INTERNAL MEDICINE LEARNING OBJECTIVES

Preamble

Medical conditions are common in surgical patients. Therefore, it is important for the General Surgery resident to have adequate exposure to Internal Medicine.

General Objectives

Upon completion of the Internal Medicine rotation, the General Surgery resident is expected to:

- Demonstrate knowledge, clinical and technical skills and decision-making capabilities pertinent to the management of patients with medical problems
- Evaluate and manage common medical conditions in order to provide appropriate perioperative care to surgical patients who happen to have medical co-morbidities

Specific Objectives

At the completion of the Internal Medicine rotation, the General Surgery resident will have acquired the following competencies and will function effectively as:

Medical Expert

- Establish and maintain clinical knowledge, skills and attitudes appropriate to the Internal Medicine rotation
  - Apply knowledge of the clinical, socio-behavioral and fundamental biomedical sciences relevant to the Internal Medicine rotation

The resident in General Surgery is required to attain sufficient knowledge as follows:

Cardiovascular Medicine

- Cardiac evaluation
- Cardiac pharmacology
- Specific problems, including:
  - Chest pain and dyspnea
  - Hypertension
  - Coronary artery disease
  - Congestive heart failure
  - Valvular heart disease/endocarditis prophylaxis
  - Arrhythmias/conduction defects

Respiratory Medicine

- Pulmonary evaluation
- Pulmonary pharmacology
- Specific problems, including:
  - Chest pain and dyspnea
  - Asthma
  - Chronic obstructive pulmonary disease
  - Obstructive sleep apnea
  - Pneumonia/pulmonary infiltrates/atelectasis
  - DVT/pulmonary embolism/DVT prophylaxis
  - Pulmonary nodules
  - Pleural diseases

Endocrinology

- Diabetes mellitus
  - Diabetic medications
  - Management of glucose levels
  - Specific problems, including:
    - Diabetic ketoacidosis
    - Hyperosmolar coma
- Thyroid disease, including:
  - Hypothyroidism
  - Hyperthyroidism
- Adrenal insufficiency, including:
  - Assessment of glucocorticoid therapy and surgical stress
- Pheochromocytoma
Hematology/Oncology
- Anemia and bleeding
- Transfusion medicine
- Coagulation disorders
- Medical management of the oncology patient
- Pain management

Nephrology
- Renal assessment
- Pharmacology and renal disease
- Specific problems, including:
  - Chronic kidney disease
  - Fluid and electrolyte disorders
  - Acid-base disorders
  - Renal failure

GI Medicine/Hepatology
- Gastrointestinal assessment
- Hepatic assessment
- Nutritional assessment
- Parenteral/enteral nutritional therapy
- GI pharmacology
- Specific problems, including:
  - Liver disease, including:
    - Acute hepatitis
    - Cirrhosis/portal hypertension
    - Jaundice
  - Gastrointestinal bleeding
  - Acid peptic disorders, including:
    - GERD
    - Peptic ulcer/H pylori
    - Stress gastritis
  - Inflammatory bowel disease
  - Diarrhea
  - Malabsorption syndromes

Infectious Diseases
- Rational use of antimicrobials for treatment and prophylaxis
- Specific problems, including:
  - Community acquired infections
  - Hospital acquired infections
  - Pneumonia
  - Endocarditis
  - Urosepsis
  - Meningitis
  - Osteomyelitis
  - Cellulitis
  - Overwhelming soft tissue infections, including:
    - Necrotizing fasciitis
    - Myonecrosis
    - Fournier' gangrene
  - Antibiotic-associated infections, including:
    - Pseudomembranous colitis
  - The neutropenic patient
  - Pyrexia of unknown origin
  - HIV/AIDS
  - VRE/MRSA

Neurology
- Cerebrovascular disease
- Seizures
- Delerium
- Parkinson’s disease
- Myesthenia gravis
- Multiple sclerosis

Rheumatology
- Systemic autoimmune disease, including:
  - Inflammatory arthritis
  - Spondylitis
- Crystalline arthritis
- Myositis
- Systemic lupus erythematosi
- Scleroderma
- Antiphospholipid antibody syndrome
- Osteoarthritis
- Osteoporosis

**Alcohol Disorders**
- Alcohol withdrawal syndrome

**Perform a complete and appropriate assessment of the Internal Medicine patient**
- Elicit a history that is relevant, concise and accurate
- Perform a focused physical examination that is relevant and accurate
- Select medically appropriate investigations in a resource-effective and ethical manner
- Demonstrate effective clinical problem solving and judgment to address medical problems, including interpreting available data and integrating information to generate differential diagnoses and management plans

**Use therapeutic interventions effectively**
- Implement an effective and prioritized management plan for the patient
- Demonstrate effective, appropriate and timely application of therapeutic interventions relevant to the Internal Medicine rotation
- Ensure appropriate informed consent is obtained for therapies

**Demonstrate proficient and appropriate use of procedural skills**
- Demonstrate effective, appropriate and timely performance of diagnostic procedures relevant to the Internal Medicine rotation
- Demonstrate effective, appropriate and timely performance of therapeutic procedures relevant to the Internal Medicine rotation
- Ensure appropriate informed consent is obtained for procedures
- Compile and maintain an accurate and complete electronic data base of all procedures performed during the Internal Medicine rotation

Having completed the Internal Medicine rotation, the General Surgery resident will be able to demonstrate knowledge and technical competence in performing the following procedures:
- Arterial puncture
- Venipuncture
- Venous cutdown
- Central venous catheter insertion
- Urinary catheter insertion
- Nasogastric/orogastric tube insertion
- Lumbar puncture
- Thoracentesis
- Paracentesis
- Bone marrow aspiration

**Seek appropriate consultation from other health professionals**
- Demonstrate insight into his/her own limitations by self-assessment
- Demonstrate effective, appropriate and timely consultation of another health professional as needed for optimal care of the patient

**Communicator**

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

**Develop rapport, trust and ethical therapeutic relationships with patients and families**
- Establish positive therapeutic relationships with patients and their families that are characterized by understanding, trust, respect, honesty and empathy
- Respect patient confidentiality, privacy and autonomy
- Listen effectively

**Accurately elicit and synthesize relevant information and perspectives of patients and families, colleagues and other professionals**
- Seek out and synthesize relevant information from other sources such as the family, caregivers and other professionals

**Accurately convey relevant information and explanations to patients and families, colleagues and other professionals**
- Deliver information to the patient and family, colleagues and other professionals in a humane and understandable manner

**Convey effective oral and written information**
- Maintain clear, accurate, appropriate and timely records of clinical encounters and procedures
- Maintain an accurate, complete and up-to-date electronic database (log) of procedures performed during the Internal Medicine rotation
- Effectively present verbal reports of clinical encounters and medical information during the Internal Medicine rotation
Collaborator

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

- **Participate effectively and appropriately in an interprofessional healthcare team**
  - Recognize and respect the diversity of roles, responsibilities and competences of other professionals in the management of the patient
  - Work with others to assess, plan, provide and integrate care of the patient

Manager

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

- **Manage his/her professional and personal activities effectively**
  - Set priorities and manage time to balance professional responsibilities, outside activities and personal life
  - Employ information technology effectively (e.g. electronic surgical procedure database)
- **Demonstrate an understanding of cost-effectiveness in patient management**
  - Utilize hospital resources wisely when managing patients
- **Serve in leadership roles, as appropriate**
  - Participate effectively at teaching rounds and other meetings

Health Advocate

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

- **Respond to the needs of the patient**
  - Identify the health needs of an individual patient

Scholar

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

- **Maintain and enhance professional activities through ongoing learning**
  - Pose an appropriate learning question
  - Access and interpret the relevant evidence
  - Integrate new learning into development as a general surgeon
- **Critically evaluate medical information and its sources and apply this appropriately to clinical decisions**
  - Critically appraise the medical evidence in order to address a clinical question
  - Integrate critical appraisal conclusions into clinical care

Professional

At the completion of the Internal Medicine rotation, the General Surgery resident will be able to:

- **Demonstrate a commitment to patients through ethical practice**
  - Exhibit appropriate professional behaviors, including honesty, integrity, commitment, compassion, respect and altruism
  - Recognize and appropriately respond to ethical issues such as consent, confidentiality and advanced directives
  - Appropriately manage conflicts of interest
  - Recognize the principles and limits of patient confidentiality
  - Maintain appropriate relations with patients