

Surgery clerkship medical knowledge goals and objectives

Perioperative evaluation and management of surgical patients (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 1)

1. *Preoperative Evaluation of the Surgical Patient*
 - a. Explain the key components and value of the preoperative history, physical examination, and selected diagnostic and screening tests prior to an elective surgical procedure.
 - b. Discuss the elements of the patient's history that are essential in the preoperative evaluation of surgical emergencies.
 - c. Discuss the assessment of pulmonary and cardiac risk including any necessary preoperative testing.
 - d. Discuss the effects of diabetes, hepatic dysfunction, adrenal insufficiency, and malnutrition on preoperative preparation and postoperative management.
 - e. Identify how to properly obtain informed consent for a surgical procedure.
2. *Postoperative Management of the Surgical Patient*
 - a. Discuss the effects of diabetes, hepatic dysfunction, adrenal insufficiency, and malnutrition on postoperative management.
 - b. List the most common post-operative problems and understand the evaluation, diagnosis, and treatment for each.

Fluids, electrolytes, and acid-base balance (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 2)

1. *Perioperative Electrolyte Management*
 - a. Know the range of normal values of sodium, potassium, bicarbonate, and chloride in serum, gastric aspirate, bile, and ileostomy aspirate.
 - b. Explain the change in values of sodium, potassium, bicarbonate, chloride and pH in the following disease statuses: excessive gastric losses, high-volume pancreatic fistula, small intestinal fistula, biliary fistula, diarrhea, and closed head injury.
 - c. Discuss the differential diagnosis and treatment of hypernatremia, hyponatremia, hyperkalemia, and hypokalemia in the postoperative period.
2. *Perioperative Fluid Management*
 - a. Identify the contributions that extracellular, intracellular, and intravascular volume make to body weight.
 - b. List the hormones or substrates that affect renal absorption and excretion of sodium and water.
 - c. Outline the methods of determining fluid balance in the immediate postoperative period including invasive and non-invasive means.
 - d. Describe the typical 24 hour fluid and electrolyte needs in the postoperative patient who has no complications.
 - e. Explain the composition of electrolytes in normal saline, lactated Ringer's solution, and D5W.
3. *Acid-Base Balance*
 - a. Explain the changes in arterial blood gas values in the setting of acute metabolic acidosis, acute respiratory acidosis, chronic respiratory acidosis, and compensated metabolic acidosis.

Nutrition (Nutrition in medicine educational module: Nutrition and Metabolic Stress, Steven Zeisel, MD, PhD, Essentials of General Surgery, 5th edition, Lawrence: Chap 3)

1. *Nutritional Requirements*
 - a. Describe the methods for assessing a patient's protein and calorie requirements.
 - b. Explain the alterations in energy and macronutrient metabolism in stress and starvation.
 - c. Describe fatty acid function and the factors influencing absorption, transport and utilization.
2. *Malnutrition*
 - a. Identify the factors in the patient's medical history and physical examination that indicate malnutrition.
3. *Nutritional Supplementation*

- a. Describe the benefits of nutrition intervention in critically ill patients.
- b. List the indications for parenteral and enteral nutritional support.
- c. List the adverse sequelae of a central venous catheter for total parenteral nutrition (TPN) and the metabolic complications of TPN.

Surgical bleeding: Bleeding disorders, hypercoagulable states, and replacement therapy in the surgical patient (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 4)

1. Identify the reasons for excessive surgical bleeding including preexisting hemostatic defects and intraoperative complications.
2. Describe the common laboratory tests that are used to assess coagulation status and explain how these tests apply to the diagnosis of specific bleeding disorders.
3. Name the conditions that might lead to disseminated intravascular coagulation (DIC).
4. Describe the symptoms of a transfusion reaction and the methods of treatment.

Shock (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 5)

1. Define shock and list the two primary mechanisms that may cause cellular malfunction consistent with shock.
2. List the primary etiologies of shock.
3. List the clinical information that helps to determine which mechanism is the predominant cause of shock in an individual patient.
4. Describe the treatment of shock based upon its etiology.
5. Describe the parameters used to gauge shock and its successful treatment.

Surgical critical care (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 6)

1. Describe the importance of prophylaxis (DVT, GI, pressure ulcer, hospital acquired infections) in a critically ill patient and list the methods of prophylaxis.
2. Explain the pathophysiology and management of abdominal compartment syndrome.
3. Identify the effects of multisystem organ failure on morbidity and mortality in the surgical patient.
4. Describe the differences between the basic modes of mechanical ventilation and the advantages and disadvantages of each mode.

Wounds, wound healing, and surgical site infections (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 7-8)

1. *Surgical Wounds*
 - a. Define clean, clean/contaminated, contaminated, and infected wounds and describe the management of each type.
 - b. Define the stages of pressure ulcers.
2. *Wound Healing*
 - a. Define the anatomy of the skin.
 - b. Describe the sequence and approximate time frame of the phases of wound healing.
 - c. Describe the 3 types of wound healing and the elements of each.
3. *Surgical Site Infections*
 - a. Describe the principals of prophylactic antibiotic use.
 - b. Define the risk factors for surgical wound infection.
 - c. Discuss the treatment options for surgical wound infections

Trauma (lecture, WISE-MD, Essentials of General Surgery, 5th edition, Lawrence: Chap 9)

1. *General Principles of Trauma Management (WISE-MD)*
 - a. Describe the steps to assess the patient with multiple injuries.
 - b. Describe the principals and methods that are used in the initial resuscitation and definitive care phase of trauma management.
 - c. Describe the end points of resuscitation and how to assess adequate perfusion.
2. *Thoracic Trauma (WISE-MD)*
 - a. Describe the pathophysiology and initial treatment of both immediately life-threatening and potentially life-threatening thoracic injuries.
3. *Neck Trauma*

- a. Describe the diagnosis and treatment of a patient with a blunt or penetrating neck injury.
- 4. *Abdominal Trauma*
 - a. Describe the diagnostic and therapeutic procedures that pertain to abdominal trauma including the indications, contraindications, and limitations of ultrasound, computed tomography and peritoneal lavage.
 - b. Describe the technique of a focused abdominal sonogram for trauma (FAST).
 - c. Describe management of blunt and penetrating injuries to the abdomen and pelvis.
- 5. *Head Trauma (WISE-MD)*
 - a. Define the Glasgow Coma Scale, its point scale and its prediction of neurologic recovery.

Burns (lecture, WISE-MD, Essentials of General Surgery, 5th edition, Lawrence: Chap 10)

1. List the classification of burns by depth of injury and indicate the anatomic differences between these injuries.
2. List the initial steps in the acute care of the patient with a burn injury.
3. Describe the appropriate fluid resuscitation of the burn patient.
4. Define burn shock and outline its treatment.
5. Describe the indications for excision and skin grafting of burn wounds.
6. List the general indications for referral of a patient to a burn center.

Abdominal wall, hernia (WISE-MD, Essentials of General Surgery, 5th edition, Lawrence: Chap 11)

1. *Anatomy of the Abdominal Wall*
 - a. List the layers of the abdominal wall and their pertinent reflections into the groin.
2. *Inguinal Hernia*
 - a. Define indirect inguinal hernia, direct inguinal hernia, and femoral hernia.
 - b. List the risk factors for development of inguinal hernias.
 - c. Discuss the relative frequency of direct, indirect, and femoral hernias by age and sex.
 - d. Define an incarcerated inguinal hernia, strangulated hernia, sliding hernia, and Richter's hernia.
 - e. Describe the surgical treatment options for the repair of inguinal hernias, femoral hernias, and abdominal wall hernias.
3. *Abdominal Wall Hernias*
 - a. Discuss the embryology of umbilical hernias.
 - b. Describe the surgical treatment options for the repair of abdominal wall hernias.

Esophagus (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 12)

1. *Esophageal Reflux Disease and Hiatal Hernia*
 - a. Describe the anatomic and physiologic factors that predispose to reflux esophagitis.
 - b. Describe the symptoms of reflux esophagitis and discuss the diagnostic procedures used to confirm the diagnosis.
 - c. List the indications for operative management of esophageal reflux and the most common anti-reflux procedures.
 - d. Describe esophageal hiatal hernia with regard to anatomic type (sliding and paraesophageal) and the relative need for treatment.
2. *Achalasia*
 - a. Describe the pathophysiology and clinical symptoms associated with achalasia of the esophagus and outline the management options.
 - b. Discuss manometric evaluation of the lower esophageal sphincter.
3. *Esophageal Diverticula*
 - a. Describe the common esophageal diverticula in terms of their location, symptoms, and pathogenesis.
4. *Esophageal Neoplasms*
 - a. List the 2 major cell types of esophageal neoplasms.
 - b. Describe the risk factors for esophageal neoplasms.
 - c. Describe the diagnostic evaluation of a patient with a suspected esophageal tumor including modalities that are helpful in staging the neoplasm.
5. *Esophageal Perforation*

- a. Describe the etiology and presentation of a traumatic perforation of the esophagus and the physical exam findings that occur early and late after this injury.

Stomach and duodenum (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 13)

1. *Upper Gastrointestinal Ulcer Disease*
 - a. Describe the common symptoms and pathogenesis of gastric versus duodenal ulcers including the patterns of acid secretion.
 - b. Discuss the significance of the anatomic location of gastric and duodenal ulcers.
 - c. Compare and contrast the pathophysiology, evaluation and treatment of gastric and duodenal ulcer disease.
 - d. List the clinical and laboratory features that differentiates Zollinger-Ellison syndrome from duodenal ulcer disease.
 - e. Describe the common operations performed for duodenal and gastric ulcer disease and discuss the morbidity rates associated with each procedure.
 - f. Discuss the commonly recognized side effects associated with surgery for duodenal and gastric ulcer disease.
2. *Surgical Treatment of Obesity*
 - a. Describe the advantages and disadvantages of common procedures performed for treatment of severe obesity and list their complications.
3. *Gastric Malignancy*
 - a. Describe the premalignant conditions, epidemiological factors, and clinical features in patients with gastric adenocarcinoma.
 - b. Describe the common types of neoplasms that occur in this stomach and discuss the appropriate diagnostic procedures and therapeutic modalities for each.

Small intestine and appendix (lecture, WISE-MD, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 14)

1. *Appendicitis (WISE-MD)*
 - a. Discuss the signs, symptoms and differential diagnoses of acute appendicitis.
 - b. Outline the diagnostic workup of the patient with suspected appendicitis including any necessary imaging studies.
 - c. Identify the sensitivity and specificity of each imaging procedure in diagnosing appendicitis.
 - d. Describe and identify the radiologic findings of acute appendicitis on plain radiograph, abdominal CT and ultrasound.
 - e. Discuss the common complications of appendicitis and appendectomy.
2. *Carcinoid Tumor*
 - a. Describe the presentation and management of an appendiceal carcinoid in addition to its management as an incidental finding.
 - b. Describe carcinoid syndrome and list the features of a carcinoid tumor that suggest it may be malignant.
3. *Small Bowel Diverticulum*
 - a. Discuss the various clinical presentations of a patient with Meckel's diverticulum and describe its treatment options.
4. *Small Bowel Obstruction (WISE-MD)*
 - a. Describe the common etiologies, signs, and symptoms of small intestinal mechanical obstruction and contrast them with those of paralytic ileus.
 - b. Outline the appropriate laboratory tests and x-rays that are used in a diagnostic evaluation of the patient with suspected small bowel obstruction and also outline a treatment plan for this patient including the indications for operative therapy.

Colon, rectum, and anus (lecture, WISE-MD, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 15)

1. *Diverticular Disease of the Colon*
 - a. Describe the clinical findings of diverticular disease of the colon.

- b. Discuss the imaging findings of diverticular disease and be able to identify them on various imaging modalities.
 - c. Discuss the complications of diverticular disease and the appropriate surgical management.
 - d. Describe the differential diagnosis, initial management, diagnostic studies and indications for medical versus surgical treatment in a patient with diverticulitis.
2. *Colorectal Malignancy*
 - a. Identify the common symptoms and signs of carcinoma of the colon and rectum.
 - b. Discuss the appropriate laboratory, endoscopic, and x-ray studies for the diagnosis of carcinoma of the colon and rectum.
 - c. Discuss the staging and five-year survival of patients with carcinoma of the colon and rectum.
 3. *Inflammatory Bowel Disease*
 - a. Differentiate ulcerative colitis from Crohn's disease of the colon in terms of history, pathology, x-ray findings, treatment, and risk of cancer.
 - b. Discuss the role of surgery in the treatment of patients with ulcerative colitis and Crohn's colitis.
 4. *Large Bowel Obstruction*
 - a. List the signs, symptoms, and diagnostic aids for evaluating the patient with a presumed large bowel obstruction.
 - b. Identify the radiographic findings of a large bowel obstruction.
 - c. List the common causes of colonic obstruction in adults.
 - d. Outline a plan for diagnostic studies, preoperative management, and treatment of volvulus, intussusception, impaction, and obstructing colon cancer.
 5. *Perianal Disease*
 - a. Discuss the anatomy of hemorrhoids, including the 4 grades encountered clinically, and differentiate internal from external hemorrhoids. Describe the symptoms and signs of patients with external and internal hemorrhoids.
 - b. Outline the principals of management of patients with symptomatic external and internal hemorrhoids, including non-operative and operative management.
 - c. Outline the symptoms and physical findings of patients with perianal infections.
 - d. Outline the principals of management of patients with perianal infections, including the role of antibiotics, incision and drainage, and primary fistulectomy.
 - e. Describe the symptoms and physical findings of patients with anal fissures.
 - f. Outline the principals of management of patients with anal fissures.
 6. *Anal Malignancy*
 - a. Name the 2 most common cancers of the anal canal and describe their clinical presentation.

Biliary tract (lecture, WISE-MD, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 16)

1. *Cholelithiasis*
 - a. Discuss the factors that contribute to the formation of the 3 most common types of gallstones.
 - b. Describe the epidemiology of gallstone disease as it relates to patient evaluation and management.
 - c. Describe the management of asymptomatic gallstones found incidentally on radiologic studies or at laparotomy.
 - d. Describe the potential complications associated with laparoscopic cholecystectomy and open cholecystectomy.
2. *Choledocholithiasis*
 - a. Discuss the options available to treat stones in the gallbladder and the extrahepatic biliary ducts.
3. *Cholecystitis*
 - a. Compare and contrast the clinical presentation, laboratory and radiologic findings, and management of the patients with chronic cholecystitis and acute cholecystitis.

- b. Identify the findings of acute cholecystitis on ultrasound, HIDA scan and CT scan.
- 4. *Cholangitis*
 - a. Describe the clinical presentation, evaluation, and management of a patient with acute cholangitis and acute suppurative cholangitis.
- 5. *Gallstone Ileus*
 - a. Outline the clinical presentation, evaluation, and management of a patient with gallstone ileus.
- 6. *Biliary Tract Malignancy*
 - a. List the common causes of benign strictures of the common bile duct.
 - b. Discuss the epidemiology, clinical presentation, evaluation and management of carcinoma of the gallbladder.
 - c. Describe the management of carcinoma of the extrahepatic biliary ducts.

Pancreas (lecture, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 17)

- 1. *Pancreatitis*
 - a. List four etiologies of pancreatitis.
 - b. Discuss the clinical presentation, evaluation, and management of the patient with acute pancreatitis and the indications for surgical intervention.
 - c. Identify the radiographic findings which are diagnostic of pancreatitis.
 - d. List the potential complications associated with acute pancreatitis.
 - e. Discuss the criteria that are used to predict the prognosis for pancreatitis.
 - f. Discuss the mechanism of pseudocyst formation and the symptoms and physical signs associated with the pseudocyst.
 - g. Discuss the natural history of an untreated pancreatic pseudocyst as well as the medical and surgical treatment options.
- 2. *Pancreatic Neoplasm*
 - a. Describe the pathology of 4 types of pancreatic neoplasms.
 - b. Describe the imaging procedures used in the evaluation of pancreatic cancer.
 - c. Describe the surgical treatment of pancreatic neoplasms.
 - d. Discuss the long-term prognosis for pancreatic cancer on the basis of pathology and cell type.

Liver (lecture, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 18)

- 1. *Benign Hepatic Tumors*
 - a. List 3 common benign tumors of the liver and describe their appropriate treatment.
 - b. Describe the diagnostic modalities useful in evaluating a liver mass.
 - c. Compare and contrast the clinical and pathologic features and treatment of hepatic adenoma and focal nodular hyperplasia.
- 2. *Malignant Hepatic Tumors*
 - a. List four factors that favorably influence the prognosis after resection of hepatic metastasis from colorectal cancer.
 - b. List the 2 most common primary hepatobiliary malignancies and their relative frequency.
- 3. *Portal Hypertension*
 - a. List the 3 major complications of portal hypertension.
 - b. List and describe the options for therapy for acute variceal hemorrhage.
 - c. Describe the causes of portal hypertension.
 - d. List the complications associated with ascites formation in the patient with portal hypertension.
- 4. *Hepatic Failure*
 - a. List 3 common causes of fulminant hepatic failure.
 - b. Describe the indications for liver transplantation.

Breast (lecture, WISE-MD, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 19)

1. *Benign Breast Disease*
 - a. Describe the diagnostic workup and management for common benign breast conditions including cysts, breast pain, nipple discharge, fibroadenoma, and breast abscess.
2. *Malignancy Breast Disease*
 - a. List the risk factors for breast cancer.
 - b. Describe the guidelines for routine screening mammography.
 - c. Describe the primary and secondary mammographic signs of malignancy.
 - d. Describe the diagnostic work up for a palpable and non-palpable breast mass suspicious for carcinoma.
 - e. Describe the preoperative evaluation for a patient with breast cancer.
 - f. Identify the difference between ductal carcinoma in situ and invasive carcinoma of the breast.
 - g. Describe the rationale for adjuvant therapy, radiation, and hormonal therapy in the treatment of breast cancer. Describe the expected survival and local recurrence rates after treatment for early breast cancer.

Surgical endocrinology (lecture, WISE-MD, Essentials of General Surgery, 5th edition, Lawrence: Chap 20)

1. *Hyperthyroidism*
 - a. Describe the symptoms of a patient with hyperthyroidism and the possible treatment options.
2. *Thyroid Malignancy*
 - a. Discuss the evaluation and differential diagnosis of a patient with a thyroid nodule.
 - b. List the different types of carcinoma of the thyroid gland and describe the treatment options and prognosis for each.
 - c. List the risk factors for carcinoma of the thyroid gland.
 - d. List the possible complications after thyroid surgery.
3. *Hyperparathyroidism*
 - a. Describe the symptoms of hyperparathyroidism and its treatment options.
 - b. Describe the difference between primary, secondary, and tertiary hyperparathyroidism.
 - c. Describe the management of acute hypercalcemia.
 - d. Describe the indications for surgical resection for hyperparathyroidism.
 - e. List the possible complications after parathyroid surgery.
4. *Cushing's Syndrome(WISE-MD)*
 - a. Describe the clinical features of Cushing's syndrome and discuss how lesions in the pituitary, adrenal cortex, and extra adrenal sites are distinguished diagnostically.
 - b. Discuss the indications for adrenalectomy in Cushing's syndrome.
5. *Primary Aldosteronism (WISE-MD)*
 - a. Describe the pathology, clinical features, laboratory findings, workup and management of the patients with primary aldosteronism.
6. *Pheochromocytoma (WISE-MD)*
 - a. Discuss pheochromocytoma including its signs, symptoms, appropriate workup and treatment.
7. *Adrenal Cortical Carcinoma*
 - a. Discuss adrenal cortical carcinoma, including its presentation, signs, symptoms, workup, and management.
 - b. Discuss the management and evaluation of an incidentally discovered adrenal mass. (WISE-MD)
8. *Adrenal Insufficiency (WISE-MD)*
 - a. Discuss the causes of adrenal insufficiency.
9. *Multiple Endocrine Neoplasia (MEN) Syndromes*
 - a. Describe the multiple endocrine neoplasia (MEN) syndromes and their surgical management.

Spleen (Essentials of General Surgery, 5th edition, Lawrence: Chap 21)

1. Discuss the anatomy and function of the spleen.

2. Discuss the role of splenectomy in hematologic abnormalities.
3. Discuss the potential consequences of splenectomy and the potential methods to reduce the associated risks.

Diseases of the vascular system (lecture, WISE-MD, Vertical Radiology Curriculum, Essentials of General Surgery, 5th edition, Lawrence: Chap 22)

1. *Aneurysmal Disease*
 - a. List the common size and relative incidence of arterial aneurysms.
 - b. Identify an abdominal aortic aneurysm on cross sectional imaging.
 - c. List the signs, symptoms, differential diagnosis and diagnostic and management plans for a patient with a ruptured abdominal aortic aneurysm.
 - d. Compare the presentation, complications, and treatment of aortic and extremity aneurysms.
2. *Aortic Dissection*
 - a. Describe the classical clinical presentation of a dissecting aorta.
 - b. List the available imaging procedures to diagnose an aortic dissection and be able to identify the pathology on these imaging modalities.
3. *Arterial Occlusive Disease*
 - a. Describe the risk factors for atherosclerosis.
 - b. Describe the pathophysiology of intermittent claudication and differentiate this symptom from leg pain of other causes.
 - c. Describe the diagnosis and medical and/or surgical treatment options for chronic occlusive disease of the aorta, iliac, superficial femoral, popliteal and tibial arteries. Describe the clinical manifestations of renal artery stenosis.
 - d. List the signs and symptoms of acute arterial occlusion and outline its management including acute mesenteric ischemia.
 - e. Define amaurosis fugax, transient ischemic attacks, reversible ischemic neurologic defects, and cerebrovascular accident.
 - f. Describe the diagnostic methods, and medical and surgical management of a patient with symptomatic carotid artery stenosis.
 - g. List the indications for arteriography in a patient with a possible arterial injury to the extremity.
4. *Venous Disease*
 - a. Identify the typical initial anatomic location of deep venous thrombosis.
 - b. Identify the clinical factors that lead to an increased incidence of venous thromboembolism.
 - c. Describe the modalities used to prevent the development of venous thrombosis in surgical patients.
 - d. List the indications for surgical intervention for venous thrombosis.
 - e. Outline the diagnostic, operative, and non-operative management of venous ulcers and varicose veins.
 - f. Describe the anatomic mechanisms that caused thoracic outlet compression syndrome and discuss the appropriate diagnostic studies and surgical treatment.
5. *Lymphedema*
 - a. Explain the pathophysiology of lymphedema and discuss its treatment.

Transplantation (lecture, Essentials of General Surgery, 5th edition, Lawrence: Chap 23)

1. List the criteria to establish death for the purpose of organ donation.
2. Define autograft, isograft, allograft, xenograft, orthotopic graft, and heterotopic graft.
3. List the current forms of immunosuppression for transplantation and describe their mechanisms of action and specific complications.
4. Distinguish among hyperacute, acute, and chronic rejection in terms of pathophysiology, interval from transplant, histology, prognosis and treatment.
5. List the common methods used to gain access to the circulation for hemodialysis.

Surgical oncology: Malignant diseases of the skin and soft tissue (WISE-MD, Essentials of General Surgery, 5th edition, Lawrence: Chap 24)

1. *Cutaneous Neoplasms*
 - a. Describe the etiology and incidence of basal and squamous cell carcinomas as well as the treatment methods.
 - b. Discuss the predisposing factors for melanoma.
 - c. List the four categories of melanoma.
 - d. Outline the steps to confirm a diagnosis and determine the extent of malignant melanoma.
 - e. Describe the therapy options for malignant melanoma.
2. *Sarcoma*
 - a. List the clinical features of a sarcoma of the trunk or abdomen and in the extremity.
 - b. Discuss the treatment of sarcomas including surgery, radiation therapy, and chemotherapy.

Pediatric Surgery (lecture, WISE-MD)

1. *Pyloric Stenosis (WISE-MD)*
 - a. Describe the metabolic derangements and treatment of patients with pyloric stenosis.
2. *Pediatric Inguinal Hernia (WISE-MD)*
 - a. Describe the diagnostic approach to a child with a groin mass and the indications for surgery.
3. *Congenital Malformations*
 - a. List the differential diagnosis for an infant with bilious emesis and which diagnoses constitute a surgical emergency.
 - b. Explain the difference between gastroschisis and omphalocele.
4. *Pediatric Appendicitis*
 - a. Chart the work up for right lower quadrant pain in a pediatric patient.
5. *Pediatric Intussusception*
 - a. Identify the epidemiology, diagnosis and treatment of intussusception.
6. *Hirschsprung's Disease*
 - a. Describe the diagnosis and treatment of Hirschsprung's disease.

Discharge planning and end of life (lecture, End of Life vertical curriculum)

1. Define what a Medical Power of Attorney is and how it is utilized in patient care.
2. See End of Life vertical curriculum goals and objectives.

Underlined topics are covered in the text ONLY and not reviewed during lecture or WISE-MD case.