Medical Knowledge: Demonstrates knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences; applies this knowledge to patient care; demonstrates an investigatory and analytic thinking approach to clinical situations; and demonstrates a commitment to lifelong learning.

Knowledge:
- Mastery of surgical pathophysiology and critical care, pharmacology, physiology, and interpretation of hemodynamic data.
- Demonstrate ability to formulate and implement a diagnostic and treatment plan for diseases of the abdomen and pelvis that are amenable to surgical intervention.
- Demonstrate knowledge and outline appropriate work up for disorders of the esophagus, stomach, small intestine, colon, and anorectum, and serve as surgeon during operative interventions of these GI disorders.
- Understand Laparoscopic Surgery General concepts – ports, pneumoperitoneum, scopes, magnification; general limitations, general indicators, general techniques, general risks.
- Understand commonly undertaken minimally invasive surgery techniques especially pertinent to the service.
- Understand the diseases/disorders being treated: achalasia, gastroesophageal reflux, bariatric surgery, cholecystitis, splenectomy, adrenalectomy (adenoma), colectomy (polyps) and hepatic cysts.
- Understand preoperative concerns unique to minimally invasive (laparoscopic) surgery: cardiac, pulmonary, previous operations.
- Understand postoperative concerns, especially unique to laparoscopic surgery: pulmonary, cardiac, pain, potential complications, especially related to, pneumo-peritoneum insufflation, and specific operations.
- Coordinate overall care of patients with hepatobiliary disease including: initial evaluation, appropriate diagnostic studies, indicated consultations, operative management
- Summarize intra-abdominal laparoscopic procedures currently being performed, including: cholecystectomy, hernia repairs, anti-reflux procedures, adrenalectomy, splenectomy.
- Demonstrate familiarity with surgical literature and extensive areas of basic surgical disease in abdominal surgery, alimentary tract and digestive systems, endocrine, liver, biliary tract and pancreas, endoscopic and laparoscopic surgery.
- Understands concepts of Inflammatory bowel disease, basic medical management and surgical options/pitfalls
- Able to manage pancreatitis
- Understands foregut pathophysiology in GERD and achalasia
- Must relate basic medical knowledge to patient care. Residents must critically evaluate and demonstrate knowledge of pertinent scientific information.
- Analyze and present complications at weekly Death and Complication Conference
- Exhibit knowledge base sufficient to teach junior level residents and students on the service.
- Demonstrate surgical competence by the use of significant surgical knowledge and advanced skill to achieve a performance that produces appropriate and anticipated outcomes.
- Demonstrate the capacity to integrate surgical continuity of care principles into the total care plan for all surgical patients.
- Through leadership and teaching, demonstrate understanding of the significance of the natural history of surgical disease, the consequence of surgical care (both positive and negative), and the influence of continuity of care upon surgical outcomes.
- Exhibit the capability to integrate surgical continuity of care principles into the total care plan for all surgical patients.

Patient Care: Demonstrate patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
Compassionate Patient Care:
- Demonstrates caring and respectful behaviors when interacting with patients and/or their families.
- Incorporates the patient preferences in making decisions about diagnostic and therapeutic interventions.
- Develops and executes patient care plans appropriate for chief resident.

Appropriate Patient Care:
- Gathers essential and accurate information about patients.
- Evaluates patients with complex surgical conditions and presents a differential diagnosis.
- Compare laparoscopic versus open procedures for each case.
- Makes informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develops and carries out patient management plans.
- Demonstrates knowledge of the indications and contraindications for various medications used in the preparation and performance of procedures.
- Coordinate the overall care of patients for the team of residents and students.

Effective Treatment and Health Promotion:
- Performs competently all essential medical and invasive procedures.
- Provides health care services aimed at preventing health problems and maintaining health.
- Works with health care professionals, including those from other disciplines, to provide Patient-focused care.

Technical Skills in Patient Care:
- Demonstrates knowledge, psychomotor skills and judgment related to his/her role in the performance of operative surgical procedures.
- Arrives in the OR prepared for the cognitive components of his/her role in individual operative surgical procedures.
- Demonstrates the ability to proceed through various steps of operative procedures in a manner that is consistent with the flow of the operation.
- Demonstrates the ability to make appropriate and timely decisions with respect to the operative procedure.
- Demonstrates manual dexterity appropriate for PGY-5.
- Demonstrate competence in the most complex surgical cases
- Demonstrates an understanding of the benefits and limitations of operative surgical techniques.
- Assist attending staff with complex surgical procedures.

Practice-Based Learning and Improvement: *Investigates and evaluates patient care practices, appraises and assimilates scientific evidence, and improves his/her patient care practices.*

Investigates And Evaluates Patient Care Practices:
- Analyzes practice experience using a systematic methodology.
- Obtains and uses information about their population of patients and the larger population from which patients are drawn.

Appraises and Assimilates Scientific Evidence Relevant To Patient Care:
- Locates, appraises, and assimilates evidence from scientific studies related to their patients' health problems.
- Applies knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of junior level residents.
• Exhibit and recognize the importance of lifelong learning in surgical practice.

**Improves Patient Care Practices:**
• Demonstrates the ability to analyze personal practice outcomes to improve patient care.
• Performs practice-based improvement activities using a systematic methodology.
• Uses information technology to manage information, access on-line medical information; and support his/her own education.
• Facilitates the learning of junior level residents.

**Interpersonal and Communication Skills:**  *Demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with patients, their families, and other health professionals.*
• Demonstrates skill and sensitivity for appropriate counseling and educating patients and their families in a variety of clinical situations.
• Creates and sustains therapeutic and ethically sound relationships with patients and families.
• Works effectively with others as a leader of the health care team and/or other professional groups.
• Effectively and promptly documents practice activities.
• Presents all patients and conference material in a concise, organized, chronologic, logical and knowledgeable manner.
• Utilizes input from all collaborative interactions with all personnel contributing to the surgical patient care.
• Exhibits surgical team leadership.
• Contributes via effective teaching and example to the educational efforts of the surgical residency.
• Evaluates the performance and competence of all members of the surgical residency team.

**Professionalism:**  *Demonstrate a commitment to carrying out professional responsibilities; adhere to ethical principles, and sensitivity to a diverse patient population.*
• Demonstrates respect, compassion and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and on-going professional development.
• Demonstrates a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
• Demonstrates sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
• Exhibits professionalism through timely completion of required administrative responsibilities (evaluations, recording hours, chart documentation, medical record dictations, etc.).
• Maintain positive relationships.
• Demonstrate accountability for actions and decisions.

**Systems-Based Practice:**  *Demonstrates an awareness of and responsiveness to the larger context and system of health care and effectively calls on system resources to provide care that is of optimal value.*

**Awareness and Responsiveness to the Health Care System:**
• Understands how patient care and other professional practices affect other health care professionals, the health care organization, and the larger society.
• Understand how these elements of the system affect their own practice.
• Knows how types of medical practice and delivery systems differ from one another, including methods and controlling health care costs and allocating resources.
• Incorporate the knowledge of ethical, legal, economic, and/or social factors into the activities of the entire surgical team for all components of surgical care.
Utilization of System Resources:
- Practices cost-effective health care and resource allocation that does not compromise quality of care.
- Advocates for quality patient care and assist patients in dealing with system complexities.
- Partner with health care managers and health care provides to assess, coordinate, and improve health care and understands how these activities can affect system performance.

Procedure Benchmarks:   Residents at the PGY-5 must be able to perform the procedures listed, in most cases, independently with little supervision. PGY-5 resident should be able to take junior level resident through some of the cases as chief.

- Performs complete dissection in a Laparoscopic Nissen Fundoplication
- Able to expose all parts of GI tract and perform small bowel and colon resections and anastomoses
- Performs Lap-appy fully
- Mobilization of stomach and procedures for ulcer disease
- Performs 2-handed laparoscopic cholecystectomy
- Completes hernia repair independently
- Completes partial colectomy independently
- Able to mobilize the splenic flexure
- Performs colon resections independently
- Performs hernia repairs independently
- Performs appendectomies independently
- Able to perform operations for chronic and acute pancreatitis with supervision

Assessment:   residents will be assessed throughout the program. The results will be utilized to improve resident performance. Residents will be evaluated on competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems based practices. The process of using assessment results to achieve progressive improvement in residents’ competence and performance, and direct experience for progressive responsibilities for patient management.

1) PATIENT CARE
   a) Weekly basic science conference
   b) New Innovations evaluations by Faculty (including mid-rotation feedback sessions)
   c) Weekly Attending Rounds

2) MEDICAL KNOWLEDGE
   a) Annual ABSITE
   b) Written evaluation by faculty (including mid-rotation feedback sessions)
   c) Faculty evaluation weekly general surgery conference
   d) Annual Mock Oral examinations
   e) Weekly Attending Rounds

3) PRACTICE-BASED LEARNING
   a) Faculty evaluation
   b) Weekly D and C
   c) Weekly attending rounds

4) PROFESSIONALISM
   a) Faculty critique of weekly GI/Radiology/Surgery conference
   b) 360 evaluations
   c) By Faculty (including mid-rotation feedback sessions)
   d) By other resident staff members
5) INTERPERSONAL RELATIONSHIPS & COMMUNICATION
   a) 360 evaluations
   b) By Faculty (including mid-rotation feedback sessions)

6) SYSTEMS-BASED PRACTICE
   a) Combined GI/Radiology/Surgery conference
   b) Faculty evaluation
Medical Knowledge: Demonstrates knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences; applies this knowledge to patient care; demonstrates an investigatory and analytic thinking approach to clinical situations; and demonstrates a commitment to lifelong learning.

Knowledge:
- Demonstrate an understanding of surgical pathophysiology, pharmacology, physiology, and interpretation of hemodynamic data.
- Demonstrate ability to formulate a diagnostic and treatment plan for diseases in abdominal surgery that are amenable to surgical intervention.
- Demonstrate familiarity with surgical literature and areas of basic surgical disease in abdominal surgery, alimentary tract and digestive systems, endocrine, liver, biliary tract and pancreas, endoscopic and laparoscopic surgery.
- Begin to understand and outline appropriate work up for disorders of the esophagus, stomach, small intestine, colon, and anorectum, and serve as surgeon during operative interventions of these GI disorders.
- Understand Laparoscopic Surgery General concepts – ports, pneumoperitoneum, scopes, magnification; general limitations, general indicators, general techniques, general risks.
- Must relate basic medical knowledge to patient care. Residents must critically evaluate and demonstrate knowledge of pertinent scientific information.
- Exhibit knowledge base sufficient to teach junior level residents and students on the service.
- Demonstrate surgical competence by the use of significant surgical knowledge and skill to achieve a performance that produces appropriate and anticipated outcomes.
- Demonstrate an understanding of integrating surgical continuity of care principles into the total care plan for all surgical patients.
- Demonstrate understanding of the significance of the natural history of surgical disease, the consequence of surgical care (both positive and negative), and the influence of continuity of care upon surgical outcomes.
- Exhibit knowledge of evaluation, preoperative management and postoperative management of gastrointestinal, pancreatic and hepatobiliary diseases.
- Understand hepatobiliary, pancreatic and gastrointestinal anatomy and physiology.
- Demonstrate the ability to evaluate and manage gastrointestinal disease states.

Patient Care: Demonstrate patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Compassionate Patient Care:
- Demonstrates caring and respectful behaviors when interacting with patients and/or their families.
- Incorporates the patient preferences in making decisions about diagnostic and therapeutic interventions.
- Develops and executes patient care plans appropriate for PGY-3/2 resident.

Appropriate Patient Care:
- Gathers essential and accurate information about patients.
- Evaluates patients with complex surgical indications and presents a differential diagnosis.
- Compare laparoscopic versus open procedures for each case.
- Makes informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Coordinate intervention of multiple specialties that may be involved in management of complex GI problems such as: varicele hemorrhage, biliary obstruction, and inflammatory bowel disease.
- In less complex cases may develop and carry out patient management plans as discussed with the chief resident and/or attending.
• Demonstrates knowledge of the indications and contraindications for various medications used in the preparation and performance of procedures.
• Provide follow-up care to the surgical patient in the outpatient clinic or surgical office.
• Perform initial consultation for inpatients with problems of the GI tract; develop differential diagnosis and initiate treatment plan.
• Assist with the overall care of patients for the team of residents and students.
• Participates in daily rounds, outpatient clinics, and resident teaching conferences.

Effective Treatment and Health Promotion:
• Participates in all essential medical and invasive procedures.
• Provides health care services aimed at preventing health problems and maintaining health.
• Works with health care professionals, including those from other disciplines, to provide Patient-focused care.

Technical Skills in Patient Care:
• Demonstrates knowledge, psychomotor skills and judgment related to his/her role in the performance of operative surgical procedures.
• Arrives in the OR prepared for the cognitive components of his/her role in individual operative surgical procedures.
• Demonstrates manual dexterity appropriate for PGY-3/2.
• Coordinate pre and post-operative care for the patient with the acute abdomen.
• Interpret the following in coordination with attending radiologists and staff:
  a. Acute abdominal series (identify free air, small bowel obstruction, ileus, colonic pseudo-obstruction, volvulus; the presence of ascites, atelectasis vs. pneumonia.
  b. Upper GI series.
  c. Barium enema
  d. Abdominal ultrasound and CT scans.
• Demonstrates the ability to proceed through various steps of operative procedures in a manner that is consistent with the flow of the operation.
  ▪ Evaluate and institute management of abdominal wound problems, including:
    a. Infection.
    b. Evisceration.
    c. Fasciitis.
    d. Dehiscence.
• Manage nonoperative care of patients with pancreatitis and learn indications for operative management of pancreatitis, timing of surgery in patients with gallstone pancreatitis,
• Ranson's criteria for assessing pancreatitis and its correlation with prognosis.
• Exhibits appropriate management of common general surgical problems.
• Demonstrate competence in the surgical cases
• Demonstrates an understanding of the benefits and limitations of operative surgical techniques.
• Assist attending staff and/or chief resident with complex surgical procedures.
• Perform common intermediate level biliary procedures and general surgical operations including morbid obesity procedures.

Practice-Based Learning and Improvement:  Investigates and evaluates patient care practices, appraises and assimilates scientific evidence, and improves his/her patient care practices.

Investigates And Evaluates Patient Care Practices:
• Analyzes practice experience using a systematic methodology.
• Obtains and uses information about their population of patients and the larger population from which patients are drawn.
Appraises and Assimilates Scientific Evidence Relevant To Patient Care:
- Locates, appraises, and assimilates evidence from scientific studies related to their Patients’ health problems.
- Applies knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of junior level residents.
- Exhibit and recognize the importance of lifelong learning in surgical practice.

Improves Patient Care Practices:
- Demonstrates the ability to analyze personal practice outcomes to improve patient care.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of junior level residents.

Interpersonal and Communication Skills:
Demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with patients, their families, and other health professionals.
- Demonstrates skill and sensitivity for appropriate counseling and educating patients and their families in a variety of clinical situations.
- Creates and sustains therapeutic and ethically sound relationships with patients and families.
- Works effectively with others as a leader of the health care team and/or other professional groups.
- Effectively and promptly documents practice activities.
- Presents all patients and conference material in a concise, organized, chronologic, logical and knowledgeable manner.
- Utilizes input from all collaborative interactions with all personnel contributing to the surgical patient care.
- Exhibits the ability to interact as part of the surgical team.
- Contributes via effective teaching and example to the educational efforts of the surgical residency.
- Participates in teaching PGY-1 residents and students on the service.
- Exhibits honesty, reliability, good communication skills, and appropriate judgment.

Professionalism:
Demonstrate a commitment to carrying out professional responsibilities; adhere to ethical principles, and sensitivity to a diverse patient population.
- Demonstrates respect, compassion and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and on-going professional development.
- Demonstrates a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrates sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
- Exhibits professionalism through timely completion of required administrative responsibilities (evaluations, recording hours, chart documentation, medical record dictations, etc.).
- Maintain positive relationships.
- Demonstrate accountability for actions and decisions.

Systems-Based Practice:
Demonstrates an awareness of and responsiveness to the larger context and system of health care and effectively calls on system resources to provide care that is of optimal value.
Awareness and Responsiveness to the Health Care System:
- Understands how patient care and other professional practices affect other health care professionals, the health care organization, and the larger society.
- Understand how these elements of the system affect their own practice.
- Knows how types of medical practice and delivery systems differ from one another, including methods and controlling health care costs and allocating resources.
- Incorporate the knowledge of ethical, legal, economic, and/or social factors into the activities of the entire surgical team for all components of surgical care.

Utilization of System Resources:
- Practices cost-effective health care and resource allocation that does not compromise quality of care.
- Advocates for quality patient care and assist patients in dealing with system complexities.
- Partner with health care managers and health care providers to assess, coordinate, and improve health care and understands how these activities can affect system performance.

Procedure Benchmarks:  
*Residents at the PGY-3/2 must be able to perform the procedures listed, or as assistant for the chief resident and/or attending.*

- Perform hernia repairs in the groin and umbilicus, demonstrating a basic understanding of the anatomy and surgical repair with supervision.
- Basic Laparoscopic Skills: discuss techniques for gaining access to the abdomen, including Veress needle, open (Hassan cannula), and laparoscopic cholecystectomy.
- Open and close abdominal incisions of all varieties.
- Serve as assistant to the primary surgeon during operations of the esophagus, stomach, small intestine, colon, and anorectum.
- Perform, under appropriate supervision, GI operations, including: small bowel resection with anastomosis lyses of adhesions, repair of enterotomies, colon resection, and operations for disease of the anorectum and drainage of intra-abdominal abscess.

Assessment:  
*Residents will be assessed throughout the program. The results will be utilized to improve resident performance. Residents will be evaluated on competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practices. The process of using assessment results to achieve progressive improvement in residents’ competence and performance, and direct experience for progressive responsibilities for patient management.*

1) PATIENT CARE
   a) Weekly basic science conference
   b) New Innovations evaluations by Faculty (including mid-rotation feedback sessions)
   c) Weekly Attending Rounds

2) MEDICAL KNOWLEDGE
   a) Annual ABSITE
   b) Written evaluation by faculty (including mid-rotation feedback sessions)
   c) Faculty evaluation weekly general surgery conference
   d) Annual Mock Oral examinations
   e) Weekly Attending Rounds

3) PRACTICE-BASED LEARNING
   a) Faculty evaluation
   b) Weekly D and C
   c) Weekly attending rounds
4) PROFESSIONALISM
   a) Faculty critique of weekly GI/Radiology/Surgery conference
   b) 360 evaluations
   c) By Faculty (including mid-rotation feedback sessions)
   d) By other resident staff members

5) INTERPERSONAL RELATIONSHIPS & COMMUNICATION
   a) 360 evaluations
   b) By Faculty (including mid-rotation feedback sessions)

6) SYSTEMS-BASED PRACTICE
   a) Combined GI/Radiology/Surgery conference
   b) Faculty evaluation
Medical Knowledge: Demonstrates knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences; applies this knowledge to patient care; demonstrates an investigatory and analytic thinking approach to clinical situations; and demonstrates a commitment to lifelong learning.

Knowledge:

- Specify characteristics of the history, physical examination findings, and mechanism of visceral and somatic pain for the following processes: acute appendicitis, perforated ulcer, diffuse peritonitis, bowel obstruction.
- Illustrate use of the following diagnostic studies in the work-up of the above process: blood chemistries (white blood count, hematocrit), urinalysis, plain x-rays, ultrasound CT scan.
- Describe the anatomy, clinical presentation, and complications of non-operative management for these hernias: direct, indirect, inguinal, and femoral, ventral, umbilical and differentiate between incarceration and strangulation.
- Interpret the following in coordination with attending radiologists and staff: Acute abdominal series (identify free air, small bowel obstruction, ileus, colonic pseudo-obstruction, volvulus; the presence of ascites, atelectasis vs. pneumonia), Upper GI series, Barium enema (identify neoplasms, signs of ischemia) Abdominal ultrasound and CT scans.
- Evaluate and institute management of abdominal wound problems, including infection, evisceration and dehiscence.
- Coordinate pre- and post- operative care for the patient with the acute abdomen.
- Accept responsibility for (under the guidance of the chief resident and attending surgeon) the postoperative management of: nasogastric tubes, intra-abdominal drains, abdominal incisions, Foley catheters, IV catheters and fluid.
- Evaluate and manage nutritional needs (enteral and parenteral) of surgical patients until normal GI function returns.
- Outline the pathophysiology, evaluation, and management of the following: symptomatic gallstones, acute cholecystitis, gallstone pancreatitis, cholangitis, acalculous, cholecystitis and gallstone ileus.
- Demonstrate a basic understanding of surgical pathophysiology, pharmacology, physiology, and interpretation of hemodynamic data.
- Demonstrate the ability to formulate a diagnostic and treatment plan for diseases in abdominal surgery that are amenable to surgical intervention.
- Demonstrate familiarity with surgical literature and areas of basic surgical disease in abdominal surgery, alimentary tract and digestive systems, endocrine, liver, biliary tract and pancreas, endoscopic and laparoscopic surgery.
- Must relate basic medical knowledge to patient care. Residents must critically evaluate and demonstrate knowledge of pertinent scientific information.
- Exhibit knowledge base sufficient to teach students on the service.
- Demonstrate the use of significant surgical knowledge and skill to achieve a performance that produces appropriate and anticipated outcomes.
- Develop an understanding of integrating surgical continuity of care principles into the total care plan for all surgical patients.
- Demonstrate understanding of the significance of the natural history of surgical disease, the consequence of surgical care (both positive and negative), and the influence of continuity of care upon surgical outcomes.
- Exhibit knowledge of evaluation, preoperative management and postoperative management of gastrointestinal, pancreatic and hepatobiliary diseases.
- Understand hepatobiliary, pancreatic and gastrointestinal anatomy and physiology.
- General understanding of immunologic principles.
- Demonstrate the ability to evaluate and manage gastrointestinal disease states.
Patient Care:  *Demonstrate patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.*

Compassionate Patient Care:
- Demonstrates caring and respectful behaviors when interacting with patients and/or their families.
- Incorporates the patient preferences in making decisions about diagnostic and therapeutic interventions.
- Develops and executes patient care plans appropriate for PGY-1 resident.

Appropriate Patient Care:
- Gathers essential and accurate information about patients.
- Evaluates patients with surgical indications and presents a differential diagnosis.
- Compare laparoscopic versus open procedures for each case.
- Develops an understanding about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- In less complex cases may develop and carry out patient management plans as discussed with the chief resident and/or attending.
- Demonstrates an understanding of the indications and contraindications for various medications used in the preparation and performance of procedures.
- Assist with the overall care of patients for the team of residents and students.
- Participates in daily rounds, outpatient clinics, and resident teaching conferences.

Effective Treatment and Health Promotion:
- Participates in all essential medical and invasive procedures.
- Provides health care services aimed at preventing health problems and maintaining health.
- Works with health care professionals, including those from other disciplines, to provide Patient-focused care.

Technical Skills in Patient Care:
- Demonstrates knowledge, psychomotor skills and judgment related to his/her role in the performance of operative surgical procedures.
- Arrives in the OR prepared for the cognitive components of his/her role in individual operative surgical procedures.
- Demonstrates manual dexterity appropriate for a first year resident.
- Demonstrates an understanding of the various steps related to operative procedures in a manner that is consistent with the flow of the operation.
- Exhibits an understanding of the management of common general surgical problems.
- Develops an understanding of the benefits and limitations of operative surgical techniques.
- Assist attending staff and/or upper level resident with surgical procedures.
- Assist with the common intermediate level biliary procedures and general surgical operations including morbid obesity procedures.
- Evaluate and diagnose the acute abdomen.
- Gain skills in perioperative management of the surgical patients.
- Carry out patient management decisions in consultation with upper level residents on the service.
- Develop skills to manage coagulopathy, hepatic failure, encephalopathy and ascites.
- Develop ability to interpret all laboratory and radiological studies.

Practice-Based Learning and Improvement: *Investigates and evaluates patient care practices, appraises and assimilates scientific evidence, and improves his/her patient care practices.*

Investigates And Evaluates Patient Care Practices:
- Analyzes practice experience using a systematic methodology.
- Obtains and uses information about their population of patients and the larger population from which patients are drawn.
Appraises and Assimilates Scientific Evidence Relevant To Patient Care:
- Locates, appraises, and assimilates evidence from scientific studies related to their Patients’ health problems.
- Understands study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of students.
- Exhibit and recognize the importance of lifelong learning in surgical practice.

Improves Patient Care Practices:
- Demonstrates the ability to analyze personal practice outcomes to improve patient care.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of students.

Interpersonal and Communication Skills: Demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with patients, their families, and other health professionals.
- Develops skill and sensitivity for appropriate counseling and educating patients and their families in a variety of clinical situations.
- Creates and sustains therapeutic and ethically sound relationships with patients and families.
- Works effectively with others of the health care team and/or other professional groups.
- Effectively and promptly documents practice activities.
- Presents all patients and conference material in a concise, organized, chronologic, logical and knowledgeable manner.
- Utilizes input from all collaborative interactions with all personnel contributing to the surgical patient care.
- Exhibits the ability to interact as part of the surgical team.
- Contributes via effective teaching and example to the educational efforts of the surgical residency.
- Participates in teaching students on the service.
- Exhibits honesty, reliability, good communication skills, and appropriate judgment.

Professionalism: Demonstrate a commitment to carrying out professional responsibilities; adhere to ethical principles, and sensitivity to a diverse patient population.
- Demonstrates respect, compassion and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and on-going professional development.
- Demonstrates a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrates sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
- Exhibits professionalism through timely completion of required administrative responsibilities (evaluations, recording hours, chart documentation, medical record dictations, etc.).
- Maintain positive relationships.
- Demonstrate accountability for actions and decisions.
Systems-Based Practice:  *Demonstrates an awareness of and responsiveness to the larger context and system of health care and effectively calls on system resources to provide care that is of optimal value.*

Awareness and Responsiveness to the Health Care System:
- Understands how patient care and other professional practices affect other health care professionals, the health care organization, and the larger society. Understand how these elements of the system affect their own practice.
- Knows how types of medical practice and delivery systems differ from one another, including methods and controlling health care costs and allocating resources.
- Incorporate the knowledge of ethical, legal, economic, and/or social factors into the activities of the entire surgical team for all components of surgical care.

Utilization of System Resources:
- Practices cost-effective health care and resource allocation that does not compromise quality of care.
- Advocates for quality patient care and assist patients in dealing with system complexities.
- Partner with health care managers and health care provides to assess, coordinate, and improve health care and understands how these activities can affect system performance.

Procedure Benchmarks:  *Residents at the PGY-1 must be able to perform the procedures listed, as assistant for the chief resident and/or attending.*

- Assist with hernia repairs in the groin and umbilicus, demonstrating a basic understanding of the anatomy and surgical repair.
- Develop skills in basic suturing, tying, and assistance at operations.
- Assist in the operating room; be able to suture and tie.
- Participate in more advanced cases to learn exposure, tissue handling and suture techniques.
- Insertion of central lines, arterial lines, NG tubes, Foley catheter.
- Perform less complicated surgical procedures such as: gastrostomy, appendectomy, hemorrhoidectomy, incision and drainage of perirectal abscess.

Assessment:  *Residents will be assessed throughout the program. The results will be utilized to improve resident performance. Residents will be evaluated on competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems based practices. The process of using assessment results to achieve progressive improvement in residents’ competence and performance, and direct experience for progressive responsibilities for patient management.*

1) PATIENT CARE
   a) Weekly basic science conference
   b) New Innovations evaluations by Faculty (including mid-rotation feedback sessions)
   c) Weekly Attending Rounds

2) MEDICAL KNOWLEDGE
   a) Annual ABSITE
   b) Written evaluation by faculty (including mid-rotation feedback sessions)
   c) Faculty evaluation weekly general surgery conference
   d) Annual Mock Oral examinations
   e) Weekly Attending Rounds

3) PRACTICE-BASED LEARNING
   a) Faculty evaluation
   b) Weekly D and C
c) Weekly attending rounds

4) PROFESSIONALISM
   a) 360 evaluations
   b) By Faculty (including mid-rotation feedback sessions)
   c) By other resident staff members

5) INTERPERSONAL RELATIONSHIPS & COMMUNICATION
   a) 360 evaluations
   b) By Faculty (including mid-rotation feedback sessions)

6) SYSTEMS-BASED PRACTICE
   a) Combined GI/Radiology/Surgery conference
   b) Faculty evaluation
MCVH – There is either a PGY-3 or PGY-4 on the vascular service.

VAMC – There is a PGY-5 on the vascular service.

Medical Knowledge: Demonstrates knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences; applies this knowledge to patient care; demonstrates an investigatory and analytic thinking approach to clinical situations; and demonstrates a commitment to lifelong learning.

Knowledge:
- Mastery of surgical pathophysiology, anatomy and physiology of the vascular system, including congenital and acquired diseases.
- Demonstrate ability to formulate and implement a diagnostic and treatment plan for diseases of the vascular patient with arterial, venous, and lymphatic disease.
- Demonstrate familiarity with surgical literature and extensive areas of basic surgical disease in vascular surgery.
- Must relate basic medical knowledge to patient care. Residents must critically evaluate and demonstrate knowledge of pertinent scientific information.
- Analyze and present complications at weekly Death and Complication Conference
- Exhibit knowledge base sufficient to teach junior level residents and students on the service.
- Demonstrate surgical competence by the use of significant surgical knowledge and advanced skill to achieve a performance that produces appropriate and anticipated outcomes.
- Exhibit knowledge and principles of non-invasive laboratory diagnosis.
- Discuss basic principles of Doppler Ultrasound in preparation for performing bedside arterial and venous Doppler testing.
- Demonstrate the capacity to integrate surgical continuity of care principles into the total care plan for all surgical patients.
- Through leadership and teaching, demonstrate understanding of the significance of the natural history of vascular disease, the consequence of surgical care (both positive and negative), and the influence of continuity of care upon surgical outcomes.
- Exhibit the capability to integrate surgical continuity of care principles into the total care plan for all surgical patients.
- Incorporate the knowledge of ethical, legal, economic, and/or social factors into the activities of the entire surgical team for all components of surgical care.
- Demonstrate an understanding to manage the infected aortic grafts.
- Understand management of DVT and indications for IVC interruption.

Patient Care: Demonstrate patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Compassionate Patient Care:
- Demonstrates caring and respectful behaviors when interacting with patients and/or their families.
- Incorporates the patient preferences in making decisions about diagnostic and therapeutic interventions.
- Develops and executes patient care plans appropriate for chief resident.

Appropriate Patient Care:
- Gathers essential and accurate information about patients.
- Evaluates patients with complex vascular indications and presents a differential diagnosis.
- Compare laparoscopic versus open procedures for each case.
- Makes informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develops and carries out patient management plans.
- Demonstrate knowledge of the indications and contraindications for various medications used in the preparation and performance of procedures.
- Coordinate the overall care of patients for the team of residents and students.

Effective Treatment and Health Promotion:
- Performs competently all essential medical and invasive procedures.
- Provides health care services aimed at preventing health problems and maintaining health.
- Works with health care professionals, including those from other disciplines, to provide Patient-focused care.

Technical Skills in Patient Care:
- Demonstrates knowledge, psychomotor skills and judgment related to his/her role in the performance of operative surgical procedures.
- Demonstrates manual dexterity appropriate for PGY 3-5.
- Arrives in the OR prepared for the cognitive components of his/her role in individual operative surgical procedures.
- Demonstrates the ability to proceed through various steps of operative procedures in a manner that is consistent with the flow of the operation.
- Demonstrates the ability to make appropriate and timely decisions with respect to the operative procedure.
- Demonstrate competence in the most complex vascular cases (see below)
- Demonstrates an understanding of the benefits and limitations of operative surgical techniques.
- Assist attending staff with complex surgical procedures.
- Evaluate patients for arterial, venous, and lymphatic disorders.
- Perform the preoperative assessment and postoperative care of patients undergoing major vascular surgical procedures.
- Manage complications of common major vascular procedures (carotid endarterectomy, aortic reconstruction, lower extremity bypass, dialysis access thrombosis).

Practice-Based Learning and Improvement: *Investigates and evaluates patient care practices, appraises and assimilates scientific evidence, and improves his/her patient care practices.*

**Investigates And Evaluates Patient Care Practices:**
- Analyzes practice experience using a systematic methodology.
- Obtains and uses information about their population of patients and the larger population from which patients are drawn.

**Appraises and Assimilates Scientific Evidence Relevant To Patient Care:**
- Locates, appraises, and assimilates evidence from scientific studies related to their Patients' health problems.
- Applies knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of junior level residents.
- Exhibit and recognize the importance of lifelong learning in surgical practice.

**Improves Patient Care Practices:**
- Demonstrates the ability to analyze personal practice outcomes to improve patient care.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
Facilitates the learning of junior level residents.

**Interpersonal and Communication Skills:** 
Demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with patients, their families, and other health professionals.

- Demonstrates skill and sensitivity for appropriate counseling and educating patients and their families in a variety of clinical situations.
- Creates and sustains therapeutic and ethically sound relationships with patients and families.
- Works effectively with others as a leader of the health care team and/or other professional groups.
- Effectively and promptly documents practice activities.
- Presents all patients and conference material in a concise, organized, chronologic, logical and knowledgeable manner.
- Utilizes input from all collaborative interactions with all personnel contributing to the surgical patient care
- Exhibits surgical team leadership.
- Contribute via effective teaching and example to the educational efforts of the surgical residency.
- Evaluates the performance and competence of all members of the surgical residency team.

**Professionalism:** 
Demonstrate a commitment to carrying out professional responsibilities; adhere to ethical principles, and sensitivity to a diverse patient population.

- Demonstrates respect, compassion and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society and the profession; and a commitment to excellence and on-going professional development.
- Demonstrates a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.
- Demonstrates sensitivity and responsiveness to patients’ culture, age, gender, and disabilities.
- Exhibits professionalism through timely completion of required administrative responsibilities (evaluations, recording hours, chart documentation, medical record dictations, etc.).
- Maintain positive relationships.
- Demonstrate accountability for actions and decisions.

**Systems-Based Practice:** 
Demonstrates an awareness of and responsiveness to the larger context and system of health care and effectively calls on system resources to provide care that is of optimal value.

**Awareness and Responsiveness to the Health Care System:**
- Understands how patient care and other professional practices affect other health care professionals, the health care organization, and the larger society. Understand how these elements of the system affect their own practice.
- Knows how types of medical practice and delivery systems differ from one another, including methods and controlling health care costs and allocating resources.

**Utilization of System Resources:**
- Practices cost-effective health care and resource allocation that does not compromise quality of care.
- Advocates for quality patient care and assist patients in dealing with system complexities.
- Partner with health care managers and health care provides to assess, coordinate, and improve health care and understands how these activities can affect system performance.

**Procedure Benchmarks:** 
Residents at the PGY3 through PGY5 must be able to perform the procedures listed, in most cases, independently with little supervision.
PGY 4/5 Benchmarks

- Demonstrate understanding of exposure of thoracic great vessels and indications for subclavian to revascularization.
- Demonstrate the appropriate incisions and exposure of: abdominal aorta and its branches, portal venous system, peripheral arterial system, extracranial carotid system, arteriovenous fistula.
- Obtain vascular control of major vessels, including: ruptured abdominal aortic aneurysm, inferior vena cava, popliteal artery, internal carotid artery, subclavian artery, vertebral artery.
- Demonstrate knowledge of pre-op, intra-op, and post-op management of ruptured AAA.
- Exhibit knowledge and understanding of exposure of SMA, Celiac, and Renal arteries.
- Illustrate the operative exposure of major vessels.
- Demonstrate ability to manage graft and suture materials.
- Exhibit ability to obtain vascular control of Aorta and Vena Cava vessels.
- Participate in endarterectomy and bypass grafting.
- Discuss and demonstrate the role of adjunctive measures in operative procedures including arteriography, angioscopy, and thrombolytic therapy.

PGY3

- Demonstrate skill in basic vascular surgical techniques, including: suturing anastomoses, balloon catheter thrombectomy, handling of autogenous vein and prosthetic graft material, closure of vascular incisions (in situ bypass, femoral incisions, and carotid surgery).
- Participate in surgery for varicose vein disease, including: ligation and stripping, microphlebectomy, management of venous ulcers, management of superficial thrombophlebitis.
- Participate in amputations with specific attention to: selection of level required for healing, indications for primary amputation, technique of digit, metatarsal, and mid-foot amputations, technique of below- and above-knee amputation.
- Demonstrate proficiency in hemoaccess procedures for dialysis.
- Participate in thromboendarterectomy and thrombectomy procedures.
- Evaluate indications for and management of patients undergoing sympathectomy procedures.

Assessment: Residents will be assessed throughout the program. The results will be utilized to improve resident performance. Residents will be evaluated on competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems based practices. The process of using assessment results to achieve progressive improvement in residents’ competence and performance, and direct experience for progressive responsibilities for patient management.

1) PATIENT CARE
   a) Weekly basic science conference
   b) New Innovations evaluations by Faculty (including mid-rotation feedback sessions)
   c) Weekly attending rounds

2) MEDICAL KNOWLEDGE
   a) Annual ABSITE
   b) Written evaluation by faculty (including mid-rotation feedback sessions)
   c) Faculty evaluation weekly vascular conference
   d) Mock oral exam
   e) Weekly attending rounds

3) PRACTICE-BASED LEARNING
   a) Faculty evaluation
   b) Weekly D and C
   c) Weekly attending rounds

4) PROFESSIONALISM
   a) Faculty critique of weekly Vascular conference
b) 360 evaluations  
c) By Faculty (including mid-rotation feedback sessions)  
d) By other resident staff members

5) INTERPERSONAL RELATIONSHIPS & COMMUNICATION  
   a) 360 evaluations  
   b) By Faculty (including mid-rotation feedback sessions)

6) SYSTEMS-BASED PRACTICE  
   a) Combined Vascular/Radiology/conference  
   b) Faculty evaluation  
   c) Department of Surgery D and C
Medical Knowledge: **Demonstrates knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences; applies this knowledge to patient care; demonstrates an investigatory and analytic thinking approach to clinical situations; and demonstrates a commitment to lifelong learning.**

Knowledge:
- Basic understanding of surgical pathophysiology, anatomy and physiology of the vascular system, including congenital and acquired diseases.
- Begin to formulate and implement a diagnostic and treatment plan for diseases of the vascular patient with arterial, venous, and lymphatic disease.
- Demonstrate familiarity with surgical literature and extensive areas of basic surgical disease in vascular surgery.
- Must relate basic medical knowledge to patient care. Residents must critically evaluate and demonstrate knowledge of pertinent scientific information.
- Exhibit knowledge base sufficient to teach students on the service.
- Exhibit knowledge and principles of non-invasive laboratory diagnosis.
- Discuss basic principles of Doppler Ultrasound in preparation for performing bedside arterial and venous Doppler testing.
- Demonstrate the capacity to integrate surgical continuity of care principles into the total care plan for all surgical patients.
- Through leadership and teaching, demonstrate understanding of the significance of the natural history of vascular disease, the consequence of surgical care (both positive and negative), and the influence of continuity of care upon surgical outcomes.
- Exhibit the capability to integrate surgical continuity of care principles into the total care plan for all surgical patients.
- Incorporate the knowledge of ethical, legal, economic, and/or social factors into the activities of the entire surgical team for all components of surgical care.

Patient Care: **Demonstrate patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.**

Compassionate Patient Care:
- Demonstrates caring and respectful behaviors when interacting with patients and/or their families.
- Incorporates the patient preferences in making decisions about diagnostic and therapeutic interventions.
- Develops and executes patient care plans appropriate for chief resident.

Appropriate Patient Care:
- Gathers essential and accurate information about patients.
- Evaluates patients with complex vascular indications and presents a differential diagnosis.
- Compare laparoscopic versus open procedures for each case.
- Makes informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment.
- Develops and carries out patient management plans.
- Demonstrate knowledge of the indications and contraindications for various medications used in the preparation and performance of procedures.

Effective Treatment and Health Promotion:
- Performs competently all essential medical and invasive procedures appropriate for PGY.
- Provides health care services aimed at preventing health problems and maintaining health.
- Works with health care professionals, including those from other disciplines, to provide Patient-focused care.
Technical Skills in Patient Care:
- Demonstrates knowledge, psychomotor skills and judgment related to his/her role in the performance of operative surgical procedures.
- Demonstrates manual dexterity appropriate for PGY 1.
- Arrives in the OR prepared for the cognitive components of his/her role in individual operative surgical procedures.
- Demonstrates the ability to proceed through various steps of operative procedures in a manner that is consistent with the flow of the operation.
- Demonstrates the ability to make appropriate and timely decisions with respect to the operative procedure.
- Begins to understand of the benefits and limitations of operative surgical techniques.
- Assist attending staff with complex surgical procedures.

Practice-Based Learning and Improvement: *Investigates and evaluates patient care practices, appraises and assimilates scientific evidence, and improves his/her patient care practices.*

Investigates And Evaluates Patient Care Practices:
- Analyzes practice experience using a systematic methodology.
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Appraises and Assimilates Scientific Evidence Relevant To Patient Care:
- Locates, appraises, and assimilates evidence from scientific studies related to their Patients' health problems.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of students
- Exhibit and recognize the importance of lifelong learning in surgical practice.

Improves Patient Care Practices:
- Demonstrates the ability to analyze personal practice outcomes to improve patient care.
- Performs practice-based improvement activities using a systematic methodology.
- Uses information technology to manage information, access on-line medical information; and support his/her own education.
- Facilitates the learning of students

Interpersonal and Communication Skills: *Demonstrate interpersonal and communication skills that result in effective information exchange and collaboration with patients, their families, and other health professionals.*
- Demonstrates skill and sensitivity for appropriate counseling and educating patients and their families in a variety of clinical situations.
- Creates and sustains therapeutic and ethically sound relationships with patients and families.
- Works effectively with others as a leader of the health care team and/or other professional groups.
- Effectively and promptly documents practice activities.
- Presents all patients and conference material in a concise, organized, chronologic, logical and knowledgeable manner.
- Utilizes input from all collaborative interactions with all personnel contributing to the surgical patient care.
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- Partner with health care managers and health care provides to assess, coordinate, and improve health care and understands how these activities can affect system performance.

**Procedure Benchmarks:** **Residents at the PGY 1 must be able to perform the procedures listed, in most cases, independently with little supervision.**

- Demonstrate skill in basic vascular surgical techniques, including: suturing an anastomosis, balloon catheter thrombectomy, handling of autogenous vein and prosthetic graft material, closure of vascular incisions (in situ bypass, femoral incisions, and carotid surgery) with supervision.
- Participate in surgery for varicose vein disease, including: ligation and stripping, microphlebectomy, management of venous ulcers, management of superficial thrombophlebitis.
- Participate in amputations with specific attention to: selection of level required for healing, indications for primary amputation, technique of digit, metatarsal, and mid-foot amputations, technique of below- and above-knee amputation.
- Demonstrate proficiency in hemoaccess procedures for dialysis.
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**Assessment:** **Residents will be assessed throughout the program. The results will be utilized to improve resident performance. Residents will be evaluated on competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems based practices. The process of using assessment results to achieve progressive improvement in residents’ competence and performance, and direct experience for progressive responsibilities for patient management.**
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4) PROFESSIONALISM
   a) Faculty critique of weekly Vascular conference
   b) 360 evaluations
   c) By Faculty (including mid-rotation feedback sessions)
   d) By other resident staff members

5) INTERPERSONAL RELATIONSHIPS & COMMUNICATION
   a) 360 evaluations
   b) By Faculty (including mid-rotation feedback sessions)

6) SYSTEMS-BASED PRACTICE
   a) Combined Vascular/Radiology/conference
   b) Faculty evaluation
   c) Department of Surgery D and C