Course Title: Primary Care Rotation

Course Description and Goals:
This is a 22-week rotation designed to educate the student about the diagnosis, management and treatment of health problems encountered across the lifespan in the primary care setting. This rotation can be 22 consecutive weeks at one location, or at several locations over several time periods. The experience may include inpatient as well as outpatient settings and will expose the student to different social and economic factors encountered in a community-based patient population. Students may not be able to accomplish all of the objectives listed below during their primary care rotation. However, they are expected to be familiar with the diagnostic entities outlined below in terms of clinical presentation, diagnostic work-up and management. As a reminder, students will be tested formally on information they are expected to see clinically or review didactically through periodic examinations.

Method of Evaluation: (preceptor evaluation, Typhon, self evaluation, specialty exam score, competency list, other)

I. Medical Knowledge
Upon completion of the rotation, the student will demonstrate the ability to evaluate, manage and educate patients and their families on the following acute, chronic and preventative conditions across the life span encountered in the Family Medicine setting:

Objectives:

Cardiology

Hypertension/Hypotension
1. Describe the clinical presentation, initial work-up (including history, physical exam, lab studies, radiologic studies and EKG) diagnosis, and treatments including pharmacologic and non-pharmacologic (e.g. weight loss, exercise, diet changes, etc.) for a patient presenting with hypertension
2. Define essential, secondary and malignant hypertension and discuss the etiology of each
3. Discuss risk factors of unmanaged hypertension, including ophthalmologic, renal, cardiac and vascular end organ damage
4. Discuss the presentation and management of a patient in cardiogenic shock
5. Describe the etiology and management of postural/orthostatic hypotension

Conduction Disorders
1. Define normal sinus rhythm, sinus arrhythmia, ventricular bradycardia and tachycardia, including paroxysmal supraventricular tachycardia
2. Discuss the presentation, etiology and treatment of atrial arrhythmias
including premature atrial contraction, atrial tachycardia, atrial flutter, atrial fibrillation
3. In a patient who presents with new onset atrial fibrillation, look for an underlying cause (e.g. ischemic heart disease, acute MI, CHF, cardiomyopathy, pulmonary embolism, hyperthyroidism, alcohol, etc.) and discuss the need for anticoagulation
4. Discuss the presentation, etiology and treatment of ventricular arrhythmias including premature ventricular contraction, ventricular tachycardia, ventricular flutter and fibrillation, ventricular escape rhythm and ventricular asystole
5. Discuss the presentation, diagnosis, etiology and treatment of AV blocks including first degree, second degree (Mobitz type I and II), and third degree (complete).
6. Define right and left bundle branch block
7. Discuss current advanced cardiac life support (ACLS) recommendations
8. Discuss right/left atrial enlargement and right/left ventricular hypertrophy, and identify the etiology, EKG findings and treatment for each

**Ischemic Heart Disease**
1. Diagnose presentations of ischemic heart disease that are classic and atypical (e.g. women, diabetes, young patients, no-risk patients)
2. Discuss the signs and symptoms, etiology, common anatomic locations of occurrence, EKG findings, laboratory findings and treatment of myocardial ischemia, myocardial injury and myocardial infarction
3. Describe the presentation and management of stable angina, unstable angina and Prinzmetal’s angina
4. Discuss the presentation, risk factors, diagnosis and management of atherosclerotic disease and hyperlipidemia

**Murmurs**
1. Discuss the timing, characteristics, etiology, symptoms, diagnosis and management of the following murmurs
   - Aortic stenosis
   - Aortic insufficiency
   - Pulmonic stenosis
   - Pulmonic insufficiency
   - Tricuspid insufficiency
   - Mitral stenosis
   - Mitral valve prolapse
   - Mitral regurgitation
   - Pericardial friction rub
   - Tricuspid stenosis

**Heart Failure**
1. Discuss the presentation, etiology, radiologic findings, diagnosis and management of right and left sided heart failure
2. Define cor pulmonale and its role in heart failure

**Carditis**
1. Discuss the presentation, etiology, lab findings, radiological findings, EKG findings and treatment of myocarditis, pericarditis and endocarditis
2. Describe the presentation of rheumatic heart disease and describe the prophylactic recommendations for patients with a history of RHD
3. Discuss the acute management of cardiac tamponade and pericardial effusion

**Cardiomyopathy**
1. Discuss the signs and symptoms, etiology, lab findings, radiological findings, EKG findings, and treatments for dilated, hypertrophic and restrictive cardiomyopathy

**Cardiovascular Disease**
1. Differentiate stroke (including ischemic, hemorrhagic and cerebral aneurysm), transient ischemic attack and reversible ischemic neurologic deficit and describe the symptoms, diagnosis and treatment for each
2. Describe the presentation, etiology, diagnosis and management of the following cardiovascular issues
   - Peripheral artery disease
   - Peripheral venous disease
   - Venous thrombosis
   - Arterial thrombosis
   - Arterial occlusive disease
   - Thrombophlebitis
   - Aortic dissection
   - Chronic venous insufficiency
   - Varicose veins
   - Venous ulceration
   - Reynaud's disease
   - Giant cell arteritis
   - Temporal arteritis
   - Aortic aneurysm

**Congenital Heart Disease**
1. Discuss the presentation, etiology, risk factors, diagnosis and management in patients with atrial septal defect, ventricular septal defect, coarctation of the aorta, Tetraolgy of Fallot and patent ductus arteriosus

**Skills:** Interpretation of EKGs, cardiac enzymes, BNP, CPK, total cholesterol, cardiac risk assessment, nuclear studies, echocardiography, holter monitor

**Procedures:** Observe/assist catheterization/angiography

**Dermatology**

**Eczematous Conditions**
1. Describe the presentation, predisposing conditions, diagnosis and treatment of the following conditions
   - Atopic dermatitis
   - Contact dermatitis
   - Nummular eczema
   - Perioral dermatitis
   - Dyshidrosis
   - Lichen simplex chronicus
   - Seborrheic dermatitis
   - Lichen planus
**Acneiform Conditions**
1. Describe the different stages of acne vulgaris and discuss treatment options for each.
2. Discuss the differences between acne and rosacea in terms of presentation and management.
3. Describe the presentation, risk factors and management of hidradenitis suppurativa.

**Nail and Hair Conditions**
1. Describe the presentation, diagnosis and treatment of nail diseases including ingrown toenail, onychomycosis, onycholysis, paronychia and subungual hematoma.
2. Describe the underlying medical condition that are associated with nail clubbing, splinter hemorrhages, nail pigmentation and pitting nails.
3. Describe the presentation, diagnosis and management of alopecia areata and androgenic alopecia.

**Infections**

**Bacterial**
1. Initiate the diagnosis and treatment of the following bacterial skin conditions:
   - Cellulitis
   - Impetigo
   - Erysipelas
   - Furunculosis
   - Folliculitis

**Viral**
1. Discuss the presentation, diagnosis and management of the following viral skin conditions:
   - Condyloma acuminata
   - Varicella
   - Herpes simplex
   - Verruca vulgaris
   - Herpes zoster
   - Erythema infectiosum
   - Molluscum contagiosum
   - Roseola
   - Rubella
   - Rubeola
   - Warts
   - Pityriasis rosea

**Fungal**
1. Describe the presentation, diagnosis and management of the following fungal skin conditions:
   - Candidiasis
   - Tinea cruris
   - Tinea versicolor
   - Tinea pedis
   - Tinea capitis
   - Tinea corporis

**Insect**
1. Discuss the diagnosis and treatment of the following insect-related skin conditions:
   - Erythema migrans
   - Scabies
   - Pediculosis
   - Spider bites
**Benign Skin Lesions**
1. Describe the characteristics, diagnosis and treatment of cherry angioma, dermatofibroma, hemangioma, neurofibroma, nevus
2. Differentiate actinic keratosis and seborrheic keratosis and discuss management for each
3. Discuss the etiology, presentation and diagnosis of café-au-lait spots and Mongolian spots
4. Discuss the treatment options for skin tags, sebaceous cysts, lipomas
5. Describe skin pigmentation, including melasma and vitiligo

**Skin Cancer**
1. Discuss the diagnosis of basal cell carcinoma, squamous cell carcinoma and malignant melanoma and distinguish a benign lesion from a malignant lesion
2. Discuss punch biopsy, excision or Moh's procedure for diagnosis of a lesion

**Inflammatory and Desquamation Conditions**
1. Define each condition below, and describe the presentation, diagnosis and treatment for each
   - Erythema multiforme
   - Erythema nodosum
   - Angioedema
   - Urticaria
   - Psoriasis
   - Xerosis
   - Keratosis pilaris
   - Granuloma annulare

**Burns and Environmental Skin Conditions**
1. Define first, second, third and fourth degree burns, the treatment for each, and the percentage of burned body surface area
2. Discuss the most appropriate treatment for severe sunburn
3. Describe the presentation, complications, treatment and prognosis for frostbite

**Skills:**
*Lab: KOH, Fungal culture, scabies prep, tzank smear, wood’s light*
*Procedures: shave, punch, excisional, incisional biopsy, cryosurgery, I&D, Moh’s*

**Eye, Ear, Nose and Throat**

**Eye**
1. Describe the anatomy and nerve structure of the eye
2. Identify presentation, risk factors, pathophysiology, diagnosis and treatment for the following conditions which present with erythema
   - Orbital cellulitis
   - Acute angle closure glaucoma
   - Foreign body, chemical or blunt injury to the cornea
   - Hyphema, Ectropion, Entropion, Blepharitis, Hordeolum, Chalazion
• Allergic, bacterial, viral (including herpetic), chemical conjunctivitis
• Bacterial and viral keratitis
• Scleritis, episcleritis, iritis, dacroadenitis, pterygium

3. Identify the presentation, risk factors, pathophysiology, diagnosis, treatment and long-term outcome of the following conditions associated with vision loss:
   • Diabetic and hypertensive retinopathy and papilledema
   • Retinal vascular occlusion, retinal detachment, vitreous hemorrhage
   • Macular degeneration
   • Cataract
   • Amblyopia, strabismus and optic neuritis

4. Discuss the presentation, diagnosis and treatment of the following traumatic eye injuries:
   • Blowout fracture
   • Chemical burns, corneal laceration and abrasion
   • Ruptured or lacerated globe

Skills: Measure visual acuity, perform slit-lamp exam and flourescein staining

Ear

1. Identify the anatomical structures of the ear
2. Discuss the presentation, etiology, risk factors, diagnosis and treatment of acute, chronic and serous otitis media.
3. Discuss serious and referred causes of ear pain (tooth abscess, trigeminal neuralgia, TMJ dysfunction, tumors, temporal arteritis, mastoiditis)
4. Describe the physical findings and treatment for otitis externa
5. Identify methods for cerumen removal, and discuss impaction prevention strategies
6. Discuss the long-term effects of barotrauma and tympanic membrane perforation
7. Discuss the methods of diagnosis of acute and chronic hearing loss
8. Identify the difference between dizziness and vertigo, and discuss central vs. peripheral vertigo, Meniere’s disease and labyrinthitis
9. Discuss the presentation, etiology and management for mastoiditis
10. Discuss the differential diagnosis for patients presenting with tinnitus
11. Define cholesteotoma

Skills: Administer hearing test, Rhine-Weber test, tympanometry

Nose
1. Identify the anatomical structures of the nose
2. Discuss the pathophysiology, signs and symptoms, diagnosis and treatment options for acute and chronic sinusitis
3. Describe the treatment approach to a foreign body in the ear canal or nose
4. Discuss the differentiating factors of allergic rhinitis
5. Discuss the presentation and acute management of anterior and posterior epistaxis
6. Discuss the presentation, etiology and treatment of nasal polyps

**Mouth/Throat**

1. Identify the anatomic structures of the mouth and throat
2. Compare and contrast the findings of acute pharyngitis when the etiology is bacterial and viral. Discuss the treatments for both.
3. Differentiate between H1N1 and seasonal influenza
4. Discuss the presentation and management of aphthous ulcers and perioral herpex simplex lesions
5. Discuss the differential diagnosis for dysphonia
6. Describe the presentation and acute management of a patient presenting with foreign body obstruction
7. Identify the signs, symptoms and immediate treatment for anaphylactic reactions
8. Describe the evaluation of a patient presenting with head or neck mass
9. Compare and contrast the findings of URI, influenza, RSV and croup
10. Discuss the signs and symptoms, etiology, diagnosis and treatment of the following bacterial, viral and fungal infections:
   - Acute tonsillitis
   - Stomatitis
   - Laryngitis
   - Dental abscess
   - Parotitis
   - Epiglottitis
   - Tracheitis
   - Oral candidiasis
   - Peritonsillar abscess
   - Sialadenitis

**Pulmonary**

1. Identify the anatomical structures of the pulmonary system
2. List the common differential diagnosis for cough, dyspnea, hypoxemia, sputum production, hemoptysis and clubbing as it pertains to the pulmonary system
3. Discuss the pathophysiology, signs and symptoms, risk factors, diagnosis and management of patients with asthma and asthma exacerbations
4. Discuss the following possible causes of cough, including presentation, diagnosis, DI and management:
   - Acute bronchitis
   - Acute bronchiolitis
5. Compare and contrast the presentation, diagnosis, DI findings and treatment plan for patients presenting with bacterial, viral, fungal and HIV-related and aspiration pneumonia and differentiate them from the signs and symptoms of bronchitis.

6. Discuss the current recommendations regarding pneumococcal vaccines.

7. Discuss the signs, symptoms and acute management of a patient presenting with foreign body.

8. Define COPD, and discuss the signs and symptoms, etiology, lifestyle recommendations and management of patients with chronic bronchitis and emphysema.

9. Discuss the presentation, pathophysiology, DI findings, diagnosis and management of the following respiratory conditions causing chest pain and/or shortness of breath:
   - Pleural effusion
   - Secondary pneumothorax
   - Tension pneumothorax
   - Pulmonary hypertension
   - Pleuritis
   - Primary pneumothorax
   - Tension pneumothorax
   - Pulmonary embolism
   - Cor pulmonale
   - Hemothorax

10. Describe the presentation and workup of patients with bronchogenic carcinoma, carcinoma tumors, metastatic tumors and pulmonary nodules.

11. Identify the signs and symptoms, management and prognosis of cystic fibrosis, idiopathic pulmonary fibrosis, pneumoconiosis and sarcoidosis.

12. Discuss the etiology and correction of blood gas abnormalities including respiratory and metabolic acidosis and alkalosis.

Skills: Read chest x-ray, perform and interpret PFTs, interpret results of V-Q scan and arterial blood gases, apply oxygen, nebulizers.

Gastrointestinal

Esophagus

1. Discuss the etiology, pathophysiology, signs and symptoms, differential diagnosis, evaluation and management of the following esophageal disorders:
   - Esophagitis
   - Mallory-Weiss tear
   - Neoplasms
   - Varices
   - Pyloric stenosis
   - Motor disorders
   - Barrett's esophagus
   - Strictures
   - Spasms

Stomach
1. List the differential diagnosis, risk factors, typical and atypical symptoms, diagnosis, potential complications and management of gastroesophageal reflux disease (GERD)
2. Discuss the etiology, signs and symptoms, evaluation and treatment of acute and chronic gastritis
3. Discuss the risk factors, pathophysiology, clinical presentation, complications, diagnosis and management of ulcers, including gastric and duodenal ulcers and peptic ulcer disease
4. Discuss the role of H. Pylori in the development of PUD
5. Outline the risk factors and prognosis for gastric neoplasm

**Small and Large Intestine**
1. Discuss the typical clinical presentation, workup, DI and laboratory findings, possible complications and management of the following GI conditions which may present as an acute abdomen:
   - Appendicitis
   - Diverticular disease
   - Intussusception
   - Peritonitis
   - GI hemorrhage
   - Bowel obstruction
   - Mesenteric ischemia
   - Ruptured AAA
2. Describe the clinical features, etiology, workup and treatment for irritable bowel syndrome
3. Outline a treatment plan and prevention strategies for common constipation
4. Discuss the etiologies, risk factors, transmission methods, diagnosis and management of diarrhea including infectious diarrhea and colitis
5. Define Inflammatory Bowel Disease, and discuss the similarities, differences, diagnosis and management of Crohn's disease, ulcerative colitis and toxic megacolon
6. Identify the risk factors, presentation, diagnosis, staging, treatment options and prognosis of colon and rectal cancer
7. Discuss the following hernias: direct, indirect, hiatal, inguinal, umbilical, incisional, ventral, strangulated
8. Identify the etiology, clinical presentation, diagnosis and management of hemorrhoids, anal fissures/fistulas, rectal prolapse, abscesses, fecal impaction and pilonidal cysts

**Gallbladder and Pancreas**
1. Outline the presentation, etiology, risk factors, diagnosis, DI and laboratory findings, complications and management of acute and chronic pancreatitis
2. Discuss the differences between cholelithiasis, acute and chronic cholecystitis, ascending cholangitis, biliary colic and choledocholithiasis and describe the treatment for each
3. Identify the presentation, diagnosis, management and prognosis for pancreatic cancer

**Liver**
1. Discuss the common signs and symptoms of liver disease and liver failure
2. Explain the clinical presentation, risk factors, etiology, diagnosis and treatment of cirrhosis
3. Define portal hypertension
4. Outline the approach to a patient with hepatic encephalopathy
5. Discuss the presentation, diagnosis, route of transmission, incubation period, carrier states and management of acute and chronic hepatitis A, B, C and D.
6. Discuss the vaccination schedule for Hepatitis A and B
7. Identify the workup, prognosis and management of a patient with liver cancer

**Nutritional Deficiencies**
1. Discuss screening tests and diagnosis of malabsorptive disorders, lactose intolerance, celiac disease and phenylketonuria
2. Outline the role of each vitamin, symptoms of deficiency, consequences of non-treatment, and methods to correct the following nutritional deficiencies:
   - Niacin
   - Thiamine
   - Vitamin A
   - Riboflavin
   - Vitamin C
   - Vitamin D
   - Vitamin K

**Skills:** Observe or assist and interpret results of barium study, x-ray, CT, MRI, ERCP, endoscopy, colonoscopy, flexible sigmoidoscopy; observe, assist or perform guaiac testing, NG tube placement, tube feeding, peripheral parenteral nutrition, total parenteral nutrition

**Genitourinary**
1. Describe the basic anatomy and physiologic function of the renal and urological system

**Electrolyte and Acid/Base Disorders**
1. Describe the way the body physiologically maintains and regulates fluid and electrolyte balance and acid-base balance
2. Discuss the signs and symptoms, etiology, laboratory studies, diagnosis and management of the following fluid and electrolyte disorders:
   - Hyponatremia
   - Hypernatremia
   - Hypokalemia
   - Hyperkalemia
   - Hypocalcemia
   - Hypercalcemia
   - Hypomagnesemia
   - Volume depletion/excess
3. Identify the clinical presentation, pathophysiology, diagnosis and treatment of metabolic and respiratory acidosis and alkalosis

**Infections and Inflammatory Conditions**
1. Outline the signs and symptoms, diagnosis and treatment for uncomplicated urinary tract infection
2. Compare and contrast the clinical presentation, diagnosis and management of cystitis and pyelonephritis
3. Identify the signs and symptoms, risk factors, etiology, diagnosis and treatment plan for epididymitis and orchitis
4. Discuss the risk factors for urethritis in males and females

**Prostate**
1. Discuss the etiology, clinical presentation, diagnostic evaluation and conservative vs. aggressive management of BPH
2. Outline the presentation, diagnosis and treatment plan for patients with prostatitis
3. Describe the pros and cons of using the PSA test for screening of prostate cancer
4. Identify risk factors, signs and symptoms, diagnosis, staging, treatment options and prognosis for patients with prostate cancer

**Renal**
1. Outline pre-renal, renal and post-renal causes of acute and chronic renal failure
2. Discuss the presentation, risk factors, diagnostic evaluation and both acute and long-term management of patients with acute vs. chronic renal failure
3. Describe the signs and symptoms, etiology, risk factors, diagnostic evaluation and treatment of the following renal conditions:
   - Glomerulonephritis
   - Nephrotic syndrome
   - Polycystic kidney disease
4. Identify the signs and symptoms, etiology (including stone composition), diagnostic evaluation, treatment options and indications for lithotripsy and/or surgery in patients with nephrolithiasis and urolithiasis

**Other Conditions of the GU tract**
1. Define hydrocele and varicocele
2. Describe the complications of untreated cryptorchidism
3. Outline the differences in etiology, presentation and treatment options for stress, overflow, functional and mechanical urinary incontinence
4. Define paraphimosis and educate patients and/or parents on the pros and cons of circumcision
5. Describe the presentation and acute management of testicular torsion
6. Identify the signs and symptoms, etiology (including stone composition), diagnostic evaluation, treatment options and indications for lithotripsy and/or surgery in patients with nephrolithiasis and urolithiasis
7. Discuss the evaluation of sexual dysfunction in males and females
8. Describe the etiology and treatment options for erectile dysfunction

**Neoplastic Disorders of the GU system**
1. Discuss the workup and differential diagnosis of microscopic hematuria
2. Identify the presentation, diagnostic evaluation, course of disease, staging, treatment options and prognosis for the following neoplastic conditions
   • Bladder carcinoma
   • Renal cell carcinoma
   • Testicular carcinoma
   • Wilms tumor

Skills: Digital rectal exam, UA, CT/MRI/US evaluation, VCUG, dialysis, PSA, cystoscopy, pesserie

Endocrine

1. Describe the clinical presentation, etiology, diagnostic evaluation and management of the following thyroid conditions
   • Hyperthyroidism
   • Hypothyroidism
   • Hyperparathyroidism
   • Hypoparathyroidism
   • Thyroid storm
   • Grave’s disease
   • Thyroiditis
2. Define hot and cold thyroid nodule, and describe the workup of each
3. Discuss the treatment options for thyroid carcinoma
4. Describe the presentation, etiology, workup and management of adrenal conditions, including Cushing’s syndrome and Addison’s disease
5. Discuss the role of the pituitary gland, and define acromegaly and dwarfism
6. Describe the differences in presentation, etiology, risk factors, diagnostic evaluation and pharmacologic/non-pharmacologic treatment of Diabetes Mellitus Type I and Type II
7. Identify the clinical presentation of hyperglycemia and hypoglycemia
8. Define Diabetes Insipidus
9. Outline the current recommendations for screening, target goals (including LDL, HDL and total cholesterol) and treatments for hypercholesterolemia and hypertriglyceridemia

Reproductive System
Please see 'Women’s Health' objectives

Orthopedics

1. Define fracture, dislocation, subluxation, sprain, strain and separation
2. Describe a fracture using the following criteria: anatomy (epiphysis, diaphysis, metaphysis), type (transverse, greenstick, torus, oblique, spiral), description (shortened, comminuted, displaced, angulated, compressed)
3. Define the Salter-Harris criteria

Hand and Wrist
1. Describe the anatomy of the hand and wrist including bones, joints (MCP, PIP, DIP, radiocarpal, radioulnar, carpometacarpal), muscles, ligaments, tendons, nerves and their areas of innervation (radial, medial, ulnar) and vasculature.

2. Describe the involved bones, x-ray findings and intervention for the following fractures/dislocations:
   - Boxer’s
   - Colles’
   - Gamekeeper’s thumb
   - Scaphoid

3. Discuss the signs and symptoms, mechanism of injury, physical exam findings, diagnostic evaluation and treatment of the following conditions involving tendons:
   - Tendonitis
   - Dupuytren’s contracture
   - Mallet finger
   - Trigger finger
   - Boutonniere deformity
   - DeQuervain’s tenosynovitis
   - Swan neck deformity
   - Tenosynovitis

4. Outline the presentation, mechanism of injury, physical exam findings, diagnostic evaluation and treatment options for carpal tunnel syndrome and cubital tunnel syndrome.

5. Define ganglion cyst.

**Elbow**

1. Describe the anatomy of the elbow, including bones, muscles, tendons, nerves and vasculature.

2. Describe the presentation, diagnostic evaluation and PE findings, and treatment of humeral, olecranon and radial head fractures and elbow dislocation.

3. Discuss the etiology, physical exam findings and treatment of lateral and medial epicondylitis.

4. Identify the mechanism of injury of Nursemaid’s elbow, and describe the treatment.

5. Distinguish elbow tendonitis from olecranon bursitis.

**Shoulder**

1. Describe the anatomy of the shoulder including bones/joints, muscles, tendons, nerves and vasculature.

2. Discuss the presentation, mechanism of injury, physical exam findings, diagnostic imaging and treatment options for rotator cuff tears and biceps tendon rupture.

3. Outline the presentation and management of fractures of the clavicle, proximal humerus and scapula.

4. Describe the signs and symptoms, mechanism of injury, PE and DI findings, and management of the following shoulder joint injuries:
   - AC separation
   - Glenohumeral instability
   - Anterior dislocation
   - Posterior dislocation
   - Frozen shoulder
5. Identify the presentation, diagnostic evaluation and treatment options for shoulder bursitis and impingement
6. Describe the etiology of thoracic outlet syndrome

**Hip/Thigh**
1. Describe the anatomy of the hip and thigh including bones/joints, muscles, tendons, nerves (including spinal nerves) and vasculature
2. Discuss the presentation, etiology, risk factors, diagnostic evaluation and treatment of aseptic necrosis
3. Define Legg-Calve-Perthes disease
4. Identify the signs and symptoms, etiology, pathophysiology, diagnostic evaluation and management of the following hip conditions:
   - Slipped capital femoral epiphysis
   - Hip dislocation/fracture/indications for replacement
   - Pelvic fractures
   - Trochanteric bursitis
   - Leg length discrepancy
   - Lateral femoral cutaneous nerve entrapment

**Knee**
1. Describe the anatomy of the knee including bones/joints, muscles, tendons, ligaments, nerves and vasculature
2. Discuss congenital abnormalities of the lower extremities including genu varum/valgum
3. Define Osgood-Schlatter disease and describe the signs and symptoms, PE findings and treatment
4. Identify the presentation, diagnostic evaluation and PE findings, and management of overuse injuries including pre-patellar bursitis, chondromalacia patellae, and tendonitis of the knee
5. Discuss the management of patellar, femoral, tibial and fibular fractures
6. Outline the presentation, PE findings, diagnostic imaging and management of ligament (ACL, PCL, LCL and MCL) and meniscus tears
7. Differentiate between knee sprain and strain
8. Define Baker’s cyst

**Ankle/Foot**
1. Describe the anatomy of the ankle and foot including bones/joints, muscles, tendons, ligaments, nerves and vasculature
2. On x-ray, identify fractures of the ankle, metatarsals, phalanges, calcaneous, hindfoot and midfoot
3. Discuss the presentation, etiology, risk factors, diagnostic evaluation and PE findings, and management of the following conditions:
   - Plantar fascitis
   - Pes planus
   - Metatarsalgia
   - Ankle sprain/tendonitis
   - Ruptured Achilles tendon
   - Hammer toe
• Mallet toe
• Stress fractures
• Tarsal tunnel syndrome
• Morton’s neuroma
• Metatarsalgia
• Club foot

**Spine**
1. Describe the anatomy of the cervical, thoracic, lumbar and sacral spine including bones/joints, muscles, ligaments, spinal nerves and vasculature
2. Discuss the normal curvature of the spine, and identify scoliosis, kyphosis and lordosis
3. Identify the risk factors for a vertebral compression fracture
4. Differentiate spondylosis, spondylolysis and spondylolisthesis
5. Outline the presentation, etiology, PE findings, diagnostic evaluation and treatment options for the following spinal conditions
   • Acute lumbar/cervical sprain
   • Degenerative disc disease
   • Disc herniation
   • Spinal stenosis
   • Facet arthritis/posterior element disease
6. Discuss the distinguishing features of cauda equina syndrome and describe immediate management for the condition
7. Define ankylosing spondylitis and discuss presentation, DI and PE findings, laboratory findings and management of the condition

**Other conditions**
1. Outline the presentation, etiology, risk factors, DI and PE findings and acute management of infectious conditions including acute/chronic osteomyelitis, and septic arthritis
2. Discuss the signs and symptoms, etiology, risk factors, diagnostic evaluation, staging, treatment and prognosis for osteosarcoma, bone tumors and bone cysts
3. Compare and contrast the presentation, diagnostic evaluation and management of osteoarthritis and rheumatoid arthritis (including juvenile rheumatoid arthritis
4. Discuss the risk factors for osteoporosis and osteomalacia
5. Discuss the clinical presentation, diagnostic evaluation and management of Paget’s disease and Rickets
6. Describe the clinical presentation, diagnostic evaluation (including DI and labs) and management of the following conditions
   • Gout/pseudogout
   • Polymyositis
   • Reiter’s syndrome
   • Sjogren’s syndrome
   • Fibromyalgia
   • Reflex sympathetic dystrophy
   • Polyarteritis nodosa
   • Polymyalgia rheumatica
   • Scleroderma
   • Systemic lupus erythematosus
   • Psoriatic arthritis
   • Dermatomyositis

**Skills:** Perform Appley’s, Lachman’s, anterior/posterior drawer, McMurray’s, Phalen’s and Tinel’s tests; perform scoliosis measurement, muscle strength testing
and appropriate neurological exams; perform joint injections; identify radiographs of dislocations, joint effusions, foreign bodies, bone lesions, fractures and soft tissue injuries; apply and remove splints and casts appropriately

**Neurology**

**Vascular**
1. Describe the clinical presentation, etiology, risk factors, diagnostic evaluation, differential diagnosis, management and prognosis of patients with embolic, thrombotic, and hemorrhagic stroke
2. Distinguish TIA from CVA
3. Outline the presentation, risk factors and management of cerebral aneurysm
4. Identify the characteristics of subdural, subarachnoid and epidural hemorrhage

**Headache**
1. Differentiate benign from serious pathology (through history and physical examination) in a patient presenting with a new-onset headache and describe the diagnostic evaluation of each
2. Describe the clinical presentation, etiology, risk factors, diagnostic evaluation, and acute/chronic treatment of patients presenting with migraine, tension and cluster headaches
3. Differentiate between common and classic migraine headache
4. Identify factors that contribute to intracranial pressure
5. Discuss the presentation, diagnostic imaging findings and treatment for hydrocephalus
6. List and differentiate between the different types of brain tumors, both benign and malignant, and the prognosis for each

**Seizures**
1. Explain the clinical presentations, etiology, risk factors, diagnostic evaluation and acute/chronic management of patients presenting with tonic, clonic, tonic-clonic, myoclonic, absence and atonic seizures
2. Define status epilepticus
3. Differentiate simple partial and complex partial seizures

**Peripheral Nerve Disorders**
1. Explain the etiology and pathophysiology of peripheral neuropathy, and list common diseases which present with peripheral neuropathy
2. List the clinical presentation, etiology, risk factors, diagnostic evaluation including imaging and labs, and acute/chronic management of the following conditions:
   • Bell’s Palsy
   • Myasthenia gravis
   • Trigeminal neuralgia
   • Guillain-Barre syndrome
   • Restless leg syndrome
   • Amyotrophic lateral sclerosis
**Movement Disorders**
1. Define essential tremor
2. List a differential diagnosis for patients presenting with tremor
3. Discuss the presentation, etiology, diagnostic evaluation, treatment and prognosis for patients with Parkinson’s disease (including idiopathic and atypical) and Huntington’s disease
4. Discuss the signs and symptoms, treatment and prognosis in cerebral palsy; identify risk factors for the disease and the progression of the disease

**Multiple Sclerosis**
1. Describe the signs and symptoms, etiology and pathophysiology of multiple sclerosis
2. Discuss the diagnostic evaluation of MS, including diagnostic imaging and laboratory findings
3. Describe the treatment plan and prognosis for MS
4. Outline the possible courses of MS, including remitting and progressive-relapsing and primary and secondary-progressive.

**Infectious Diseases**
1. Describe the presentation, etiology, diagnostic evaluation, management and potential complications of meningitis, including viral, bacterial and aseptic
2. Discuss the clinical findings and management of encephalitis

**Dementia/Alzheimer’s**
1. In patients with obvious cognitive impairment, discuss patient history, imaging and laboratory findings and PE findings to distinguish between dementia, delirium and depression
2. Discuss the presentation, etiology, diagnostic evaluation, management and prognosis for patients with Alzheimer’s disease
3. Distinguish Alzheimer’s disease from other dementias
4. Assess the needs of and supports for caregivers of patients with dementia

**Skills:** Perform Mini Mental Status Exam, recognize abnormal findings on MRI/CT scans, observe and interpret an EEG study if possible

**Psychiatry**

**Mood Disorders**
1. Discuss the clinical presentation, risk factors, screening techniques, the DSM-IV diagnostic criteria and treatment (pharmacologic and non-pharmacologic) of depression
2. Identify barriers of the patient and the clinician to the diagnosis and management of depression
3. Differentiate major depression from dysthymic disorder
4. Define adjustment disorder
5. Describe the clinical presentation, typical age of onset, diagnosis and treatment (pharmacologic and non-pharmacologic) for bipolar disorder

**Anxiety Disorders**
1. In a patient with symptoms of anxiety, differentiate between agoraphobia, social phobia, generalized anxiety disorder and panic disorder
2. Identify appropriate treatments for the conditions listed above
3. Discuss the presentation, epidemiology, risk factors, diagnosis and treatment of Post Traumatic Stress Disorder
4. Define Obsessive-Compulsive Disorder, and discuss the clinical signs and symptoms, age, gender distributions, risk factors, diagnosis and management of the condition

**Personality Disorders**
1. Discuss the clinical presentation, diagnosis using DSM-IV criteria, barriers to treatment and management options for the following personality disorders:
   - Antisocial
   - Avoidant
   - Borderline
   - Histrionic
   - Narcissistic
   - Paranoid
   - Schizoid/Schizotypal
   - Dissociative

**Psychoses**
1. Differentiate schizoaffective disorder from schizophrenia
2. Identify the presentation, risk factors, diagnosis, evaluation of possible substance abuse, management and psychosocial supports for patients with schizophrenia
3. Define a psychotic episode and psychiatric emergency
4. Discuss the characteristics of delusional disorder and differentiate obsessions from delusions

**Eating Disorders and Substance Abuse**
1. Define anorexia nervosa and bulimia
2. Discuss binge overeating and the negative medical effects of obesity
3. Describe the risk factors and common demographic characteristics of patients with eating disorders
4. Outline the treatment plan, barriers to treatment and possible complications of untreated eating disorders
5. Discuss mechanisms for prevention of substance abuse
6. Discuss the CAGE assessment for substance abuse
7. Describe the signs and symptoms of withdrawal and acute intoxication of alcohol, tobacco and illicit drugs
8. Discuss treatment options for patients with substance abuse problems

**Other Behavioral and Emotional Disorders**
1. Discuss the clinical presentation, risk factors, contributing factors, screening questions, typical demographic, diagnosis, acute and long-term management options and prognosis of the following conditions
   • Attention Deficit Disorder  • Autistic disorder
   • Asperger’s syndrome  • Somatoform disorder
   • Sleep disturbance  • Suicide risk
   • Acute stress reaction/grief  • Domestic violence
   • Sexual disorders/addictions  • Affects of chronic pain
   • Physical, emotional and sexual abuse of a child, man, woman or elder

Skills: perform mini-MSE and complete MSE, observe, assist or perform psychometric testing, observe a psychiatric emergency

Hematology
1. Outline the processes of hematopoiesis/erythropoiesis and production of white blood cells and platelets
2. Describe the functions of erythrocytes, neutrophils, lymphocytes, monocytes, eosinophils and basophils

Anemias
1. List the clinical presentation, etiology, risk factors, physical exam findings, laboratory findings, diagnosis and treatment options for the following anemias:
   • Aplastic anemia  • B12 deficiency
   • Folate deficiency  • Iron deficiency
   • Hemolytic anemia  • Thalassemia
   • Sickle Cell anemia  • Anemia of chronic disease
   • G6PD deficiency
2. Classify the anemias listed above as microcytic/hypochromic, normocytic/normochromic and macrocytic/megaloblastic, normochromic

Coagulation Disorders
1. Describe the role of the spleen
2. Identify presentation, inheritance patterns, genetic mutations, diagnostic evaluation and management of patients with hemophilia, Factor VIII, IX and XI disorders and Von Willebrand’s disease
3. Identify the characteristics of Factor V Leiden, hyperhomocysteinemia, dysfibrinogenemia, antithrombin-III deficiency, prothrombin gene mutation and protein C and S deficiency
4. Describe the workup for suspected DVT and identify the common causes for acquired thrombosis (immobilization, surgery, antiphospholipid antibodies, surgery, trauma, pregnancy, estrogen)
5. Review the presentation, diagnostic evaluation, risk factors and management of platelet disorders including thrombocytopenia, idiopathic thrombocytopenia purpura, Henoch-Schlein purpura and thrombocytosis

**Malignancies**

1. Describe the signs and symptoms, etiology, diagnostic evaluation, staging, treatment options and prognosis for the following malignant conditions:
   - Acute lymphocytic leukemia
   - Acute myelogenous leukemia
   - Hodgkin’s lymphoma
   - Multiple Myeloma
   - Chronic lymphocytic leukemia
   - Chronic myelogenous leukemia
   - Non-Hodgkin’s leukemia
   - Ewing’s sarcoma

**Infectious Diseases**

1. Identify the clinical characteristics, etiology, diagnostic evaluation, methods of transmission, risk factors and treatment of the following conditions:

   **Bacterial**
   - Staphylococcus
   - H. Flu
   - Cholera
   - Salmonella
   - Streptococcus
   - Botulism
   - Diptheria
   - Shigella
   - Meningococcus
   - Chlamydia
   - Gonococcal infections
   - Tetanus

   **Viral**
   - Cytomegalovirus
   - Herpes simplex
   - Influenza
   - Rabies
   - Rubeolla
   - Epstein-Barr
   - HIV
   - H1N1
   - Roseola
   - Measles
   - Erythema infectiosum
   - Human papillomavirus
   - Mumps
   - Rubella
   - Varicella-zoster

   **Fungal**
   - Candidiasis
   - Pnumocystitis
   - Cryptococcosis
   - Histoplasmosis

   **Parasitic**
   - Amebiasis
   - Malaria
   - Trichomoniasis
   - Hookworks
   - Pinworm
   - Ringworm
   - Toxoplasmosis

   **Mycobacterial**
   - Tuberculosis
   - Atypical mycobacterium

   **Spirochetal**
   - Lyme disease
   - Rocky Mountain Spotted Fever
   - Syphilis
Geriatric Medicine
Please see ‘Geriatric Medicine’ objectives

II. Patient Care
Students are expected to gather and document essential and accurate information about their patients and make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences. The student is expected to use up-to-date scientific evidence and clinical judgment to develop and carry out management plans. Prior to completion of the Family Medicine rotation, the student should:

1. Take a detailed medical history
2. Perform an age-appropriate physical exam
3. Formulate a differential diagnosis and plan
4. Perform, observe, assist (if applicable) or order and interpret the following tests:
   a) EKG
   b) Urinalysis
   c) Fecal Occult Blood test
   d) Plain films of the abdomen, chest, extremities
   e) Uncomplicated skin biopsy
   f) Cryotherapy
   g) CBC, CMP, blood culture
   h) Cerumen removal
   i) Splinting/casting
   j) Fluoroscein stain
   k) Echocardiogram
   l) CT/MRI
   m) EEG and nerve conduction study
   n) Bone scan and DEXA scan
   o) HIDA scan
   p) Ultrasound
   q) DRE/PSA
   r) Mini Mental Status exam
   s) Suture
   t) PFTs
   u) Sleep study

Additional Objectives Specific to Inpatient Medicine
• Identify criteria for hospital admission and hospital discharge
• Discuss criteria for appropriate placement within the hospital for a patient requiring inpatient care (i.e. Ward, ICU, telemetry)
• Manage a patient through the entire course of hospital stay from admission to discharge; coordinate appropriate follow-up care
• Write admission and discharge summaries
• Write orders and progress notes daily
• Round on patients with the attending physician, residents and medical team daily
• Perform concise and complete oral case presentations to residents and/or attending physician
• Identify when a patient needs an appropriate consultation from:
  o Specialty consultation
  o PT/OT
  o Nutrition
  o Social Services
  o Speech Pathology
  o Diabetic Education
  o Pharmacy
  o Religious
• Maintain an accurate fluid intake and output record and maintain appropriate fluid balance

III. Interpersonal & Communication Skills
Students are expected to communicate information respectfully, efficiently and effectively in verbal, nonverbal and written exchange. During the Family Medicine rotation, the student must:
• Effectively communicate information, perform counseling and patient education clearly to patients and their families
• Respectfully communicate with ALL members of the medical team including providers, ancillary staff and other learners
• Perform accurate and complete documentation of the patient’s visit or hospital stay

IV. Professionalism
Students are expected to demonstrate professionalism at all times during their Family Medicine rotation. During the rotation, the student must:
• Maintain a professional attitude at all times with patients, families and the medical team
• Provide care for patients of all ages, genders, cultures, socioeconomic backgrounds, sexual orientations and disabilities with respect, compassion and dignity
• Maintain integrity and honesty at all times with patients, families and the medical team
• Be accountable to patients, families, the medical team and the profession

V. Practice-Based Learning and Improvement
Practice-based learning and improvement includes the processes through which clinicians engage in critical analysis of their own practice experience, medical literature and other information resources for the purpose of self-improvement. During the Family Medicine rotation, students are expected to:
• Recognize one’s own limitations and continuously strive for self-improvement
• Acquire a capacity to learn from errors and use it to self-improve
• Identify appropriate consultation with other medical services for the benefit of the patient to assure comprehensive patient care
• Use evidence from literature to make the most informed and up-to-date clinical decisions
• Participate not only in learning from others but in teaching others, including patients, families, medical team, staff and faculty

Suggested Reading List
Online texts can be accessed through the following websites:
1. www.uptodate.com
2. www.mdconsult.com
3. www.pubmed.com
4. www.dynamed.com
5. www.emedicine.com

VI. Systems-Based Practice
Students must be aware of the societal and economic environments in which health care is delivered. During the Family Medicine rotation, the student must:
• Identify relationships between the different levels of inpatient care
• Identify the importance of continuity of care and coordinate appropriate follow-up care when needed
• Realize the financial impact of medical care on a patient and identify cost-effective alternatives when appropriate, as well as resources for the patient’s financial and medical benefit
• Use information technology to improve health care delivery and patient education