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GENERAL SURGERY RESIDENCY PROGRAM

Year Specific Global Competency-Based Goals and Objectives

PGY 1

GLOBAL COMPETENCY-BASED GOALS AND OBJECTIVES

Site Location: University of Nevada School of Medicine
1701 W. Charleston Blvd., Suite 400
Las Vegas, NV. 89102
Program Director: Jennifer Baynosa, MD
Associate Program Director: Gary Shen, MD

ACGME General Surgery Milestones

The milestones represent a continuum through which residents progress in their training. The PGY 1 target is Milestone Level 1 in all areas of competency. Residents are expected to progress to this level at the conclusion of the PGY 1 training.

MEDICAL KNOWLEDGE

GOAL 1: This resident has a basic understanding of the symptoms, signs, and treatments of the “core” diseases in the SCORE curriculum and has basic knowledge about common surgical conditions to which a medical student would be exposed in clerkship.

GOAL 2: This resident has a basic knowledge of the “core” surgical operations in the SCORE curriculum to which a medical student would be exposed in clerkship.

OBJECTIVES:

- Study and discuss readings and questions from SCORE Curriculum
- Complete course work and testing to obtain Basic and Advanced Cardiac Life Support and Advanced Trauma Life Support certification.
- Attend and actively discuss readings in all education conferences.
- Attend and actively discuss readings at Faculty and Guest Basic Science and Clinical Lectures.
- Attend and actively participate in the ABSITE review.
- Describe normal physiology and pathophysiology as applied to surgical diseases.
- Apply physiological knowledge to the clinical and operative management of surgical patients.
- Attend and actively participate in the Surgical Skills Program.
- Successfully complete the American Board of Surgery In-Training Examination at or above 30 percentile.
- All PGY-1 Residents must complete USMLE Part 3.

PATIENT CARE
GOAL 1: This resident performs a focused, efficient, and accurate initial history and physical of a full spectrum of patients admitted to the hospital, including critically ill patients.

GOAL 2: This resident recognizes and manages common post-operative problems with the assistance of senior residents or staff members who are physically present.

GOAL 3: This resident has basic surgical skills. The resident can perform basic operative steps in “core” operations/procedures of the SCORE curriculum.

OBJECTIVES:

- Acquire self-confidence and the ability to develop differential diagnoses and management plans through history and physical examination.
- Perform pre- and post-operative care of patients with the basic understanding of pathophysiology as applied to surgical diseases.
- Manage common post-operative complications such as fever, hypotension, hypoxia, confusion, and oliguria.
- Understand the principles involved in operations, handling of tissues, dissection of tissues planes, suture-ligature techniques; complete “simple” operative procedures with standard aseptic techniques.
- Illustrate techniques such as airway management, knot tying, simple suturing, suture removal, use of Doppler ultrasound, administration of local anesthetic, universal precautions, and aseptic technique,
- Able to reliably perform basic procedures, including venipuncture, arterial puncture incision and drainage, minor skin excisions and placement of an IV, nasogastric tube, or urinary catheter.
- Understand the use and placement chest tubes, endotracheal tubes, IVs, CVPs, arterial lines.
- Demonstrate initial management of life threatening surgical illnesses and be adept at resuscitation.
- Prepare for and formulate an operative plan prior to operations.
- Demonstrate reasonable judgment, safety, and effective technical skills in operative cases.

INTERPERSONAL AND COMMUNICATION SKILLS

GOAL 1: This resident uses a variety of techniques to ensure that communication with patients and their families is understandable and respectful.

GOAL 2: This resident willingly exchanges patient information with team members.

GOAL 3: This resident communicates basic facts effectively with patients, hospital staff members, and the senior surgeon in the operating room and before surgery.

OBJECTIVES:
• Interact with peers regarding operative cases and provide feedback about the scientific literature at the didactic sessions (clinical conferences, Evidenced Based Review of Surgery readings, and oral discussions).
• Gather essential information from patients; document patient encounters accurately and completely.
• Demonstrate effective communication strategies to interact with patients and families from diverse backgrounds (e.g., nontechnical language, teach back, appropriate pacing, and small pieces of information).
• Provide therapeutic relationships with patients using effective listening skills and candid feedback.
• Educate patients and families about the pre-and post-operative care of the surgical patient, and effectively communicates basic health care information to patients and their families.
• Respond politely and promptly to requests for consults and care coordination activities from attending physicians, staff, and members of other health care teams.
• Enter orders and complete progress reports in a coherent and legible format.
• Perform face-to-face hand-offs.
• Understand and communicate the necessary elements of informed consent for procedures, including the risks, benefits and alternatives of the intended procedure to the patient and family.

PROFESSIONALISM

GOAL 1: This resident is polite and respectful toward patients, their families, and other health care professionals. This resident demonstrates a commitment to continuity of care by taking personal responsibility for patient care outcomes.

GOAL 2: The resident understands the institutional resources available to manage personal, physical, and emotional health.

GOAL 3: The resident performs assigned and required administrative tasks in a timely fashion.

OBJECTIVES:

• Respond and answer pages promptly.
• Demonstrate honest and trustworthy behavior.
• Consistently respect patient confidentiality and privacy, including the use of information transmission with electronic devices.
• Understand and use the chain of command on the resident service.
• Dress in a respectable and conservative manner at conferences and at office.
• Attend and actively participate in all weekly conferences.
• Apply time management principles as necessary to be accountable to patients, and other health care professionals.
• Apply the principles of physician wellness and fatigue mitigation (e.g., acute and chronic
disease, substance abuse, and mental health problems).

- Respect needs of patients.
- Demonstrate a commitment to ethical principles, maintain confidentiality of patient information, informed consent, and other business practices.
- Comply with duty hours standards.
- Complete medical reports in a timely manner.
- Complete operative case logs and duty hour logs.
- Complete all administrative tasks and does not require excessive reminders or follow-up (e.g., visa renewal, credentialing, obtaining a medical license).

PRACTICE BASED LEARNING AND IMPROVEMENT

GOAL 1: This resident willingly imparts educational information clearly and effectively to medical students and other health care team members.

GOAL 2: This resident completes learning assignments using multiple sources.

GOAL 3: This resident actively participates in Morbidity and Mortality (M&M) and/or other Quality Improvement (QI) conferences with comments, questions, and/or accurate presentation of cases.

OBJECTIVES:

- Analyze, critique and review surgical literature as it applies to evidence-based medicine.
- Assess annual ABSITE scores to develop an individual study plan as necessary.
- Use information technology to access medical literature and select treatment strategies.
- Use computer technology, simulations and other multimedia resources to increase medical knowledge and operative skills.
- Attend and actively participate in didactic presentations such as the Basic Science Reading program, journal club, skills curriculum activities and simulation experiences to build surgical skills.
- Educates students and other health care members willingly, using media in presentations appropriately and effectively.
- Recognize when and how errors or adverse events affect the care of patients.
- Modify patient care behaviors in response to feedback from his or her supervisors.
- Participate in patient outcome research such as QI or PI projects.

SYSTEMS-BASED PRACTICE

GOAL 1: This resident has a basic understanding of the resources available for coordinating patient care.

GOAL 2: This resident has basic knowledge of how health systems operate.
OBJECTIVES:

● Attend and actively participate in the Interdisciplinary Grand Rounds monthly.
● Consult with other members of the health care team to provide cost-efficient health care for patients, including social workers, visiting nurses, and physical and occupational therapists.
● Apply cost-effective care in ordering tests and planning interventions.
● Provide consultations for other services.
● Explain system factors that contribute to medical errors and is aware that variations in care occur.
ACGME GENERAL SURGERY MILESTONES

The milestones represent a continuum through which residents progress in their training. The PGY 2 target is Milestone Level 2 in all areas of competency. Residents are expected to make progress to be at or close to this level at the conclusion of the PGY 2 training. The goals and objectives for PGY 2 are built on those outlined for PGY 1.

MEDICAL KNOWLEDGE

GOAL 1: This resident has basic knowledge about many of the “core” diseases in the SCORE curriculum.

GOAL 2: This resident has basic knowledge of the operative steps, peri-operative care, and post-operative complications for many of the “core” operations in the SCORE curriculum.

Objectives:

- Make a diagnosis and recommend appropriate initial management for common surgical diseases.
- Recognize variations in the presentation of common surgical conditions.
- Synthesize contents and questions from SCORE Curriculum.
- Summarize his or her readings in Clinical Case Conferences, Oral Discussion Sessions, and the Evidenced Based Reviews of Surgery Sessions.
- Analyze and critique readings in Faculty and Guest Basic Science and Clinical Lectures.
- Participate actively in all discussions in Mortality and Morbidity Conference.
- Apply physiological knowledge to the non-operative and operative management of surgical diseases.
- Attend and actively participate in the Surgical Skills Program.
- Delineate operative steps on many of the “core” operations.
- Demonstrate appropriate peri-operative care of patients undergoing many of the “core” operations.
- Successfully complete American Board of Surgery In-Training Examination at or above 30 percentile.

PATIENT CARE
GOAL 1: This resident accurately diagnoses many "core" surgical conditions in the SCORE curriculum and initiates appropriate management for some “core” conditions.

GOAL 2: This resident recognizes and manages common post-operative problems assistance of senior residents or staff members who are available for consultation, but not physically present.

GOAL 3: This resident conducts portions of common operations.

OBJECTIVES:

- Demonstrate responsibility for overall care of patients, and continue to develop operative skills.
- Develop a diagnostic plan and implement initial care for patients seen in the Emergency Department, including evaluation and care of the acute abdomen.
- Justify decision for patient triage based on level of acuity.
- Manage with assistance common complications such as fever, hypotension, hypoxia, confusion, and oliguria.
- Perform independently the placement of endotracheal tubes, IV’s, CVP’s, arterial lines, chest tubes, and ACLS.
- Manage all aspects of the ICU patient including TPN, ventilators, and invasive access.
- Demonstrate reasonable judgment, safety, and effective technical skills in operative cases, such as respect for tissue and in instrument handling.
- Performs some of the “core” operations in the SCORE curriculum with minimal assistance or coaching and make straightforward intraoperative decisions.

INTERPERSONAL AND COMMUNICATION SKILLS

GOAL 1: This resident customizes communication with patients and their family.

GOAL 2: This resident exhibits behaviors that invite information sharing with health care team members.

GOAL 3: This resident effectively describes various aspects of the procedure and perioperative care to the patient and his or her family and other operating room team members.

OBJECTIVES:

- Apply patient characteristics (e.g., age, literacy, cognitive disabilities, culture) in communication.
- Provide timely updates to patients and their families during hospitalizations and clinic visits.
- Demonstrate respect, approachability, active listening in information sharing.
- Perform hand-off best practices (e.g., uses multiple forms of information transfer, confirms receipt of information, invites questions).
- Lead a preoperative "time out".
Perform clear informed consent discussion for basic procedures.
Document patient encounters accurately and completely.
Provide therapeutic relationships with patients using effective listening skills and candid feedback.
Enter orders and progress notes in a coherent and legible format and ensures accuracy of those entered by junior members of the team.
Acknowledge the contributions of other team members.

PROFESSIONALISM

GOAL 1: This resident behaves in accordance with ethical principles.

GOAL 2: This resident monitors his or her own personal health and wellness and appropriately mitigates fatigue and/or stress.

GOAL 3: This resident is prompt in attending conferences, meetings, operations, and other activities.

OBJECTIVES:

- Attend punctually all educational conferences and other required or assigned activities.
- Exhibit compassion and empathy toward patients and their families.
- Recognize the limits of his or her knowledge and asks for help when needed.
- Respect confidentiality of patient information.
- Illustrate composure in stressful situations.
- Manage effectively and efficiently his or her own time, monitor personal health and wealth to assure fitness for duty.
- Use the chain of command on the resident service.
- Respond promptly to requests from faculty members and departmental staff members (e.g., pager responsiveness).
- Appreciate opinions and feedback.
- Accept responsibility for his or her own actions.

PRACTICE BASED LEARNING AND IMPROVEMENT

GOAL 1: This resident communicates educational material accurately and effectively at the appropriate level for learner understanding.

GOAL 2: This resident independently reads the literature to answer questions related to patients. This resident develops a learning plan based on feedback with some external assistance.

GOAL 3: This resident evaluates his or her own surgical results and the quality and efficacy of care of patients through appraisal and assimilation of scientific evidence.

OBJECTIVES:
• Present patient cases accurately and succinctly in conferences.
• Use a variety of sources for learning (e.g., SCORE modules, peer-reviewed publications, practice guidelines, textbooks, library databases, and online materials).
• Cite relevant literature to support his or her discussions and conclusions at M&M and/or other QI conferences.
• Analyze, critique and review surgical literature as it applies to evidence-based medicine.
• Assess annual ABSITE scores to develop an individual study plan as necessary.
• Use computer technology, simulations and other multimedia resources to increase medical knowledge and operative skills.
• Identifies gaps in personal technical skills and works with faculty members to develop a skills learning plan.
• Evaluate and modify his or her own practice to avoid errors.
• Participate in clinical research.
• Read, understand and analyze classic articles on surgical cases as dictated by cases encountered and formally in the Evidenced Based Reviews of Surgery Conferences.
• Design basic steps in a QI project (e.g., generates a hypothesis, conducts a cause-effect analysis, creates method for study).

**SYSTEMS-BASED PRACTICE**

**GOAL 1:** This resident knows the necessary resources to provide optimal coordination of care and how to access them.

**GOAL 2:** This resident understands how patient care is provided in his or her system.

**OBJECTIVES:**

• Utilize specialized services like home total parenteral nutrition (TPN) or home antibiotic infusion.
• Identify certain specific system failures that can affect patient care.
• Follow protocols and guidelines for patient care.
• Participate in hospital-based outcome research such as QI or PI projects.
GLOBAL COMPETENCY-BASED GOALS AND OBJECTIVES

Site Location: University of Nevada School of Medicine
1701 W. Charleston Blvd., Suite 400
Las Vegas, NV. 89102
Program Director: Jennifer Baynosa, MD
Associate Program Director: Gary Shen, MD
Assigned Residents: PGY-3

ACGME GENERAL SURGERY MILESTONES

The milestones represent a continuum through which residents progress in their training. The PGY 3 target is Milestone Level 3 in all areas of competency. Residents are expected to make progress to be at or close to this level at the conclusion of the PGY 3 training. The goals and objectives for PGY 3 are built on those outlined for PGY 1 and PGY 2.

MEDICAL KNOWLEDGE

GOAL 1: This resident has significant knowledge about many “core” diseases and a basic knowledge of the “advanced” diseases in the SCORE curriculum,

GOAL 2: This resident has a significant knowledge of most of the “core” operations and a basic knowledge of some of the “advanced” operations in the SCORE curriculum.

- Make a diagnosis and initiate appropriate initial management for most of the “core” diseases and some of the “advanced” diseases.
- Describe peri-operative care of most of the “core” operations and some of the “advanced” operations.
- Demonstrate operative steps for some of the “advanced” operations.
- Provide content for active discussions in all education conferences.
- Illustrate thorough understanding of abdominal procedures.
- Demonstrate an understanding of the anatomy, physiology, and pathophysiology and presentations of diseases of the abdomen and pelvis.
- Outline the physiology of wound healing.
- Explain the principles associated with the diagnosis and management of critically ill patients, including multiple organ system failure.
- Complete reading on entire text related to general surgery clinical management, such as Cameron’s Current Surgical Therapy.
- Complete American Board of Surgery In-Training Examination at the 30 percentile or above.
PATIENT CARE

GOAL 1: This resident accurately diagnoses and initiates appropriate management for most "core" conditions and some “advanced” conditions in the SCORE curriculum independently.

GOAL 2: This resident recognizes and manages complex post-operative problems independently.

GOAL 3: This resident performs many of the “core” operations and is beginning to gain experience in the “advanced” operations.

OBJECTIVES:

● Make diagnosis and initiate treatment independently.
● Perform the steps of most of “core” operations without much coaching and make intra-operative decisions.
● Demonstrate proficiency in the handling of most instruments and exhibit efficiency of motion during procedures.
● Perform basic endoscopic procedures with minimal guidance.
● Treat complex post-operative complications such as sepsis, systemic inflammatory response syndrome, and multiple system organ failure without assistance.
● Articulate to senior residents and attending staff details of pre-, intra- and post-operative treatment plans.
● Justify course of treatment based on operative indications and contraindications.
● Illustrate consistently sound judgment, safety, and effective technical skills in operative cases.

INTERPERSONAL AND COMMUNICATION SKILLS

GOAL 1: This resident is capable of delivering bad news to patients and their families sensitively and effectively.

GOAL 2: This resident effectively and efficiently discusses care plans with the members of the health care team.

GOAL 3: This resident anticipates logistical issues regarding the procedure and engages members of the operating team to solve problems.

OBJECTIVES:

● Deliver timely, complete, and well organized information to referring physicians and to providers of follow-up care at the time of patient care transitions.
● Inform members of health care team up-to-date changes in patient statuses and care plan.
● Perform clear informed consent discussion for complex procedures.
● Present patient cases at conferences using commonly accepted terminology and descriptions in a concise and accurate fashion.
- Interact cooperatively with health care professionals and resolve potential conflicts proactively.
- Maintain transparent communication with patients and family members.
- Coordinate operative team members.

PROFESSIONALISM

GOAL 1: This resident ensures patient care responsibilities are performed and continuity of care is maintained.

GOAL 2: This resident sets an example by promoting healthy habits and creating an emotionally healthy environment for those working with him or her.

GOAL 3: This resident assures that others under his or her supervision respond appropriately to responsibilities in a timely fashion.

OBJECTIVES:

- Demonstrate integrity in all aspects of care and professional relationships.
- Exemplify appropriate management of personal health issues, fatigue and stress.
- Accept responsibility for errors in patient care
- Initiate corrective action when errors in patient care occur.
- Assume leadership role for resident teams in practical daily patient care duties.

PRACTICE BASED LEARNING AND IMPROVEMENT

GOAL 1: This resident demonstrates an effective teaching style.

GOAL 2: This resident looks for trends and patterns in the care of patients and reads and uses sources to understand such patterns.

GOAL 3: This resident evaluates his or her own surgical results and medical care outcomes in a systematic way and identifies areas for improvement.

- Identify probable causes for complications and deaths at M&M and/or other QI conferences with appropriate strategies for improving care.
- Select appropriate evidence-based information tools to answer specific questions while providing care.
- Describe standard of care in both operative and non-operative care based on literature.
- Demonstrate proficiency at teaching with effective teaching style at bedside and conferences.
- Organize and assign responsibilities for formal education activities.
- Access computer technology, information technology simulations and other multimedia resources.
- Practice surgical skills independently in a simulation environment to enhance technical ability.
- Recognize patterns in the care of his or her patients and look for opportunities to systematically reduce errors and adverse events.
- Participate in clinical research (optional).

**SYSTEMS-BASED PRACTICE**

**GOAL 1:** This resident is able to efficiently arrange disposition planning.

**GOAL 2:** This resident makes suggestions for changes in the healthcare system that may improve patient care.

**OBJECTIVES:**

- Prepare all materials necessary for discharge or transfer of patients.
- Report problems with technology or processes that could produce medical errors (e.g., devices and automated systems).
- Engage in planning and improvement of department of surgery educational meetings.
- Participate in ACGME committees and contribute to internal reviews of other GME programs.
- Engage in hospital committees related to QI and PI.
- Delineate patient support systems within the hospital system and in the community.
- Identify regional and national individuals or centers for referral (e.g., liver transplant).
GENERAL SURGERY RESIDENCY PROGRAM

PGY 4 and PGY 5

GLOBAL COMPETENCY-BASED GOALS AND OBJECTIVES

Site Location: University of Nevada School of Medicine
1701 W. Charleston Blvd., Suite 400
Las Vegas, NV 89102

Program Director: Jennifer Baynosa, MD
Associate Program Director: Gary Shen, MD
Assigned Residents: PGY-4 and PGY-5

ACGME GENERAL SURGERY MILESTONES

The milestones represent a continuum through which residents progress in their training. The target is Milestone Level 4 in all areas of competency at the completion PGY 5 of surgical training. PGY 4 residents are expected to build on their previous levels of competency toward this target. The goals and objectives for PGY 4 and 5 are built on those outlined for PGY 1, PGY 2 and PGY 3.

MEDICAL KNOWLEDGE

GOAL 1: This resident has a comprehensive knowledge of “core” diseases and can make the diagnosis and provide initial care for the “advanced” diseases in the SCORE curriculum.

GOAL 2: This resident has a comprehensive level of knowledge of “core” operations in the SCORE curriculum and a basic knowledge of many of the “advanced” operations.

- Develop solid understanding of the operative steps, peri-operative care, and post-operative complications of surgical diseases.
- Compare and contrast varying patterns of presentation and alternative and adjuvant treatments.
- Reflect understanding of assigned topics by informed presentations at surgery conferences.
- Define and describe the anatomic aspects and technical details of the advanced operations (e.g., abdominoperineal resection, Whipple procedure, pneumonectomy, or AAA repair).
- Demonstrate familiarity of recent surgical literature in conferences and case discussions.
- Synthesize medical knowledge and clinical perspectives by presenting at Grand Rounds.
- Complete the Mock Oral Exams and score an overall Pass grade.

PATIENT CARE

GOAL 1: This resident can lead a team that cares for patients with “core” and “advanced”
conditions in the SCORE curriculum.

**GOAL 2**: This resident can lead a team in management of complex post-operative care.

**GOAL 3**: This resident can perform most of the “core” operations and has significant experience in the “advanced” operations.

**OBJECTIVES:**

- Lead and delegate appropriate clinical tasks to other health care team members.
- Recognize atypical presentations of a large number of conditions and modify therapy as necessary.
- Supervise in the evaluation and management of complex post-operative problems such as sepsis, systemic inflammatory response syndrome, and multiple system organ failure.
- Illustrate independence in the evaluation and management of all aspects of patient care.
- Demonstrate proficiency in use of instruments and equipment required for “essential” operations.
- Guide the conduct of most operations and make independent intra-operative decisions.
- Apply sound surgical principles to address the unexpected in the operating room.
- Display exemplary judgment, safety, and effective technical skills in operative cases.
- Acknowledge limitations and seek advice and assistance whenever necessary.

**INTERPERSONAL AND COMMUNICATION SKILLS**

**GOAL 1**: This resident can customize emotionally difficult information.

**GOAL 2**: This resident assumes overall leadership of a health care team responsible for his or her patients.

**GOAL 3**: This resident assumes leadership when unexpected events occur in the operating room.

- Relate and discuss emotional situations with patients, family, and staff (e.g., in cancer diagnosis or end-of-life discussions).
- Seek input from the members of the team and value contributions of others.
- Negotiate and manage conflict among care providers.
- Ensure clear hand-offs are given at transitions of care.
- Communicate effectively with the family when unexpected events occur in the operating room.
- Act as the lead member of the health-care team both in and out of the operating room, but defer to the attending staff for final and critical decisions.
- Monitor and correct communication among other members of team.
PROFESSIONALISM

GOAL 1: This resident serves as a role model for ethical behavior.

GOAL 2: The resident promotes a healthy work environment.

GOAL 3: This resident sets an example for conference attendance, promptness, and attention to assigned tasks.

- Influence others positively by assertively modeling professionalism and complying with ethical principles.
- Elevate the interests of patients ahead of self-interests when appropriate.
- Recognize and appropriately address personal health issues in other members of the health care team.
- Demonstrate a high standard of personal conduct, and respect the needs of patients.
- Apply time management principles as necessary to be accountable to patients, and other health care professionals.
- Modify schedules or intervening in other ways, proactively, to assure that those caregivers under his or her supervision maintain personal wellness and do not compromise patient safety (e.g., requires naps, counsels, refers to services, reports to program director).
- Complete case logs and other requirement of ABS without delays or prompting.
- Represent the department of surgery and the training program.

PRACTICE BASED LEARNING AND IMPROVEMENT

GOAL 1: This resident recognizes teachable moments and readily and respectfully engages the learner.

GOAL 2: This resident demonstrates use of a system or process for keeping up with changes in the literature, and initiates assignments for other learners.

GOAL 3: This resident exhibits on-going self-evaluation and improvement.

OBJECTIVES:

- Practice an interactive educational style and engage in constructive educational dialogue.
- Facilitate conferences and case discussions based on assimilation of evidence from the literature.
- Demonstrate leadership and practice management by organizing and running a resident service and outpatient clinic service.
- Lead surgical skills experiences for students and junior residents.
- Develop skills curriculum.
- Attend local, regional, and national activities, optional conferences, and/or self-
assessment programs, such as the ACS clinical congress (for PGY 5).

- Assess annual Mock Oral Board results to develop an individual study plan as necessary.
- Use information technology to access medical literature and select treatment strategies and direct other learners to access relevant information.
- Conduct case presentations at conferences such Mortality and Morbidity Conference.
- Demonstrate expertise on particular topics of interest with presentations in Grand Rounds.
- Demonstrate application of M&M and/or other QI conference conclusions to his or her own patient care.
- Lead a QI activity relevant to patient care outcomes.
- Reflect on practice, tracking and analyzing his or her patient outcomes,
- Integrate evidence-based practice guidelines, and identify opportunities to make practice improvements.
- Participate in clinical research (optional).

**SYSTEMS-BASED PRACTICE**

**GOAL 1**: This resident coordinates the activities at the time of patient discharge or transfer.

**GOAL 2**: This resident understands the appropriate use of standardized approaches to care and participates in creating such protocols of care.

- Coordinate discharge activities among residents, nurses, social workers, and other health care professionals to provide optimal continuity of care.
- Provide or direct post-discharge ambulatory care that is appropriate for the patient’s particular needs.
- Apply cost-effective care in the context of standard of care when ordering tests and planning interventions.
- Create standard protocols in patient care for the resident teams (e.g., hand-off protocol).
- Participate in work groups or performance improvement teams designed to reduce errors and improve health outcomes, such as hospital committees.
Rotation Specific Competency-Based Goals and Objectives
UMC 1 - GENERAL SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

Faculty: Annabel Barber, M.D.
Jennifer Baynosa, M.D.
Dan Kirgan, M.D.
Charles “Randy” St. Hill, M.D.

Length of Rotation: one to two months

Service Description

Elective General Surgery, with emphasis in surgical oncology, breast surgery, and hepatobiliary/pancreas surgery, and surgery of the abdomen and alimentary tract.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objectives for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:

1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of surgical patients, and in both the operative and non-operative management of surgical conditions.

Surgical Oncology

- Summarize the tenets of tumor biology, including the biochemical events of invasion and metastasis and their natural history.
- Identify and differentiate between the diagnostic features of benign versus malignant neoplasms (gross and microscopic).
- Describe the characteristics of the various staging systems of neoplastic diseases and explain their implication in prognosis and treatment.
- Stage specific neoplasms both clinically and pathologically, including the tumor, nodes, and metastasis system (TNM).
- Describe the principles of surgical technique for oncologic surgery, such as margin of
resection and relevance of nodal dissection.

- Outline principles of alternative therapeutic options (e.g., radiofrequency ablation).
- Summarize the indications and appropriate modalities for adjuvant and neoadjuvant therapy within the scope of general surgery, including chemotherapy, radiation therapy, immunotherapy, and gene therapy.
- Recognize the metabolic and nutritional consequence of malignancy.
- Define the criteria for palliative versus curative treatment plans.
- Outline the operative approaches to surgical resection, including:
  a. GI mucosal and stromal cancer
  b. Melanoma and other skin cancers
  c. Thyroid cancer
  d. Retroperitoneal and extremity sarcoma

**Breast Surgery**

- Describe the anatomy of the breast.
- Summarize the incidence, epidemiology, and risk factors (including environmental and genetic factors) associated with breast cancer.
- Describe the presentation, natural history, pathology, and treatment of benign breast conditions, including:
  a. Fibroadenomas
  b. Fibrocystic disease
  c. Cysts
  d. Fat necrosis
  e. Abscesses (from various etiologies)
  f. Intraductal papilloma
  g. Atypical epithelial hyperplasia
  h. Gynecomastia
- Discuss the principles of the basic options available for the treatment of breast cancer and their accepted techniques, including:
  a. Radical mastectomy
  b. Modified mastectomy
  c. Lumpectomy
  d. Sentinel node sampling and axillary dissection
- Explain the steps in the clinical decision tree that are involved in the work-up of a breast mass.
- Discuss the diagnostic role of mammography, MRI, ultrasound, needle aspiration, fine-needle biopsy, open biopsy, and needle localization and biopsy.
- Outline the diagnostic work-up and the differential diagnosis of various forms of nipple discharge.
- Justify the various options for breast cancer prevention (e.g., oophorectomy, prophylactic mastectomy, chemoprevention).
- Explain the use TNM staging in the treatment of breast cancer.
- Describe the characteristics, diagnosis, and therapy of less common lesions of the breast such as:
  a. Inflammatory carcinoma
  b. Cystosarcoma phylloides
c. Paget's Disease  
d. Bilateral breast carcinoma  
e. Lactiferous duct fistula  
f. Male breast carcinoma  
g. Mondor's Disease  
• Summarize the role of adjuvant (and neoadjuvant) chemotherapy and radiation therapy for the treatment of primary breast carcinoma.  
• Outline the importance of estrogen, progesterone and HER-2 neu receptor status in the prognosis and treatment of breast cancer.  
• Describe the prognosis of pre-malignant findings (e.g., DCIS, LCIS, ADH).  
• Summarize the major considerations for post-mastectomy breast reconstruction.  

**Abdominal Surgery**  
• Understand the anatomy of the abdomen including its viscera, anatomic spaces, and potential spaces for hernia formation.  
• Describe major lymph node groups and their drainage  
• Elucidate the mechanism of visceral and somatic pain for the following processes:  
  a. Acute appendicitis  
  b. Ureteral colic  
  c. Bowel obstruction  
  d. Diffuse peritonitis  
  e. Perforated ulcer  
  f. Biliary colic  
• Discuss the differential diagnosis of paralytic ileus, including:  
  a. Postoperative  
  b. Electrolyte imbalance  
  c. Retroperitoneal pathology  
  d. Trauma  
  e. Extra-abdominal disease (central nervous system, lung, sepsis)  
• Discuss wound complications, including risk factors, incidence, clinical presentations, and methods of prevention.  
• Outline the treatment strategies for an enterocutaneous fistula.  
• Describe the anatomy, clinical presentation, work up, operative (including technical aspects), and non-operative management for hernias:  
  a. Abdominal wall  
  b. Hiatal and paraesophageal  
  c. Parastomal  
  d. Diaphragmatic  
• Support the use of laboratory and diagnostic tests to confirm the diagnosis of surgical diseases of the abdomen.  
• Outline the techniques for wound closure (including type of suture material and use of retention sutures) for each of the incisions and options available for temporary closure.  
• Identify the indications for elective splenectomy.  
• Outline the technical steps to splenectomy (open or laparoscopic).  

**Alimentary Tract**
● Outline the clinical manifestation of GI conditions based on pathologic findings, such as
  a. Embryologic abnormalities
  b. Neoplasia
  c. Ulceration
  d. Obstruction
  e. Hemorrhage
  f. Perforation
  g. Abscess formation
  h. Malabsorptive conditions
  i. Ischemia
  j. Portal hypertension
  k. Venous thrombosis
● Summarize current medical management and surgical intervention in the following:
  a. Peptic ulcer disease
  b. Gastroparesis
  c. Esophageal varices
  d. Inflammatory bowel disease
  e. Upper and lower GI bleeding
  f. Diverticulitis
● Describe the physiologic consequence of gastrointestinal operations, including:
  a. Vagotomy
  b. Pyloroplasty
  c. Gastric resection and reconstruction
  d. Small bowel resection with anastomosis
  e. Ostomy formation
  f. Bypass of GI tract segments for unresectable tumors
● Explain the indications and contraindications for diagnostic and therapeutic endoscopy of
  the alimentary tract.

Liver and Biliary Tract
● Describe the segmental anatomy of the liver
● Describe the anatomy of the biliary system, including common variations, and define the
  critical view for cholecystectomy.
● Outline the work-up and differential diagnosis of the jaundiced patient.
● Discuss various types of liver cysts (e.g., echinococcal, nonparasitic) and the appropriate
  management of each.
● Discuss the principal characteristics of and the treatment for the following:
  a. Metastatic lesions to the liver
  b. Primary malignancies of liver and biliary tree
  c. Benign tumors of the liver
● Summarize the etiologies and management of pyogenic and amebic hepatic abscesses.
● Outline the pathophysiology, evaluation, and management of the following:
  a. Choledochal cysts
  b. Gallstones, cholecystitis and associated complications
  c. Sclerosing cholangitis
  d. Biliary cirrhosis
e. Congenital biliary atresia
f. Biliary obstruction

- Compare and contrast technical details of laparoscopic versus open cholecystectomy.
- Assess management alternatives for common bile duct stones and biliary obstruction.
- Discuss the pathophysiology of portal hypertension and cirrhosis of the liver.
- Outline the acute and chronic management of bleeding esophageal varices.
- Describe the options for management of ascites, including management of such patients with symptomatic hernia.
- Explain the pathophysiology of liver decompensation in patients with liver disease undergoing major surgery.
- Outline the surgical technique of standard liver resection (e.g., segmentectomy).

Pancreas

- Describe the anatomy of the pancreas, including regional vascular anatomy.
- Explain the pathophysiology and presentation of acute pancreatitis (e.g., severity scoring), and indications for surgical or percutaneous intervention.
- Outline the treatment principles for peri-ampullary carcinoma.
- Discuss the presentation, evaluation, and management of pancreatic pseudocysts.
- Summarize treatment options for patients with chronic pancreatitis.
- Identify unusual pancreatic conditions such as neuroendocrine tumor or IPMN.
- Describe the surgical technique of standard pancreatic resection (e.g., Whipple).
- Outline the indications for and potential complications of ERCP and endoscopic US.

PATIENT CARE

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

Surgical Oncology

- Perform a complete history and physical examination on patients with cancer.
- Formulate an appropriate differential cancer diagnosis, and document independent, written diagnosis for each cancer patient assigned.
- Demonstrate proper wound care and follow-up management.
- Excise skin lesions, demonstrating proper wound margins and appropriate wound closure and follow-up management.
- Close wounds following major resections.
- Manage colostomies and ileostomies.
- First assist on colostomies, ileostomies, and wedge resections of lung and liver.
- Perform lymph node biopsies, breast biopsies, and procedures of similar magnitude.
- Perform nutritional assessments and plan nutritional support programs.
- Perform feeding gastrostomies and tube jejunostomies.
- Perform nutritional assessments and plan nutritional support programs.
- Perform all varieties of endoscopy (upper and lower gastrointestinal) and bronchoscopy.
- Prepare patients for major surgical resection, such as:
  a. Gastric resection
  b. Colon resection
c. Pancreatic resection (Whipple Procedure)
  
  ● Stage specific neoplasms clinically and pathologically using the TNM system.
  ● Demonstrate progressive expertise in resection and anastomosis of the GI tract, and ostomy creation and closure.
  ● Demonstrate skills in fine-needle and core biopsies.
  ● Exhibit proficiency in gamma probe-directed or dye-directed sentinel lymph node biopsy for breast cancer and melanoma.
  ● Perform major resections in neck, chest, abdomen, breast, and extremity, including complex operative procedures, such as:
    a. Whipple procedures,
    b. Construction of ileal conduit
    c. Major neck dissections
    d. Segmental and lobar hepatic resections
    e. RFA
    f. Thyroidectomy and parathyroidectomy

Breast Surgery

  ● Acquire and document pertinent history and physical examination findings.
  ● Demonstrate skill in the physical examination of the breast, including recognition of the range of variation in the normal breast.
  ● Perform beside procedures such as:
    a. Diagnostic fine-needle aspiration of cysts
    b. Drainage of simple breast abscesses
    c. Core needle biopsy of breast masses
    d. Open biopsy of superficial masses
  ● Diagnose common lesions such as fibroadenomas, cysts, mastitis, and cancer.
  ● Perform breast ultrasound.
  ● Interpret findings on mammogram such as stellate masses or suspicious microcalcifications.
  ● Perform, with progressive independence, operations on the breast including:
    a. Modified radical mastectomy
    b. Lumpectomy
    c. Axillary dissection
    d. Sentinel lymph node biopsy
    e. Excision of lactiferous duct fistula
    f. Needle-localized breast biopsy
    g. Simple mastectomy
  ● Incorporate various types of adjuvant therapy for breast cancer.
  ● Manage unusual breast diseases such as:
    a. Inflammatory carcinoma
    b. Bilateral breast cancer
    c. Paget's disease
    d. Male breast cancer
    e. Lactiferous duct fistula
    f. Cystosarcoma phylloides
Abdominal Surgery
- Illustrate the use of diagnostic studies and their interpretation in the work-up of the surgical patient, including:
  - Laboratory evaluation
  - Urinalysis
  - Plain x-rays
  - Contrast gastrointestinal (GI) studies
  - Ultrasound
  - Computed axial tomography (CAT)
  - Nuclear medicine scan
  - MRI
- Perform, record, and report complete patient evaluation and assessment.
- Evaluate and diagnose the acute abdomen.
- Choose appropriate sutures to close abdominal wounds.
- Demonstrate progressive expertise in hernia repairs, using open, laparoscopic or robotic approaches.
- Evaluate and institute management of abdominal wound problems, including:
  - Infection
  - Evisceration
  - Fasciitis
  - Dehiscence
- Coordinate pre- and post-operative care for the patient with the acute abdomen.
- Manage enterocutaneous fistula.
- Provide operative access to kidneys, pancreas, spleen, aorta, iliac arteries and other retroperitoneal structures via thoracoabdominal and retroperitoneal approaches.
- Perform open or laparoscopic exploration for acute abdomen, demonstrating a systematic approach for determination of the etiology of the process and appropriate measures for its management.
- Demonstrate technical expertise in splenectomy.

Alimentary Tract
- Evaluate outpatients with abdominal pain in the outpatient and inpatient setting.
- Demonstrate progressive technical expertise in the operations on the esophagus, stomach, small intestine, colon, and anorectum, such as resection, anastomosis, and creation of ostomies.
- Develop diagnostic and therapeutic endoscopy skills such as:
  - Diagnostic esophagogastroduodenoscopy
  - Percutaneous endoscopic gastroscopy
  - Dilation of intestinal strictures
  - Diagnostic colonoscopy
  - Polypectomy
- Perform simple surgical procedures such as:
  - Gastrostomy
  - Meckel's diverticulectomy
  - Appendectomy
  - Hemorrhoidectomy
e. Anal fissurectomy and fistulotomy
f. Incision and drainage of perirectal abscesses

- Institute nutritional supplements (enteral and parenteral) of surgical patients.
- Manage abdomen drains, such as nasogastric tubes, intestinal tubes, or external drains.

**Liver and Biliary Tract**
- Perform history and physical examination specifically focused on liver and biliary system.
- Select and interpret appropriate laboratory and radiologic evaluations in the work-up of the jaundiced patient.
- Plan appropriate management and operative approach.
- Demonstrate progressive technical expertise in the surgery of the liver, the gallbladder and biliary system.
  a. Laparoscopic cholecystectomy with cholangiography
  b. Common bile duct exploration
  c. Biliary drainage procedures
  d. Drainage of liver abscess
  e. Peritoneo-venous shunts
  f. Liver resection
  g. Bile duct resection and reconstruction

**Pancreas**
- Perform history and physical examination focused on the pancreas.
- Select and interpret appropriate laboratory and radiologic examinations in evaluation of pancreatic disease, including ERCP, MRCP, EUS.
- Manage patients with severe acute pancreatitis.
- Demonstrate progressive technical expertise in pancreatic operations, such as:
  a. Whipple resection
  b. Total or subtotal pancreatectomy
  c. Operative debridement and drainage of pancreatic abscess or infected necrosis
  d. Surgical exploration for islet cell tumors of the pancreas
  e. Local resection for ampullary tumors
  f. Drainage procedures for chronic pancreatitis
  g. Surgical drainage of pseudocysts

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., cancer diagnosis) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams.
- Educate patients on behavior modification and cancer screening, such as breast self-examination.
- Coordinate anticipated needs and minimize the unexpected in the operating room.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks.

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not comprise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs and attend conferences without reminders.
- Engage in training-appropriate role on the resident team.

PRACTICE BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas of breast disease, such as:
  a. Cancer prevention techniques, such as tamoxifen and raloxifene
  b. Role of various adjuvant therapy programs.
  c. Biological behavior of lesions such as lobular carcinoma in situ, and atypical ductal hyperplasia
  d. Benefit and frequency of screening mammograms
  e. Relationship of mammographic parenchymal patterns to the risk of subsequent malignancy (e.g., BIRAD scores).
- Understand the methodologies and results of landmark breast cancer trials (e.g., B-04, B-06, B-17, B-24 (NSABP)
• Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g. simulation models) to improve.

SYSTEMS-BASED PRACTICE

The resident will coordinate and improve care within the system into which he or she delivers care.

• Apply appropriate screening/surveillance for common malignancies.
• Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and operations.
• Compare and contrast academic and private practice.
• Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
• Elucidate the economic and psychosocial issues associated with malignant disease and their effects on cancer management, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
  e. Enterostomal therapy
  f. Cost containment
  g. Pre-admission procedures and authorization
  h. Conservation and availability of in-patient resources
  i. Geriatric care
  j. Tumor registry data
  k. Adjuvant and neoadjuvant therapy
• Adhere to protocols and standards of care.
• Assist and plan for palliative care for patients with advanced diseases.
• Identify and correct system issues and errors (e.g., EHR).
• Arrange for discharge care, such as follow-up appointments and visiting home care.
• Engage in committees (e.g. tumor board), workgroups, or research teams to improve process and patient outcome.
• Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
• Coordinate multi-disciplinary care of complex GI problems such as:
  a. Variceal hemorrhage
  b. Biliary obstruction
  c. Gastroparesis
  d. Inflammatory bowel disease
  e. Chronic abdominal pain
  f. Chronic constipation
  g. Localized and advanced malignancies
• Observe advanced directives such as living will, health care proxy and power of attorney.
UMC 2 - GENERAL SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV 89102

Faculty:
Joseph Thornton, M.D.,
Ovunc Bardakcioglu, M.D.
Clinical Faculty of Desert West Surgery

Length of Rotation: 1-2 months

Service Description

Elective General Surgery, with emphasis in colorectal surgery, and surgery of the abdomen and alimentary tract.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of surgical patients, and in both the operative and non-operative management of surgical conditions.

Colorectal Surgery
- Attain understanding of the normal state of the alimentary tract to include:
  a. Anatomy of the gastrointestinal (GI) tract
  b. GI physiology
  c. Metabolic needs
- Summarize pathologic findings of the colorectal region, including:
  a. Neoplasia
  b. Ulceration
  c. Obstruction
  d. Ileus
  e. Hemorrhage
f. Perforation
  g. Acute and chronic ischemia
  h. Inflammatory bowel diseases
● Outline the diagnostic evaluation of the alimentary tract, including the use of flexible and rigid endoscopy, and virtual colonoscopy.
● Understand the anatomic basis to treat benign anorectal lesions.
● Detail standard operative techniques (open, laparoscopic, or robotic), including:
  a. Ostomy creation and closure
  b. Anatomic resection (with or with node sampling)
  c. Bypass
  d. Drainage of abscess
  e. Low anterior resection
  f. Ileal-rectal resection and pouch creation
● Assess alternatives to surgical intervention in the management of complex diseases of the alimentary tract such as:
  a. Intestinal polyposis
  b. Inflammatory bowel disease
  c. Colon and rectal cancer
  d. Squamous cell cancer of the anus
● Summarize adjuvant and neoadjuvant therapy of colorectal malignancies.
● Outline therapeutic approaches to the complex situations, such as:
  a. Re-operative abdomen
  b. Colocutaneous fistulas
  c. Strictures and internal fistulas (e.g., colovesical)
  d. Recurrent colon malignancy
  e. Carcinomatosis
  f. Radiated abdomen

**Abdominal Surgery**
● Understand the anatomy of the abdomen including its viscera, anatomic spaces, and potential spaces for hernia formation.
● Describe major lymph node groups and their drainage
● Elucidate the mechanism of visceral and somatic pain for the following processes:
  a. Acute appendicitis
  b. Ureteral colic
  c. Bowel obstruction
  d. Diffuse peritonitis
  e. Perforated ulcer
  f. Biliary colic
● Discuss the differential diagnosis of paralytic ileus, including:
  a. Postoperative
  b. Electrolyte imbalance
  c. Retroperitoneal pathology
  d. Trauma
  e. Extra-abdominal disease (central nervous system, lung, sepsis)
● Discuss wound complications, including risk factors, incidence, clinical presentations,
and methods of prevention.

- Outline the treatment strategies for an enterocutaneous fistula.
- Describe the anatomy, clinical presentation, work up, operative (including technical aspects), and non-operative management for hernias:
  a. Abdominal wall
  b. Hiatal and paraesophageal
  c. Parastomal
  d. Diaphragmatic
- Support the use of laboratory and diagnostic tests to confirm the diagnosis of surgical diseases of the abdomen.
- Outline the techniques for wound closure (including type of suture material and use of retention sutures) for each of the incisions and options available for temporary closure.

**Alimentary Tract**
- Outline the clinical manifestation of GI conditions based on pathologic findings, such as
  a. Embryologic abnormalities
  b. Neoplasia
  c. Ulceration
  d. Obstruction
  e. Hemorrhage
  f. Perforation
  g. Abscess formation
  h. Malabsorptive conditions
  i. Ischemia
  j. Portal hypertension
  k. Venous thrombosis
- Summarize current medical management and surgical intervention in the following:
  a. Peptic ulcer disease
  b. Gastroparesis
  c. Esophageal varices
  d. Inflammatory bowel disease
  e. Upper and lower GI bleeding
  f. Diverticulitis
- Describe the physiologic consequence of gastrointestinal operations, including:
  a. Vagotomy
  b. Pyloroplasty
  c. Gastric resection and reconstruction
  d. Small bowel resection with anastomosis
  e. Ostomy formation
  f. Bypass of GI tract segments for unresectable tumors
- Explain the indications and contraindications for diagnostic and therapeutic endoscopy of the alimentary tract.

**Biliary Tract and Pancreas**
- Describe the anatomy of the biliary system, including common variations, and define the critical view for cholecystectomy.
● Outline the work-up and differential diagnosis of the jaundiced patient.
● Outline the pathophysiology, evaluation, and management of the following:
  a. Choledochal cysts
  b. Gallstones, cholecystitis and associated complications
  c. Sclerosing cholangitis
  d. Biliary cirrhosis
  e. Congenital biliary atresia
  f. Biliary obstruction
● Compare and contrast technical details of laparoscopic versus open cholecystectomy.
● Assess management alternatives for common bile duct stones and biliary obstruction.
● Describe the anatomy of the pancreas, including regional vascular anatomy.
● Explain the pathophysiology and presentation of acute pancreatitis (e.g., severity scoring), and indications for surgical or percutaneous intervention.
● Outline the treatment principles for peri-ampullary carcinoma.
● Discuss the presentation, evaluation, and management of pancreatic pseudocysts.
● Summarize treatment options for patients with chronic pancreatitis.
● Identify unusual pancreatic conditions such as neuroendocrine tumor or IPMN.
● Describe the surgical technique of standard pancreatic resection (e.g., Whipple).
● Outline the indications for and potential complications of ERCP and endoscopic US.

PATIENT CARE

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

Colorectal Surgery
● Perform complete evaluation patients who present with problems referable to the GI tract.
● Use appropriate diagnostic tools to reach a diagnosis without delay.
● Perform basic surgical procedures such as:
  a. Hemorrhoidectomy
  b. Anal fissurectomy and fistulectomy
  c. Lateral sphincterotomy
  d. Anal condyloma fulguration and excision
  e. Incision and drainage of perirectual abscesses
  f. Trans-anal excision of polyps
● Develop diagnostic and therapeutic endoscopy skills, such as:
  a. Diagnostic colonoscopy
  b. Polypectomy
  c. Endoscopic ultrasound
● Demonstrate progressive technical expertise in procedures, including:
  a. Drainage of abdominal and retroperitoneal abscesses
  b. Lysis of adhesions
  c. Repair of enterotomies
  d. Colon resection
  e. Creation of ostomies
● Manage the postoperative care of:
Abdominal Surgery
● Illustrate the use of diagnostic studies and their interpretation in the work-up of the surgical patient, including:
  a. Laboratory evaluation
  b. Urinalysis
  c. Plain x-rays
  d. Contrast gastrointestinal (GI) studies
  e. Ultrasound
  f. Computed axial tomography (CAT)
  g. Nuclear medicine scans
  h. MRI
● Perform, record, and report complete patient evaluation and assessment.
● Evaluate and diagnose the acute abdomen.
● Choose appropriate sutures to close abdominal wounds.
● Demonstrate progressive expertise in hernia repairs, using open, laparoscopic or robotic approaches.
● Evaluate and institute management of abdominal wound problems, including:
  a. Infection
  b. Evisceration
  c. Fasciitis
  d. Dehiscence
● Coordinate pre- and post-operative care for the patient with the acute abdomen.
● Manage enterocutaneous fistula.
● Provide operative access to kidneys, pancreas, aorta, iliac arteries and other retroperitoneal structures via thoracoabdominal and retroperitoneal approaches.
● Perform open or laparoscopic exploration for acute abdomen, demonstrating a systematic approach for determination of the etiology of the process and appropriate measures for its management.
● Engage in training-appropriate role in the resident team.

Alimentary Tract
● Evaluate outpatients with abdominal pain in the outpatient and inpatient setting.
● Demonstrate progressive technical expertise in the operations on the esophagus, stomach, small intestine, colon, and anorectum.
● Develop diagnostic and therapeutic endoscopy skills such as:
  a. Diagnostic esophagogastroduodenoscopy
b. Percutaneous endoscopic gastroscopy
c. Dilation of intestinal strictures
d. Diagnostic colonoscopy
e. Polypectomy

- Perform simple surgical procedures such as:
  a. Gastrostomy
  b. Meckel's diverticulectomy
  c. Appendectomy
  d. Hemorrhoidectomy
  e. Anal fissurectomy and fistulectomy
  f. Incision and drainage of perirectal abscesses

- Institute nutritional supplements (enteral and parenteral) of surgical patients.
- Manage abdomen drains, such as nasogastric tubes, intestinal tubes, or external drains.

**Biliary Tract and Pancreas**

- Perform history and physical examination specifically focused on the biliary system and the pancreas.
- Select and interpret appropriate laboratory and radiologic evaluations in the work-up of the jaundiced patient.
- Plan appropriate management and operative approach.
- Demonstrate progressive technical expertise in the surgery of the gallbladder and biliary system.
  a. Laparoscopic or open cholecystectomy with cholangiography
  b. Common bile duct exploration
  c. Biliary drainage procedures
  d. Bile duct resection and reconstruction
- Select and interpret appropriate laboratory and radiologic examinations in evaluation of pancreatic disease, including ERCP, MRCP, EUS.
- Manage patients with severe acute pancreatitis.
- Demonstrate progressive technical expertise in pancreatic operations, such as:
  a. Whipple resection
  b. Total or subtotal pancreatectomy
  c. Operative debridement and drainage of pancreatic abscess or infected necrosis
  d. Surgical exploration for islet cell tumors of the pancreas
  e. Local resection for ampullary tumors
  f. Drainage procedures for chronic pancreatitis
  g. Surgical drainage of pseudocysts

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g.,
cancer diagnosis) and complications, and manages conflicts.

- Facilitate exchange of information, updates, and recommendations among health care teams.
- Educate patients on behavior modification and cancer screening, such as breast self-examination.
- Coordinate anticipated needs and minimize the unexpected in the operating room.

**PROFESSIONALISM**

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks.

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and case logs and attend conferences without reminders.

**PRACTICE BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Document cases for M&M for moderator review.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas of colorectal disease treatment, such as:
  
  f. Cancer prevention techniques
  g. Role of various adjuvant therapy programs.
  h. Use of biologics (e.g., anti-TNF monoclonals).
  i. Benefit and frequency of screening programs
- Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g.
simulation models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

- Apply appropriate screening/surveillance for common malignancies.
- Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and operations.
- Compare and contrast academic and private practice.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with malignant disease and their effects on cancer management, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
  e. Enterostomal therapy
  f. Cost containment
  g. Pre-admission procedures and authorization
  h. Conservation and availability of in-patient resources
  i. Geriatric care
  j. Tumor registry data
  k. Adjuvant and neoadjuvant therapy
- Adhere to protocols and standards of care.
- Assist and plan for palliative care for patients with advanced diseases.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees (e.g. tumor board), workgroups, or research teams to improve process and patient outcome.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of complex GI problems such as:
  a. Variceal hemorrhage
  b. Biliary obstruction
  c. Gastroparesis
  d. Inflammatory bowel disease
  e. Chronic abdominal pain
  f. Chronic constipation
  g. Localized and advanced malignancies
- Observe advanced directives such as living will, health care proxy and power of attorney.
UMC 3 – VASCULAR CT AND TRANSPLANT SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

Faculty: John Ham, M.D.
Gary Shen, M.D.

Clinical Instructors: Quynh Feikes, M.D.

Length of Rotation: 1-2 months

Service Description

Specialty surgery, with emphasis in vascular, cardiothoracic and transplant surgery (kidney transplant).

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:

1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

In the areas of cardiothoracic, vascular, and transplant surgery, the resident will acquire comprehensive knowledge in the evaluation of surgical patients, and in both the operative and non-operative management of surgical conditions.

Organ Transplantation

- Explain the human leukocyte antigen (HLA) complex, including its genetic location and composition, pattern of inheritance,
- Discuss the role of tissue typing in the identification and preparation of patients for organ transplantation to include:
  a. Natural, pre-formed antibodies
  b. Acquired antibodies
  c. The role of panel reactive antibody (PRA, sensitization)
  d. The effect of tissue compatibility on graft survival
  e. Use of cross match (serologic or flow cytometry).
- Explain the definition of brain death, including a discussion of the available laboratory
and radiologic studies to support the clinical criteria.

- Understand the current method for the allocation of organs for transplantation, with emphasis of kidney allocation.
- Describe the mechanism of action, indication for use, and side effects of immunosuppressive drugs, including:
  - Corticosteroids
  - Calcineurin inhibitors (cyclosporine and tacrolimus).
  - Monoclonal and polyclonal anti-T cell antibodies
  - Mycophenolate mofetil (Cellcept)
  - Rapamycin
  - Anti-IL 2 receptor therapy
- Analyze the short- and long-term risks of chronic immunosuppression, including:
  - Opportunistic infections
  - Lymphoproliferative disease (PTLD)
  - Cardiovascular effects
  - Rejection
  - Autoimmune diseases
- Outline the molecular basis of hyperacute, acute, and chronic organ rejection.
- Specify the various drug schemes for induction, maintenance, and rejection (both cellular and humoral rejection) therapy, including new "rescue" therapies.
- Outline the surgical steps for kidney, liver, and pancreas transplantation.

**Vascular Surgery**

- Review normal arterial and venous anatomy.
- Review arterial and venous hemodynamics, such as:
  - Claudication
  - Transient ischemic attack (TIA)
  - Stroke
  - Mesenteric angina
  - Renovascular hypertension
  - Arteriovenous (AV) fistula
- Discuss pathologic findings of the arterial wall.
- Outline the clinical manifestations of vascular disorders, including:
  - Obstructive arterial disease
  - Aneurysmal arterial disease
  - Thromboembolic disease, both arterial and venous
  - Chronic venous insufficiency and lymphatic obstruction
  - Portal hypertension
  - Congenital vascular disease
  - Immediately life threatening pathologies (e.g., ruptured AAA, mesenteric venous thrombosis)
- Describe the risk factors for atherosclerotic vascular disease:
  - Diabetes mellitus
b. Congestive heart failure
c. Hypertension
d. Hyperlipidemia
e. Renal failure
f. Smoking

- Differentiate diagnostic tools available for assessing vascular disease, including:
  a. Angiography
  b. Computed axial tomographic (CAT) scanning CT angiogram
  c. Magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA)
  d. Duplex scanning (ultrasonography)

- Outline the principles behind therapeutic options of a variety of vascular diseases, including conditions of arterial, venous, and lymphatic etiologies.
- Review uncommon conditions such as vascular malformation and vascular tumors.
- Describe the natural history of vascular disease following non-operative treatment, including:
  a. Carotid arterial stenosis (e.g., TIA’s)
  b. Abdominal aortic aneurysm
  c. Claudication
  d. Venous incompetence

- Summarize principles for the preoperative assessment of patients undergoing major vascular surgical procedures.
- Discuss the coagulation pathway, the pharmacology of antiplatelet agents and antithrombotic agents, and their role in the management of patients with vascular disease.
- Explain the concept of critical arterial stenosis and ischemia.
- Discuss the indication for thrombolytic therapy (systemic or catheter-directed).
- Outline the pathophysiology of hypercoagulable states.
- Describe the surgically correctable causes of hypertension (e.g., renal artery disease) and their diagnostic modalities.
- Summarize the options for hemodialysis access placement.
- Illustrate the general principles of vascular surgical technique including:
  a. Vascular control
  b. Anastomosis and repair
  c. Endarterectomy
  d. Angioplasty
  e. Bypass grafting
  f. Endovascular interventions

- Understand the operative exposure of the major vessels, including:
  a. Aortic arch.
  b. Suprarenal aorta
  c. Proximal subclavian artery
  d. Infrarenal aorta
  e. Carotid artery
  f. Femoral artery
  g. Descending thoracic aorta
  h. Popliteal artery

- Outline the indications for interventions (open or endovascular) for vascular diseases.
Discuss therapeutic options for the chronic and acute management of portal hypertension.

Summarize the surgical techniques available for managing common vascular disorders, such as:

a. Abdominal aortic aneurysm
b. Aortic-iliac occlusive disease
c. Carotid stenosis
d. Femoral-popliteal occlusion
e. Below knee occlusive disease
f. Visceral aneurysms
g. Mesenteric occlusive disease
h. Popliteal aneurysms
i. Thoracic outlet syndrome

Summarize complications of common major vascular procedures, including management of prosthetic graft infections.

**Thoracic Surgery**

Review the basic anatomy and physiology of thoracic structures, including:

a. Chest wall
b. Diaphragm
c. Mediastinum
d. Trachea, segmental and subsegmental bronchi
e. Lungs
f. Esophagus
g. Heart and pericardium
h. Great vessels and their immediate branches
i. Peripheral nerves (vagus, sympathetics, intercostals, phrenic, recurrent laryngeal)
j. Thoracic duct
k. Azygous and Hemiazygous veins

Justify appropriate diagnostic and therapeutic modalities for common thoracic pathologies, including:

a. Pneumothorax
b. Hydrothorax and hemothorax
c. Chylothorax
d. Pulmonary infiltrates or masses
e. Congenital anomalies
f. Pleural effusions and empyema
g. Fractures (clavicles, sternum, ribs, scapulae, and spine)
h. Mediastinal masses
i. Neoplastic processes (esophageal, pulmonary, pleural)
j. Benign esophageal disorders

Assess operative risk for thoracic surgery.

Outline the indications and interpretations for the following diagnostic modalities:

a. Plain and positional chest x-rays
b. Gastrointestinal contrast studies
c. CAT, MRI, and PET scans
d. Bronchograms
e. Pulmonary function studies
f. Ventilation-perfusion studies
g. Nuclear medicine studies
h. Ultrasound

● Explain the mechanics of ventilatory support, the clinical application of mechanical ventilation and the proper indications for tracheostomy.

● Manage chest tubes.

● List thoracic tumor types, and the TNN staging for each.

● Describe the diagnosis and therapy for complications such as:
  a. Fistulas: bronchopleural, pleurocutaneous, tracheoesophageal (TE), arteriovenous (AV) and thoracic duct
  b. Esophageal leak/stenosis/obstruction
  c. Loculated hemothorax
  d. Postoperative bleeding
  e. Empyema
  f. Air leaks
  g. Bronchial obstructions
  h. End stage COPD/pulmonary fibrosis

● Define the diagnostic indications and therapeutic options using:
  a. Rigid and flexible bronchoscopy
  b. Esophagoscopy (rigid and flexible)
  c. Mediastinoscopy (cervical and parasternal)
  d. Thoracoscopy/VATS

● Outline the technical steps in advance procedures, including:
  a. Lung resection (segmental, lobar, pneumonectomy)
  b. Thoracoplasty
  c. Esophageal resection/reconstruction
  d. Anti-reflux procedures
  e. Sleeve resection of the trachea/bronchus for tumor
  f. Chest wall reconstruction using myocutaneous flaps and/or synthetic materials
  g. Lung transplant

**Cardiac Surgery**

● Review the normal anatomy and physiology of the heart and the great vessels.

● Discuss the pathophysiology of acquired cardiac disease, including:
  a. Myocardial ischemia
  b. Valvular heart disease (stenotic and regurgitant)
  c. Endocarditis
  d. Ventricular aneurysms
  e. Thoracic aneurysms
  f. Trauma to the heart and great vessels

● Discuss the pathophysiology of congenital cardiac disease, including:
  a. Coarctation of the aorta
  b. Patent ductus arteriosus
  c. Atrial septal defects
  d. Ventricular septal defects
e. Complex cyanotic cardiac disease
   1) Transposition of great vessels
   2) Tetralogy of Fallot
   3) Pulmonary atresia
   4) Total anomalous venous return

● Summarize the use and interpretation of cardiovascular diagnostic tests, including:
   a. Electrocardiography
   b. Echocardiography (transthoracic and transesophageal)
   c. Plain films
   d. Cardiac catheterization and arteriography
   e. Vascular ultrasonography
   f. Computer tomography and magnetic resonance angiogram
   g. Radionuclide scintigraphy

● Compare various cardiac monitoring methods, including:
   a. Intra-arterial and central venous pressure transducers
   b. Pulmonary artery catheters
   c. Left atrial catheters
   d. External cardiac output monitoring

● Describe the indication and technical steps of common procedures, including:
   a. Coronary artery bypass and minimally invasive direct coronary artery bypass surgery
   b. Valvular replacement/repair
   c. Operations of the ascending aorta, aortic arch and descending thoracic aorta
   d. Permanent pacemaker/automatic defibrillator insertion
   e. Pericardial drainage procedure
   f. Insertion of IABP

● Outline the common complications of cardiac surgery and their management, including:
   a. Arrhythmias
   b. Bleeding
   c. Infection
   d. Low cardiac output and refractory hypotension
   e. Postoperative hypertension
   f. Renal failure
   g. Respiratory failure

● Discuss the evaluation and therapeutic options available for surgical management of cardiac trauma such as:
   a. Traumatic transection of the aorta and other great vessels
   b. Blunt and penetrating cardiac and great vessel injury

PATIENT CARE

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

Organ Transplantation

● Evaluate potential candidates for placement on the waiting list in a multi-disciplinary team.
- Participate in the management of immunosuppressive drug therapy, including monitoring drug levels and treating potential toxicities.
- Evaluate patients with transplant dysfunction, and formulate a differential diagnosis, including:
  a. Acute thrombosis
  b. Acute rejection
  c. Drug toxicity
  d. Sepsis
  e. Ureteral complications
  f. Lymphocele
- Employ diagnostic tools of evaluate allograft dysfunctions, including:
  a. Ultrasound
  b. Nuclear medicine scan
  c. CT or MR scan
  d. Cystogram
  e. Percutaneous biopsy
- Participate in the preparation and handling of multiple organ procurement.
- Perform operations related to renal transplant, including
  a. Donor nephrectomy
  b. Native nephrectomy
  c. Kidney transplant
  d. Transplant nephrectomy
  e. Exploration
- Manage routine postoperative surgical complications.

**Vascular Surgery**
- Perform the preoperative assessment of patients undergoing major vascular surgical procedures, including cardiac risk stratification and potential modification.
- Manage post-operative complications after vascular surgery, including:
  a. Cardiac complications
  b. Hemorrhage
  c. Graft thrombosis
  d. Wound or graft infection
- Demonstrate basics technical skills in vascular surgery, such as:
  a. Knot tying
  b. Instrument selection
  c. Suturing on blood vessels
  d. Handling of graft material
- Manage patients with venous incompetence or ulceration.
- Demonstrate proficiency in dialysis access procedures.
- Assess and plan for patients who require amputations.
- Acquire progressive expertise in the technical performance of major vascular procedures, including:
  a. Carotid endarterectomy
  b. Open AAA repair
  c. Lower extremity bypass grafting
d. Repair of traumatic injuries  
e. Portosystemic shunts  
f. Endovascular intervention

**Thoracic Surgery**  
- Evaluate operative risk for a patient undergoing thoracic surgery, with focus on cardiac risk factors and pulmonary function and reserve.  
- Stage patients with malignancy using TNM staging.  
- Use, set, and regulate mechanical ventilators.  
- Perform basic procedures, including:  
  a. Chest tubes  
  b. Thoracentesis  
  c. Central venous access lines  
  d. Laryngoscopy  
  e. Tracheostomy  
  f. Bronchoscopy  
- Perform double lumen intubation.  
- Interpret results of hemodynamic monitoring (from pulmonary artery catheter or non-invasive monitoring).  
- Assist in the management of patients with significant chest wall trauma.  
- Perform endoscopy and associated procedures, such as biopsy or stenting.  
- Manage chest tubes.  
- Manage complications after complex thoracic procedures.  
- Diagnose and manage patients with esophageal perforation.  
- Demonstrate familiarity with advanced procedures of the thorax, including  
  a. Lung resection  
  b. VAT and associated procedures  
  c. Mediastinoscopy  
  d. Resection of mediastinal mass  
  e. Esophageal resection and reconstruction  
  f. Endovascular intervention

**Cardiac Surgery**  
- Perform preoperative evaluation, including history, and physical examination and diagnostic tests of cardiac surgery patients.  
- Provide postoperative care for patients after cardiac surgery, with attention to:  
  a. Gastrointestinal ischemia  
  b. Cerebrovascular accident  
  c. Endocrine abnormalities  
  d. Pulmonary complications  
  e. Renal dysfunction  
  f. Coagulopathy  
  g. Dysrhythmias  
  h. Low cardiac output status  
  i. Hemorrhage  
- Assist with selected cardiac cases based on level of training, such as:
a. Pacemaker and defibrillator insertions
b. Saphenous vein harvest and wound closure for coronary bypass operations
c. Valve and coronary operations
d. Pericardial drainage operations
e. Tracheostomy
f. Minor vascular repairs
g. Pericardial window
h. Coronary artery bypass surgery
i. Valvular replacements and repairs
j. Thoracic aortic surgery
k. Congenital cardiac surgery
l. Emergency thoracotomies
m. Repair of cardiac trauma
n. Insert intra-aortic balloon pump

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., brain death) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams.
- Educate patients on behavior modification and cancer screening, such as smoke cessation and weight reduction.
- Coordinate anticipated needs and minimize the unexpected in the operating room.
- Communicate effectively with the OPO.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs and attend conferences without reminders.
PRACTICE BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences (e.g., mortality/morbidity conference) clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas of, such as:
  a. Role of various adjuvant therapy programs in the treatment of lung cancer.
  b. Carotid stenting vs. endarterectomy.
  c. Use of high risk donors for transplantation.
  d. Antiplatelet and antithrombotic therapies
- Identify gaps in technical skills (open, laparoscopic, endovascular) and practice independently (e.g. simulation models) to improve.

SYSTEMS-BASED PRACTICE

The resident will coordinate and improve care within the system into which he or she delivers care.

- Apply appropriate screening/surveillance for common malignancies involving the thorax.
- Participate in community outreach programs such as smoke cessation and organ donation awareness.
- Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and operations.
- Compare and contrast academic and private practice.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with organ transplantation, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient support groups
  e. Family support groups
  f. Cost containment
g. Pre-admission procedures and authorization
h. Conservation and availability of resources

- Adhere to protocols and standards of care.
- Assist and plan for palliative care for patients with advanced diseases.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees (e.g. tumor board), workgroups, or research teams to improve process and patient outcome.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Interact with social services and community agency resources.
- Coordinate multi-disciplinary care of complex issues using all available resources.
- Engage in process of long term patient follow up and compliance (e.g., immunosuppression).
- Observe advanced directives such as living will, health care proxy and power of attorney.
UMC 4 EMERGENCY GENERAL SURGERY
ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV 89102

Faculty: All General Surgery Academic Faculty
All Clinical Faculty of Desert West Surgery
Adjunct Private Practice Surgeons

Length of Rotation: 1-2 months

Service Descriptions

Acute care general surgery, with consultative service from both the emergency department and in-house units.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

Residents will attain knowledge of surgical diseases and their appropriate surgical and non-operative management in the acute setting.

- Describe the pathophysiology and clinical presentation of emergency/urgent surgical problems, including:
  a. appendicitis
  b. bowel obstruction
  c. cholecystitis
  d. colonic diverticulitis
  e. soft tissue infection (uncomplicated or necrotizing)

- Understand the appropriate use of empiric antibiotics.
- Summarize the general principles of wound care.
- Outline an expeditious diagnostic algorithm for acute surgical problems.
- Demonstrate appreciation of immediately life threatening conditions, including:
  a. Cholangitis
  b. GI hemorrhage
c. Acute pancreatitis
d. Ischemic bowel
e. Perforated viscus
f. Necrotizing fasciitis
g. Strangulated hernia
h. Large bowel obstruction

- Outline the steps for rapid resuscitation and preparation for surgical intervention.
- Recite the operative steps of common emergency operations (e.g. laparoscopic appendectomy).

**PATIENT CARE**

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures in the acute setting.

- Synthesize relevant data and diagnose patients with acute complaints expeditiously.
- Produce a legible and thorough history and physical and daily progress notes, which incorporate laboratory and diagnostic data, as well as an assessment and plan.
- Justify daily selection of laboratory and diagnostic testing for each patient on the service.
- Manage certain conditions non-operatively (e.g., uncomplicated diverticulitis).
- Demonstrate skills in bedside procedures, such as
  a. I&D of simple abscesses
  b. Administration of conscious sedation
  c. Central line insertion
  d. Chest tube insertion
  e. Endotracheal intubation
  f. Reduction of incarcerated hernia
- Develop progressive technical expertise, including:
  a. Appendectomy
  b. Cholecystectomy
  c. Exploratory Laparotomy or laparoscopy
  d. Bowel resection
  e. Repair of bowel perforation
  f. Lysis of adhesions
  g. Amputations
- Manage post-operative complications after emergency operations.
- Manage the open abdomen.
- Dictate consultation reports, H&P, and operative reports immediately.

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
• Communicate with patients and family clearly and effectively, including bad news and complications, and manages conflicts.
• Facilitate exchange of information, updates, and recommendations among health care teams, especially from the consultants.
• Educate patients on behavior modification.
• Coordinate anticipated needs and minimize the unexpected in the operating room.
• Schedule cases in the operating room according to urgency.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

• Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
• Respect wishes of patients and their social background, such as desires for alternative therapies.
• Exemplify ethical behavior for medical students and other trainees.
• Respond to criticism, correction, and difficult situations with composure and attention.
• Recognize own errors and limitation, and seek advice and improvement.
• Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
• Respond promptly to requests from consultants, faculty and staff.
• Complete records and logs, and attend conferences without reminders.
• Respect and follow guidance from senior level residents and attendings.
• Delegate tasks responsibly to junior residents.

PRACTICE BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

• Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
• Present patient cases and topics in conferences clearly with citation of supporting evidence.
• Lead, design, and organize education activities, including skills labs.
• Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
• Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns (e.g., non-operative treatment of acute appendicitis).
• Develop a working knowledge of prior research milestones (landmark findings) and current research efforts in acute care surgery (e.g., surviving sepsis guidelines).
• Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g. simulation models) to improve.
SYSTEMS-BASED PRACTICE

The resident will coordinate and improve care within the system into which he or she delivers care.

- Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and urgent operations.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic issues associated with emergency vs. elective treatment of surgical conditions.
- Adhere to protocols and standards of care.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees, workgroups, or research teams to improve process and patient outcome (e.g., develop new protocols or pathways).
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of patients, including:
  a. Other medical consultants
  b. Ancillary services
  c. Discharge planning
  d. Social needs (e.g., language barrier).
- Observe advanced directives such as living will, health care proxy and power of attorney.
UMC 5 – GENERAL SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV 89102

Faculty: William Scott, M.D.,
Rachel Nemcic, M.D.
Academic Faculty in the Division of Acute Care Surgery

Length of Rotation: 1-2 months

Service Description

Elective and Semi-elective Consult Service in General Surgery. Residents will take care of patients from faculty’s elective practice as well as from consults who do not require immediate operative treatment.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:

1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

Residents will attain knowledge of surgical diseases and their appropriate surgical and nonoperative management in the subacute setting and elective setting.

Acute Care Surgery

- Describe the pathophysiology and clinical presentation of emergency/urgent surgical problems, including:
  - appendicitis
  - bowel obstruction
  - cholecystitis
  - colonic diverticulitis
  - soft tissue infection (uncomplicated or necrotizing)
- Understand the appropriate use of empiric antibiotics.
- Summarize the general principles of wound care.
- Outline an expeditious diagnostic algorithm for acute surgical problems.
● Demonstrate appreciation of immediately life threatening conditions, including:
  i. Cholangitis
  j. GI hemorrhage
  k. Acute pancreatitis
  l. Ischemic bowel
  m. Perforated viscus
  n. Necrotizing fasciitis
  o. Strangulated hernia
  p. Large bowel obstruction

● Outline the steps for rapid resuscitation and preparation for surgical intervention.
● Recite the operative steps of common emergency operations (e.g. laparoscopic appendectomy).

**Abdominal Surgery**

● Understand the anatomy of the abdomen including its viscera, anatomic spaces, and potential spaces for hernia formation.
● Describe major lymph node groups and their drainage
● Elucidate the mechanism of visceral and somatic pain for the following processes:
  g. Acute appendicitis
  h. Ureteral colic
  i. Bowel obstruction
  j. Diffuse peritonitis
  k. Perforated ulcer
  l. Biliary colic
● Discuss the differential diagnosis of paralytic ileus, including:
  f. Postoperative
  g. Electrolyte imbalance
  h. Retroperitoneal pathology
  i. Trauma
  j. Extra-abdominal disease (central nervous system, lung, sepsis)
● Discuss wound complications, including risk factors, incidence, clinical presentations, and methods of prevention.
● Outline the treatment strategies for an enterocutaneous fistula.
● Describe the anatomy, clinical presentation, work up, operative (including technical aspects), and non-operative management for hernias:
  a. Abdominal wall
  b. Hiatal and paraesophageal
  c. Parastomal
  d. Diaphragmatic
● Support the use of laboratory and diagnostic tests to confirm the diagnosis of surgical diseases of the abdomen.
● Outline the techniques for wound closure (including type of suture material and use of retention sutures) for each of the incisions and options available for temporary closure.

**PATIENT CARE**
The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures in the subacute and elective setting.

**Acute Care Surgery**

- Synthesize relevant data and diagnose patients with acute complaints expeditiously.
- Produce a legible and thorough history and physical and daily progress notes, which incorporate laboratory and diagnostic data, as well as an assessment and plan.
- Justify daily selection of laboratory and diagnostic testing for each patient on the service.
- Manage certain conditions non-operatively (e.g., uncomplicated diverticulitis).
- Demonstrate skills in bedside procedures, such as:
  - I&D of simple abscesses
  - Administration of conscious sedation
  - Central line insertion
  - Chest tube insertion
  - Endotracheal intubation
  - Reduction of incarcerated hernia
- Develop progressive technical expertise, including:
  - Appendectomy
  - Cholecystectomy
  - Exploratory Laparotomy or laparoscopy
  - Bowel resection
  - Repair of bowel perforation
  - Lysis of adhesions
  - Amputations
- Manage post-operative complications after emergency operations.
- Manage the open abdomen.
- Dictate consultation reports, H&P, and operative reports immediately.

**Abdominal Surgery**

- Illustrate the use of diagnostic studies and their interpretation in the work-up of the surgical patient, including:
  - Laboratory evaluation
  - Urinalysis
  - Plain x-rays
  - Contrast gastrointestinal (GI) studies
  - Ultrasound
  - Computed axial tomography (CAT)
  - Nuclear medicine scans
  - MRI
- Perform, record, and report complete patient evaluation and assessment.
- Evaluate and diagnose the acute abdomen.
- Choose appropriate sutures to close abdominal wounds.
- Demonstrate progressive expertise in hernia repairs, using open, laparoscopic or robotic approaches.
- Evaluate and institute management of abdominal wound problems, including:
Coordinate pre- and post-operative care for the patient with the acute abdomen.
Manage enterocutaneous fistula.
Provide operative access to kidneys, pancreas, aorta, iliac arteries and other retroperitoneal structures via thoracoabdominal and retroperitoneal approaches.
Perform open or laparoscopic exploration for acute abdomen, demonstrating a systematic approach for determination of the etiology of the process and appropriate measures for its management.
Engage in training-appropriate role in the resident team.

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams, especially from the consultants.
- Educate patients on behavior modification.
- Coordinate anticipated needs and minimize the unexpected in the operating room.
- Schedule cases in the operating room according to urgency.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Respect wishes of patients and their social background, such as desires for alternative therapies.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs, and attend conferences without reminders.
- Respect and follow guidance from senior level residents and attendings.
• Delegate tasks responsibly to junior residents.

**PRACTICE BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

• Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
• Present patient cases and topics in conferences clearly with citation of supporting evidence.
• Lead, design, and organize education activities, including skills labs.
• Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
• Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns (e.g., non-operative treatment of acute appendicitis).
• Develop a working knowledge of prior research milestones (landmark findings) and current research efforts in acute care surgery (e.g., surviving sepsis guidelines).
• Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g. simulation models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

• Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and urgent operations.
• Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
• Elucidate the economic issues associated with emergency vs. elective treatment of surgical conditions.
• Adhere to protocols and standards of care.
• Identify and correct system issues and errors (e.g., EHR).
• Arrange for discharge care, such as follow-up appointments and visiting home care.
• Engage in committees, workgroups, or research teams to improve process and patient outcome (e.g., develop new protocols or pathways).
• Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
• Coordinate multi-disciplinary care of patients, including:
  e. Other medical consultants
  f. Ancillary services
  g. Discharge planning
  h. Social needs (e.g., language barrier).
• Observe advanced directives such as living will, health care proxy and power of attorney.
TRAUMA SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

Trauma Director: John Fildes, MD
Faculty:
Paul Chestovich, MD
Douglas Fraser, MD
Deborah Kuhls, MD
Syed Saquib, MD
Clinical Faculty of Desert West Surgery

Length of Rotation: 1-2 months

Service Description

The service is responsible for the resuscitation and stabilization of the acutely injured patients brought to the UMC level one trauma center. The care is transferred to and coordinated with the TICU team as needed. The service continues to care for patients out of the TICU and manage their discharge needs.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:

1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of trauma patients, and in their operative and non-operative management.

● Describe the typical case scenarios following blunt and/or penetrating trauma with life-threatening presentations, such as:
  a. Multiple system trauma
  b. Shock (cardiogenic, neurogenic, septic, and hypovolemic)
  c. Traumatic neurological injuries
     1. Head injury
     2. Spinal cord injury
     3. Subarachnoid/subdural hemorrhage
4. Penetrating head trauma
d. Chest injuries
e. Abdominal and pelvic injuries
f. Vascular injuries
● Explain the mechanics/trajectories associated with various gunshots and penetrating objects.
● Discuss the management of associated medical conditions seen in trauma patients, such as:
  a. Diabetes
  b. Chronic obstructive pulmonary disease
c. Hypertension
d. Coronary artery disease
e. HIV
f. Anticoagulation
● Identify the indications for emergency procedures, such as:
  a. Burr holes
  b. Cricothyrotomy
c. Insertion of cardiopulmonary assist devices
d. Resuscitative thoracotomy
e. Pelvic stabilization
● Formulate a plan for rehabilitation.
● Define abdominal compartment syndrome, its diagnosis and treatment.
● Outline the sequence of “damage control surgery.”

PATIENT CARE

The resident will provide comprehensive care for trauma patients and demonstrate progressive expertise in trauma-related surgical procedures.

● Perform triage of emergency trauma patients.
● Institute initial resuscitative measures in patients with shock.
● Interpret radiologic studies.
● Identify candidates for non-operative management in both penetrating and blunt trauma.
● Provide management for pre-existing disease states in injured patients with appropriate consultation.
● Demonstrate progressive expertise in the operative management of trauma to the chest, abdomen, extremities, and head.
● Perform central line placement, cricothyrotomy, chest tube insertion, and FAST examination.
● Direct rehabilitation and discharge planning with appropriate consultation.
● Practice the principles of damage control surgery in severely-injured patients.
● Perform at the bedside percutaneous tracheostomy and PEGs.

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of
patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Receive and relate pre-hospital communication from EMS and other providers.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., paralysis) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams in a positive manner.
- Educate patients on behavior modification and cancer screening, such as drinking/driving and seat belt use.
- Coordinate anticipated needs and minimize the unexpected in the operating room.
- Coordinate care among consultants in the multiple injured patients.
- Perform accurate hand-off to the TICU team.

**PROFESSIONALISM**

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs and attend conferences without reminders.
- Respect residents and fellows from other departments and institutions.

**PRACTICE-BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current
research efforts, and trauma research methodology.

- Analyze current data addressing controversial areas of trauma, such as:
  a. Endpoints of fluid resuscitation
  b. Treatment of massive hemorrhage from pelvic fractures
  c. Endoscopic treatment of vascular injury
- Identify gaps in skills (open, laparoscopic, endoscopic) and practice independently (e.g. simulation models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care, with focus on the trauma system in the Las Vegas metro and surrounding areas.

- Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and operations.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with trauma, including:
  a. Ethics
  b. Rehabilitation (physical, occupational, vocational)
  c. Home care resources
  d. Patient and family support groups
  e. Cost containment
  f. Pre-admission procedures and authorization
  g. Conservation and availability of in-patient resources
  h. Geriatric care
- Adhere to protocols and standards of care.
- Assist and plan appropriate care with the OPO for patients with brain death.
- Identify and correct system issues and errors (e.g., pre-hospital care).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees, workgroups, or research teams to improve process and patient outcome (e.g., trauma prevention measures).
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of complex trauma problems.
- Engage in community education programs, including programs for EMS.
- Discuss the overall organization and management of a trauma service in a level one trauma center.
- Direct patient flow in the emergency department, the operating room, and the intensive care unit.
- Observe advanced directives such as living will, health care proxy and power of attorney.
TRAUMA ICU /CRITICAL CARE ROTATION

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

ICU Director: Deborah Kuhls, MD
Faculty:
Paul Chestovich, MD
Jay Coates, DO
John Fildes, MD
Douglas Fraser, MD
Deborah Kuhls, MD
Syed Saquib, MD

Length of Rotation: 1-2 months

Service Description

The resident team is responsible for patient care at the Trauma Intensive Care Unit, part of the level one trauma center of University Medical Center. The team also consults on the critical care management of other surgical patients in the hospital.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire detailed knowledge in the evaluation and critical care management of surgical and trauma patients.

- Define major types of shock:
  a. Explain the etiology and pathophysiology in terms of oxygen supply and demand.
  b. Summarize the clinical presentation and associated hemodynamic parameters.
  c. Propose a diagnostic algorithm.
  d. Outline the principles of treatment and assessing response to treatment.
- Review major concepts in pulmonary physiology as applied to critical care, with focus on:
  a. Interpretation of chest X-ray and CT scan
b. ABG

c. Major concepts such as tidal volume, compliance, airway pressure, and functional residual capacity.

d. Weaning parameters.

- Discuss the pathophysiology of life-threatening conditions, including:

  a. Acute myocardial infarction
  b. Acute dysrhythmia
  c. Congestive heart failure
  d. Hypovolemic shock (non-trauma)
  e. Burns
  f. Septic shock
  g. Anaphylaxis
  h. Acute adrenal insufficiency
  i. Penetrating or blunt trauma
     1. Tension pneumothorax
     2. Pericardial tamponade
     3. Hemorrhagic shock
     4. Aortic tear
  j. Hypothermia
  k. Substance abuse
  l. Electrical injury
  m. Drowning
  n. Airway injury
  o. Acute stroke

- Summarize the indication and appropriate technique for cardiac support and use of pressors.

- Recite the principles of adult and pediatrics ATLS.

- Explain the use of mechanically assisted ventilation, including advanced modalities such as high frequency jet ventilation and inverse ratio ventilation.

- Outline the indications for and steps of supportive procedures, such as:

  a. Cricothyrotomy
  b. Thoracostomy tube
  c. Central venous catheter
  d. Peripheral vein cutdown
  e. Arterial line
  f. Pulmonary artery catheter
  g. Diagnostic peritoneal lavage (DPL)
  h. Resuscitative thoracotomy
  i. Pericardiocentesis
  j. Thoracentesis
  k. Ultrasound
  l. Wound exploration

- Review the pathogenesis of congenital and acquired bleeding disorders facing the acutely injured or post-operative patients, including:

  a. Dilutional thrombocytopenia
  b. Disseminated intravascular coagulopathy (DIC).
c. Coagulation disorders such as Hemophilia A or Von Willebrand's disease
d. Chronic anticoagulation from use of warfarin, thrombin inhibitors, or Factor Xa inhibitors
e. Advanced liver disease
f. Renal dysfunction
g. Hypercoagulable states

● Explains the use of blood products, including:
  a. Packed red cells
  b. Fresh frozen plasma
  c. Platelets
d. Cryoprecipitate
e. Whole blood
  f. Specific clotting factor concentrates (VIII, IX, XII) and PCC.

● Describe the concept of the Systemic Inflammatory Response Syndrome (SIRS).
● Summarize prophylactic measures routinely used in critical care, for specific indications including:
  a. Gastrointestinal (GI) bleeding
  b. Pulmonary complications (e.g., VAP)
c. VTE
d. Universal precautions
e. Skin care protocols
  f. Catheter-related infection
g. Wound infection

● Outline the indications and methods for nutritional support.
● Outline the diagnostic approaches to postoperative fever.
● Describe the differential diagnosis of acute mental status changes.
● Describe the manifestation of adrenal insufficiency.
● Discuss the use of sepsis severity scores and injury severity score.
● Describe the use of intracranial pressure monitors.
● Review common acid-base and electrolyte abnormalities in critically-ill patients and the associated clinical scenarios.
● Explain the pathogenesis of acute kidney injury.
● Discuss the correction of complex acid-base problems using fluid and electrolyte replacement.
● Summarize the indications and options for acute renal replacement therapy.
● Describe the principles of acute glycemic management.
● Define brain death.

PATIENT CARE

The resident will provide comprehensive care for critical care surgical patients and demonstrate progressive expertise in surgical procedures.

● Provide initial management of the critically-ill postoperative patients or post-resuscitation trauma patients, including:
  a. Manage fluid orders
b. Determine ventilator settings
c. Order pharmacologic support drugs
d. Manage and monitor chest tubes and drains
e. Determine the need for and duration of antibiotic therapy
f. Correct bleeding issues
• Diagnose the etiology of ongoing shock and modify treatments as necessary.
• Manage the patient with low GCS from a variety of etiologies, including:
  a. CHI
  b. Intracranial bleed
c. Acute stroke
d. Anoxia
e. Seizure
f. Drug toxicity
g. Metabolic encephalopathy
• Manage mechanical ventilation.
• Diagnose airway injury.
• Manage carbon monoxide poisoning.
• Diagnose cardiac failure and rhythm disturbances and institute treatments.
• Apply the guidelines of ATLS and ACLS.
• Perform venous access procedures, including subclavian, jugular and femoral vein catheterizations and saphenous vein cutdown.
• Administer appropriately, monitor response and complications, for common critical care medications, including:
  a. Propranolol and other adrenergic blockers
  b. Morphine other narcotics
c. Benzodiazepines
d. Propofol
e. Atropine
f. Diltiazem
g. Epinephrine and norepinephrine
h. Vasopressin
i. Dopamine and dobutamine
j. Adenosine
k. Nitroglycerin and nitroprusside
l. Furosemide, mannitol, and other diuretics
m. Sodium bicarbonate
n. Calcium
o. Amiodarone
• Institute fluid and electrolyte replacement therapy.
• Control external blood loss.
• Administer appropriate antimicrobial therapy.
• Adhere to VTE prophylaxis and treatment protocols.
• Develop expertise in the following procedures:
  a. Orotracheal and nasotracheal intubation
  b. Nasogastric and orogastric tube insertion
c. Bladder catheter insertion
d. Arterial catheter insertion

e. Central venous and pulmonary artery catheter insertion

f. Placement of tube thoracotomy

g. Cricothyrotomy

h. Pericardiocentesis

i. Fasciotomy

j. Local wound care

- Perform endoscopic procedures, such as bronchoscopy, Perc Trachs, and PEG.
- Recognize and treat abdominal compartment syndrome.
- Manage the open abdomen.
- Place emergency transvenous/transthoracic access for cardiac pacing.
- Manage the nutritional needs the patient's illness.
- Diagnose and treat and HIT.
- Manage intestinal, bile, or pancreatic fistula:
  a. Apply wound care devices
  b. Replace fluid and electrolyte loss
  c. Treat associated sepsis

- Make referral to the OPO appropriately.

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures, as applied to critical care patients.

- Direct all surgical management of patients in the TICU, including admission and discharge from the unit.
- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., serious injury diagnosis) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams.
- Educate patients on behavior modification such as seat belt use.
- Coordinate anticipated needs and minimize the unexpected in the operating room.

**PROFESSIONALISM**

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs and attend conferences without reminders.
- Respect team members from other residency programs and institutions.

**PRACTICE-BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas of critical care, such as:
  a. Ventilation modalities
  b. Early vs. late tracheostomy
  c. Ratio of components and goal of fluid resuscitation
- Identify gaps in skills (open, laparoscopic, and endoscopic) and practice independently (e.g. simulation models) to improve.
- Complete and pass Advanced Cardiac Life Support (ACLS) and Advanced Trauma Life Support (ATLS).

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

- Triage care (ICU vs. intermediate care).
- Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and operations.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with trauma, including:
  a. Ethics of organ donation
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
e. Cost containment
f. Ethics of futile therapy
g. Conservation and availability of in-patient resources
h. Geriatric care

- Adhere to protocols and standards of care.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees (e.g. process improvement team), workgroups, or research teams to improve process and patient outcome.
- Collect information for trauma database.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Observe advanced directives such as living will, health care proxy and power of attorney.
- Recognize the interdisciplinary approach to the critically ill patient, including:
  a. Surgery
  b. Pharmacy
  c. Blood bank
  d. Nursing
  e. Religion or other spiritual systems of belief
  f. Family and friends
  g. Social work
  h. Physical therapy
  i. Hospital administration
  j. Other medical consultants
USAF ROTATION - GENERAL SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: Michael O’Callaghan Federal Hospital
4600 Las Vegas Blvd. North
Nellis AFB,
Las Vegas, NV 891091

Site Program Director: Major Charles Chesnut
General Surgery Faculty
   Colonel Richard Standaert
   Lt Col Siri Sastri
   Major Jason Compton
   Major Rachael Nemcic

Length of Rotation: 1 -2 months

Service Description

The practice of “bread and butter” general surgery on the air force base. Residents are also welcome to participate in the care of other surgical specialties when opportunities arise.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objectives for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of surgical patients common to veterans, and in both the operative and non-operative management of their surgical conditions.

- Review the principles of diagnosis and treatment of common surgical diseases, including:
  a. Acute appendicitis
  b. Diverticulitis
  c. Symptomatic cholelithiasis, acute cholecystitis, choledocholithiasis
  d. GI neoplasia
  e. Hernias (inguinal, umbilical & incisional)
  f. Intestinal obstruction, hemorrhage, perforation and ischemia
  g. Intra-abdominal abscesses
h. Subcutaneous abscesses
i. Intestinal fistulas
j. Hemorrhoids, anal fissure, anal fistula and perianal abscesses

- Outline the essential characteristics of aspects in the diagnostic evaluation of the alimentary tract, including:
  a. History
  b. Physical examination
  c. Radiologic examinations, including:
     (1) Acute abdominal series
     (2) Upper GI series with small bowel follow-through
     (3) Barium enema
     (4) Abdominal ultrasound
     (5) CT scans
     (6) Magnetic Resonance Imaging
     (7) Nuclear scans (GI bleeding)
     (8) Radioisotope clearance studies
  d. Fiberoptic endoscopy
  e. Rigid anoscopy and sigmoidoscopy

- Understand the surgical anatomy of the abdomen and GI tract.
- Review the peri-operative management of surgical patients.
- Outline the technical details of common operations.

**PATIENT CARE**

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

- Perform focused, complete and accurate patient history and physical exams
- Develop differential diagnoses and management plans.
- Perform operations of the esophagus, stomach, small intestine, colon, and anorectum according to levels of training.
- Demonstrate expertise in common operations such as hernia repair (umbilical, inguinal and incisional), gastrostomy placement, appendectomy, cholecystectomy, hemorrhoidectomy, anal fissurectomy/fistulectomy, and incision and drainage of perirectal abscesses.
- Manage peri-operative care of patients.

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Perform clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., cancer diagnosis) and complications, and manages conflicts.
• Facilitate exchange of information, updates, and recommendations among health care teams.
• Educate patients on behavior modification and cancer screening, such as smoking cessation.
• Coordinate anticipated needs and minimize the unexpected in the operating room.
• Present patient information in a clear and concise format during hospital rounds and when on call.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks.

• Complete all documentation, including patient notes and orders, in a timely fashion.
• Relate as a team member with other residents from other departments.
• Demonstrate appropriate dress and decorum while on duty.
• Comply with regulations of the VA hospital.
• Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
• Exemplify ethical behavior for medical students and other trainees.
• Respond to criticism, correction, and difficult situations with composure and attention.
• Recognize own errors and limitation, and seek advice and improvement.
• Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
• Respond promptly to requests from consultants, faculty and staff.
• Complete records and logs and attend conferences without reminders.
• Engage in training-appropriate role on the resident team.

PRACTICE-BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

• Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
• Present patient cases and topics in conferences clearly with citation of supporting evidence.
• Lead, design, and organize education activities, including skills labs.
• Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
• Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
• Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and research methodology.
• Analyze current data addressing controversial areas of general surgery.
• Identify gaps in skills (open or laparoscopic) and practice independently (e.g. simulation
models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the VA system into which he or she delivers care.

- Apply appropriate screening/surveillance programs.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with care of veterans, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
  e. Enterostomal therapy
  f. Cost containment
  g. Pre-admission procedures and authorization
  h. Conservation and availability of in-patient resources
  i. Geriatric care
  j. Tumor registry data
- Adhere to protocols and standards of care.
- Assist and plan for palliative care for patients with advanced diseases.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in PI or QI committees, workgroups, or research teams.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of complex patients, using resources such as:
  a. Medical consultants
  b. Social workers
  c. Case managers
  d. Physical and occupational therapists
- Observe advanced directives such as living will, health care proxy and power of attorney.
VA ROTATION - GENERAL SURGERY/VASCULAR SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Locations:  VA Southern Nevada Healthcare System
                 6900 North Pecos Road
                 North Las Vegas, NV  89086

Site Director:    Jaclyn Munn, MD
Chief of Surgery: Julian Losanoff, MD
Clinical Faculty: Kevin Dunn, MD
                  Cassandra Joffs, MD
                  Luis Panuncialman, MD
                  Laura Dacks, MD

Length of Rotation:  1 -2 months

Service Description

Elective and emergency general surgery, serving the veteran population at the Las Vegas Veterans Administration Hospital. Residents are also welcome to participate in the care of specialty surgery patients, such as vascular surgery, whenever opportunities arise.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of surgical patients, and in both the operative and non-operative management of surgical conditions.

General Surgery

- Understand the anatomy of the abdomen including its viscera, anatomic spaces, and potential spaces for hernia formation.
- Describe major lymph node groups and their drainage.
- Elucidate the mechanism of visceral and somatic pain for the following processes:
  a. Acute appendicitis
  b. Ureteral colic
  c. Bowel obstruction
  d. Diffuse peritonitis
e. Perforated ulcer  
f. Biliary colic

- Discuss the differential diagnosis of paralytic ileus, including:
  a. Postoperative  
  b. Electrolyte imbalance  
  c. Retroperitoneal pathology  
  d. Trauma  
  e. Extra-abdominal disease (central nervous system, lung, sepsis)

- Discuss wound complications, including risk factors, incidence, clinical presentations, and methods of prevention.

- Outline the treatment strategies for an enterocutaneous fistula.

- Describe the anatomy, clinical presentation, work up, operative (including technical aspects), and non-operative management for hernias:
  a. Abdominal wall  
  b. Hiatal and paraesophageal  
  c. Parastomal  
  d. Diaphragmatic

- Support the use of laboratory and diagnostic tests to confirm the diagnosis of surgical diseases of the abdomen.

- Describe the techniques of bowel resection and anastomosis.

- Outline the techniques for wound closure (including type of suture material and use of retention sutures) for each of the incisions and options available for temporary closure.

- Identify the indications for elective splenectomy.

- Outline the technical steps to splenectomy (open or laparoscopic).

- Outline the clinical manifestation of GI conditions based on pathologic findings, such as
  a. Embryologic abnormalities  
  b. Neoplasia  
  c. Ulceration  
  d. Obstruction  
  e. Hemorrhage  
  f. Perforation  
  g. Abscess formation  
  h. Malabsorptive conditions  
  i. Ischemia  
  j. Portal hypertension  
  k. Venous thrombosis

- Summarize current medical management and surgical intervention in the following:
  a. Peptic ulcer disease  
  b. Gastroparesis  
  c. Esophageal varices  
  d. Inflammatory bowel disease  
  e. Upper and lower GI bleeding  
  f. Diverticulitis

- Describe the physiologic consequence of gastrointestinal operations, including:
  a. Vagotomy  
  b. Pyloroplasty
c. Gastric resection and reconstruction
d. Small bowel resection with anastomosis
e. Ostomy formation
f. Bypass of GI tract segments for unresectable tumors

● Explain the indications and contraindications for diagnostic and therapeutic endoscopy of the alimentary tract.
● Describe the segmental anatomy of the liver
● Describe the anatomy of the biliary system, including common variations, and define the critical view for cholecystectomy.
● Outline the work-up and differential diagnosis of the jaundiced patient.
● Discuss various types of liver cysts (e.g., echinococcal, nonparasitic) and the appropriate management of each.
● Discuss the principal characteristics of and the treatment for the following:
  a. Metastatic lesions to the liver
  b. Primary malignancies of liver and biliary tree
  c. Benign tumors of the liver
● Summarize the etiologies and management of pyogenic and amebic hepatic abscesses.
● Outline the pathophysiology, evaluation, and management of the following:
  a. Choledochal cysts
  b. Gallstones, cholecystitis and associated complications
  c. Sclerosing cholangitis
  d. Biliary cirrhosis
  e. Congenital biliary atresia
  f. Biliary obstruction
● Compare and contrast technical details of laparoscopic versus open cholecystectomy.
● Assess management alternatives for common bile duct stones and biliary obstruction.
● Discuss the pathophysiology of portal hypertension and cirrhosis of the liver.
● Outline the acute and chronic management of bleeding esophageal varices.
● Describe the options for management of ascites, including management of such patients with symptomatic hernia.
● Explain the pathophysiology of liver decompensation in patients with liver disease undergoing major surgery.
● Outline the surgical technique of standard liver resection (e.g., segmentectomy).
● Describe the anatomy of the pancreas, including regional vascular anatomy.
● Explain the pathophysiology and presentation of acute pancreatitis (e.g., severity scoring), and indications for surgical or percutaneous intervention.
● Outline the treatment principles for peri-ampullary carcinoma.
● Discuss the presentation, evaluation, and management of pancreatic pseudocysts.
● Summarize treatment options for patients with chronic pancreatitis.
● Identify unusual pancreatic conditions such as neuroendocrine tumor or IPMN.
● Describe the surgical technique of standard pancreatic resection (e.g., Whipple).
● Outline the indications for and potential complications of ERCP and endoscopic US.

**Vascular Surgery**

● Review normal arterial and venous anatomy.
● Review arterial and venous hemodynamics, such as:
a. Claudication
b. Transient ischemic attack (TIA)
c. Stroke
d. Mesenteric angina
e. Renovascular hypertension
f. Arteriovenous fistula (AVF)

- Discuss pathologic findings of the arterial wall.
- Outline the clinical manifestations of vascular disorders, including:
  a. Obstructive arterial disease
  b. Aneurysmal arterial disease
  c. Thromboembolic disease, both arterial and venous
  d. Chronic venous insufficiency and lymphatic obstruction
  e. Portal hypertension
  f. Congenital vascular disease
  g. Immediately life threatening pathologies (e.g., ruptured AAA, mesenteric venous thrombosis)

- Describe the risk factors for atherosclerotic vascular disease:
  a. Diabetes mellitus
  b. Congestive heart failure
  c. Hypertension
  d. Hyperlipidemia
  e. Renal failure
  f. Smoking

- Differentiate diagnostic tools available for assessing vascular disease, including:
  a. Angiography
  b. Computed axial tomographic (CAT) scanning CT angiogram
  c. Magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA)
  d. Duplex scanning (ultrasonography)

- Outline the principles behind therapeutic options of a variety of vascular diseases, including conditions of arterial, venous, and lymphatic etiologies.
- Review uncommon conditions such as vascular malformation and vascular tumors.
- Describe the natural history of vascular disease following non-operative treatment, including:
  a. Carotid arterial stenosis (e.g., TIA’s)
  b. Abdominal aortic aneurysm
  c. Claudication
  d. Venous incompetence

- Summarize principles for the preoperative assessment of patients undergoing major vascular surgical procedures.
- Discuss the coagulation pathway, the pharmacology of antiplatelet agents and antithrombotic agents, and their role in the management of patients with vascular disease.
- Explain the concept of critical arterial stenosis and ischemia.
- Discuss the indication for thrombolytic therapy (systemic or catheter-directed).
- Outline the pathophysiology of hypercoagulable states.
- Describe the surgically correctable causes of hypertension (e.g., renal artery disease) and
their diagnostic modalities.

- Summarize the options for hemodialysis access placement.
- Illustrate the general principles of vascular surgical technique including:
  a. Vascular control
  b. Anastomosis and repair
  c. Endarterectomy
  d. Angioplasty
  e. Bypass grafting
  f. Endovascular interventions
- Understand the operative exposure of the major vessels, including:
  a. Aortic arch.
  b. Suprarenal aorta
  c. Proximal subclavian artery
  d. Infrarenal aorta
  e. Carotid artery
  f. Femoral artery
  g. Descending thoracic aorta
  h. Popliteal artery
- Outline the indications for interventions (open or endovascular) for vascular diseases.
- Summarize the surgical techniques available for managing common vascular disorders, such as:
  a. Abdominal aortic aneurysm
  b. Aortic-iliac occlusive disease
  c. Carotid stenosis
  d. Femoral-popliteal occlusion
  e. Below knee occlusive disease
  f. Visceral aneurysms
  g. Mesenteric occlusive disease
  h. Popliteal aneurysms
  i. Thoracic outlet syndrome
- Summarize complications of common major vascular procedures, including management of prosthetic graft infections.

PATIENT CARE

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

General Surgery

- Illustrate the use of diagnostic studies and their interpretation in the work-up of the surgical patient, including:
  a. Laboratory evaluation
  b. Urinalysis
  c. Plain x-rays
  d. Contrast gastrointestinal (GI) studies
  e. Ultrasound
f. Computed axial tomography (CAT)
g. Nuclear medicine scans
h. MRI

- Perform, record, and report complete patient evaluation and assessment.
- Evaluate and diagnose the acute abdomen.
- Choose appropriate sutures to close abdominal wounds.
- Demonstrate progressive expertise in hernia repairs, using open or laparoscopic approaches.
- Evaluate and institute management of abdominal wound problems, including:
  a. Infection
  b. Evisceration
  c. Fasciitis
  d. Dehiscence
- Coordinate pre- and post-operative care for the patient with the acute abdomen.
- Manage enterocutaneous fistula.
- Provide operative access to kidneys, pancreas, spleen, aorta, iliac arteries and other retroperitoneal structures via thoracoabdominal and retroperitoneal approaches.
- Perform open or laparoscopic exploration for acute abdomen, demonstrating a systematic approach for determination of the etiology of the process and appropriate measures for its management.
- Evaluate outpatients with abdominal pain in the outpatient and inpatient setting.
- Demonstrate progressive technical expertise in the operations on the esophagus, stomach, small intestine, colon, and anorectum, such as resection, anastomosis, and creation of stomies.
- Develop diagnostic and therapeutic endoscopy skills such as:
  a. Diagnostic esophagogastrroduodenoscopy
  b. Percutaneous endoscopic gastroscopy
  c. Dilation of intestinal strictures
  d. Diagnostic colonoscopy
  e. Polypectomy
- Perform simple surgical procedures such as:
  a. Gastrostomy
  b. Meckel's diverticulectomy
  c. Appendectomy
  d. Hemorrhoidectomy
  e. Anal fissurectomy and fistulotomy
  f. Incision and drainage of perirectal abscesses
- Institute nutritional supplements (enteral and parenteral) of surgical patients.
- Manage abdomen drains, such as nasogastric tubes, intestinal tubes, or external drains.
- Perform history and physical examination specifically focused on liver and biliary system.
- Select and interpret appropriate laboratory and radiologic evaluations in the work-up of the jaundiced patient.
- Plan appropriate management and operative approach.
- Demonstrate progressive technical expertise in the surgery of the liver, the gallbladder and biliary system.
a. Laparoscopic cholecystectomy with cholangiography
b. Common bile duct exploration
c. Biliary drainage procedures
d. Drainage of liver abscess
e. Peritoneo-venous shunts
f. Liver resection
g. Bile duct resection and reconstruction

- Perform history and physical examination focused on the pancreas.
- Select and interpret appropriate laboratory and radiologic examinations in evaluation of pancreatic disease, including ERCP, MRCP, EUS.
- Manage patients with severe acute pancreatitis.
- Demonstrate progressive technical expertise in pancreatic operations, such as:
  a. Whipple resection
  b. Total or subtotal pancreatectomy
  c. Operative debridement and drainage of pancreatic abscess or infected necrosis
  d. Surgical exploration for islet cell tumors of the pancreas
  e. Local resection for ampullary tumors
  f. Drainage procedures for chronic pancreatitis
  g. Surgical drainage of pseudocysts
- Demonstrate expertise in open or laparoscopic splenectomy.

**Vascular Surgery**
- Perform the preoperative assessment of patients undergoing major vascular surgical procedures, including cardiac risk stratification and potential modification.
- Manage post-operative complications after vascular surgery, including:
  a. Cardiac complications
  b. Hemorrhage
  c. Graft thrombosis
  d. Wound or graft infection
- Demonstrate basics technical skills in vascular surgery, such as:
  a. Knot tying
  b. Instrument selection
  c. Suturing on blood vessels
  d. Handling of graft material
- Manage patients with venous incompetence or ulceration.
- Demonstrate proficiency in dialysis access procedures.
- Assess and plan for patients who require amputations.
- Acquire progressive expertise in the technical performance of major vascular procedures, including:
  a. Carotid endarterectomy
  b. Open AAA repair
  c. Lower extremity bypass grafting
  d. Repair of traumatic injuries
  e. Portosystemic shunts
  f. Endovascular intervention
g. Amputations

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent.
- Communicate with patients and family clearly and effectively, including bad news (e.g., cancer diagnosis) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among healthcare teams.
- Educate patients on behavior modification and cancer screening, such as breast self-examination.
- Coordinate anticipated needs and minimize the unexpected in the operating room.
- Respect team members from other specialties.
- Follow all military protocols and regulations on the Air Force Base.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks

- Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
- Exemplify ethical behavior for medical students and other trainees.
- Respond to criticism, correction, and difficult situations with composure and attention.
- Recognize own errors and limitation, and seek advice and improvement.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Respond promptly to requests from consultants, faculty and staff.
- Complete records and logs and attend conferences without reminders.

PRACTICE BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas.
- Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g. simulation models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

- Apply appropriate screening/surveillance for common malignancies.
- Compare military vs. civilian health care system.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial factors associated with patient care issues, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
  e. Enterostomal therapy
  f. Cost containment
  g. Pre-admission procedures and authorization
  h. Conservation and availability of in-patient resources
  i. Adjuvant and neoadjuvant cancer therapy
- Adhere to protocols and standards of care.
- Observe advanced directives such as living will, health care proxy and power of attorney.
- Assist and plan for palliative care for patients with advanced diseases.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees (e.g. tumor board), workgroups, or research teams to improve process and patient outcome.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of complex GI problems such as:
  a. Variceal hemorrhage
  b. Biliary obstruction
  c. Gastroparesis
  d. Inflammatory bowel disease
  e. Chronic abdominal pain
  f. Chronic constipation
  g. Localized and advanced malignancies
- Observe advanced directives such as living will, health care proxy and power of attorney.
PEDIATRIC SURGERY
ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

Sunrise Hospital & Medical Center
3186 S. Maryland Parkway
Las Vegas, NV 89109

Faculty: Michael Scheidler, MD

Length of Rotation: 1 - 2 months

Service Description
Elective and emergency pediatric surgery, with exposure to critically ill patients in both pediatric and neonatal intensive care units.

Competencies-based Goals and Objectives
The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to innovation and leadership.

MEDICAL KNOWLEDGE
The resident will acquire comprehensive knowledge in the evaluation of pediatric surgical patients, and in both the operative and non-operative management of their surgical conditions.

- Review the cardiac and pulmonary physiology in the pediatric patient.
- Define the goals of pediatric resuscitation.
- Classify congenital malformations, recognize their embryologic origin and the need for surgical intervention, including:
  a. Thyroglossal duct cyst
  b. Cystic hygroma
  c. Pyloric stenosis
d. Tracheal esophageal fistulas
e. Abdominal wall defects (e.g., omphalocele and gastroschisis)
f. Undescended testis
g. Diaphragmatic hernia
h. Imperforate anus
i. Hirschsprung disease
j. PDA

- Explain the presentation of life threatening conditions of the newborn such as NEC and midgut volvulus.
- Summarize the basic approach to the diagnosis and management of more common surgical problems of infancy and childhood, such as:
  a. Pyloric stenosis
  b. Appendicitis
  c. Intussusception
  d. Inguinal and umbilical hernias
- Present the differential diagnosis for pediatric gastrointestinal hemorrhage.
- Outline the surgical steps to complex surgical procedures for infants and children, such as:
  a. Thoracotomy (for pulmonary and esophageal disease)
  b. Flexible and rigid endoscopy
  c. Antireflux procedure
  d. Bowel resection
  e. Pull through operation for Hirschsprung disease
  f. Nephrectomy (e.g., Wilms tumor)
  g. Splenectomy and splenorrhaphy
  h. Management of the seriously injured pediatric patient
  i. Kasai procedure
- Outline the diagnosis and management options in the treatment of short-gut syndrome.

**PATIENT CARE**

The resident will provide comprehensive care for pediatric surgical patients and demonstrate progressive expertise in their surgical procedures.

- Evaluate surgical conditions in the pediatric population through a comprehensive history, physical examination, and appropriate diagnostic studies.
- Manage the post-operative care of pediatric patients undergoing both routine and complicated procedures.
- Perform routine surgical procedures, including:
  a. Excision of skin and subcutaneous lesions
  b. Lymph node biopsy
  c. Chest tube placement
  d. Central venous catheter placement
  e. Venous cutdown
  f. Pyloromyotomy
  g. Appendectomy
h. Herniorrhaphy (umbilical and inguinal)
i. Circumcision
j. Orchiopexy
k. Oophorectomy
l. Vaginoscopy for foreign body or biopsy
m. Excision of supernumerary digit
n. Muscle biopsy
o. Thyroglossal duct cyst excision
p. Endoscopy (e.g., for FB)
q. Gastrostomy
r. Tracheostomy

- Assist in the operative care of more complex problems in pediatric surgery, including:
  a. Gastroschisis and omphalocele
  b. Branchial cleft cyst
c. Cystic hygroma
d. TEF
e. Diaphragmatic hernia
f. ECMO
g. GE reflux
h. Intussusception
i. Laparotomy for trauma
j. Splenectomy (laparoscopic or open), splenorrhaphy
k. Cholecystectomy (open or laparoscopic)
l. Neuroblastoma or Wilms tumor
m. Teratomas or germ cell tumors
n. Torticollis
o. Biliary atresia
p. PDA
q. Hirschsprung disease
r. Imperforate anus
s. Undescended testis
t. NEC
u. Midgut malrotation

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

- Report up the “chain of command” concisely and in a timely fashion.
- Performs clear informed consent from car givers.
- Communicate with patients and family clearly and effectively, including bad news (e.g., cancer diagnosis) and complications, and manages conflicts.
- Facilitate exchange of information, updates, and recommendations among health care teams.
- Educate patients (and their adult care givers) on behavior modification
• Coordinate anticipated needs and minimize the unexpected in the operating room.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks.

• Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
• Exemplify ethical behavior for medical students and other trainees.
• Respond to criticism, correction, and difficult situations with composure and attention.
• Recognize own errors and limitation, and seek advice and improvement.
• Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
• Respond promptly to requests from consultants, faculty and staff.
• Complete records and logs and attend conferences without reminders.
• Respect residents from other specialties (e.g., pediatric or FM residents).

PRACTICE BASED LEARNING AND IMPROVEMENT

The resident will improve his or her own practice in education, self-directed learning, and patient care.

• Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
• Present patient cases and topics in conferences clearly with citation of supporting evidence.
• Lead, design, and organize education activities, including skills labs.
• Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
• Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
• Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and research methodology.
• Analyze current data addressing controversial areas pediatric surgery.
• Identify gaps in skills (open, laparoscopic, and robotic) and practice independently (e.g. simulation models) to improve.

SYSTEMS-BASED PRACTICE

The resident will coordinate and improve care within the system into which he or she delivers care.

• Apply appropriate screening/surveillance for common congenital problems.
• Recognize the differences between PPO’s HMO’s and standard medical insurance and the different requirements for authorizations needed for hospital admissions and
operations.
● Compare and contrast academic and private practice.
● Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
● Elucidate the economic and psychosocial issues associated with the care of the pediatric surgical patient, including:
  a. Ethics
  b. Rehabilitation
  c. Home care resources
  d. Patient and family support groups
  e. Enterostomal therapy
  f. Cost containment
  g. Resource utilization
● Adhere to protocols and standards of care.
● Assist and plan for palliative care for children with advanced diseases.
● Identify and correct system issues and errors (e.g., EHR).
● Arrange for discharge care, such as follow-up appointments and visiting home care.
● Engage in process improvement and quality improvement committees, workgroups, or research teams.
● Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
● Coordinate multi-disciplinary care of complex problems to involve:
  a. Pediatricians
  b. Intensivists
  c. Social services
  d. Child Psychiatrist
  e. Physical therapy
● Observe advanced directives such as living will, health care proxy and power of attorney.
BURNS SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV. 89102

Faculty: Syed Saquib, MD
Nathan Ozobia, MD
Terry Lewis, MD

Assigned Residents: PGY-2
Length of Rotation: 2 months

Service Description

Acute resuscitation and wound care management at the UMC Burn Care Unit.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objective for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:

1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of the burn patients, and in both the operative and non-operative management of surgical conditions.

- Categorize the pathophysiology of thermal, chemical, and electrical burns, including consideration of:
  a. Systemic pathophysiology
  b. Cardiac depression
  c. Local pathophysiology
  d. Pulmonary compromise
- Compare and contrast the underlying pathophysiology and apparent severity between different burn mechanisms such as thermal, electrical, and chemical injury
- Describe the “classical” chemical agents causing burns and list their antidotes.
- Outline the physics and dynamics of thermal injury and the progression of tissue damage.
- Identify the appearance of the burn wound in relation to its depth, bacteriologic condition, healing potential, and requirement for intervention.
- Review the criteria for adequate evaluation of a burned patient, including historical
aspects of the type of burn and subjective physical findings.

● Discuss an initial treatment plan for stabilization and fluid resuscitation of a burned patient based on the above evaluation.

● Outline the principles of burn shock, immunologic alteration, and bacteriologic pathology of burned skin.

● Define the “Rule of Nines” as it relates to total body surface area of the burn.

● Describe the relationship between burn depth and the degree of the burn.

● Review the basic principles and controversies concerning the management of the burn wound, and describe a clinical plan for its care.

● Analyze the principles of systemic and local antibacterial agents in the burn wound.

● Explain the special circumstances created by electrical, chemical, and inhalation burn injury, and apply their relation to the management.

● Describe the pathology and management of inhalation injury, noting its relation to mortality, morbidity, and time course of patient recovery.

● Explain the etiology and treatment of carbon monoxide poisoning.

● Discuss the physics and pathology of the electrical burn and its relation to associated organ injury, including:
  a. Current
  b. Neurological injury
  c. Entrance and exit wounds
  d. Vascular problems
  e. Deep tissue involvement
  f. Rhabdomyolysis

● Recognize the musculoskeletal consequences of a major burn, including extremity and hand contracture, and common techniques used to prevent these disabilities such as splinting, immobilization techniques, and physical therapy.

● Describe the anatomy of the hand in relation to the specialized requirements of management and rehabilitation of the burned hand.

● Describe the indications, techniques for harvest, application, immobilization, and care of split- and full- thickness skin grafts.

● Explain the principles of wound contracture, and report desirable and harmful effects of contracture on:
  a. Initial management of the burn victim
  b. Closure of the burn wound
  c. Rehabilitation of the burn patient

● Describe and explain the following terms:
  a. Compartment syndromes
  b. Burn eschar contraction
  c. Fasciotomy and escharotomy incisions and techniques

● Summarize the treatment of chemical burns to include pathology, sources, decontamination, and management.

● Review and analyze the special circumstances, management, and rehabilitation of burns in the pediatric patient.

● Describe the indications for, and basic techniques of, plastic and reconstructive intervention in the burn wound to alleviate:
  a. Scar contracture
b. Underlying joint contracture

c. Hypertrophic scar

- Describe the principles of and indications for operative techniques such as burn wound debridement, tangential excision, full thickness burn excision, and amputation in burn patients.
- Recite the indications for and complications of allograft, xenograft, biomaterials, and skin autoculture.

**PATIENT CARE**

The resident will provide comprehensive care for burn patients and demonstrate progressive expertise in surgical procedures.

- Perform a complete history and physical examination on patients with burns and initiate appropriate initial treatment with assistance from faculty.
- Provide emergency burn patient evaluation and monitoring.
- Determine the level of care and need for transfer to a burn facility.
- Estimate the depth and percent body surface area of burns.
- Implement fluid resuscitation protocols for children and adults.
- Manage burn wound infection including antibiotic topical burn therapy, burn wound cultures, septic workup.
- Manage systemic effects of the burn wound in the critically injured surgical patient, considering:
  a. Sepsis
  b. Gastrointestinal (GI) effects
  c. Immunologic problems
  d. Cardio-respiratory effects
  e. Abdominal compartment syndrome
- Manage treatment of inhalation injury:
  a. Flexible laryngotracheoscopy
  b. Ventilator management
- Manage carbon monoxide poisoning.
- Manage wound therapy, including:
  a. Eschar formation and slough
  b. Re-epithelialization
  c. Tangential and fascial excision
  d. Debridement of deep tissues
  e. Skin graft harvest and application
- Evaluate electrical burns, including:
  a. Entrance and exit wound
  b. Cardiac, vascular, neurologic, ophthalmologic effects
  c. Deep tissue destruction
  d. Rhabdomyolysis
- Institute treatment of chemical burns, including:
  a. Identification of types and sources
  b. Management by dilution or neutralization
c. Treatment of systemic effects of local chemicals
   ● Manage eschar contracture and edema control:
     a. Techniques of escharotomy
     b. Techniques of fasciotomy
   ● Device specific treatment for special burn sites such as eyes and ears.
   ● Perform operative appropriate burn management (e.g., debridement, escharotomy).

**INTERPERSONAL AND COMMUNICATION SKILLS**

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

   ● Communicate with patients and family members in difficult burn cases, including discussion of informed consents and of complications.
   ● Maintain and facilitate a clear channel of communication among members of the multi-disciplinary team (e.g., with therapists to order pressure garments for post burn scars).
   ● Direct clinical management and supervision of the burn team.

**PROFESSIONALISM**

The resident will demonstrate professional behavior in patient care, maintenance of own health, and in performance of assignments and tasks.

   ● Exhibit compassion, empathy, and respect to patients and family, including recognition of their culture background and adherence to privacy regulations.
   ● Exhibit ethical consideration and compassion to burn victims and family.
   ● Attend outpatient burn clinic and any burn conferences.

**PRACTICE BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

   ● Assess gaps in knowledge about burns and their management and develop a plan for personal improvement, by accessing burn literature through a variety of means.
   ● Educate medical students on the burn service and involve other learners in patient care activities appropriate to their level of training.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

   ● Utilize the full extent of burn care capabilities University Medical Center.
   ● Follow the American Burn Association (ABA) classification of burns and protocols for burn unit transfer and triage of burn patients.
• Identity resources with assistance from social services and community agencies to support burn patients (e.g., support groups).
• Arrange for appropriate follow-up and rehabilitation after discharge.
PLASTIC SURGERY

ROTATION SPECIFIC GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV  89102
Specialty Surgery Center
2401 Paseo Del Prado
Las Vegas, NV

Plastic Surgery Chief: Richard Baynosa, MD
Faculty: John Brosius, MD
John Menezes, MD

Service Description

Broad-based elective and emergency plastic surgery, including breast reconstruction, extremity replantation, microsurgery, cosmetic surgery, and surgery for congenital cranial-facial malformations.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objectives for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

The resident will acquire comprehensive knowledge in the evaluation of surgical patients in the field of plastic surgery, and in both the operative and non-operative management of their conditions.

- Outline the components of a comprehensive focused history and physical examination pertinent to the evaluation and correction of congenital or acquired defects under the realm of plastic and reconstructive surgery.
- Discuss and compare skin and connective tissue according to:
  a. Anatomy
  b. Normal physiology and biochemistry
  c. Pathophysiology of benign and malignant skin disorders
d. Unique pathophysiology of connective tissue disorders

- Explain the basic techniques for surgical repair of superficial incisions and lacerations of the head, neck, trunk, and extremities to include the following considerations:
  a. Skin
  b. Subcutaneous tissue
  c. Superficial muscle and fascia
  d. Dressings
  e. Splints
  f. Suturing and knot tying

- Explain the assessment of facial skeletal trauma according to the following systems:
  a. LeFort I, II, and III classification of maxillary fractures
  b. Nasoethmoidal disruption classification
  c. Zygomatic, orbit, and mandibular fractures
  d. Disruption classification

- Define the tumor, node, and metastases (TNM) classification system as used for neoplasms of skin, soft tissue, and head and neck.

- Discuss epidemiology, risk factors, treatment, and prevention of cutaneous malignancies in the geriatric patient, including:
  a. Skin cancer rates (basal cell carcinoma [BCC], squamous cell carcinoma [SCC])
  b. Average age of onset for BCC/SCC
  c. Etiology of BCC/SCC
  d. Usual modes of treatment for BCC/SCC (Mohs Technique, radiation, chemotherapy)
  e. Prevention using medications (isotretinoin, beta-carotene)

- Explain the methods for performing incisional and excisional biopsies of skin and oral cavity.

- Summarize the evaluation of patients with head and neck cancer, and develop a treatment plan according to the following criteria:
  a. Location of lesion
  b. Size of primary lesion
  c. Presence of metastatic disease

- Discuss the use of the reconstructive ladder (including skin grafts, local flaps, and regional and free microvascular flaps) in the definitive management of traumatic or excised wounds.

- Discuss the surgical treatment of:
  a. Common hand injuries and tumors
  b. Surgical repair of facial trauma, soft tissue, and bony defects
  c. Resection and reconstruction of the simple, soft tissue defects following resection of neoplasms of the head and neck
  d. Resection of skin and soft tissue neoplasms requiring complex reconstruction
  e. Reconstruction of the breast for congenital and acquired defects
  f. Management of the burned hand and face
  g. Reconstruction of congenital craniofacial defects

- Analyze treatment options for the comprehensive care of the burn patient, including:
a. Excision of burn  
b. Homografting  
c. Xenografting  
d. Autografting  
e. Tissue engineering and prefabrication  

- Summarize currently accepted surgical techniques for treating the following:  
a. Correction of congenital lesions of the head/neck and hand/trunk  
b. Craniofacial anomalies, including cleft lip and palate  
c. Breast reconstruction after mastectomy  
d. Reconstruction and ablative head and neck surgery  
e. Aesthetic rejuvenation of the face and body

**PATIENT CARE**

The resident will provide comprehensive care for surgical patients and demonstrate progressive expertise in surgical procedures.

- Complete a comprehensive physical examination and clinical data history, including pertinent diagnostic laboratory and radiographic findings.  
- Demonstrate the systematic examination of the hand to assess motor and sensory function, including:  
  a. Intrinsic tendon and muscle function  
  b. Extensive tendon and muscle function  
  c. Median nerve  
  d. Ulnar nerve  
  e. Radial nerve  
  f. Circulation  
  g. Bones  
- Evaluate and treat simple and intermediate abrasions and burns of the face, trunk, and extremities.  
- Perform simple incisional biopsies and excise small lesions on the skin and subcutaneous tissue of the trunk or extremities.  
- Provide definitive treatment plans for superficial incised and lacerated wounds of the neck, trunk, and extremities.  
- Participate in the perioperative evaluation and management of congenital or acquired defects (traumatic and surgical).  
- Apply and remove dressings of the head, neck, hand, trunk, and extremities, including:  
  a. Occlusive  
  b. Casts  
  c. Non-occlusive  
  d. Alginate  
  e. Wet to dry  
  f. Colloidal  
- Debride and suture major non-facial wounds and burns.  
- Participate in the acute resuscitation, evaluation, and initial treatment of a burned patient.  
- Harvest and apply split-thickness skin grafts.
• Perform simple, localized skin flaps for wound coverage.
• Evaluate and formulate treatment plans for:
  a. Hand injuries
  b. Congenital anomalies
  c. Facial fractures
  d. Breast deformities
  e. Head and neck cancer
  f. Burn patients
• Assist in the planning and performance of complex reconstructive operations.
• Reconstruct defects with random flaps, composite flaps, and grafts.
• Develop familiarity and expertise in major resectional and reconstructive surgery of the head, neck, breast, trunk and extremities.
• Perform major excision of burns, escharotomy, and skin grafting.
• Assist in complex operations, including:
  a. Complex soft tissue injury
  b. Fractures requiring operative and non-operative reduction
  c. Nerve, tendon, and bone surgery of the hand
  d. Vascular injuries
  e. Reconstruction and reparative surgery of the hand
  f. Surgical repair of facial trauma
  g. Resection of neoplasms of the head and neck
  h. Resection of major skin and soft tissue neoplasms requiring complex reconstruction
  i. Surgical repair of craniomaxillofacial congenital defects
  j. Reconstruction of the breast
  k. Complex wound reconstruction using flap both local, regional, and free microvascular

INTERPERSONAL AND COMMUNICATION SKILLS

The resident will demonstrate effective interpersonal and communication skills in the care of patients, coordination of care, and in the performance of procedures.

• Display a friendly disposition that is conducive to successful interaction with team members and patients
• Communicate treatment plans with support staff and be able to listen and respond to the patients and support staff’s questions in a positive manner
• Interact effectively with patients and family members from a diverse background
• Gather essential information from patients, and accurately document patient encounters
• Interact with nurses, residents, attending surgeons and ancillary staff to achieve the health-related goals of the patient.
• Coordinate anticipated needs and minimize the unexpected in the operating room.

PROFESSIONALISM

The resident will demonstrate professional behavior in patient care, maintenance of own health,
and in performance of assignments and tasks.

- Relate as a team member with other residents and fellows from other departments.
- Relate with all patients and support staff politely and with respect.
- Respond to pages and consults in a timely manner.
- Respond to criticism and correction with calm and attentive demeanor.
- Demonstrate appropriate dress and decorum while on duty.
- Handle all patient information confidentially.
- Follow the chain of command on the resident service.
- Maintain own physical and emotional health, follow principles of wellness and fatigue mitigation, and assure a working environment and schedule which do not compromise patient safety.
- Complete records and logs and attend conferences without reminders.

**PRACTICE-BASED LEARNING AND IMPROVEMENT**

The resident will improve his or her own practice in education, self-directed learning, and patient care.

- Engage in effective teaching style in both informal setting and in conferences to medical students and other learners.
- Present patient cases and topics in conferences clearly with citation of supporting evidence.
- Lead, design, and organize education activities, including skills labs.
- Develop self-learning plan (e.g. SCORES) based on feedback and ABSITE scores.
- Seek and adopt evidence-based information (e.g., society journals) for best practices and changes in practice patterns.
- Develop a working knowledge of prior research milestones (landmark findings), current research efforts, and cancer research methodology.
- Analyze current data addressing controversial areas of plastic surgery.
- Identify gaps in skills, and practice independently (e.g. simulation models) to improve.

**SYSTEMS-BASED PRACTICE**

The resident will coordinate and improve care within the system into which he or she delivers care.

- Demonstrate good patient advocacy skills.
- Recognize and understand how different health insurance companies affect the treatment plan for patients.
- Compare and contrast academic and private practice.
- Consider cost-effectiveness when selecting alternative diagnostic and therapeutic options.
- Elucidate the economic and psychosocial issues associated with care of plastic surgery patients, including:
  a. Ethics
  b. Rehabilitation
c. Home care resources
d. Patient and family support groups
e. Cost containment
f. Pre-admission procedures and authorization
g. Conservation and availability of in-patient resources
h. Geriatric care

- Adhere to protocols and standards of care.
- Identify and correct system issues and errors (e.g., EHR).
- Arrange for discharge care, such as follow-up appointments and visiting home care.
- Engage in committees, workgroups, or research teams to improve process and patient outcome.
- Understand and practice the use of ICD-10 Codes/CPT Codes in billing.
- Coordinate multi-disciplinary care of complex problems, using all available resources, such as:
  a. Social worker
  b. Rehabilitation
  c. Occupational and Physical Therapy
  d. Other medical consultants
  e. Psychiatry and psychology
  f. Discharge planners
- Observe advanced directives such as living will, health care proxy and power of attorney.
HEAD AND NECK SURGERY/ OTORHINOLARYNGOLOGY
PGY 4 for 2 months

COMPETENCY-BASED GOALS AND OBJECTIVES

Site Location: University Medical Center
1800 W. Charleston Blvd.
Las Vegas, NV  89102
ENT Chief: Robert Wang, MD
Faculty: Matthew Ng, MD
Tsungju O-Lee, MD,

Assigned Residents: PGY-4
Length of Rotation: 2 month
Reference Sources: SCORE Curriculum
Conference Schedule: Tuesday, 8:00 am – 11:00 am & 1:00 pm – 2:00 pm

Service Description

The resident will be involved in the comprehensive care of both elective and emergency Head and Neck surgery patients, with special attention to head and neck cancer, and surgical treatment of the disease of the thyroid and parathyroid.

Competencies-based Goals and Objectives

The ACGME milestones are targets of competencies for all residents as they complete successive levels of training. Residents should be familiar with the year-specific goals and objectives for the targeted level of competencies for each year. Taken together, as the residents advance they are expected to:
1. Attain knowledge and patient care skills from “core” conditions and operations to “advanced” conditions and operations;
2. Function in their responsibilities from being supervised to being independent;
3. Engage in research and education capacities and roles from basic participation to leadership and innovation.

MEDICAL KNOWLEDGE

- Identify the anatomy and explain the physiology of the ear, nose, oral cavity, and throat.
- Summarize the essential components of a focused history and physical examination for common otolaryngologic problems.
- Describe and compare the pathophysiology of the following common ENT diseases:
  a. Sinusitis
  b. Sialadenitis
  c. Neck abscess
  d. Epiglottitis
- Describe and explain the pathophysiology of presbycusis as it can be:
  a. Conductive
  b. Metabolic and toxic
c. Neural 
d. Cochlear 
e. Tumor-related 
f. Age-dependent 

- Explain how physical examination differs for delineation of conductive versus neurosensory hearing loss.
- Explain the principal causes of simple epistaxis and describe its management.
- Evaluate patients with facial trauma and develop a treatment plan for the management of:
  a. Fractures 
  b. Lacerations 
  c. Hemotympanum 
  d. Epistaxis 
- Describe the indications for tracheostomy in adults and children.
- Summarize the characteristics of the common neoplasms of the ear, nose, and throat, and describe appropriate surgical intervention.
- Outline the diagnostic approaches to otolaryngologic neoplasia, including:
  a. Direct visualization 
  b. Indirect visualization 
  c. Use of radiography 
  d. Fine-needle biopsy 
- Describe diagnostic and therapeutic procedures utilized in treating the following:
  a. Abscess 
  b. Neck mass 
  c. Oral ulcer 
  d. Salivary gland mass 
- Describe and demonstrate methods for removing foreign bodies from the trachea, bronchus, and esophagus.
- Compare surgical approaches using surgical flaps for repair of ENT defects and trauma of the lip, alar rim, and helix.
- Outline the diagnosis and repair of facial fractures of the mandible, nose, and frontal sinus.
- Summarize diagnostic and therapeutic considerations in the management of caustic injury to the mouth, nasopharynx, trachea, and esophagus.
- Discuss the management of airway in patients with terminal carcinoma of the thyroid and trachea.
- Describe the signs and symptoms and discuss the health care significance to elderly patients from the pathophysiology of:
  a. Tinnitus 
  b. Vertigo 
  c. Cerumen impaction 
- Define and discuss the three-dimensional anatomy of the head and neck region with regard to:
  a. Interrelationships of anatomy 
  b. Fascial planes 
  c. Path and course of cranial nerves 
  d. Major arterioles and venous structures 
  e. Musculature of face and neck 
  f. Anatomy of larynx and cervical trachea 
  g. Location of cricothyroid membrane 
- Describe the cervical anatomy of nasopharynx, pharynx, esophagus (special emphasis on sinuses, Eustachian tubes, middle and external ear structures)
- Describe laryngeal function as it relates to voice production.
- Describe the interrelationship of pharyngeal and laryngeal function.
• Identify the bones of the skull, face, and cervical spine. Explain their relationship to major neurologic and neurovascular structures of the head and neck.
• Analyze predisposing factors for head and neck cancer.
• Differentiate between neoplastic and non-neoplastic neck masses.
• Explain the tumor, nodes, and metastases (TNM) classification system for tumors of the head and neck.
• Indicate how to examine a patient with severe facial laceration to rule out damage to the following:
  a. Lacrimal drainage systems
  b. Parotid gland and duct
  c. Facial nerve
• Identify and delineate
  a. Pathophysiology of cranial nerve dysfunctions and injuries
  b. Brachial plexus injuries
  c. Anatomy/location of parotid and submandibular ductal drainage systems
• Define and describe the LeFort maxillary fracture classification system.
• Describe the roles of the following diagnostic modalities in the evaluation of head and neck lesions and facial fracture:
  a. Plain x-rays e. Isotope scans
  b. CT scanning f. Ultrasound
  c. Sialography
  d. Magnetic resonance imaging (MRI)
• Discuss indications for radical and modified radical neck dissection.
• Distinguish between the following kinds of grafts in the management of head and neck problems:
  a. Split-thickness grafts
  b. Full-thickness skin grafts
  c. Rotational flaps
  d. Free flaps
• Describe the anatomy and the advantages and disadvantages of regional flaps available for head and neck reconstruction.
• Compare and contrast the use of the following local flaps:
  a. Advancement e. Z-plasty
  b. Rotational f. W-plasty
  c. Pedicle g. V-Y advancement
  d. Rhomboid (Limberg)
• Outline the advantages and disadvantages of irradiation, chemotherapy, and resection of neoplastic lesions of the:
  a. Tongue d. Retromolar trigone
  b. Floor of mouth e. Alveolar ridge
  c. Buccal mucosa f. Palate
• Discuss the frequency of benign and malignant head and neck tumors in the pediatric population.
• Outline the microbiology and treatment of deep neck abscesses.
• Outline the anatomy, physiology, pathophysiology of common benign and malignant thyroid diseases.
● Outline the anatomy, physiology, pathophysiology of common benign and malignant parathyroid diseases.

● Interpret neck ultrasound, as well as interpreting other radiographic studies relevant the patient population (sestamibi, 4-D CT, PET CT)

**PATIENT CARE**

● Perform and record a focused ENT history and physical examination.

● Manage the emergent/elective airway; using visual inspection, radiographic evaluation, indirect invasive and non-invasive visualization techniques (direct speculum and indirect mirror evaluations, direct fiberoptic and rigid evaluations); with consideration for:
  a. Nose, nasal passages  
  d. Larynx  
  b. Nasopharynx  
  e. Trachea  
  c. Oropharynx  

● Be prepared to manage airway obstruction as the result of:
  a. Edema  
  d. Anaphylaxis  
  b. Secretion  
  e. Foreign body  
  c. Benign and malignant tumors (including, vascular malformations and infectious processes)

● Evaluate patients with facial trauma, including fractures, lacerations, hemotympanum, and epistaxis.

● Perform tracheostomy on adults under direct supervision.

● Perform biopsies of lesions of skin of face, neck, and oral cavity.

● Perform evaluation of a neck mass, and provide appropriate treatment.

● Correctly differentiate between the indications for and management of cricothyroidotomy and tracheostomy, demonstrating varying techniques and choice of instrumentation for emergent airway management and ventilation in each.

● Interpret radiologic examinations of sinuses.

● Perform simple endoscopy including:
  a. Nasopharyngoscopy  
  c. Esophagoscopy  
  b. Direct laryngoscopy  

● Evaluate head and neck tumor patients, and be prepared to perform a tumor biopsy.

● Perform tracheostomy on children with supervision.

● Evaluate radiologic studies of the head and neck, including computed axial tomography (CAT) scanning.

● Evaluate and treat head and neck abscesses and other masses.

● Remove esophageal foreign bodies endoscopically.

● Perform diagnostic bronchoscopy.

● Reconstruct facial and neck defects with transposition and myocutaneous flaps.

● Manage facial fractures with appropriate consultation.

● Evaluate and treat caustic injury.

● Perform head and neck examinations, including nasopharyngoscopy and fiberoptic direct laryngoscopy.

● Provide emergency airway management, including performance of:
  a. Intubation  
  b. Emergency cricothyrotomy
c. Emergency tracheostomy
    ● Perform biopsy of all intraoral lesions.
    ● Care for contaminated wounds, including animal bites of face and neck.
    ● Assist with incisions for head and neck surgery, including:
      a. Radical neck dissection
      b. Salivary gland surgery
      c. Tracheostomy
      d. Laryngeal/tracheal trauma
      e. Considerations for incisions of previously irradiated tissues
    ● Formulate a plan for the management of an unknown primary tumor of the head and neck.
    ● Perform fine-needle biopsies.
    ● Perform simple operative incisions with supervision (tracheostomy, intubation, simple lesions of head and neck).
    ● Assist with repair of avulsion of ear and nose.
    ● Perform simple operative incisions without direct supervision.
    ● Perform radical neck dissection under direct supervision.
    ● Manage postoperative complications, including nerve paralysis and cutaneous fistulas from the aerodigestive tract.
    ● Manage trauma to the upper airway.
    ● Evaluate and perform directed history and physical examinations on endocrine and oncologic surgery clinic patients,
    ● Review radiographic information to develop a management plan for common thyroid and parathyroid diseases.
    ● Assist in and perform surgical resection of the thyroid and the parathyroid, including neck dissection.
    ● Manage post-operative issues common to head and neck surgical patients.

INTERPERSONAL AND COMMUNICATION SKILLS

● Display a friendly disposition that is conducive to successful interaction with team members and patients
● Communicate treatment plans with support staff and be able to listen and respond to the patients and support staff’s questions in a positive manner
● Interact effectively with patients and family members from a diverse background
● Gather essential information from patients, and accurately document patient encounters
● Interact with nurses, residents, attending surgeons and ancillary staff to achieve the health-related goals of the patient

PROFESSIONALISM

● Relate as a team member with other residents and fellows from other departments
● Relate with all patients and support staff politely and with respect
● Respond to pages and consults in a timely manner
● Respond to criticism and correction with calm and attentive demeanor
● Demonstrate appropriate dress and decorum while on duty
• Handle all patient information confidentially and not discuss it in hallways or other public places
• Use and know the chain of command on the resident service
• Demonstrate kindness, empathy and maturity in the interrelationship with patients with routine surgical problems

PRACTICE-BASED LEARNING AND IMPROVEMENT

• Remain current on medical literature as it relates to principles of head and neck surgery
  Be adept with online medical databases
• Teach, guide and act as a role model for medical students
• Demonstrate progression in resource management skills
• Attend and actively participate in didactic sessions/presentations

SYSTEMS-BASED PRACTICE

• Integrate closely with the total team of medical students, residents, and attending, caring for patients involved in head and neck surgery
• Utilize the expertise of other services and support personnel
• Demonstrate good patient advocacy skills
• Recognize and understand how different health insurance companies affect the treatment plan for patients