the consulting physician and the primary care team. The resident will learn to maintain timely, complete and appropriate notes in the medical record.

PGY4

The senior resident on the service, the PGY4 is the team leader, under the supervising attending's leadership, for the care of the patient. The senior resident will coordinate the care, prepare the team for rounds, and communicate with the ancillary clinical services. The communication skills, leadership and professionalism are of paramount importance in the highly charged environment of the SICU. The senior resident will be guided by the seasoned full-time faculty.

Professionalism

PGY2

The ICU is a high intensity area and high stress area that requires the Critical Care Resident to behave professionally at all times. Residents are expected to

- Demonstrate respect, compassion and integrity in relationships with family, patients and staff
- Demonstrate sensitivity and responsiveness to cultural issues, age, gender, and religious differences
- Understand and be able to participate in the process of informed consent.
- Understand the ethical and legal issues that ICU patients including DNR, withdrawal of support, and end of life issues.

PGY4

- The senior resident on the service will provide the professional leadership and demeanor expected of a surgical resident responsible for a high-volume and high-intensity service. The senior resident will act professionally towards the ancillary, and nursing staff. The senior resident will coordinate the care of the patient in the context of a multi-disciplinary team.
- Conflict resolution methods emphasized.
- The senior resident is expected to acquire and implement into the daily practice the methods of the "Residents as Teachers" workshops.

System Based Practice

PGY2

The care of the critical care patient is a complex multi-disciplinary process that stretches the resources of the health care system. It is important the critical care resident to learn how to effectively call upon the wide range of system resources available while not wasting resources that are not needed or effective. The critical care resident must coordinate the care of the patient within this complex health care system.

PGY4

The senior resident on the SICU service will coordinate the discharge and transfer planning for the patients in the SICU, under the direct supervision of the supervising surgical attending.

Goals and Objectives Trauma/Critical Care

Management of the patient following trauma differs from that involving most other surgical problems in that treatment often precedes a complete diagnostic evaluation and work-up. The key to a successful outcome is a prioritized approach which begins with the initial assessment and resuscitation of all immediately life threatening injuries, followed by definitive management of all injuries.

The primary objective of the trauma surgery rotation is to provide the surgical resident with graduated competencies based educational experience so that he/she will have a clear understanding of the above principle and, through successive yearly rotations, he /she will be able to:

- Diagnose and treat injuries that are immediately life threatening such as “Trauma Codes”, tension pneumothorax, hemothorax, cardiac tamponade, and pelvic or intra-abdominal bleeding under the supervision of a team of dedicated Trauma surgeons.
- Know and implement basic principles of resuscitation including blood replacement technology and hemostasis.
- Know and understand the use and limitations of various diagnostic studies used in the work up and diagnosis of injured patients and be able to utilize these studies in an appropriate and cost effective manner.
- Be able to obtain surgical hemostasis and have a general understanding of how to surgically manage basic penetrating and blunt organ injuries.

To achieve these educational objectives by the completion of the 5th year of surgical training, the Trauma Surgery Division has defined the following specific goals and objectives for the surgical residents rotating on the Trauma Service based on their level of training.

Patient Care

PGY1

- Know and understand the principles of the “ABCDE’s” in the initial assessment of the injured patient according to the principles of the Advanced Trauma Life Support Course.

- Be familiar with the concept of the secondary survey (physical exam) of the acutely injured patient and assist the senior residents in the participation of these examinations and resuscitations. They should be able to accurately record these findings in the initial database.
- Obtain when possible an appropriate history as it relates to traumatic injury and critical illness
- The PGYI should have a clear understanding of the post admission management of the non-critically injured trauma patient and potential complications such as the diagnosis and management of compartment syndromes, general fracture management, wound care and fluid and electrolyte balance.
- Specific skills that should be mastered at the PGY I level include:
 - IV access in the hypovolemic patient
 - Evaluation/interpretation of blood gases and the importance of base deficit
 - Understand the principles and limitations of the ultrasound (F.A.S.T.) and diagnostic peritoneal lavage and perform these procedures under supervision
 - Understand and be able to initiate maneuvers to prevent hypothermia in the injured patient.
 - Understand and perform principles of basic wound management, simple suture repair, compression, and tetanus and antibiotic prophylaxis.
 - Understand the indications for immediate operative management of the traumatically injured patient.

PGY2

Residents at this level should:

- Be able to identify and manage immediately life threatening injuries such as a tension pneumothorax, hemothorax, and obtain airway control during the initial assessment of the trauma patient.
- Be able to perform a complete and thorough physical exam in the injured patient and begin to understand the role and limitations of various diagnostic tests used in the work-up of the injured patient and the role of consulting services for the management of specific injuries.
- Become familiar with the management of the critically injured trauma patient at the initial presentation, intraoperative and postoperative phases of treatment and understand the concepts of hypovolemic, septic, cardiogenic and spinal shock and their management. Understand the general principles of blood replacement therapy. Know and understand the physiologic response to injury.

Specific skills that should be mastered at the PGY II level include:

- Obtain central venous access and arterial line placement in the hypovolemic patient
- Understand the indication and be able to perform diagnostic tap and peritoneal lavage, and ultrasound in the trauma patient under supervision.
- Understand the indications for CT imaging, and interventional radiology indications
- The resident should know and understand how to interpret the results of these studies and the implications for treatment.
- Know the principles and options of airway control in the acutely injured patient and be able to describe these options including the technique for cricothyroidotomy.
- Understand the principles of safe transport in the critically injured and potentially unstable patient and be able to supervise the safe transport and monitoring of these unstable patients.

- Understand the operative and non-operative management of specific types of injuries with specific attention to blunt solid organ injuries and pelvic fractures.
- The PGY II resident should have a clear understanding of the diagnosis and management of vascular injuries including the concepts of; “hard and soft signs” of vascular injury, proximity injury, and reperfusion injury.
- Know and demonstrate basic chest tube placement and management including maintenance and removal of tubes.

PGY3

Should be able to independently:

- Diagnose and initiate treatment for hypovolemic, cardiogenic, septic and spinal shock and demonstrate appropriate judgment for the use of invasive monitoring equipment and resuscitative equipment.
- Demonstrate independent thinking and judgment in the selection of diagnostic evaluation and the choice of appropriate diagnostic studies based on the stability and injury patterns of the patient with an understanding of the risks, benefits, limitations and cost effectiveness of these studies.
- Know the indications for Emergency Room thoracotomy and be able to explain and describe the procedure and potential pitfalls.
- Know and understand the indications for emergent operative management of thoracic, abdominal and head injuries and be able to initiate treatment for these injuries and prepare for operative management.
- Understand the principles of hemostasis and damage control laparotomy and abdominal compartment syndrome.
 - Become familiar with the postoperative complications common to the trauma patient and their diagnosis and management.
- Understand the principles and management of complicated soft tissue wounds and wound infections
 - be able to demonstrate proficient and cost effective use of antibiotics, wound debridement, and methods to treat or prevent infection.

Specific Skills that should be mastered at the PGY III level include:

- Safe and independent insertion and use of invasive monitoring devices
- Safely and independently perform percutaneous DPL’s and be able to supervise and teach junior residents in this procedure.
- Improved skill in F.A.S.T.
- Provide indications and demonstrate the ability to perform open diagnostic peritoneal lavage, local wound explorations, and gain control of vascular injuries with assistance and supervision.
- Know the principles of trauma laparotomy including correct patient positioning, prep, draping and exposure for exploration.
 - Be able to describe critical intraoperative maneuvers and techniques commonly used in trauma laparotomy such as mediovisceral rotation, aortic cross-clamping and Pringle Maneuvers and the indications and purpose of each.

- Be able to describe how to perform an exploratory laparotomy, trauma splenectomy, splenic salvage, indications for retroperitoneal exploration, the classes of retroperitoneal hematomas, and management of bowel injuries.

PGY4/PGY5

Residents are expected to:

- Master the goals and objectives specified for the previous year in training and be able to supervise and teach more junior residents in acquisition of these skills.
- Supervise and direct the trauma team in the initial resuscitation and stabilization of the trauma patient and using the principles of ATLS and lead a trauma code.
- Know the indications for operative management of Head, Thoracic, Abdominal and vascular injuries and be able to initiate the operative management of the same.
- Demonstrate a basic knowledge and understanding of the management options for specific intra-abdominal organ injuries and be able to perform medial visceral rotation, and Pringle Maneuvers, liver mobilization and packing and placement of supraceliac aortic crossclamp.
- Demonstrate a sound knowledge of the postoperative management of the stable and unstable injured patient and be able to recognize, diagnose and manage common postoperative complications in the trauma patient.
- Be able to diagnose and coordinate the care of the multi-injured blunt trauma patient including the anticipation of specific discharge needs and services.

Specific skills that should be mastered by the PGY IV and V surgical resident on the trauma service include:

- Independently perform an ED Thoracotomy and manage a pericardial tamponade.
- Be able to initiate trauma laparotomy and achieve hemostasis
- Be able to perform medial visceral rotation, Pringle maneuvers, liver mobilization and packing, supraceliac aortic cross clamping.
- Have a basic understanding of the grades of organ injury and injury severity scales and be able to dictate a complete and accurate operative report.
- Understand the pathophysiology and factors contributing to hypothermia and coagulopathy in the injured patient and be able to direct the members of the trauma team in its prevention and management.

Medical knowledge

PGY1

- Participation in the Trauma and Critical care Conferences.
- Application of basic science principles to common clinical situations in the injured patient.
- Ability to interpret radiographic findings, EKGs, laboratory data, and intravascular and intra-cranial monitoring systems
- Learning the fundamental steps of the operative Management of Trauma
- Basic pharmacological principles of anesthesia, as it applies to the injured patient.
- Principles of Post-injury Care

- Basic knowledge of the evaluation, resuscitation, treatment, and long-term effects
- of injuries to the major organ systems or body areas.
- Fundamentals of surgical nutrition including nutrition evaluation.

PGY2/PGY3

- Participation in the Trauma and Critical Care Conferences with additional responsibilities for presentation and contribution at the conferences.
- Expand knowledge base by using standard surgical texts, and beginning to supplement the texts with surgical and trauma journals.
- Teach and supervise the junior residents the basic invasive procedures and assist them in becoming credentialed.
- Participate in the teaching rounds and lead the case presentations using the knowledge acquired through reading and past experience.
- Expand your own knowledge
 - By teaching the medical students on the service, including the basic surgical techniques.
 - In the field of surgical nutrition, including routes of IV access, composition of TPN based on patient's requirements, and co-existing conditions.
- Expand the knowledge of the evaluation, resuscitation, treatment, and long-term effects
- of injuries to the following organ systems or body areas:
 - Central and peripheral nervous system
 - Head and neck
 - Cardiac system
 - Major vascular structures including great vessels, carotid, upper extremity,
 - Aorta and its major branches, as well as lower extremity, and corresponding major venous structures.
 - Thoracic contents including ribs, pleural space, lungs
 - Intra-abdominal contents including the stomach, small bowel, colon, spleen, pancreas, Hepatobiliary system and diaphragm
 - Genito-urinary system
 - Bony structures including face, extremities, spine, skull, and pelvis, soft tissues including skin and muscles, and endocrine organs

PGY4/PGY5

- As the most senior, and the chief resident on the service continue to acquire knowledge in the discipline of Trauma, by continuing to read the standard surgical and trauma texts, with extensive supplementation with the current Trauma literature.
- Participation in scholarly activities of the department and the Trauma Division, and data presentation at the specialty conferences and meetings.
- The knowledge base will prepare you for better patient care and provide leadership and inspiration to the junior residents and medical students.
- Understanding of brain death evaluation and certification
- Understanding the issues of palliative care
- Understanding the issues of organ donation including procurement, preservation, allocation

- Diagnosis and management of persistent vegetative state
- Importance of infection control

Outpatient management of the trauma patient

Practice-Based Learning and Improvement

PGY1/PGY2

The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement as it applies to the care of the injured patient.

Use of the internet resources, as well as the standard surgical texts to optimize learning.

- All residents are expected to develop an on-going personal learning project when on the Trauma and other services, which include:
 - Resident portfolios- the form is on the department's web site.
 - Maintenance of timely updated ACGME web-based operative log
 - Credentialing for the invasive procedures
 - Timely submission of the "chits" required for the credentialing
 - Incorporation of all formal presentations into Portfolios/CV's
- Review of the ABSITE results and especially questions on Trauma not answered correctly for self-directed study
- Preparation for the assigned elective cases on the Trauma service by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.
- Review of the faculty and chief residents filled global assessment form/monthly evaluation to understand the weaknesses and strengths.
- Use of portfolios to reflect on the care rendered to the patient in the context of the global health care environment, and resident's appreciation of own contribution to the care of the patient.
- Discussing with the faculty mentor/advisor, and the program director during regularly scheduled meetings the evaluations, and plan of correction if needed.
- Develop a willingness to learn from mistakes and improve both personal performance and the overall process of patient care

PGY3/PGY4

Continue to develop all Practice-based Learning and Improvement from the junior years.

Trauma is a busy, high-stress service, in which leadership is very important.

- As opportunities open for evaluation of performance of the senior residents, the feedback process and evaluations carry more importance, and will allow for an objective evaluation.
 - Deficiencies are better understood and the strengths will become more apparent. The residents should therefore take the opportunity and thoroughly evaluate the evaluation from the Trauma rotation, and use it as an objective guide for improvement.
- Track the changes in evaluations for a particular deficiency if noted. Institute a change in practice, with the mentor's or trauma attending's input. If a technical deficiency is noted on the evaluation use the department's resources (animal and inanimate lab), and faculty to work on the deficiency that persists.

- Become a leader to the junior residents, and students. Teaching a topic or a skill will make you better at the skill or more knowledgeable on the particular topic.
- Take full advantage of the department's 'Residents as Teachers' program. Taped sessions will be valuable to you and help you understand your style when presenting, and the associated strengths and weaknesses.
- Using the techniques assimilated in these workshops you will become a more effective teacher and a leader.
- Preparation for the formal discussions and presentations using the information technology, and all resources available at the Medical School, and the on-line resources.
- The department's animal and inanimate labs are an excellent tool for improvement and perfecting skills that may have been identified as needing improvement.

PGY5

Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.

Remember that you are the leader of your team and this residency program, and for many years to come your tenure will be a source of legend and tales, frequently exaggerated. Make your legacy the one that your interns and juniors will aspire to emulate.

Interpersonal and Communication Skills

PGY1

The intern is expected to develop an understanding of the key elements in each of the following areas:

- Effective communication and interaction with the emergency department
- Effective communication and interaction with ancillary support staff
- Effective communication with OR staff
- Develop effective verbal and written communication skills
- Participation in the outpatient clinics.
- Taking appropriate history and performing a physical exam.
- Documenting the above in the outpatient medical record.
- Creating the plan of care and presentation of the patient to the faculty member in charge of the clinic.
- Initiating the plan of care discussion with the patient and then formalizing the discussion and documenting the plan of care after the attending had evaluated the patient and discussed the plan of care with the patient, and when appropriate with the patient's family members.
- The resident should be present when the attending assesses the patient and discusses the disease process and plan of care with the patient.
- Provide accurate information to the colleagues when a consultation is required. For example, provide accurate information to the radiologist, when a radiological test is requested.
- Hand writing must be legible, and the signature should be followed with a stamp or printed name, and contact information (beeper number).
- Effectively and professionally communicate with all members of the health care team for the in-house patients requiring discharge planning.

- Provide the necessary information to the social service, case managers, and when necessary assistance with the required forms in preparation for the discharge.
- Appreciate and respect different ethnic and religious beliefs of the patients.
- When needed requesting the translation services, which are easily available at all our sites.
- The residents are expected to be teachers and role models to the medical students, and extensive series of workshops entitled “Residents as Teachers” was undertaken by the department with the assistance from the Dean’s office.

PGY2

As the level of clinical responsibility increases, the importance of the ability to communicate effectively becomes more relevant.

- Seeing critical patients in the Emergency Department and evaluating an injured patient, may challenge even a seasoned practitioner. The response to the consultation must be prompt and courteous to the referring service.
- Don’t feel pressured to come up with the immediate diagnosis, or plan of care. Ask for consultation from peers and people with more experience
- Reflection and thought are very useful to the surgeon and the patient.
- Do not be influenced by the opinion of others, and evaluate the patient and the data independently, without any preconceptions.
- Discuss your impression with the patient, when appropriate and possible, and the senior/chief resident or a surgical attending.
- If the situation is urgent, immediately summon help.

PGY3

- Based on foundation acquired in the junior years continue to communicate professionally and effectively.
- Remember that frequently the information you will have to convey will be to those with less experience than you. Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.
- Assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient’s families courteously and professionally. Remember that most times these will be lay people, who are in a stressful environment and may be critically ill. Effectively communicate with the vocabulary that will be understandable to the patient. Request a translator if needed and appropriate.

PGY4/PGY5

- Become a leader of your team based on the experience of the prior years.
- Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
- Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader, and a communicator.
- Be patient!

- Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critique.
- Do not insult anyone! We work in the environment that is diverse and cultural sensitivities should be taken into account when we talk to the patients and other health care team members.
- If you have to counsel or reprimand a junior resident do it privately.
- If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- Escalate to the supervising attending any unresolved matters.
- Always act professionally, and withdraw from a potentially more difficult situation. Report the matter to the supervising attending, day or night.

Professionalism

PGY1/PGY2

Junior residents are expected to demonstrate, and be instructed in a basic understanding of the following:

- Maintenance of Certification in ATLS, BLS, PALS, ACLS
- Ethical, Economic and Legal Aspects of Trauma Care
- Basic ethical principles for commonly encountered ethical dilemmas
- Societal impact of traumatic injury and trauma care
- Economic impact upon the patient and family
- The residents are expected to be ethical and professional.
 - Professionalism is expected in all clinical arenas- Emergency Department, Trauma bay, bedside, operating room, outpatient department, and hallways/elevators.
 - Respect patient privacy.
 - Do not discuss anything related to patient care issues in public places.
 - HIPPA training will assist with understanding patient privacy issues and legal aspects of patient confidentiality.
- Timely completion of the medical records, operative dictations, compliance with the department's administrative policies, i.e. ACGME operative logs, submission of the credentialing charts are expected and will be monitored.

PGY3/PGY4

- Maintain certification in ATLS, BLS, PALS and ACLS
- Demonstrate by your actions, and leadership, commitment to compassionate patient care which is ethical and respectful.
- Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the supervising attending. Follow the patient after the surgery with daily progress notes.
- Communicate with the attending surgeon daily to coordinate the post-operative care of the patient.
- When appropriate provide the patient with the pertinent information, deferring to the attending surgeon discussions dealing with difficult matters, such as complications, or injuries that result in long term disabilities or death.

- You should be present when these discussions do take place, as this will provide you with the important lessons for the future.
- Dress appropriately with attention to personal hygiene.
- All residents will demonstrate personal integrity, honesty, accountability, respect, compassion, patient advocacy and dedication to patient care and well-being that supersedes self-interest
- All residents will demonstrate a commitment to excellence and continuous professional development
- All residents will demonstrate a commitment to ethical principles pertaining to the provision of critical care, patient confidentiality, and informed consent
- All residents are expected to demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities
- All residents will demonstrate respect and a professional demeanor in relationships with colleagues
- All residents will develop lifelong learning skills through the application of basic science concepts to clinical management, critical reading and critical thinking
- The resident is expected to develop the following:
 - Organizational skills
 - Leadership skills including personnel management, negotiation, team development, and conflict resolution

PGY5

At this stage of your training you are expected to be a leader in a professional organization.

Being a chief resident on the Trauma Service, will challenge your leadership skills and professionalism.

- You must remain a leader frequently in a very challenging trauma setting.
- Remain calm, as your team will take their lead from you.
- Remember that you represent the department, as you interact with residents and attendings from other departments, and other personnel.
- The position of a chief surgical resident is of great power, responsibility and brevity.
- With pride of a great accomplishment, there also must be a sense of humility and appreciation that we always remain students at various stages of personal and professional development.
- Treat your juniors as you wanted to be treated by your chief when you were an intern.
- Treat your patients as you would want to be treated if you were in their place.

System-Based Practice

PGY1/PGY2

The intern and the junior resident will develop a basic understanding of key elements in the following areas:

- Maintenance of certification in ATLS, BLS, PALS and ACLS
- Epidemiology of Trauma and Injury Prevention
- The local, regional, national and international economic, societal, and

- clinical impact of traumatic injury
- Pre-hospital Care
- Organization, supervision, and coordination of emergency medical services
- Principles of Post-injury Care:
 - Develop an appreciation for the benefits of a multi-disciplinary approach for the management of critically ill surgical patients
- The residents are expected to demonstrate awareness of the larger health care systems and issues, and must work effectively in its context.
- Resident's portfolios address the issues of resident's involvement in the care of a particular patient. A resident is given an opportunity to reflect on how they felt and contributed to the care of the patient in the context of the larger health care system.
- Participation in the multiple multi-disciplinary conferences is valuable in demonstrating and teaching the residents the practice of medicine in the context of a global health care delivery.
- Case management conferences are excellent for demonstrating the close and necessary ties between clinical and other services, especially in the discharge planning arena.
- Familiarization with the Joint Commission standards, national patient safety goals, New York State Department of Health 405 Regulations are mandated and the instruction given.
- HIPPA regulations, patient privacy issues are to be understood and respected. Instructions are given to the residents.
- Participation in the Quality Assurance process.
- The residents are required to comply with the department's administrative policies:
 - ACGME operative logs
 - Submission of chits for credentialing for invasive procedures
 - Program and attendings' evaluations

PGY3/PGY4

- Participation in the Quality Assurance projects, such medicine reconciliation, perioperative use of antibiotics, DVT prophylaxis protocol implementation will provide the residents with valuable experience and appreciation of health care delivery in a more global context.
- Participation in the discharge rounds will provide the residents with understanding of the discharge process, steps necessary to arrange for social services, arranging for the visiting nurse or home health aids.
- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.
- The residents will be able to incorporate this acquired appreciation of the multi-specialty approach to patient care in their own practice.
- The resident will develop an appreciation and understanding of:
 - Epidemiology of Trauma and Injury Prevention
 - Basic principles of risk identification and development of preventive strategies

PGY5

Understand and incorporate into practice fundamental aspects of public health issues

- Maintain certification in ATLS, BLS, PALS and ACLS
- Pre-hospital Care

- Principles, risks, and benefits of EMS
- Organization, supervision, coordination, and interaction with EMS
- Identification and understanding of the limitations of regional healthcare delivery systems, including EMS, intra-hospital transport agencies, EMTALA
- Priorities of on-scene and in-transit patient evaluation and resuscitation
- Operative Management of Trauma
- Resource limitations and availability of the operating room including the conflicting duty to provide both elective and emergency surgical care
- Fundamentals of management including triage, communication, manpower management, and resource utilization
- Fundamentals of Rehabilitation
- Effective communication and collaborative practice with ancillary services including speech therapy, occupational therapy, physical therapy, respiratory therapy, and substance abuse counselors

The chief residents are expected to not only understand the issues of system-based Practice as they relate to the treatment of the injured patient, but they should help the junior residents to navigate through the difficulties of working in a multi-disciplinary, high-stress environment.

- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex cases with an unexpected outcome are discussed in a multi-specialty group involving hospital and nursing administration in addition to the clinical services.
- Participation in the Resident Subcommittee of the GME Committee provides our residents with hands-on involvement in charting the academic course of the institution. Residents' concerns are discussed, and then presented by the resident representative at the GME Committee.

Transplant Surgery Service Goals and Objectives.

Patient Care

PGY1/PGY2

The goals of the junior resident rotation will focus on the immediate pre-operative and postoperative care of the patient with kidney failure and on the development of the fine psychomotor skills required to perform vascular suturing and central access for hemodialysis access. The following objectives are identified:

- a. Begin to understand the preoperative considerations in patients with organ failure and complex medical problems.
- b. Begin to understand the postoperative considerations in patients with organ failure and complex medical problems.
- c. Learn the basics of operative conduct (i.e. positioning, prepping, draping, vascular suturing, line placement etc)
- d. Learn the basic management of central catheters (i.e. placement, clearance, recognition of complications etc)
- e. The above is to be accomplished through Attending supervision of the following:
 - i. Conducting a minimum of 15 pre and postoperative evaluations
 - ii. First assisting on of a minimum 15 cases
 - iii. Second assisting on at least one transplant

PGY4

The goals of the senior resident rotation will focus on responsibility, leadership and administrative skills to direct immediate pre-operative and postoperative care of the patient with organ failure. Technique development will focus on expanding the surgical armamentarium to include performing vascular anastomoses, conducting a retroperitoneal approach, understanding the basics of laparoscopic donor surgery, understanding the basics of liver surgery, and understanding the basics of cadaver donor surgery. The following objectives are identified:

- a. Understand the preoperative considerations in patients with organ failure and complex medical problems.
- b. Understand the postoperative considerations in patients with organ failure and complex medical problems.
- c. Learn the basics of transplant surgery and donor surgery
- d. Learn the basics of conducting the transplant vascular anastomosis
- e. The above is to be accomplished through Attending supervision of the following:
 - i. Directing a minimum of 15 pre and postoperative evaluations of kidney transplants
 - ii. First assisting on of a minimum 15 cases, such as

- a. transplants
- b. Assisting on live donation
- c. Assisting on cadaver donations
- d. Assisting on general surgical cases performed on transplant recipients

Medical Knowledge

PGY1/PGY2

During the rotation we expect the junior resident to learn the basic concepts in transplantation with a focus on the knowledge required for the clinical care of the transplant candidate, transplant recipient, and the live donor. The following objectives are identified:

- a. Develop a fund of knowledge about transplant surgery sufficient to understand the care delivered to the transplant candidate, recipient, or live donor.
- b. Understand the indications and contraindications for transplant surgery.
- c. Understand the mechanisms of action and complications of various immunosuppressive medications.
- d. Understand transplant complications (e.g. rejection and infection)
- e. Understand the indications and contraindications for live donation.
- f. The above is to be accomplished through the following - in order of importance:
 - i. Reading the Transplant chapters in a recommended textbook of surgery (e.g. Schwartz or Sabiston)
 - ii. Daily delivery of inpatient and out patient pre and post transplant care supervised by the Chief Resident or Fellow, and Attending
 - iii. Attendance at and participation in the weekly transplant conferences
 - iv. Attendance at the weekly lectures
 - v. Journal article review and critique (assigned)

PGY4

During the rotation we expect the senior resident to learn the advanced considerations involved in the surgical subspecialty of transplantation with a focus on knowledge required for the clinical care of the transplant candidate, transplant recipient, cadaver donor, and the live donor. The following objectives under Attending supervision are identified:

- a. Develop a fund of knowledge about transplant surgery sufficient to understand and supervise the care delivered to the transplant candidate, recipient, or live donor.
- b. Understand the indications and contraindications for transplant surgery.

- c. Understand the mechanisms of action and complications of various immunosuppressive medications.
- d. Understand and direct the management of transplant complications with fellow, and attending supervision (e.g. rejection and infection)
- e. Understand the basic management of outpatient transplant care.
- f. Understand the indications and contraindications for live donation.
- g. Understand the process of cadaver donation.
- h. The above is to be accomplished through the following - in order of importance:
 - i. Reviewing the Transplant chapters in a recommended textbook of surgery with the junior residents(e.g. Schwartz or Sabiston)
 - ii. Conducting the daily delivery of inpatient and out patient pre and post transplant care supervised by the Fellow, and Attending
 - iii. Deliver outpatient post transplant care with attending supervision.
 - iv. Attendance and provision of resident leadership at the weekly transplant conferences
 - v. Read and assign journal articles for review and critique by the junior residents
 - vi. Attendance at the weekly lectures
 - vii. Utilize board review materials to identify preparedness in transplant knowledge and to eliminate weaknesses in this area during this rotation.

Practice-based Learning and Improvement

PGY1/PGY2

- a. Use of the internet resources, as well as the transplantation related chapters in standard surgical texts to optimize learning.
- b. Residents are expected to continue their on-going personal learning project, which includes:
 - i. Resident portfolios- the form is on the department's web site.
 - ii. Maintenance of timely updated ACGME web-based operative log
 - iii. Credentialing for the invasive procedures
 - iv. Timely submission of the chits required for the credentialing
 - v. Incorporation of all formal presentations into Portfolios/CV's
- c. Preparation for the assigned elective cases by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.
- d. Participation in the Transplant morbidity and mortality conferences and the associated Quality Assurance process.
- e. Participation in the evidence-based ACS Core Curriculum.
- f. Review of the faculty and chief residents filled global assessment form/monthly evaluation to understand the weaknesses and strengths.
- g. Use of portfolios to reflect on the care rendered to the patient in the context of the global health care environment, and resident's appreciation of own contribution to the care of the patient.

- h. Discussing with the faculty mentor/advisor, and the program director during regularly scheduled meetings the evaluations, and plan of correction if needed.

PGY4

- a. Continue to develop all Practice-based Learning and Improvement from the junior years.
- b. As more opportunity exists for evaluation of performance of the senior residents the feedback and evaluations carry more importance, and will allow for an objective evaluation. The deficiencies are better understood and the strengths will become more apparent. The residents should therefore take the opportunity and thoroughly evaluate the evaluation, and use it as an objective guide for improvement.
- c. Track the changes in evaluations for a particular deficiency if noted. Institute a change in practice, with the mentor's help. If a technical deficiency is noted on the evaluation use the department's resources (animal and inanimate lab), and faculty to work on the deficiency that persists.
- d. Become a leader to the junior residents, and students. Teaching a topic or a skill will make you better at the skill or more knowledgeable on the particular topic.
- e. Take full advantage of the department's 'Residents as Teachers' program. Taped sessions will be valuable to you and help you understand your style when presenting, and the associated strengths and weaknesses.
- f. Using the techniques assimilated in these workshops you will become a more effective teacher and a leader.
- g. Preparation for the formal discussions and presentations using the information technology, and all resources available at the Medical School, and the on-line resources.
- h. Remember that your power point presentation is posted on the department's web-site, and is a resource to anyone looking for the information on the topic.

Interpersonal and Communication Skills

PGY1/PGY2

- a. Participation in the outpatient clinics will be a valuable tool in helping the resident develop communication skills.
- b. Taking appropriate history and performing a physical exam.
- c. Documenting the above in the outpatient medical record.
- d. Creating the plan of care and presentation of the patient to the faculty member in charge of the clinic.
- e. Initiating the plan of care discussion with the patient and then formalizing the discussion and documenting the plan of care after the attending had evaluated the patient and discussed the plan of care with the patient, and when appropriate with the patient's family members.
- f. The resident should be present when the attending assesses the patient and discusses the disease process and plan of care with the patient.

- g. Provide accurate information to the colleagues when a consultation is required.
- h. Provide accurate information to the radiologist, when a radiological test is requested.
- i. Hand writing must be legible, and the signature should be followed with a stamp or printed name, and contact information (beeper number).
- j. Effectively and professionally communicate with all members of the health care team for the in-house patients requiring discharge planning.
- k. Provide the necessary information to the social service, case managers, and when necessary assistance with the required forms in preparation for the discharge.
- l. Appreciate and respect different ethnic and religious beliefs of the patients.
- m. When needed requesting the translation services, which are easily available at all our sites.
- n. The residents are expected to be teachers and role models to the medical students, and extensive series of workshops entitled “Residents as Teachers” was undertaken by the department with the assistance from the Dean’s office.

PGY4

- a. Become a leader of your team based on the experience of the prior years.
- b. Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
- c. Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader, and a communicator.
- d. Be patient!
- e. Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critique.
- f. Do not insult anyone! We work in the environment that is diverse and cultural sensitivities should be taken into account when we talk to the patients and other health care team members.
- g. If you have to counsel or reprimand a junior resident do it privately.
- h. If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- i. Escalate to the supervising attending any unresolved matters.
- j. Always act professionally, and withdraw from a potentially more difficult situation. Report the matter to the supervising attending, day or night.

Professionalism

We expect the junior resident to develop an understanding of and appreciation for the surgeon’s role as the team leader, and a professional in the delivery of care for the patient with complex surgical as well as medical problems.

- a. Professionalism is expected in all clinical arenas—bedside, operating room, outpatient department, and hallways/elevators.
 - i. Respect patient privacy.
 - ii. Do not discuss anything related to patient care issues in public places.

- b. HIPPA training will assist with understanding patient privacy issues and legal aspects of patient confidentiality.
- c. Timely completion of the medical records, operative dictations, compliance with the department's administrative policies, i.e. ACGME operative logs, submission of the credentialing charts are expected and will be monitored.
- d. Remember that the hospital is the workplace for us, but for the patients it is temporary home. Patients' rooms are therefore their private space, which we enter out of necessity.
 - i. Knock on the door, if the door to the room is closed.
 - ii. Most of the time there are two patients in the room, and to get to the patient away from the door you will have to traverse the space of a person. A quick apology, a greeting and a smile will make the intrusion much less offensive.
 - iii. Surgeons frequently make rounds in the very early hours, and with large teams. Try to awaken the patient gently, and ask permission to examine them.
 - iv. Close the curtain, respecting the patient's privacy.
 - v. Although frequently difficult to maintain privacy in a small room make every effort to do so.

PGY4

The Senior resident on the transplant service is a true leadership position

- a. The senior resident should be able to provide administrative and clinical leadership for the resident team.
- b. The senior resident must maintain close communication with the Attending staff regarding the conduct of the plan of care for all patients on the service.
- c. Demonstrate by your actions, and leadership, commitment to compassionate patient care which is ethical and respectful.
- d. Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the supervising attending. Follow the patient after the surgery with daily progress notes.
- e. Communicate with the attending surgeon daily to coordinate the post-operative care of the patient.
- f. When appropriate provide the patient with the pertinent information, deferring to the attending surgeon discussions dealing with difficult matters, such as complications, and prognosis and treatment plan in cancer patients.
- g. You should be present when these discussions do take place, as this will provide you with the important lessons for the future. It is also usually comforting to the patient to see familiar faces when receiving bad news.
- h. Dress appropriately with attention to personal hygiene.

System-based Practice

PGY1

We expect the junior resident to develop the ability to function within the framework of an extended team that includes many non-surgical team members with whom care must be coordinated in order to achieve quality outcomes. The above is to be accomplished through the following:

- Daily delivery of inpatient and out patient pre and post transplant care supervised by the Chief Resident or Fellow, and Attending and coordinated with the Nursing staff, transplant coordinators, nephrologists, immunology lab personnel, and medical consultants
- Attendance at and participation in the transplant interdisciplinary conferences
- Maintain adequate documentation in the medical record (daily notes at a minimum)

PGY4

We expect that the senior resident will develop an understanding of and appreciation for the surgeon's role as the team leader in the delivery of care for the patient with complex surgical as well as medical problems. The following objectives are identified:

- a. We expect the senior resident to exercise the ability to function within the framework of an extended team that includes many non-surgical team members with whom care must be coordinated in order to achieve quality outcomes. The above is to be accomplished through the following objectives:
- b. Conduct the daily delivery of inpatient, pre- and post-surgical care supervised by the Fellow, and Attending while coordinating with the Nursing staff, transplant coordinators, nephrologists, immunology lab personnel, and medical consultants
- c. Attendance at and resident leadership in the transplant interdisciplinary conferences
- d. Supervise adequate resident documentation in the medical record (daily notes at a minimum)

Pediatric Surgery Goals and Objectives

Patient Care

PGY1

- Preoperative and postoperative evaluation and management of the pediatric patient.
- Fluid and electrolyte management of the pediatric patient.
- Evaluation and management of the pediatric trauma patient.
- Evaluation and management of abdominal complaints in infants and children.
- Evaluation and management of inguinal complaints in infants and children.
- Evaluation and management of non-cardiac thoracic disease in infants and children.
- Evaluation and management of common pediatric surgical emergency room complaints, such as abdominal pain, vomiting, lacerations, burns, skin abscesses, and foreign bodies.
- Familiarity with common pediatric surgical procedures such as pediatric inguinal hernia repair, umbilical hernia repair, and circumcision
- Become competent and comfortable in performing physical examinations of infants and children.

PGY3

- Evaluation and management of the surgical neonate.
- Evaluation and surgical management of common pediatric surgical diseases, such as pyloric stenosis and intussusception.
- Evaluation and surgical management of the most common surgical congenital anomalies, such as esophageal atresia, bowel atresias, malrotation, Hirschsprung's disease, imperforate anus, and abdominal wall defects.
- Exposure to more complex pediatric surgical operative procedures and decision making.

The Goals and Objectives related to other ACGME competencies for the Pediatric Surgery Rotation are similar to the General Surgery Goals and Objectives, with literature assignments pertaining to the Pediatric Surgery.

Special emphasis is place on Communication and Professionalism skills on this rotation due to the fact that the Pediatric Service and parents are always involved with the patient care. Skills will be cultivated in dealing with the patients' families and Pediatric Medicine Service.

Goals and Objectives for Surgical Resident Rotation on the Otolaryngology Service

Patient Care

PGY1

At the conclusion of a month on the otolaryngology rotation, the surgical resident is expected to have accomplished the following:

- Familiarity with head and neck anatomy so that a basic otolaryngologic examination can be performed and that abnormalities can be recognized. Be able to examine children as well as adults.
- Familiarity with otolaryngology-specific history intake.
- Knowledge of common diagnoses and initial treatment/workup for: cerumen impaction, acute otitis externa and media, neck abscess, epistaxis, tonsillitis/peritonsillar abscess, acute parotitis, facial fractures, foreign bodies ear/nose/pharynx, goiter, hyperparathyroidism.
- Proficiency in basic procedures – flexible laryngoscopy; cerumen removal with irrigation and curettes; removal of foreign bodies from the ear, nose and pharynx; repair of simple and complex facial lacerations; fine needle aspiration biopsy of the neck; anterior nasal packing and chemical cauterization.
- Recognition (stridor, in particular) and initiation of treatment for the compromised upper airway.
- Familiarity with basic anatomical features on CT scan of the neck and plain x-rays of the facial bones. Recognize when and what type of CT neck should be ordered.
- Familiarity with otolaryngology OR procedures, such tonsillectomy, thyroidectomy, repair of facial fractures and parathyroidectomy, and their indications and respective immediate postop care/complications.
- Familiarity and comfort with tracheotomy tubes and their care. Be able to change an established tracheotomy tube.

The Goals and Objectives related to other ACGME competencies for the Otolaryngology Rotation are similar to the General Surgery Goals and Objectives, with literature assignments pertaining to the discipline of Otolaryngology

Goals and Objectives for Surgical Resident Rotation in Urological Surgery

PGY1

This one month PGY1 rotation is designed to teach when to suspect urologic disease, how to diagnose and treat it, and to understand when it is appropriate to refer patients for urological evaluation. The rotation is designed to help surgical residents develop appropriate skills in basic urologic diagnostic and therapeutic procedures. The surgical residents participate in all clinical and didactic activities of the GU Department.

The surgical resident is expected to become familiar with:

- Physiology, significance and evaluation of hematuria
- The use of Digital Rectal Exam
- Interpretation of PSA levels
- Urodynamics and Videourodynamics studies indications and significance
- Commonly used drugs in Urology; indications, contraindications, toxicity
- Management of GU emergencies:
 - *Painful testicle*
 - *Flank Pain*
 - *Priapism*
 - *Trauma*
 - *Acute Urinary Retention*
- Scrotal mass
- Kidney mass
- Female incontinence
- Diabetes and its effect on GU tract
- Indications and interpretation of IVP, CT, MRI, Sonography in urological diseases
- Urethral catheterization

The Goals and Objectives related to other ACGME competencies for the Urological Surgery Rotation are similar to the General Surgery Goals and Objectives, with literature assignments pertaining to the discipline of Urological Surgery.

Goals and Objectives for Rotation on the Surgical Oncology Service at Memorial-Sloan Kettering Cancer Center

General Goals: For PGY2 or PGY3 resident- To gain basic experience with the multidisciplinary care of patients with intra-abdominal tumors. This includes surgical basic physiology, presentation, diagnosis and surgical care. Residents will interact with a world class multidisciplinary team in preoperative workup, intra-operative anatomy, technique and decision making, and postoperative care, to include post-discharge treatment.

Specific Goals:

PGY2/PGY3

- Become familiar with evaluation of patients referred for consultation
- Work with attending, fellow and ancillary staff towards a differential diagnosis, treatment plan
- Assist the chief residents in running the team
- Develop understanding of the more commonly performed surgical operations and the related anatomy
- Continue to expand your surgical armamentarium: variety of cases, number of cases
- Become familiar with the newer technologies, i.e. laparoscopic equipment, sonography, sentinel lymph node biopsy
- Interact in a professional manner with the multidisciplinary team
- Critically evaluate daily X-Rays, blood work
- See the patients that you operated on every day, as well as consults, and write a note
- Work with other departments as team members.
- Pursue reading not only from standard surgical textbooks, but also from current surgical literature and journals
- Participate in didactic sessions offered at MSKCC, including giving case presentations, literature reviews, and leading conferences
- Coordinate the monthly joint MSKCC/SUNY Downstate Surgical Oncology Review Conference
- Continue to log cases and use the departmental internet program

The Goals and Objectives related to other ACGME competencies for the Urological Surgery Rotation are similar to the General Surgery Goals and Objectives, with literature assignments pertaining to the discipline of Surgical Oncology Surgery.

Goals and Objectives Cardiothoracic Surgery

The Cardiothoracic Surgical Service is a comprehensive service with its own Intensive Care Unit. State of the art care is provided to Adult patients and all forms of Complex Cardiac and Thoracic Surgery are performed. The Team includes Cardiothoracic Surgeons and Intensive Care Physicians providing leadership and guidance.

Our ethnically and socio-economically diverse patient population tends to be often complicated, with complex disease processes. Often time provision of basic Primary care is needed for the indigent patients. The spectrum of disease tends to be complex and varied, and intellectually challenging.

The other objective of the Service is to provide a top-level educational experience to our Residents. The Educational commitment is total, and these trainees rotating through the service are an Integral part of the team, participating closely in the patient care.

Residents in the General Surgery Program spend typically a month at a time as PGY-I and again as PGY-II level. Later in the program they also rotate at PGY-IV level. Their educational experience and Hands-on training has different implications at each level, but broadly involves the following categories.

Patient Care

PGY1/PGY2

At the junior levels the Residents participate in Morning and Evening rounds and continuing care during the day and night based on their call schedule.

They are supervised at all times by the Attending staff and at night a senior member of the Program—either a Fellow or a PGY-IV-V as the case may be.

The junior residents are expected to gain understanding in

Early Post Open Heart Surgery Perioperative Care

- ***Understanding of Pathophysiology of the immediate postoperative period***
 - Hypothermia
 - “Capillary Leak” related to cardiopulmonary bypass
 - Hypertension
 - Awakening
 - Rewarming, vasodilation, volume resuscitation and use of pressors
 - Requirement for inotropes
 - Coagulopathy
- ***Assessment and control of mediastinal bleeding***
- ***Weaning from mechanical ventilation***
- ***Sedation and pain control***
- ***Arrhythmias***
 - Pacing with epicardial pacemaker wires
 - Transvenous pacemaker
- ***Monitoring of hemodynamics using SWAN***
- ***Perioperative Care after the first 24 hours***
- ***Cardiovascular Complications***
 - Low Cardiac Output syndrome
 - Decreased preload; decreased contractility; diastolic dysfunction; arrhythmias; hypertension

- Hypertension
- Arrhythmias, use of antiarrhythmic medications
- **Respiratory Complications**
 - Atelectasis
 - Cardiogenic and noncardiogenic pulmonary edema
 - Nosocomial pneumonia
 - COPD
 - Intrathoracic collections (clot)
 - Pneumothorax
 - Pleural effusion
 - Shunting caused by intravenous antihypertensive medication
 - Pulmonary embolism
- **Swallowing dysfunction and upper airway dysfunction**
- **Assessment of the risk for recurrent respiratory failure**
- **The need for tracheostomy**
 - Prolonged dependence on mechanical ventilation
 - Weaning the difficult to wean patient
- Transferring from ICU to a less monitored setting.

Operative experience

At the junior level the Resident is expected to participate in the team, and get introduced to the nature of the procedures performed and the setup and conduct of Heart surgery. The nuances of Cardiopulmonary Bypass, the close team approach, and the dependence of this interaction for successful patient outcomes are introduced to them.

The anatomy of the thorax and the heart is explained to them.
Hands on experience are allowed, appropriate for the level of training.

PGY4

- More hands-on participation with the skills acquired at the more junior level.
- Each senior resident is expected to learn how to perform a Median Sternotomy.
- Each senior resident is expected to learn how to perform a Thoracotomy.
- Each resident is will learn identification of the key structures in the chest.
- The senior residents will perform major steps in Thoracic procedures and may perform many procedures such as pericardial windows, VATS with pleurodesis.
- They become familiar with Bronchoscopy, Mediastinoscopy and Endoscopy.
- They are expected to have prepared thoroughly for the cases they scrub on and actively participate in.
- With experience and past meaningful exposure the senior resident will participate in all non-cardiac and cardiac thoracic procedures.
- Cases are discussed preoperatively and they are expected to have a plan of action, and alternatives and plans for complications.
- The basis of the training is twofold –one to prepare the senior for emergency room trauma in the chest, and any encounters in the chest in Non Cardio thoracic procedures. The other

objective is for the potential senior resident wishing to embark on a career in the discipline, and give the resident a more enhanced level of participation in the Operating room.

The Goals and Objectives related to other ACGME competencies for the Cardiothoracic Surgery Rotation are similar to the General Surgery Goals and Objectives, with literature assignments pertaining to the discipline of Cardiothoracic Surgery.

Familiarization with 405 Regulations.

Residents' Hours.

Summary:

- Work hours not to exceed 80 hours/week over four week period
- Not scheduled to work more than a 24 hour period except:
 1. Purpose is for the transfer of patient information-“shift change”
 2. The new patient care activity is not assigned
 3. Time should be added to the 80 hour work week
- Scheduled on-duty assignments must be separated by not less than 8 consecutive non- working hours.
- At least one 24-hour period of scheduled non-working time per week.

MOONLIGHTING IS NOT PERMITTED!

405 Regulations also apply to resident supervision.

Attending Coverage.

There shall be sufficient number of (attending) physicians present in person in the hospital “24/7” to supervise the postgraduate trainees in their specialties to meet reasonable and expected demand.

In hospitals which cannot document that the patient’s attendings are immediately available.... onsite supervision can be carried out by the postgraduate trainees who are in their final year of training or who have completed at least three years of postgraduate training.

Results of Non-Compliance.

- ❑ Financial punishment to hospital and department
- ❑ Bad press
- ❑ State will dictate what to do for corrective actions

All residents should thoroughly familiarize themselves with the regulations. Periodically, and at different sites, you will be asked to fill out time studies. Be precise, punctual and honest in filling out the forms. Don't hesitate to ask if you have any questions!