

Ambulatory Medicine

Rationale and Overview

An internist must be competent in the management of patients in the ambulatory setting. In reality, the majority of patients managed by an internist will occur in this setting, and as such, the internist must have the necessary training during residency in order to function effectively in this setting.

Caring for patients in the outpatient setting not only entails caring for ill patients, but understanding and assessing wellness, implementing preventive measures and the promotion of health. An internist may encounter patients with a wide array of illnesses, most of which may be related to non-internal medicine disciplines such as neurology, gynecology, physical medicine and rehabilitation, ophthalmology, otolaryngology, dermatology and adolescent medicine. It is important that the internist acquire appropriate training in these areas, such that they can function effectively with non internal medicine specialist.

Goals

1. To acquire the knowledge, skills and attitude to effectively manage patients in the ambulatory care setting
2. To effectively and efficiently coordinate the care of patients in the ambulatory setting with other specialist

Objectives

1. At the end of the rotation, residents will demonstrate knowledge of the natural history of common disorders seen in the ambulatory setting.
2. At the end of the rotation, residents will demonstrate effective communication skills with other specialist, patients and their families, and other health care professionals.
3. At the end of the rotation residents will demonstrate competence in the performance of common out patient procedures
4. At the end of the rotation, residents will demonstrate knowledge of the indication for consultation

Rotation Description and Lines of Responsibility

The ambulatory experience occurs in many different clinical areas, and varies depending upon the year of training. The attending physician of record assigned to the clinical service is responsible for all clinical, academic and administrative responsibility while the resident is on the rotation. When subspecialty fellows are present, they are responsible for directly supervising residents and directing the plan of care instituted by the attending physician. When present, senior residents (R2/3) are responsible for the supervision of junior residents and medical students on the service.

The ambulatory experience other than the continuity clinic experience is usually in one month block rotations, and varies in content depending on the level of training. During the first year, residents spend a one month block rotation in the non internal medicine specialties of gynecology, otolaryngology, psychiatry, physical medicine and rehabilitation, neurology and office orthopedics. Residents interview new and returning patients to the clinic, and are directly supervised by attending physicians in the respective specialty, and are observed directly when performing any procedure.

In the second year of training, residents spend one month rotating on the following services; ophthalmology, dermatology and adolescent medicine. Residents interview new and returning patients and are directly supervised by attending physicians in the respective specialty. During the second year of training residents spend one month in a community physician's office. Here residents interview and examine patients seen in the office under the direction and supervision of an attending physician.

In the third year of training the resident spend one month rotating on the occupational medicine service where they work directly with an attending physician. Residents also spend one month in an urgent care setting and also in a primary care setting evaluating and assessing patients with respective attending physicians.

Teaching Methods

Teaching rounds are conducted on the respective services on a daily basis and is facilitated by the attending physician. There is bedside demonstration of clinical findings and the resident presents their cases and receives feedback and direction regarding a plan of care.

Residents also receive instruction via a series of didactics facilitated by the attending physician. Residents are required to research these topics and present them to the attending physician or designee. These topics include but are not limited to the following;

Physical Medicine and Rehabilitation

- Indication for PMR consultation on the medicine service
- Indications for EMG and nerve conduction studies
- Pain assessment and management in myofascial diseases
- Functional assessment
- Indication for assist devices
- Use and ordering of orthodontics
- Entrapment syndromes and tendonitis
- Soft tissue injuries, including strains, sprains and overuse syndromes
- Evaluation of gait and gait disturbances
- Injury prevention to include body mechanics, posture, proper lifting techniques and the use of supportive bracing

Procedures

- Comprehensive neuromuscular examination

- Basic EMG interpretation

Psychiatry

- Adjustment disorders (grief, life-cycle changes)
- Anxiety disorders
- Bipolar disorders
- Cognitive disorders
- Delirium
- Dementia
- Dissociative disorders
- Eating disorders
- Major depression, dysthymia
- Panic disorders
- Personality disorders
- Schizophrenia
- Sexual dysfunction
- Sleep disorders
- Somatization

Neurology

- Benign positional vertigo
- Central nervous system infection
 - Brain abscess
 - Encephalitis
 - Meningitis
- Cerebrovascular disease
 - Stroke
 - Transient ischemic attack
- Dementias
 - Alzheimer's
 - Multi-infarct
 - Lower body
 - Normal pressure hydrocephalus
- Epidural abscess
- Epilepsy
- Headache
- Labyrinthitis
- Lumbar, cervical disk syndromes
- Multiple sclerosis
- Neuromuscular disease
 - Amyotrophy
 - Guillain-Barré syndrome
 - Multiple sclerosis
 - Muscular dystrophy
 - Myasthenia gravis

- Myopathy
- Parkinson's disease
- Peripheral neuropathy
- Sleep disorders
- Spinal stenosis
- Subarachnoid hemorrhage
- Subdural hematoma
- Toxic encephalopathies, e.g. alcohol withdrawal (see also substance abuse)

Procedure Skills

- Caloric stimulation test
- Tensilon (edrophonium chloride) test (optional)

98

Ordering and Understanding Tests

- Anticonvulsant drug levels
- Carotid Doppler echo scans
- Computed tomography, magnetic resonance imaging of central nervous system
- Digital intravenous angiography
- Electroencephalography, evoked potentials (visual, auditory, sensory)
- Electromyography, nerve conduction studies
- Muscle biopsy
- Myelography
- Screen for toxins, heavy metals
- Sleep study

Women's Health/Gynecology

- Abnormal Pregnancy
- Ectopic pregnancy
- Emotional impact of abortion/miscarriage
- Threatened/spontaneous abortion
- Breast disease
 - Breast cancer (see also Oncology)
 - Breast mass
 - Breast reconstruction, augmentation or reduction
 - Fibrocystic disease
 - Nipple discharge
- Counseling
 - Breast-feeding
 - Contraception
 - Eating disorders
 - Physical/emotional abuse
 - Pregnancy
 - Sexual assault
- Gynecology disorders
 - Abnormal Papanicolaou smear

- Cervical cancer (see also Oncology)
- Endometriosis
- Fibroids
- Genital herpes
- Infertility
- Ovarian cyst
- Pelvic inflammatory disease
- Vaginal discharge
- Vaginitis
- Interpreting bone mineral density studies
- Menstrual
 - Amenorrhea (primary, secondary)
 - Dysmenorrhea
 - Hormone replacement therapy
 - Menopause
 - Premenstrual syndrome
 - Unexplained vaginal bleeding
- Normal Pregnancy
 - Nutrition
 - Post partum depression
- Osteoporosis
- Pregnancy
 - Medical complications (see also Consultative Medicine)
 - Normal physiology
- Sex-related
 - Contraception
 - Sexual dysfunction/dyspermia
 - Sexual preference and identity
 - Sexuality over the life cycle
 - Sexually transmitted diseases
- Urinary disorder
 - Incontinence
 - Interstitial cystitis
 - Urinary tract infection

Procedure Skills

- Counseling about cosmetic/reconstructive surgery
- Crisis counseling/psychosocial counseling
- Fitting of diaphragm
- Rape protocol
- Removal of foreign body from vagina
- Colposcopy (optional)
- Endometrial biopsy (optional)

- Insertion and removal of intrauterine device (optional)
- Office urodynamics (optional)
- Administration of contraceptives
- Administration of hormone replacement therapy

Primary Interpretation of Tests

- Urine Pregnancy test
- Pelvic ultrasound

Ordering and Understanding Tests

- Aspiration of breast mass
- Bladder function tests
- Bone densitometry
- *Chlamydia* culture
- Colposcopy and biopsy
- Computed tomography of the abdomen, pelvis
- Dilatation and curettage
- Endometrial biopsy
- Fertility studies
- Incision and drainage of breast abscess
- Laparoscopy
- Mammography
- Papanicolaou pathology report
- Sex hormone assays

Otolaryngology

- Ears
 - Acute labyrinthitis
 - Benign positional vertigo
 - Cerumen impaction
 - Eustachian tube dysfunction
 - Otitis
 - Sensorineural hearing loss
- Nose
 - Epistaxis
 - Nasal polyps
 - Rhinitis, allergic
 - Rhinitis, medicamentosa
 - Rhinitis, vasomotor
 - Septal deviation
 - Sinusitis
- Throat
 - Acute epiglottitis

- Laryngitis
- Masses or lesions of the oral cavity
- Peritonsillar abscess
- Pharyngitis
- Sleep apnea

Procedure Skills

Ears

- Insertion of wick in auditory canal
- Removal of cerumen

Nose

- Anterior nasal packing
- Speculum rhinoscopy
- Transillumination of maxillary sinuses

103

Throat

- Indirect laryngoscopy (optional)

Primary Interpretation of Tests

Nose

- Waters' view radiograph of sinuses

Ordering and Understanding Tests

Ears

- Audiometry

Nose

- Aeroallergen skin sensitivity testing
- Limited computed tomography of the sinuses
- Radiography of the sinuses

Throat

- Culture
- Polysomnography
- Rapid streptococcal antigen

Dermatology

- Abscess
- Cellulitis
- Condyloma
- Cyst
- Eczematous reaction pattern
 - Acute contact dermatitis
 - Atopic dermatitis
 - Dyshidrotic eczema
 - Nummular eczema
 - Stasis dermatitis

- Erythema nodosum
- Follicular disease
 - Acne
 - Rosacea
- Malignancy and premalignancy
 - Actinic keratosis
 - Basal cell carcinoma (see also Oncology)
 - Melanoma (see also Oncology)
 - Squamous cell carcinoma (see also Oncology)
- Molluscum contagiosum
- Papulosquamous reaction pattern
 - Fungal, yeast infections
 - Lichen planus
 - Psoriasis
 - Seborrheic dermatitis
 - Syphilis (see also Infectious Disease)
- Paronychia
- Pityriasis rosea
- Scabies
- Skin Ulcers
- Skin signs of systemic disease
 - Dermatomyositis
 - Diabetes mellitus
 - Gastrointestinal polyposis
 - Inflammatory bowel disease
 - Internal malignancy
 - Kaposi's sarcoma
 - Liver disease
 - Lupus erythematosus
 - Rheumatoid arthritis
 - Scleroderma
 - Sepsis
 - Thrombocytopenia
 - Thyroid disease
- Vascular reaction pattern
 - Drug hypersensitivity
 - Erythema multiforme
 - Toxic epidermal necrolysis
 - Urticaria
 - Vasculitis
 - Viral exanthems
- Vesiculobullous reaction pattern
 - Bullous pemphigoid

- Herpes simplex infection
- Herpes zoster infection
- Pemphigus vulgaris
- Varicella
- Warts

Procedure Skills

- Application of chemical destructive agents for skin lesions e.g. Warts and molluscum, condyloma
- Incision, drainage, and aspiration of fluctuant lesions for diagnosis or therapy
- Scraping of skin (for potassium hydroxide, mite examination)
- Skin biopsy
- Cryotherapy

Primary Interpretation of Tests

- Microscopic examination for scabies, nits, etc.
- Tzanck smear

86

Ordering and Understanding Tests

- Dark-field microscopy
- Fungal culture
- Skin biopsy

Ophthalmology

- Blepharitis
- Cataracts
- Chemical burn
- Chlamydial infection
- Conjunctivitis
- Corneal abrasions
- Corneal infection
- Detachment of retina or vitreous
- Diabetic retinopathy
- Dry eye syndromes
- Foreign bodies, external and superficial
- Glaucoma
- Herpes zoster ophthalmicus
- Hordeolum, chalazion
- Keratitis, corneal ulcer
- Macular degeneration
- Optic atrophy
- Optic nerve involvement in Giant Cell Arteritis
- Optic neuritis
- Orbital or periorbital cellulitis

- Pinguecula, pterygium
- Retinal artery or vein occlusion
- Scleritis, episcleritis
- Subconjunctival hemorrhage
- Systemic effects of ophthalmic medications
- Trauma (orbital fracture, hyphema)
- Uveitis

Procedure Skills

- Fluorescein stain of the cornea
- Bandaging and patching (optional)
- Eye irrigation (optional)
- Removal of superficial foreign body (optional)
- Slit lamp examination (optional)

Ordering and Understanding Tests

- Fluorescein angiography
- Formal visual field testing
- Intraocular pressure testing
- Slit lamp examination

Adolescent Medicine

- Acne
- Amenorrhea (primary and secondary)
- Behavior risks (assessment and counseling)
 - Cigarette smoking
 - HIV
 - Reckless behavior
 - Self image issues
 - Sexual activity (unprotected)
 - Substance abuse
- Behavioral management of chronic disease
- Crohn's disease
- Delayed development
- Depression (see also Psychiatry)
- Diabetes mellitus, type 1
- Domestic violence
- Eating disorders
 - Anorexia nervosa
 - Bulimia nervosa
 - Obesity/hyperphagia
- Learning disabilities
- Migraine headache
- Scoliosis
- Sexually transmitted diseases
- Societal violence
- Sports injuries

Procedure Skills

- First pelvic examination
- Tanner staging (optional)

Primary Interpretation of Tests

- Height/weight growth charts (optional)

Ordering and Understanding Tests

- Wrist radiography (to determine bone age) (optional)

Evaluation Methods

Residents are evaluated by faculty as follows;

- Formative evaluation – mid-rotation nonjudgmental feedback
- Summative evaluation at the end of the month using a global rating form.
Residents are evaluated on the six ACGME competencies

Rotation

- The rotation is evaluated by residents. The resident completes a global rating form
- ACP in – training examination results

Faculty are evaluated in an anonymous manner by the residents at the end of the rotation.

Reading List