

**Doctors Hospital / Ohio University College of  
Osteopathic Medicine  
Internal Medicine Residency Program**

Program Description and Course Curriculum

Robert Palma, D.O.  
Program Director

## **Internal Medicine Residency Program Description and Curriculum**

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### **Faculty:**

#### Internal Medicine

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#### Infectious Diseases

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#### Nephrology

Henry Wehrum, D.O.  
John MacLaurin, D.O.  
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#### Pulmonology/Critical Care

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#### Endocrinology

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#### Gastroenterology

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#### Hematology/Oncology

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#### Neurology

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The Doctors Hospital / Ohio University College of Osteopathic Medicine Internal Medicine Residency is a three year residency program. Advanced credit for internship-internal medicine rotations for applicants who did not complete an internal medicine internship must be made to the American College of Osteopathic Internists (ACOI).

All Internal Medicine residents will receive a certificate of completion and be eligible for certification by the ACOI.

## I. General Program Goals

The internal medicine resident will:

- A. Develop the ability to effectively assess the critical and non-critical patients in both the hospital and ambulatory settings;
- B. Effectively obtain historical information about patients and perform a comprehensive physical examination;
- C. Achieve competency in procedures commonly utilized in the management of patients encountered in internal medicine;
- D. Understand and employ evidence-based intervention in the management of patients;
- E. Incorporate osteopathic manipulative medicine pertinent to the diagnosis and treatment of in-hospital and ambulatory patients;
- F. Use in evidence-based approach to patient care, critically interpret the medical literature and understand basic principles of research design;
- G. Manage a cohort of patients in the ambulatory setting.

## II. Application Process and Selection

- A. All candidates for the Internal Medicine residency must apply for postgraduate training via the ERAS system.

## B. Interview

1. After completion of the application, an interview with the Internal Medicine Residency committee is scheduled during the months of September, October, and November. The committee consists of the program director, internal medicine faculty, internal medicine chief resident(s) and a designated medical education department representative. Prospective residents will generally interview in the morning, followed by lunch with the residents and a tour of the hospital and ambulatory facility.
2. An applicant who did not complete a first year of the Internal Medicine program is required to complete all of the requirements listed in Part II.A. and to interview as described in Part II.B. To receive advanced credit for portions of the internship, a candidate must apply for advanced credit for the internal medicine rotations of the non-internal medicine first year; the ACOI will then review the candidate's application.
3. Admission to the OUCOM/Doctors Hospital Internal Medicine Residency is not influenced by race, sex, religion, creed, national origin, age, or handicap as defined by federal regulations.

## C. Residents Contracts

1. Resident contracts are issued in the spring prior to the academic year, which begins July 1 and ends June 30. Contract renewal is based upon compliance with the Internal Medicine Residency and OUCOM/Doctors Hospital standards, policies and procedures, and successful progress in the program.

## D. Orientation

1. All residents who are new to OUCOM/Doctors Hospital are required to participate in the hospital orientation. During this time, administrators and staff will familiarize residents with housestaff requirements, roles, and responsibilities.
  - a. Year one housestaff will undergo a gradual work orientation to the Internal Medicine ambulatory facility over the first several weeks of the academic year.
  - b. First year housestaff will be oriented to house call by the chief resident(s) in internal medicine.

### III. Internship/Residency Curriculum Outline (Guidelines)

#### A. Clinical Rotations

1. Internal Medicine Residency Year one
  - a. 4 months General Internal Medicine
  - b. 1 month Critical Care
  - c. 1 month Cardiology
  - d. 1 month Perioperative care/presurgical assessment
  - e. 1 month Emergency Medicine
  - f. 1 month Women's Health
  - g. 2 months Selectives
  - h. 1 month Liaison Psychiatry
  
2. Internal Medicine Residency (PGY-2 & 3)
  - a. 8 months General Internal Medicine
  - b. 1 month Oncology
  - c. 1 month Gastroenterology
  - d. 1 month Nephrology
  - e. 1 month Hematology / Oncology
  - f. 1 month Rheumatology
  - g. 1 month Infectious diseases
  - h. 1 month Endocrinology
  - i. 1 month Pulmonology
  - j. 1 month Neurology
  - k. 7 months Selectives
  
3. During all three years, 10% ( \_ day/week) is spent in the internal medicine ambulatory facility, located at Doctors Community Health Specialists, 50 Old Village Drive, about \_ mile from the hospital.

#### B. Academic Curriculum

1. Standard curriculum for Internal Medicine Residency Program
  - a. Refer to Appendix A for details
  
2. Standard curriculum for Continuity Ambulatory Component of Osteopathic Internal Medicine Residency Training
  - a. Refer to Appendix B for details

Academic conferences:

3. Daily morning report consists of case presentations as discussed in the morning report curriculum (See Appendix I).
4. Daily noon conferences Monday through Thursday consist of board review from the Medical Knowledge Self Assessment Program (MKSAP) as dictated by the topic theme for the month.
5. Subspecialty case conferences occur each Friday AM, including neurology, cardiology, endocrinology, gastroenterology, and infectious diseases.
6. Journal Club is held twice per month; the curriculum for this conference is detailed in Appendix J.
7. The Resident Program Advisory Committee (RPAC) meets quarterly for an all day educational session.
9. Tumor Board is a mandatory conference on the first and third Tuesdays of every month.
10. A monthly Internal Medicine Resident meeting with the chief resident(s) is scheduled on the first morning of each rotation.
11. Internal Medicine Department Meetings are scheduled quarterly. At least one internal medicine resident is encouraged to attend this meeting as a representative from the Internal Medicine program.
12. The chief resident will attend and represent the residents at the chief residents meetings.

C. Required Clinical Courses

1. Advanced Cardiac Life Support Provider
2. Basic Life Support Provider

D. National Conferences

1. At least once during the residency, IM trainees must attend an ACOI national conference. This is sponsored by the department of medical education and required by the ACOI.
  - a. Arrangements for on-call coverage and notification of the continuity clinic are the responsibility of the internal medicine resident leaving for a conference;
  - b. No conferences can be approved while a resident is rotating in the intensive care unit, on an out-of-house elective, during the month of July, or while rotating on the Clinical Medicine Teaching Service.

E. The residents will receive 20 working days of time away from duty (i.e., vacation, illness, bereavement, interviews) during each academic year.

- a. Time away from duty is not approved during the months the internal medicine resident is rotating in the critical care unit, on an out of house elective, on the Clinical Medicine service, and during the month of July.
- b. Arrangements for on-call coverage and notification of the continuity clinic is the responsibility of the internal medicine resident leaving for vacation; the continuity care clinic must be notified at least four weeks prior to canceling clinic appointment days.

IV. Resident Requirements

A. Applicants for residency training in internal medicine must:

1. Graduate from an AOA accredited college of osteopathic medicine
2. Be, and remain, a member of the AOA during residency training;
3. Be licensed in the state of Ohio.

B. During the training program, the resident must:

1. Submit a Resident Annual Report to the American College of Osteopathic Internists within thirty (30) days of completion of the

training year. Documents not received within twelve (12) months following completion of each year of training shall not satisfy the requirements and the resident's training may not be approved.

2. The research requirement is met through Article IV, G.9., i.e., "Educational program on *How to Read and Understand the Medical Literature*, with ongoing discussion throughout the training program." The third edition of *Evidence-based medicine: How to practice and teach EBM* serves as the basis for this review. Four articles per month are reviewed and critiqued at the twice per month IM Journal Club conducted by the Program Director and the dept of research statistician.
3. Become familiar with the principles and practice of evidence-based medicine and utilize this competence in patient management.

C. Work Hours, Moonlighting, and Supervision Policy

1. Situations in which residents work an excessive numbers of hours can lead to errors in judgment and clinical decision-making. These errors can impact on patient safety, as well as the safety of the residents, through increased motor vehicle accidents, stress, depression and illness related complications. The training institution, VP of Medical Education, and program directors maintain a high degree of sensitivity to the physical and mental well being of trainees and make every attempt to avoid scheduling excessive work hours leading to sleep deprivation, fatigue or inability to conduct personal activities. The residents shall not be assigned to work physically on duty in excess of 80 hours per week averaged over a 4-week period, inclusive of in-house night call and moonlighting.

The resident shall not work in excess of 24 consecutive hours inclusive of morning and noon educational programs. Allowances for inpatient and outpatient continuity (Continuity of Care - The ongoing care and management of the same patients by the same trainee in the same setting over the entire course of the training program), transfer of care, educational debriefing and formal didactic activities may occur, but may not exceed 6 hours. Residents may not assume responsibility for a new patient after working 24 hours.

The resident shall have on alternate weeks 48-hour periods off, or at least one 24-hour period off each week. Upon conclusion of a 24-hour duty shift, residents shall have a minimum of 8 hours off

before being required to be on duty again. Upon completing a lesser hour duty period, adequate time for rest and personal activity must be provided. All off-duty time must be totally free from assignment to clinical or educational activity.

The resident and training institution must always remember the patient care responsibility is not precluded by the work hour policy. In cases where a resident is engaged in patient responsibility which cannot be interrupted, additional coverage should be provided as soon as possible to relieve the resident involved. The resident may not be assigned to call more often than every third night averaged over any consecutive four-week period.

- a. The internal medicine resident will remain in house while on call. When a PGY-2 and 3 internal medicine resident is on call with a PGY-1 internal medicine resident, the senior resident is to provide direct supervision of the PGY-1 resident.
- b. If an internal medicine resident misses a call shift, disciplinary action will be taken at the discretion of the chief resident / program director.

2. Any professional clinical activity (moonlighting) performed outside of an official residency program may only be conducted with the permission of the program administration (DME/program director). A written request by the resident must be approved or disapproved by the program director and placed in the resident file. All approved hours are included in the total allowed work hours under AOA policy and are monitored by the institution's graduate medical education committee. Failure to report and receive approval by the program may be grounds for terminating a resident's contract.

If moonlighting is permitted, all moonlighting will be inclusive of the 80 hour per week maximum work limit and must be reported on the work hours' duty log and to the internal medicine program director.

PGY-1 residents cannot moonlight.

3. Call

The Resident call schedule will follow a graduated number of on duty call shifts dependent upon level of training. The call shifts are defined as twelve hours in duration on weekends and 14 hours in duration during weekdays. The graduated schedule for the number of call shifts assigned per month will be as follows:

PGY 1 residents will be assigned no more than 6 call shifts / month.  
PGY2 residents will be assigned no more than 5 call shifts / month.  
PGY3 residents will be assigned no more than 3 call shifts / month.

4. Throughout the training program, internal medicine residents receive supervision that is progressive and adjusted to their training and qualification (performance) levels. At the conclusion of each training year, the program director, in conjunction with the faculty, will determine whether each resident may progress to the next training year. Each residency year involves progressive clinical responsibility that may vary among residents in a program at the same educational level, depending on individual rates of progress and qualifications. However, assistance and supervision is available at all times throughout the entire residency program.
  - a. Supervision requirements apply to hospital and continuity ambulatory facility training sites.

V. Policy for Academic And Disciplinary Dismissals

- A. In July, 1993, the Board of Trustees of the American Osteopathic Association adopted the following policy:

The hospital and department have clearly defined procedures for academic and disciplinary action. Academic dismissals result from a failure to attain a proper level of scholarship or non-cognitive skills, including clinical abilities, interpersonal relations, and/or personal and professional characteristics. Institutional standards of conduct include such issues as cheating, plagiarism, falsifying records, stealing, alcohol and/or substance abuse, or any other inappropriate actions or activities.

In cases of academic dismissal, the hospital and department will inform trainees, orally and in writing, of deficiencies and their effects on academic standing. The trainee will be provided a specified period to implement specified actions required to resolve academic deficiencies. Following this period, if academic deficiencies persist, the trainee may be placed on probation for a period of three (3) to six (6) months. The trainee may be dismissed following this period if deficiencies remain and are judged to be irremediable. In accordance with institutional policy, the trainee will be provided an opportunity to meet with evaluators to appeal decisions regarding probation or dismissal. Legal counsel at hearings concerning academic issues is not allowed.

In cases of disciplinary infractions that are judged irremediable, the

hospital and department will provide the trainee with adequate notice, in writing, or specific ground(s) and the nature of the evidence on which the disciplinary action is based. The trainee will be given an opportunity for a hearing in which the disciplinary authority will provide a fair opportunity for the trainee's position, explanations, and evidence. Finally, no disciplinary action will be taken on grounds which are not supported by substantial evidence. The department and/or hospital intern training committee, or house staff education committee, or other appropriate committees will act as the disciplinary authority. Pending proceedings on such disciplinary action, the hospital in its sole discretion may suspend the trainee, when it is believed that such suspension is in the best interests of the hospital or of patient care.

#### VI. Guidelines for Continuity Ambulatory Training Sites

- A. The ambulatory site provides comprehensive general internal medicine (not subspecialty) patient care where residents function as the primary care physician for patients. The site is in a free-standing facility at 50 Old Village Rd., approximately one quarter-mile from the hospital.
- B. The training site is staffed by an attending internist for supervision of residents. The major role of the attending internist is to assist, educate, and provide quality assurance and feedback to the internal medicine residents.
- C. Ambulatory care is 10% of each training year. Other ambulatory rotations (i.e. neurology or rheumatology) do not count toward the 10% minimum requirement.
- D. An educational program and schedule must occur in the clinic with active participation between the supervisor and the resident. Cases must be discussed and all charts reviewed.
- E. The resident should be exposed to the broad spectrum of medical diagnosis in adult patients, as well as to integrate the concepts of disease prevention and health maintenance.
  - 1. Refer to Appendix B for the Standard Curriculum for Continuity Ambulatory Component developed by the ACOI
  - 2. Refer to Appendix H for the manual of the Internal Medicine Outpatient Clinic Manual
- F. Specific ambulatory logs on all patients must be maintained and available for review by the clinic supervisor, resident program director and AOA residency inspector. Logs must contain patient name and/or number,

diagnosis and the activity and/or procedure performed on each visit.

- G. the ideal number of patients per resident is a minimum of 50 patients recruited by the second year, or a minimum total of 100 patients by the end of three years. The greater emphasis on development of the panel (practice) should occur during the first and second years.
- H. In addition to clinical exposure in the ambulatory training site, the resident will be exposed to osteopathic concepts, behavioral and psycho-social aspects of medical care, medical ethics, medical-legal implications and practice management.
- I. If more than one resident is in the clinic at the same time, they should function as though in a private practice model and cover for each other for patient care needs when the other is not available. They should function as partners although each has separate panels. The continuity care clinic must be notified at least six weeks prior to canceling clinic appointment days.
- J. The resident is made aware of the hospitalization of any of his/her clinic patients at the base hospital facility (Doctors Hospital).
- K. A resident in a teaching ambulatory setting should see an average of 4-8 patients per half-day period, the numbers evaluated defined by the level and progress of the resident and the nature of the patient (new physical, repeat visit, etc.).

## VII. Standard Curriculum for Continuity Ambulatory Component

- A. Goals and Objectives
  - 1. To develop skills in continuity of care in the ambulatory setting.
    - a. Patient assignment to individual residents for initial and follow-up care.
    - b. Development of appropriate long-term patient rapport
    - c. Provision of applicable patient education, including health promotion and disease prevention
    - d. Performance of supervised procedural skills, e.g., electrocardiogram interpretation, bimanual pelvic examination and Pap smear, and others as determined appropriate by the program director.

2. To provide management opportunities in ambulatory services pertaining to chronic care patients.
  - a. Integration of applicable community and medical support services such as social service, family planning and genetic counseling, hospice care, stress management, smoking cessation, and others.
  - b. Appropriate utilization of in-patient services in management of chronic and acute problems.
3. To instill understanding of cost-effective and efficient utilization of ambulatory services.
  - a. Understand cost-benefit ratio of high load diagnostic procedures, and their appropriate utilization.
  - b. Be familiar with necessary pre-certification and utilization procedures associated with third-party-payer plans and health maintenance organizations.
  - c. Understand the cost-effectiveness of pharmaceuticals.
4. To apply osteopathic principles and practices in the ambulatory setting.
  - a. Perform manipulative therapy, where appropriate, in the ambulatory setting.
  - b. Demonstrate holistic care in planning, testing, therapy, and prevention
5. To develop adequate psychosocial relational and diagnostic skills.
  - a. With direction and/or training from the appropriate internists or psychiatric personnel, the resident will perform interviews directed at defining the role of emotional, cognitive or social stress in the patient's disease or chief complaint.
  - b. Demonstrate the ability to recognize aberrant psychiatric adaptation to the patient's problem.

B. Content

1. Patient population
  - a. Volume of patients should provide each resident with an individual case load for follow-up.
  - b. Patient population must be broad in scope.
  - c. A broad spectrum of disease states must be present in the base population.

VIII. Resident evaluation

- A. Refer to Appendix F.

IX. Attending/Rotation evaluation

- A. Refer to Appendix G.

## Appendix A

- I. The general educational content and standard curriculum of the internal medicine residency includes:
  - A. The neuromuscular component of disease and the osteopathic concept of evaluating and treating the whole patient in inpatient care and ambulatory care settings.
  - B. Basic cognitive skills and knowledge pertaining to normal physiology and pathophysiology of the body systems and the clinical application of medical diagnosis and management.
  - C. Sufficient experience and training to develop competence in the following procedures. Verification by the program director of experience and competency in required procedures is necessary.
    1. Required: Comprehensive histories and physicals, including structural examinations for somatic dysfunction, pelvic and rectal examinations; cardiopulmonary resuscitation; gram stains of sputum with analysis; chest x-ray interpretation; microscopic examination of the urine; thoracentesis; paracentesis; ECG (EKG) performance and interpretation; central venous line placement; spirometric interpretation; lumbar puncture; local infiltrative anesthesia; and endotracheal intubation.
    2. Recommended: Arterial cannulation; bone marrow aspiration and biopsy; right heart catheterization (Swan-Ganz); cardiac stress testing supervision and analysis; advanced pulmonary function laboratory studies, and arthrocentesis (shoulder and knee).
    3. Optional: Cricothyrotomy; chest tube placement; electrocardioversion; endoscopic evaluation of the gastrointestinal tract; fiberoptic bronchoscopy, and liver biopsy.
  - D. Bio-psychosocial knowledge and skills shall be taught in both formal and informal settings throughout the residency, including such factors as medical sociology, doctor-patient-family communications, crisis recognition and intervention, the effects of psychological components of health states, interviewing skills, recognition and management of uncomplicated behavioral disorders, and substance abuse care.

E. Subject areas

1. Substance abuse

a. History

- I. Define screening techniques for patients with or at risk for substance abuse
- ii. Define demographics and related psychosocial factors relating to substance abuse
- iii. Define diagnostic modalities for each major abused substance
- iv. Target agents: alcohol, prescription drugs, street drugs including toxins such as toluenes, glues, methanol, and tobacco

b. Physical examination

- I. Perform systematic examination focusing on involved organ systems
- ii. Recognize classic findings of end organ toxicity for each abused agent

c. Basic Principles

- I. Pharmacology of absorption, tolerance, dependence
- ii. Clinical withdrawal syndromes
- iii. Cognitive behavior effects
- iv. Laboratory aberrancies

d. Diagnostic/Therapeutic principles

- I. Treatment of withdrawal syndromes
- ii. Emergency management of acute toxicity
- iii. Consider all appropriate alternative treatment strategies
- iv. Consider compliance issues, patient risk, and cost effectiveness
- v. Utilize community resources to assist in rehabilitation
- vi. Identify appropriate time for referral to specialized care
- vii. Initiate follow up planning

- e. Health promotion
  - I. Understand principles of relapse prevention
  - ii. Psychosocial support

2. Women's Health

a. History

- I. Complete menstrual history (onset, timing, volume, FDLMP, menopause)
- ii. Contraception use and sexual activity (preferences, exposure)
- iii. Pregnancy/birth history
- iv. Substance abuse or medications while pregnant
- v. Vaginal protrusion/incontinence
- vi. Vaginal discharge/itching/masses
- vii. Postmenopausal bleeding and character
- viii. PAP test, breast exam and mammogram history
- ix. Nipple discharge or breast changes
- x. Identify impact of psychosocial factors on sexually transmitted disease, pregnancy, and general health

b. Physical examination

- I. Demonstrate complete breast examination
- ii. Describe breast masses with respect to location, size, mobility, nipple discharge or retraction, skin changes, lymph nodes
- iii. Perform adequate pelvic examination to include PAP smear and bimanual examination
- iv. Identify cystocele, rectocele, pediculosis, masses, lichen planus, cervicitis, vaginitis, warts, ulcers (herpetic), imperforate hymen, ovarian and uterine masses or malposition

c. Basic principles

- I. Hirsutism
- ii. Menstrual dysfunction
- iii. Medical disorders of pregnancy
- iv. Pelvic infection/sexually transmitted disease
- v. Postmenopausal osteoporosis
- vi. Impotence

- vii. Fertility control
    - viii. Estrogen/progesterone therapy
    - ix. PAP smear result interpretation
  - d. Diagnostics/therapeutics
    - I. Wet mount interpretation
    - ii. PAP smear/colposcopy
    - iii. Hormone evaluation
  - e. Health promotion
    - I. PAP smear, mammography and breast exam surveillance
    - ii. Behavior modification
    - iii. STD prophylaxis
    - iv. Psychosocial support for appropriate female ailments
3. Adolescent medicine
- a. History
    - I. Obtain adequate information to assess cognitive function, psychomotor skills, personality development, sexuality and psychosocial development
    - ii. Understand the impact of the following on adolescent health: age sex, race, socioeconomic status, parity/gravity
  - b. Physical examination
    - I. Recognize special findings indicating adolescents at particular risks
    - ii. Pelvic examination on sexually active females
    - iii. Structural examination
  - c. Basic principles
    - I. Biologic maturity
    - ii. Morbidity and mortality
    - iii. Mental health problems
  - d. Diagnostics/therapeutics
    - I. Interpretation of lab and x-ray values which are unique to the adolescent

- e. Health maintenance
  - i. Immunization schedule
  - ii. Behavior modification and diet
  - iii. Psychosocial support for disruptive behavior

4. Geriatric medicine

a. History

- i. Obtain data to evaluate mental function, physical function, and social dynamic
- ii. Recognize the presentation of dementia, delirium, auditory and visual impairment, fatigue, dysautonomia
- iii. Identify important additional sources of information such as family, significant others, health care providers, friends
- iv. Recognize the importance of home visits to obtain most helpful information regarding general condition
- v. Understand the impact of the following on the elderly: age, race, sex, socioeconomic status, marital status, parity/gravity

b. Physical examination

- i. Note the unique aspects pertaining to the elderly: normal skin, structural, and organ changes with aging
- ii. Understand the effects of aging on interpretation of findings
- iii. Focus on mobility, general health, nutrition, and sense organ disease

c. Basic principles

- i. Level I
  - a. Herpes zoster
  - b. Decubitus ulcer, non-surgical
  - c. Stasis and ischemic ulcers
  - d. Senile purpura
  - e. Xerosis and benign skin lesions
  - f. Cerumen impaction
  - g. Hiatal hernia/reflux
  - h. Malnutrition/failure to thrive
  - i. Diverticular disease

- j. Fecal impaction, constipation, incontinence
- k. Mesenteric ischemia
- l. Anemia
- m. Hypertension
- n. Dementia/delirium/mental status change
- o. Parkinsonism
- p. Cerebral ischemia syndromes
- q. Falls/drops attacks
- r. Dysautonomia
- s. Urinary tract -  
Infection/incontinence/colonization/dysfunction
- t. Estrogen deficiency-atrophic vaginitis,  
osteoporosis
- u. Degenerative joint disease/arthritis
- v. Rheumatologic disorders (temporal arteritis,  
polymyalgia rheumatica, rheumatoid arthritis)
- w. Atrial fibrillation
- x. Myocardial ischemic syndromes
- y. Aortic stenosis
- z. Congestive heart failure
- aa. Venous insufficiency
- bb. Thrombophlebitis/pulmonary embolism
- cc. Peripheral arterial occlusive disease/aortic  
occlusive disease/aneurysm
- dd. Aspiration acute and chronic
- ee. Influenza
- ff. Hyperosmolar state
- gg. Thyroid dysfunction
- hh. Hypo and hyperthermia
- ii. Polypharmacy/drug toxicity/drug interaction
- jj. Insomnia/depression/anxiety
- kk. Elder abuse

d. Diagnostics/therapeutics

- i. Specific tools for each content area above
- ii. Fall prevention strategies
- iii. Exercise prescription
- iv. Hormone replacement therapy

e. Health promotion

- i. Cancer screening
- ii. Immunization
- iii. Behavior modification

5. Dermatology

a. History

- I. Describe lesions by color, size, distribution
- ii. Sensory findings
- iii. Familial occurrence
- iv. Exposure history
- v. Question regarding the following: acne, discoloration, changes in moles, warts, cysts, corns/calluses, rashes, ulcers, blisters, pain/itching, nodules, sore toenails, hair changes, toxic topical exposures

b. Physical examination

- I. Recognize macule, papule, bulla, plaque, nodule, wheal, vesicle, pustule, cyst, atrophy, ulcer, scaling, crusts, purpura, petechiae, stria, tumor
- ii. Detect the difference between primary and secondary bulla
- iii. Detect normal and abnormal hair patterns
- iv. Demonstrate proper lighting techniques and full skin examination
- v. Recognize common nail disorders

c. Basic principles

- I. Drug eruption
- ii. Skin cancer
- iii. Immune mediated skin disorders
- iv. Skin infections
- v. Photosensitivity syndromes
- vi. AIDS lesions

d. Diagnostics/therapeutics

- I. Utilize laboratory for above disorders where appropriate
- ii. KOH slide for fungi
- iii. Appropriate therapy for each disorder above

e. Health maintenance

- I. Education on sunscreen use

- ii. Surveillance of suspicious lesions

## 6. Cardiovascular medicine

### a. History

- I. Dyspnea
- ii. Chest pain
- iii. Edema
- iv. Exercise intolerance and functional class
- v. Family history of cardiac illness
- vi. Heart murmur or rheumatic fever
- vii. Hypertension
- viii. Congestive heart failure
- ix. Ischemic heart disease
- x. Arrhythmia with or without syncope
- xi. Previous cardiac testing
- xii. Claudication
- xiii. Deep venous thrombosis/pulmonary embolus
- xiv. Chest trauma/surgery
- xv. Stroke/TIA

### b. Physical examination

- I. Demonstrate proper 5 phase blood pressure measurement
- ii. Detect conditions which affect accurate determination of BP: auscultatory gap, atherosclerosis, limb position, cuff size, arrhythmia
- iii. Obtain blood pressure in all extremities and in two positions
- iv. Demonstrate technique and understanding of the principles for detecting pulsus paradoxus
- v. Detects signs of right and left ventricular failure
- vi. Describe heart murmurs as to location, timing, quality, radiation, intensity, and determine the valvular lesion by the type
- vii. Detect left and right ventricular heaves by palpation, along with placement of PMI and presence of thrills
- viii. Detect normal and variant S1, S2, S3, and S4.
- ix. Detect opening snap, systolic click, pericardial rub, and normal or paradoxical splitting of S2
- x. Detect differential swelling of extremities and edema

c. Basic principles

i. Level I

- a. Congestive heart failure
- b. Cardiac arrhythmias
  - i. AV block
  - ii. PSVT
  - iii. Atrial tachycardia/flutter/fibrillation
  - iv. Junctional rhythm/tachycardia
  - v. Ventricular rhythm/tachycardia/fibrillation
- c. Bundle branch block
- d. Angina/infarction
- e. Pericarditis/tamponade
- f. Valvular heart disease
- g. Dressler syndrome
- h. Cardiomyopathies
  - i. Restrictive
  - ii. Dilated
  - iii. Hypertrophic
- i. Myocarditis/endocarditis
- j. Cor pulmonale
- k. Orthostatic hypotension/syncope
- l. Hypertension/hypertensive heart disease
- m. Raynaud's phenomenon
- n. Varicose veins/venous thrombosis/postphlebotic syndrome
- o. Vasculitis
- p. Atherosclerosis/risk factors

ii. Level II

- a. Atrial myxoma
- b. Constrictive pericarditis
- c. Aortic aneurysm
- d. Anomalous AV conduction (WPW)
- e. Acute arterial occlusion
- f. A-V fistula
- g. Recurrent ventricular tachycardia
- h. Aortitis/ Takayasu's
- i. Thromboangiitis obliterans
- j. Coarctation
- k. Subclavian steal syndrome
- j. Leriche syndrome

- l. Hypertrophic obstructive cardiomyopathy
- m. Cardiogenic shock
- n. Ventricular aneurysm
- o. Lymphedema

- d. Diagnostics/therapeutics
  - I. Echocardiography-interpretation
  - ii. Chest X-ray-interpretation
  - iii. Exercise stress test-performance and interpretation
  - iv. Swan Ganz catheterization-assist or perform
  - v. D.C. cardioversion-perform
  - vi. Temporary transvenous pacemaker insertion-assist or perform
  - vii. Pericardiocentesis-assist
  - viii. Structural evaluation-perform and interpret
  
- e. Health maintenance
  - I. Risk factor modification
  - ii. Low fat diet
  - iii. Cholesterol/blood pressure screening
  - iv. Smoking cessation
  - v. Stress reduction/exercise prescription

7. Endocrinology

- a. History
  - I. Genital maturation/menarche
  - ii. Growth and development
  - iii. Thyroid dysfunction
  - iv. Steroid use
  - v. Endocrine surgery/trauma
  - vi. Weight variation
  - vii. Edema
  - viii. Radiation exposure
  - ix. Family history of DM, goiter, growth defects, obesity
  
- b. Physical examination
  - I. Height/weight/proportion
  - ii. Skin fold thickness
  - iii. Hyper pigmentation, stria, acne
  - iv. Exophthalmos
  - v. Thyroid nodule, size texture
  - vi. Voice changes, breath odor
  - vii. Inappropriate breast development
  - viii. Genital structure and health

- c. Basic principles
  - i. Level I
    - a. Adrenal insufficiency
    - b. Hyper adrenalism-endogenous/exogenous
    - c. Hyperaldosteronism
    - d. Diabetes mellitus
    - e. Diabetic ketoacidosis
    - f. Non-ketotic hyperosmolar coma
    - g. Hypoglycemia/insulinoma
    - h. Thyroid imbalance
    - i. Thyroid goiter-hypo-and hyperthyroid
    - j. Thyroid nodules/thyroiditis
    - l. Parathyroid imbalance
    - m. SIADH
    - n. Diabetes insipidus
    - o. Osteoporosis
    - p. Calcium imbalance/Paget's disease of bone
    - q. Protein-calorie malnutrition
    - r. Vitamin deficiencies
    - s. Obesity/anorexia/bulimia
    - t. Pheochromocytoma
    - u. Hyperlipidemia
    - v. Polycystic ovarian disease/amenorrhea
    - w. Impotence
  - ii. Level II
    - a. Reidel struma
    - b. Thyroid carcinoma
    - c. Acute suppurative thyroiditis
    - d. Carcinoid
    - e. Dwarfism
    - f. Hypogonadism
    - g. Porphyria
    - h. Wilson disease
    - i. panhypopituitarism
- d. Diagnostics/therapeutics
  - i. Suppression/stimulation testing
    - a. Fasting stress
    - b. Thyroid releasing hormone (TRH)

- c. Adrenocorticotropin hormone (ACTH)
      - d. Dexamethasone suppression
      - e. Water deprivation
    - ii. Special lab tests
      - a. Glycosylated hemoglobin
      - b. Glucose tolerance test
      - c. Serum hormone levels
      - d. Insulin and c-peptide
      - e. Serum catecholamines
      - f. Plasma renin activity/aldosterone
      - g. Urine VMA/metanephrines
      - h. Urine HCG
    - iii. Imaging procedures
      - a. Sella turcica X-ray/MRI
      - b. Thyroid radio nuclide study
      - c. Ultrasound thyroid
      - d. Structural exam
  - e. Health maintenance
    - i. Dietary support for diabetes
    - ii. Hypertension control
8. Gastroenterology
  - a. History
    - i. Family history of inflammatory bowel disease, peptic ulcer, bowel cancer or polyps, celiac disease or lactase deficiency
    - ii. Sexual history
    - iii. Mouth and tongue symptoms including bleeding, pain, soreness, ulcer, swelling, lumps
    - iv. Dysphagia, eructation, dyspepsia, odynophagia
    - v. Vomiting, nausea, anorexia
    - vi. Abdominal pain, bloating, swelling
    - vii. Blood in stool, constipation, diarrhea, stool changes
    - viii. Anal discharge
    - ix. Anal pruritis, worms
    - x. Pain or mass in rectum or perirectal area
    - xi. Jaundice

- xii. Weight loss or gain
  - xiii. Food intolerance
- b. Physical examination
- I. Abdominal shifting dullness, ballottement
  - ii. Sequential exam of the acute abdomen: auscultation first, light palpation least tender area next, then most tender area; rebound, guarding, spasm
  - iii. Know importance of serial abdominal examination
  - iv. Light and deep palpation for masses and hernia
  - v. Auscultation for bruits
  - vi. Palpatory examination of the spleen, liver, abdominal aorta, hernias of the abdominal wall, masses
  - vii. Detection of voluntary versus involuntary guarding and rigidity
  - viii. Performance and understanding of the iliopsoas and obturator tests
- c. Basic principles
- I. Reflux esophagitis and varices
  - ii. Hiatal hernia
  - iii. Acid peptic disease
  - iv. Upper and lower gastrointestinal bleeding
  - v. Postoperative ileus
  - vi. Diarrhea-acute, chronic, physiologic
  - vii. Diverticular disease
  - viii. Inflammatory bowel disease
  - ix. Irritable bowel disease
  - x. Esophageal motility disorder
  - xi. Diabetic gastropathy and enteropathy
  - xii. Gut infections-bacterial, parasitic, viral
  - xiii. Pseudomembranous colitis
  - xiv. Hemorrhoids, anal fissures, pruritis ani
  - xv. Hyperbilirubinemia-conjugated and unconjugated (familial)
  - xvi. Drug induced cholestasis
  - xvii. Cirrhosis-alcoholic, cardiac
  - xviii. Hepatitis-A-E, toxic, chronic persistent and chronic active
  - xix. Cholangitis, cholecystitis, cholelithiasis
  - xx. Pancreatitis, pseudocyst, pancreatic cancer
  - xxi. Malnutrition, malabsorption
  - xxii. Volvulus, Meckel's diverticulum

- xxiii. Ischemic bowel
  - xxiv. Gay bowel syndrome
  - xxv. Hernias
- d. Diagnostics/therapeutics
- I. Flexible sigmoidoscopy
  - ii. Paracentesis
  - iii. Insertion of central venous catheter for parenteral nutrition
  - iv. Insertion of nasogastric tube
  - v. Liver biopsy-assist
  - vi. Structural examination and therapy
  - vii. Interpretation of appropriate laboratory tests to confirm findings in areas listed above
  - viii. Understand indications for appropriate surgical procedures to include:
    - a. Cholecystectomy
    - b. Peptic ulcer surgery
    - c. Hiatal hernia repair
    - d. Abdominal wall herniorrhaphy
    - e. Exploratory laparotomy
    - f. Bowel resection
    - g. Enterostomy/gastrostomy
    - h. Peritoneal shunts
  - ix. Endoscopic procedures-assist
    - a. Esophageal dilation
    - b. Sclerotherapy for esophageal variceal bleeding
    - c. Palliative therapy for esophageal, gastric, and colonic tumors
    - d. Sphincterotomy of the Ampulla of Vater
    - e. Stenting of bile duct
    - f. Polypectomy
- e. Health maintenance
- I. Recommend bowel screening protocol
  - ii. Colonic surveillance for polyps
  - iii. Dietary management of colonic disease and malabsorption
  - iv. Psychosocial support for gut dysfunction

9. Hematology

a. History

- I. Fatigue, early exhaustion, anorexia, weight loss
- ii. Abnormal bleeding
- iii. Skin lesions, lumps, swellings, masses
- iv. Family history of tumors
- v. Medications, drug use, alcohol, toxin exposure, smoking
- vi. Fever of unknown origin
- vii. Trauma and prior surgery

b. Physical exam

- I. Observe changes in fundi, sclera, conjunctiva, mouth, nose
- ii. Lymph nodes
- iii. Nails and nail beds
- iv. Tongue
- v. Bones and joints
- vi. Liver and spleen
- vii. Structural examination

c. Basic concepts

- I. Iron deficiency anemia and sideroblastic anemia
- ii. Megaloblastic anemia
- iii. Bone marrow failure
- iv. Aplastic anemia and myelophthisis
- v. Anemia of chronic disease
- vi. Hemolytic anemia
- v. Hemoglobinopathies
- vi. Platelet disorders
- vii. Clotting/bleeding disorders
- viii. Blood typing and transfusion medicine
- ix. Polycythemia vera
- x. Myeloproliferative disorders
- xi. Diseases of the reticuloendothelial system
- xii. Acute and chronic leukemia
- xiii. Hodgkin's disease/lymphoma
- xiv. Myeloma/gammopathy
- xv. AIDS and its cancers

- d. Diagnostics/therapeutics
  - i. Bone marrow aspiration and core biopsy
  - ii. Peripheral blood smear interpretation
  - iii. Template bleeding time
  - iv. Lumbar puncture for intrathecal therapy-assist
  - v. Thoracentesis, paracentesis, skin biopsy for diagnostic purposes
  - vi. Osteopathic structural examination
  
- e. Health promotion
  - i. ACS cancer screening protocols for GI, GYN, prostate, and breast cancer
  - ii. Hospice
  - iii. Chronic pain management
  - iv. Advanced directives

10. Infectious diseases

- a. History
  - i. Fever curve
  - ii. Recent patient contacts
  - iii. Travel and family history
  - iv. Complete sexual history
  - v. Work/environmental exposures
  - vi. Surgical/dental procedures or trauma
  - vii. Detection of immunocompromising disorders
  - viii. Drug abuse/smoking
  - ix. Discharges, odors, sores, swellings, rashes
  
- b. Physical examination
  - i. Skin lesions typical of specific organisms
  - ii. Typical fever patterns of specific organisms
  - iii. Identify and differentiate findings for the following
    - a. Skin abscess, cellulitis, lymphangitis, phlebitis
    - b. Conjunctivitis, sty, uveitis, blepharitis, periorbital cellulitis
    - c. Pharyngitis and pharyngeal abscess
    - d. Otitis externa, media, and serous otitis
    - e. Bronchitis, pneumonia, abscess, empyema
    - f. Peritonitis, cholangitis, pelvic infection, abscess

- g. Septic joint, bursitis, nephritis, abscess
  - h. Urethritis, cystitis, nephritis, abscess
  - l. Sialoadenitis, thyroiditis
  - j. Paronychia, felon
  - k. Meningitis, brain and epidural abscess
  - l. Botulism, Guillian-Barre, transverse myelitis
  - m. Food poisoning
  - n. Infectious mononucleosis
  - o. Systemic fungemia
- iv. Osteopathic structural examination
- c. Basic concepts
- i. Septic shock
  - ii. Iatrogenic infections
  - iii. Infected prosthetic devices or central lines
  - iv. Endocarditis
  - v. Toxic shock
  - vi. Human and animal bites
  - vii. Infectious pericarditis and mediastinitis
  - viii. Travel related immunizations
  - ix. HIV/AIDS
  - x. Urinary tract infections
  - xi. Gram negative sepsis
  - xii. Tuberculosis
  - xiii. Sexually transmitted diseases
  - xiv. Antibiotic associated colitis
  - xv. Fever of unknown origin
- d. Diagnostic/therapeutics
- i. X-ray interpretation: chest, bone, soft-tissue
  - ii. Nuclear scan interpretation: gallium, indium, technetium
  - iii. Cytology
  - iv. Serology
  - v. Antibiotic utilization: cost effectiveness, indications, dosing monitoring
  - vi. Specimen collection
  - vii. Gram staining
- e. Health promotion
- i. Screening and immunization

## 11. Nephrology

### a. History

- I. Urine frequency, volume, color
- ii. Dysuria, change in stream, hesitancy, urgency, dribbling
- iii. Urinary incontinence
- iv. Hematuria
- v. Flank pain, groin pain
- vi. Stones, abscesses
- vii. Family history of renal disease
- viii. Sexual activity

### b. Physical examination

#### I. Level I

- a. Prostatitis, epididymitis, orchitis
- b. Testicular torsion, varicocele, tumor, hydrocele
- c. Erectile dysfunction
- d. Prostatic hypertrophy and masses
- e. Balanitis and genital ulcers
- f. Condyloma and genital granulomas
- g. Basic infertility

#### ii. Level II

- a. Genital neoplasms
- b. Prostatic abscess
- c. Priapism
- d. Urethral stenosis
- e. Phimosi
- f. Prostatic malignancy
- g. Peyronie disease

### c. Basic concepts

- I. Hypertension: essential, secondary, accelerated, malignant, crisis
- ii. Primary glomerulopathies: histology, natural history
- iii. Nephrotic and nephritis syndrome
- iv. Diabetic kidney
- v. Immune complex nephropathy

- vi. Hepatorenal syndrome
- vii. Myeloma and amyloid kidney
- viii. Vasculitis
- ix. AIDS
- x. Interstitial nephritis
- xi. Nephrolithiasis
- xii. Obstructive uropathy
- xiii. Hereditary tubular disorders
- xiv. Acute and chronic renal failure
- xv. Renal osteodystrophy
- xvi. Vitamin D metabolism
- xvii. Renin-aldosterone axis
- xviii. Renal tubular acidosis
- xix. Electrolyte management
- xx. Acid-base disorders
- xxi. Hemodialysis and peritoneal dialysis
- xxii. Transplantation

d. Diagnostics/therapeutics

- i. Renal function evaluation: glomerular filtration rate, urine/serum osmolarity, fractional excretion of sodium, renal failure index, creatinine clearance
- ii. Renal imaging: IVP, ultrasonography, renal scan
- iii. Renal biopsy-assist
- iv. Urinalysis with microscopic
- v. Arterial blood gas analysis
- vi. Temporary vascular access for hemodialysis-assist
- vii. Insertion of peritoneal dialysis catheter (temporary)
- viii. Peritoneal dialysis
- ix. Osteopathic structural examination

e. Health promotion

- i. Outpatient dialysis prescription
- ii. Support group advising for dialysis patients
- iii. Donor acquisition for transplant program
- iv. Dietary management for chronic renal failure

12. Neurology

a. History

- i. Nature of dysfunction and mode of onset
- ii. Toxins or other environmental exposures

- iii. Trauma and infections
  - iv. Activities of daily living
  - v. Family history
- b. Physical examination
- I. Complete cranial nerve evaluation
  - ii. Muscular tone, strength, fasciculation, wasting
  - iii. Reflex testing, clonus, Babinski, Chaddock, Bing
  - iv. Cerebellar testing
  - v. Gait observation
  - vi. Sensory testing to include pain, light touch, temperature, vibratory, position, neglect
  - vii. Mental status examination
- c. Basic concepts
- I. Cephalgia: tension, vascular, cluster
  - ii. Vertigo
  - iii. CNS infections, hemorrhage, trauma, edema
  - iv. Concussion, epidural and subarachnoid hematoma
  - v. Seizures: status epilepticus, classification, evaluation, indications for treatment
  - vi. Coma
  - vii. Cerebrovascular disease: CVA, TIA, RIND, stroke in evolution, intracranial hemorrhage, and aneurysms
  - viii. Fluent and non-fluent aphasia
  - ix. Dementia: multi-infarct, metabolic, Alzheimer's disease, degenerative, toxic
  - x. Meningitis, encephalitis
  - xi. Movement disorders: Parkinsonism, tardive dyskinesia, essential and secondary tremor
  - xii. Multiple sclerosis
  - xiii. Polyneuropathy, mononeuritis, Myasthenia gravis, Guillian Barre
  - ix. Neuro-ophthalmology: normal fundus, papilledema, Marcus-Gunn pupil
  - x. Syncope
  - xi. Pituitary adenoma
  - xii. Spinal cord compression, corda equina syndrome
  - xiii. Eaton-Lambert syndrome
- d. Diagnostics/therapeutics
- I. Lumbar puncture

- ii. EEG-assist
    - iii. Cerebral angiography-interpretation
    - iv. CT-MRI scanning-interpretation
    - v. Myelography-assist
    - vi. Evoked potentials-interpret
    - vii. EMG assist
    - viii. Doppler ultrasound of carotids-interpret
    - ix. Osteopathic structural examination
  - e. Health promotion
    - I. Psychosocial support
    - ii. Genetic counseling
13. Oncology
- a. History
    - I. Carcinogens in environment and workplace
    - ii. Family history and genetic predisposition
    - iii. Exposure to radiation, toxins, drugs, hormones
    - iv. Tobacco use
    - v. Sun exposure
    - vi. Fatigue, weakness, weight loss, anorexia
    - vii. Bleeding
    - viii. Masses, lumps, changes in skin lesions
    - ix. Bowel habit change, bloating
    - x. Fever, sweats
    - xi. Dysphagia, mouth sores
    - xii. Mental status change, delirium, neurologic abnormalities personality change
    - xiii. Chronic cough
  - b. Physical examination
    - I. Masses
    - ii. Pallor
    - iii. Edema
    - iv. Skin changes
    - v. Complete lymph node examination
    - vi. Rectal exam and occult blood testing
  - c. Basic concepts
    - I. Pathophysiology of neoplasia: growth patterns,



- vi. Previous pulmonary testing
  - vii. Snoring, hyper somnolence
  - viii. Hemoptysis
  - ix. Voice changes
  - x. Chest pain
- b. Physical examination
- I. Extra pulmonary findings in lung disease
    - a. Cyanosis
    - b. Clubbing
    - c. Chest configuration
  - ii. Respiration patterns
    - a. Cheyne-stokes
    - b. Kussmaul
    - c. Accessory muscle use and abdominal paradox
  - iii. Thoracic structural abnormalities
  - iv. Detection and character of crackles, wheezes, rhonchi, post-tussive crackles, tubular breath sounds
  - v. Pleural friction rub
  - vi. Differentiation of effusion from consolidation with percussion in multiple positions, egophony, e-to-a
  - vii. Subcutaneous emphysema
  - viii. Diaphragmatic immobility
- c. Basic concepts
- I. Level I
    - a. Aspiration pneumonitis
    - b. Lung abscess, pneumonia, bronchitis, colonization
    - c. Hypersensitivity pneumonitis
    - d. Bronchiolitis, tracheitis
    - e. Infiltrate with eosinophilia
    - f. Allergic bronchopulmonary aspergillosis
    - g. Emphysema, chronic bronchitis, asthma
    - h. Pulmonary embolism and infarction
    - I. Bronchopulmonary hemorrhage
    - j. Sleep apnea
    - k. Pulmonary contusion, rib fracture, burns, drowning
    - l. ARDS
    - m. Atelectasis
    - n. Basic physiology of respiration
    - o. Pulmonary function testing
    - p. Rheumatoid lung and other connective tissue disorders

- o. Cor pulmonale
- ii. Level II
  - a. Mediastinitis, mediastinal tumors
  - b. Empyema
  - c. Alveolar proteinosis, BOOP
  - d. Desquamative interstitial pneumonitis
  - e. Sarcoidosis
  - f. Churg-Strauss syndrome, vasculitis
  - g. Wegeners granulomatosis
  - h. Goodpastures syndrome
  - i. Fungal and Tuberculosis infections
  - j. Foreign body
  - k. Hemosiderosis
  - l. Cystic fibrosis
  - m. Flail chest
  - n. Primary pulmonary hypertension
- d. Diagnostics/therapeutics
  - i. Level I
    - a. Ventilator management, physiology, weaning parameters, modes, adjustments, trouble shooting
    - b. Arterial blood gas performance and interpretation
    - c. Pleural biopsy-assist
    - d. Thoracentesis
    - e. Simple spirometry
    - f. Pleural fluid analysis
    - g. Sputum induction
    - h. Direct fluorescent Legionella antibody in sputum and urine
    - i. Gram stain
    - j. Basic hypersensitivity testing
    - k. Endotracheal intubation
    - l. Chest tube drainage
    - m. Lung scan/gallium scan
    - n. Pre-operative evaluation
    - o. Osteopathic structural evaluation
  - ii. Level II
    - a. Bronchoscopy, biopsy, lavage
    - b. Fluoroscopy
    - c. MRI/CT of chest
    - d. Lung biopsy or aspiration

- e. Pulmonary angiography
- f. Cardiopulmonary stress testing
- g. Complete pulmonary function testing with methacholine challenge
- h. Tracheotomy
- i. Mediastinoscopy
- j. Lung transplantation protocol

e. Health maintenance

- i. Smoking cessation
- ii. Immunization
- iii. Rehabilitation
- iv. Support group
- v. Screening examinations

15. Rheumatology

a. History

- i. Joint pain, stiffness, motion dysfunction, swelling
- ii. Neck, low back and thoracic spine pain and motion dysfunction
- iii. Weakness, joint instability or locking
- iv. Sensory dysfunction
- v. Functional limitations-Activities of Daily Living
- vi. Occupational and athletic history
- vii. Prior treatment and responses
- viii. Family history

b. Physical examination

- i. Erythemas, Heberdens nodes, Bouchard nodes, ulnar deviation, Dupuytren contractures, tophi, thenar atrophy, foot drop, varus/valgus deformity
- ii. Osteopathic evaluation including bulge, ballottement, crepitus stability, range of motion, strength, spinal loading, spasm, stretch testing
- iii. Posture, gait movement
- iv. Chest expansion for spondylitis
- v. Leg length
- vi. Sacroiliac motion testing
- vii. Anal sphincter tone
- viii. Sensory and reflex examination

- c. Basic concepts
  - i. Laboratory use
    - a. Rheumatoid factor
    - b. ANA
    - c. Cryoglobulins
    - d. Sedimentation rate
    - e. Immunogenetics
  - ii. Non-articular rheumatism
    - a. Fibromyalgia
    - b. Bursitis, tendinitis
    - c. Polymyalgia rheumatica
    - d. Progressive systemic sclerosis
    - e. Raynaud's phenomenon
    - f. Carpal tunnel syndrome
    - g. Reflex sympathetic dystrophy
  - iii. Mono-articular disease
    - a. Infectious arthritis
    - b. Crystal deposition disease
  - iv. Malignancy associated disease
    - a. Hypertrophic pulmonary arthropathy
    - b. Palmar and plantar fasciitis
    - c. Seronegative rheumatoid arthritis
    - d. Dermatomyositis
    - e. Amyloidosis
    - f. Osteoarthritis
  - v. Polyarticular disease
    - a. Rheumatoid arthritis
    - b. Juvenile chronic polyarthritis
    - c. Seronegative spondyloarthropathies
    - d. Systemic lupus erythematosus
    - e. Vasculitis
      - i. Hypersensitivity angiitis
      - ii. Giant cell arteritis
      - iii. Necrotizing angiitis
      - iv. Sjorgren's syndrome
    - f. Metabolic bone disease
    - g. Immunology
      - i. Complement
      - ii. Mediators and lymphokines
      - iii. Cellular immunology
- d. Diagnostic/therapeutics
  - i. Joint aspiration

- ii. Joint injection
  - iii. Polarizing microscopy
  - iv. Osteopathic evaluation and treatment
- e. Health maintenance
  - I. Screening
  - ii. Immunization
  - iii. Physical therapy

## Appendix B

- I. The internal medicine resident should demonstrate the ability to properly and efficiently evaluate, diagnose, and establish treatment plans to include ongoing follow-up for all of the following chief complaints and problems in the ambulatory setting.
  - A. Chest pain, acute or chronic
  - B. Dyspnea with orthopnea and evidence of heart disease
  - C. Dyspnea on exertion with evidence of pulmonary disease
  - D. Hypertension
  - E. Palpitations with or without syncope
  - F. Diabetes mellitus and its complications
  - G. Hypothyroid states
  - H. Chronic steroid dependency
  - I. Abdominal pain and dyspepsia
  - J. Dysphagia
  - K. Chronic or acute diarrhea or abdominal cramps
  - L. Jaundice, with or without pain
  - M. Gastrointestinal bleeding
  - N. Chronic malnutrition
  - O. Eating disorders
  - P. Chronic anemia, evaluation and therapy
  - Q. Chronic or recurrent infections
  - R. Fever of unknown origin
  - S. Infection in the high-risk population
  - T. AIDS screening and referral or chronic management as appropriate
  - U. Chronic renal insufficiency
  - V. Proteinuria
  - W. Chronic peritoneal and hemodialysis
  - X. Uremia
  - Y. Hematuria, with or without pain
  - Z. Stroke rehabilitation
  - AA. Loss of memory, orientation, or cognitive ability
  - BB. Headache
  - CC. Tremors
  - DD. Gait disturbances
  - EE. Seizure or syncope
  - FF. Screening and follow-up for carcinomas of the head and neck, breast, lung, gastrointestinal tract, central nervous system, urogenital tract, or skin
  - GG. Wheezing, with or without cough
  - HH. Hemoptysis
  - II. Sleep disorders or chronic hyper somnolence
  - JJ. Joint pains, acute and chronic

- KK. Systemic lupus and its variations
- LL. Recurrent rashes
- MM. Environmentally related symptoms or disease
- NN. Low back pain
- OO. Routine examinations
- PP. Fatigue
- QQ. Psychosocial disorders
- RR. Disease prevention and health maintenance

## **Appendix C**

### **Internal Medicine Resident Attendance Policy**

- I. PGY I Internal medicine residents are required to attend all internal medicine morning reports and noon conferences while on an internal medicine rotation. PGY I residents are encouraged to attend when on non-internal medicine services. Morning report starts promptly at 7:30 AM. Tumor board on the 1st and 3rd Tuesday of every month will begin at 7:00 AM.
  - A. Any resident or intern who does not sign the attendance sheet will be counted absent.
  - B. Residents will be allowed 2 (two) unexcused absences each month. Each subsequent absence will result in one extra 12 hour weekend shift.
- II. If a resident has three (3) unexcused absences from morning report and noon conference during a four (4) week rotation, disciplinary action will be taken at the discretion of the chief resident(s).
- III. The attendance will be taken by the internal medicine chief resident or someone appointed by that person.

## **Appendix D**

- I. All manuscripts must be typed and submitted in an appropriate format acceptable for publication in a standard scientific refereed journal.
- II. An abstract must accompany each manuscript. The cover sheet must list the program for which credit is to be applied and a statement that the resident is the primary author, or performed substantive participation in the study and that the paper has been reviewed and approved. This must be signed and attested to by the program director. Manuscripts shall be submitted in one of the following formats only:
  - A. A case presentation of a first reported case or other unusual manifestations of a disease which will add to the medical literature, which should include a review of the literature and discussion (acceptable only if submitted for publication).
  - B. A report of an original clinical research study approved by the program director and the institutional review authorities.
  - C. A case presentation and discussion which challenges existing concepts of diagnosis or treatment and thus recommends further investigation.
- III. Initially, the resident should submit a written proposal to the program director for review and approval as fulfilling the writing requirement. All projects must be performed and prepared under the supervision of the program director or another physician approved by the program director.
- IV. Residents may work jointly on an original clinical research project, provided a progress report and written approval of the program director is included in Part II of the Resident Annual Report. Residents may not work jointly on case reports. Residents shall submit the required manuscript within thirty (30) days of the completion of the second year of training in general internal medicine.
- V. Clinical research projects which are prospective in nature, may require ongoing accrual of patients to provide sufficient numbers to assure statistical validity. Patient accrual, performance of the study, data analysis, and writing of the paper may represent a long-term project of more than two (2) years. In such a situation, with the approval of the program director, the resident may submit a substantive progress report of the project with a summary of data collected so far and indicating the ongoing nature of the study. This progress report shall be accepted in lieu of the required final manuscript for the second year in a three (3) year program. Final credit will be granted with the submission of an acceptable paper within thirty (30) days of completion of the fourth year of training.

## Appendix E

- I. Options for meeting the research requirement for residency training by the ACOI
  - A. The program shall provide adequate exposure to medical research/review skills and methods of presentation, including information relating to changes in the health care delivery system. Options for meeting the above requirement shall be determined by the program director and may include, but not be limited to, any of the following:
    1. Original research studies (basic science, clinical studies, health services research) and writing;
    2. Retrospective studies (medical records analysis);
    3. Entry into the ACOI annual resident medical writing competition;
    4. Presentation of a scientific poster/abstract at the ACOI Convention;
    5. Resident education program on research types and methodology;
    6. Resident education program on biostatistics;
    7. Formal critique of resident presentations of journal club articles/literature review (i.e., credibility of material, data, statistics and study design), twice annually;
    8. Educational program for residents in health services research, policies, administration (i.e., access of population groups to health care, compliance issues, public policies, managed care, etc.);
    9. Educational program on “How to Read and Understand the Medical Literature”;
    10. Formal critique of medical resident lecture presentation of research topic, twice annually.

## Appendix F

### Internal Medicine Outpatient Clinic Manual

#### **Purpose**

The Internal Medicine Resident Clinic at Doctors Hospital was created in 1992 to provide the residents with outpatient care responsibility. The residents are expected to examine and provide care for a number of patients on their specified clinic day either as the primary care physician or as a consultant. The resident will be supervised by an attending physician to advise decision making and to supervise patient care.

#### **Structure**

Currently, the Internal Medicine Resident Clinic is located at Doctors Community Health Specialists, 50 Old Village Drive. Ancillary care, such as nursing and laboratory services, billing, and scheduling are provided by the hospital. The resident is scheduled for \_ day once a week. The scheduled date will remain constant throughout the year. The clinic hours are 9:00 a.m. - 12:00 p.m. (Wednesday) and 1:00 p.m. - 4:00 p.m. (Monday through Thursday). Continuity of care for your clinic patients is mandatory and takes precedence over your other clinical responsibilities. You are excused from all of your rotation responsibilities to attend the outpatient clinic. This includes all rotations at Doctors Hospital or a rotation within the Columbus City limits.

According to the Doctors Hospital guidelines, the clinic should not schedule more than 2 new patients and a total of 5 patients per each clinical day.

#### **Patient Charts**

The outpatient clinic staff will provide the patient with a chart that will remain filed in the clinic's medical record room. The chart contains a current diagnosis list, immunization records, PPIP (Putting Prevention Into Practice) sheet, laboratory and radiographic results, correspondences, and written progress notes. It is the resident's responsibility to complete and keep up to date the information on the above listed forms. The progress notes are expected to be in the SOAP format and legible. The consultations and initial H&P are to be dictated and completed in the usual fashion as hospitalized patients.

#### **Specialty Clinics**

In addition to your weekly internal medicine clinic, neurology and rheumatology clinics are scheduled on a monthly basis. The neurology clinic is with Donald Friedenburt, D.O. and is scheduled for the third Wednesday morning (8:00 a.m. - 12:00 p.m.) of each month. You are responsible to evaluate the patients under the supervision of the respective specialist. The chief resident will provide you with a yearly schedule for the speciality clinics.

### **Clinic Coverage**

During the day time hours, each resident is responsible for answering calls from his/her patients. After 5:00 p.m., on the weekends, or during coverage weeks, the resident on call at Doctors is responsible for answering calls from the patients. Back-up resident coverage will be assigned on monthly rotations.

If you are scheduled for a conference or vacation, it is your responsibility to notify the clinic at least 14 days in advance so they can reschedule patients. If an emergency arises, you are required to find another resident to cover in your absence.

When a patient requires admission to the hospital, the patient is admitted under the clinical medicine teaching service.

### **Supervision**

During the first six months of your clinic experience, all patients must be seen by the supervising physician. This is usually after the resident has completed the examination with the patient. After the six month period, the supervising physician is required to see all patients on their initial visit and a Level IV and V visit. For recheck visits that are a Level I to III, the resident is required to discuss the patient visit with the supervising physician.

All procedures are to be done under the direct supervision of the supervising physician.

## Appendix G

### A Course Outline for Morning Report

Francis X. Blais, DO

(Formulated 1997, updated 12/03)

“...facts are useful to the extent that they can be employed in solving problems.”

Schwartz, W.B. (1979)

“The starting point for organizing the program content of education ... must be the present, existential, concrete situation ...”

Freire, P. (1990)

#### Introduction:

Morning report is a common didactic conference in the great majority of internal medicine training programs. However, there is little empirical evaluation of the educational outcome of this traditional patient-based forum. A review of the literature from 1982 to the present via computerized search of the Index Medicus identified 38 citations regarding morning report, ten were letters to the editor and two editorials. Most published articles are descriptive in nature and offer suggestions for successful formats.

Wenger and Spiner (1993) defined the following as common goals for morning report:

- To review management decisions
- To investigate therapeutic misadventures
- To help the Chief of Service keep track of developments
- To function as a case-oriented teaching session

Welch, et. al. (1996) suggest a fifth approach, using this forum to enhance adverse event detection. At different times, morning report probably serves all of these functions, but its major intent in the Doctors Hospital internal medicine training program is a case-oriented teaching forum. Different programs include different levels of the hierarchy of trainees, but our program will attempt to include the active participation of all of the housestaff and the medical students

on the internal medicine teaching services, in the future focused to the ward team (clinical medicine service).

Recent literature suggests unique approaches to this forum, including using a patient about to be discharged as the teaching focus, the use of patients from the ambulatory clinics, and devising means to assure follow-up of presented cases. Some authors suggest mini-lectures and even weekly quizzes for the trainees to use as formative feedback. Many of the ideas suggested in the literature are in review for possible inclusion in the Doctors Hospital program. However, the following document will attempt to formalize the expectations of the housestaff and the students regarding this important teaching conference and outline some new elements to enhance the educational value of this forum.

### **Central Questions:**

- How is quality assurance provided for cases managed by the internal medicine housestaff during night coverage?
- What educational venues are available for in-depth discussion of case management, including differential diagnosis and therapeutic decisions?
- How do the internal medicine housestaff learn to integrate patients evaluated and the medical literature?
- Where do the residents apply their knowledge of information technology?
- What education formats are available to discuss and learn principles of cost effective patient management?
- How do the internal medicine trainees receive feedback regarding cases admitted while on call, particularly final diagnosis and disposition?

### **Course Rationale:**

Critical analysis of a patient at initial presentation and communication of pertinent information to colleagues are essential skills for all physicians. Differentiating relevant from irrelevant data facilitates a focused presentation, or capsule summary, of the presenting complaints and

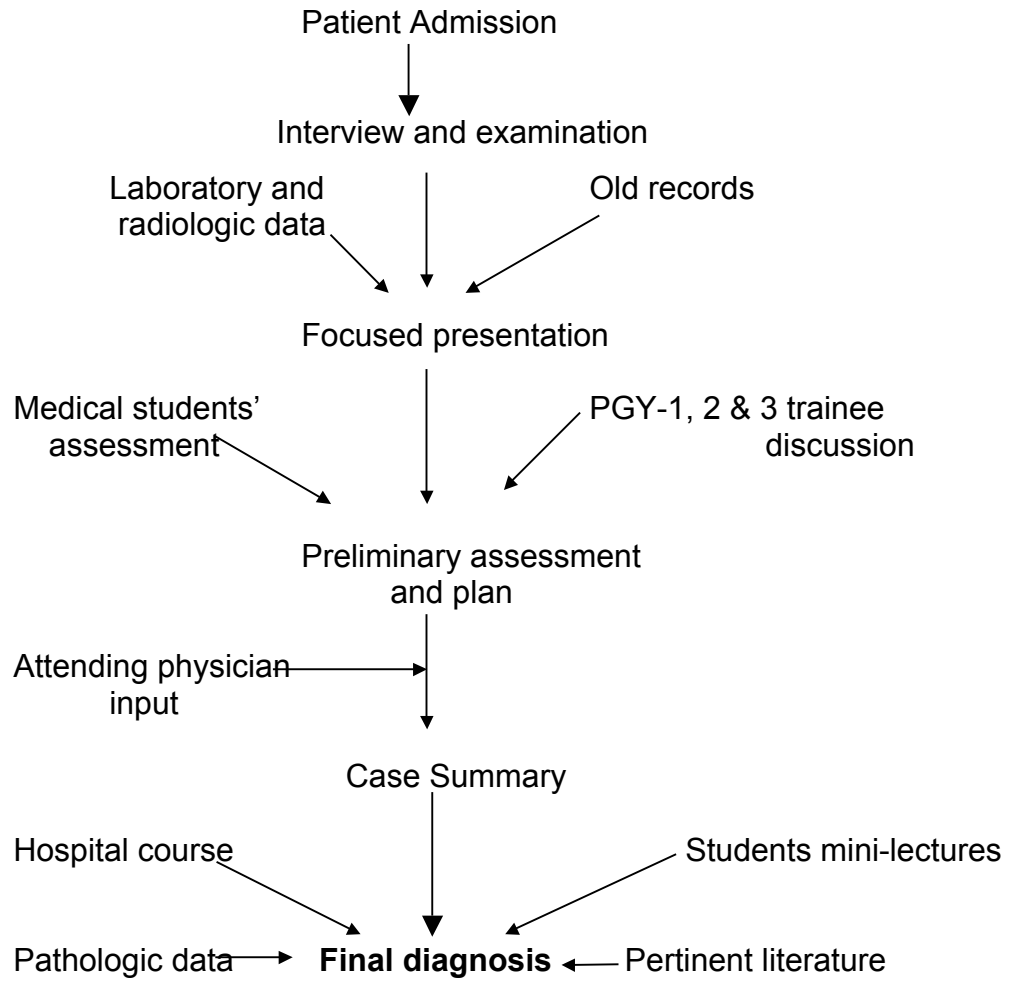
physical findings of a new patient. Initial diagnostic and therapeutic interventions are often difficult decisions based on the limited data base available when a physician first evaluates a patient, often critically ill during off hour hospital admissions.

Morning report offers the internal medicine resident the opportunity to reproduce the dilemma of the night before, to discuss difficult decisions with peers and receive formative feedback from more experienced colleagues. The physician-in-training can reflect, reconsider, and analyze preceding patient management decisions through a critical appraisal of the patient and their data base. As Wheeler (1982) notes, "A recognized mistake is probably the best teacher." Additionally, through follow up of previously presented cases, mini-lectures, and review of pertinent literature, the initial evaluation can be reconsidered in a retrospective fashion, the addition of the patient's clinical course and relevant literature adding clarity to the diagnostic and therapeutic approach to complex clinical problems.

**Intended learning objectives:**

- The on-call resident will appropriately gather data, collate the obtained information, and present the patient's case **concisely** within five minutes.
- The residents will discuss likely diagnostic possibilities, based initially on the patient's presenting complaints and physical findings.
- With completion of the available data base, the residents will formulate likely differential diagnosis and appropriate diagnostic studies and management.
- Residents will review pertinent literature relevant to the case, and be prepared, based on the principles of evidence-based medicine, to discuss the previous week's cases in an informed fashion during weekly case review.
- The resident will access appropriate computer-based assistance to search the literature regarding citations pertinent to presented cases.
- Twice monthly, an assigned resident will prepare and present a recently discharged case for discussion from the perspective of discharge planning, ambulatory follow-up care, preventive care, and a cost analysis of the case.

**Conceptual Map:**



## **General teaching strategies:**

The resident on call the evening prior to morning report is responsible for the case presentation. The verbal summary should be concise, focused, and easily presented within the allocated five minutes. Reading recorded history and physical findings are **unacceptable**. A second trainee will serve as scribe and record pertinent findings on the board for visual reinforcement. The initial discussion is based on the historical data and physical findings available at initial presentation. The medical students assigned to internal medicine will be asked, when present, to initiate the discussion with an individual or collective assessment of the likely diagnosis, followed by an open discussion among the housestaff. Pertinent laboratory findings will then be relayed as requested. The presenting resident will assure that EKG's, x-rays, microscopic slides, etc., are available for review and discussion. The case discussion will be focused to the attending housestaff, not the presenter; however, summary will include justification for initial diagnostic and therapeutic decisions.

Morning report will occur Monday through Friday at 0730 with sixty minutes allocated for presentation and discussion; attendance by internal medicine trainees is **mandatory**. Monday morning report may address the previous week's cases, including discussion of pertinent topics by the medical students on the IM services and reviews of pertinent literature on an evidence-based approach to critical analysis of clinical data. The chief resident, primary presenter and residency director will assume responsibility for obtaining pertinent citations from the literature. Students are allocated ten minutes for their presentations which should focus on specific questions posed during morning report, augmenting their discussion with data from the primary literature. The internal medicine residents, particularly the chief resident, will mentor and assist the medical students in this task.

Twice monthly at morning report a resident will prepare and present a case from a discharge perspective, i.e., considering ambulatory follow-up care, risk factor modification, preventative health care, patient education, etc. Further, the resident will present a cost analysis of the patient's hospitalization, including a breakdown of expenses, e.g., laboratory and radiological studies, medications, physicians' fees, room charges, etc. Discussion will then

focus on cost effective health care. The residency director will facilitate this process and assist the resident with this endeavor **if requested.**

Unannounced quizzes will assess knowledge related to cases presented at morning report. Answers to the questions will be provided with a brief discussion of pertinent issues or questions. Such exercises provide formative feedback to the housestaff, directing individual learning goals. Questions will be formatted similar to certification examination, hopefully enhancing the residents' success in achieving board certification.

The format of morning report is focused to critical appraisal of clinical diagnosis and therapy. The case provides the context to address common medical problems encountered in hospitalized patients. The goal is **not** an interrogation of the presenting resident; on the contrary, feedback by more experienced colleagues offers residents the opportunity to retrospectively reflect upon case management decisions. Further, follow-up information allows all to evaluate the accuracy of initial assessment and enhance learning through the review of relevant literature. Mistakes are expected and an inevitable consequence of decisions that must be made in the immediacy of critically ill patients and a limited data base. Fortunately, we can all learn from our collective errors and open discussion focused to improving our diagnostic and therapeutic acumen.

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## Appendix J

### Curriculum for Internal Medicine Journal Club

Formulated: August, 1997

Revised: November, 2003

Francis X. Blais, DO

“Employ your time in improving yourself by other men’s documents. So shall you come easily by what others have labored hard for”.

Socrates

#### **Introduction:**

Journal Club is a traditional didactic conference in most internal medicine training programs, including the Doctors Hospital (DH) IM residency. Different formats emphasize various goals of the educational endeavor. Most commonly, the focus takes one of the following approaches:

- Increase familiarity with the latest medical literature
- Development of ‘roundsmanship’ ammunition
- Critically review an author’s conclusions
- Promote the development of skills in clinical epidemiology and biostatistics

The major emphasis of the DH journal club will be directed to critical appraisal of the literature, focused to evidence-based medicine. This approach will be facilitated by a course for IM residents in basic medical statistics and clinical epidemiology. The IM residents and / or will then choose the format and topics and facilitate the discussion at their assigned journal club.

#### **Central Questions:**

- Why is Journal Club required in the internal medicine residency?
- What format is used for Journal Club?
- How does the residency address critical appraisal of the literature, including knowledge of

medical statistics, research design, and clinical epidemiology?

- How is the efficacy of Journal Club assessed?
- Is there a linkage between the residents clinical responsibilities and activities and didactic endeavors such as Journal Club?

**Rationale:**

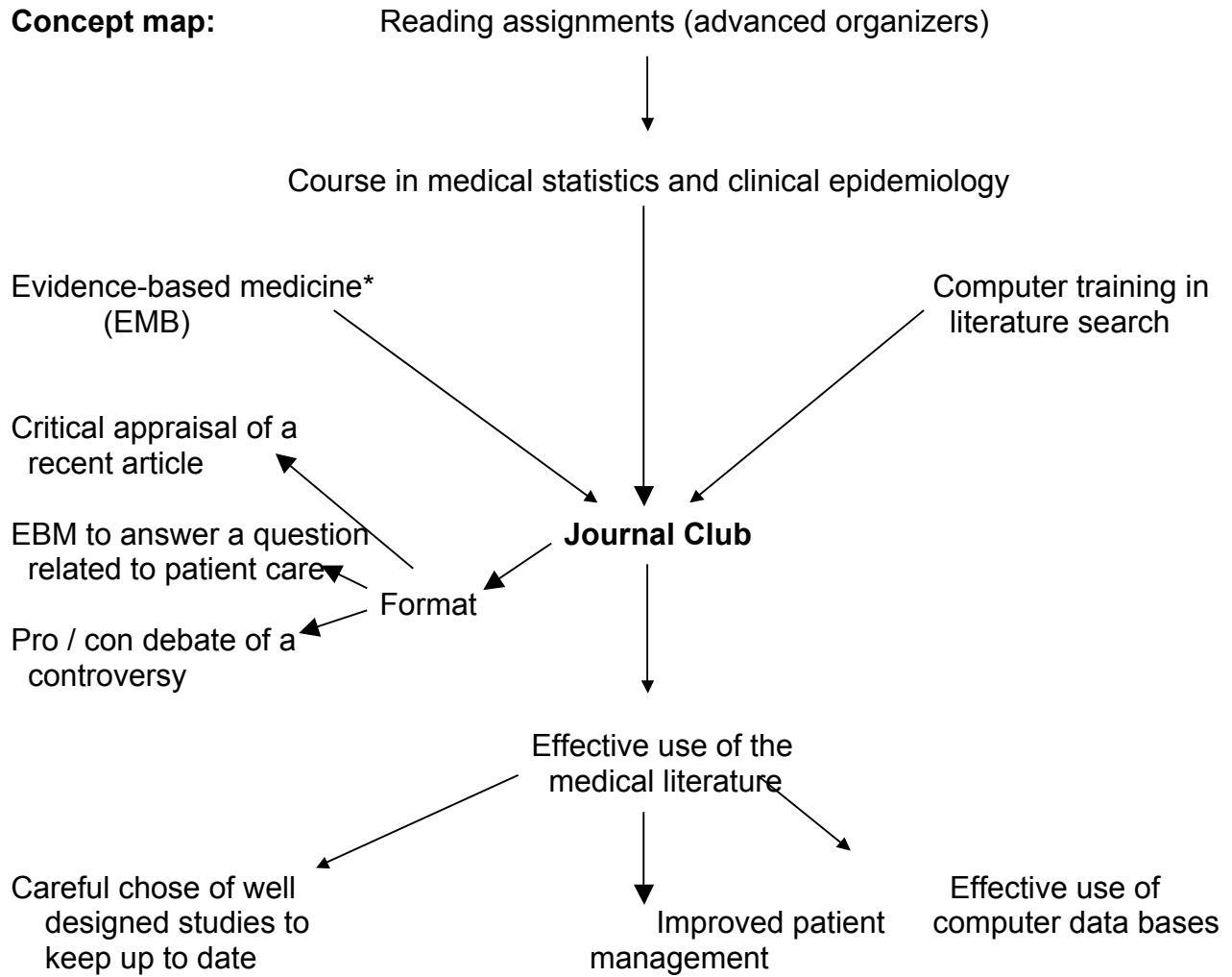
Knowledge of the ever-expanding data base of medicine is an essential component of the practice of internal medicine. Remaining current in important developments in the specialty requires the ability to distinguish well designed studies that are clinically relevant to the practice of medicine. The purpose of journal club is to develop the skill of critical appraisal of the literature and to use such data to answer questions of relevance to the care of patients. Residents review a series of articles relevant to a careful selection and appraisal of the literature, receiving formal instruction in medical statistics at the beginning of residency training. Journal Club provides a consistent forum to discuss the medical literature in a critical fashion with peers and attending physicians, developing the knowledge and skills necessary to use the literature as a lifelong guide to well informed, contemporary patient care and professional development.

**Intended learning objectives:**

The resident should be able to:

- Understand basic statistics used in most medical publications, e.g., standard deviation, t- tests, p values, contingency tables, etc.
- Engage colleagues in meaningful discussion of the medical literature during assigned journal clubs.
- Prepare presentations for journal club that ensure appropriate and in-depth discussion with colleagues.
- Use computers and on-line data bases to search the medical literature to solve clinical dilemmas and answer questions that arise during patient care.
- Carefully choose journals and articles to remain current in the relevant knowledge base of internal medicine.

**Concept map:**



\*Evidence-based medicine (EBM) is the systematic analysis of scientific evidence to deduce “best practice” guidelines (research synthesis or systemic review).

## Content Outline: Introductory Biostatistics

- I. Descriptive statistics and the normal curve
  - A. Descriptive versus inferential
  - B. Scale of measurement
  - C. Averages or measures of central tendency
    - (Mean, median, and mode)
  - D. Variability
    - 1. Standard deviation
    - 2. Measures of relationship (Correlation coefficients)
  - E. Normal distribution
    - 1. Properties of the normal curve
    - 2. Mean plus and minus one, two or three standard deviations
    - 3. Standard scores (z scores)
- II. Inferential statistics and statistical significance
  - A. Using samples to make inferences about populations
  - B. Statistical analysis and generalization
  - C. Statistical significance and probability
    - 1. Degrees of freedom
    - 2. Confidence intervals
    - 3. The null hypothesis and statistical significance
    - 4. Probability and levels of significance
      - a. p values
      - b. Tables of significant statistical value
    - 5. Common statistical tests
      - a. t tests
      - b. Chi-square ( $\chi^2$ )
      - c. ANOVA (F)
    - 6. Type I and II error
  - D. Complex statistical analysis
    - 1. Multivariate analysis of variance (MANOVA)
    - 2. Discriminant analysis
    - 3. Meta-analysis

### III. Statistical and practical significance

#### **Required reading prior to course in medical statistics:**

Dept of Clinical Epidemiology and Biostatistics, McMaster University Health Center, How to read the clinical journals. *Canadian Medical Association Journal* 1981:

1. Why to read them and how to start reading them critically; 124: 555 - 8.
2. To learn about a diagnostic test; 124: 703 - 10.
3. To learn the clinical course and prognosis of a disease; 124: 869 - 72.
4. To determine etiology and causation; 124: 895 - 990.
5. To distinguish useful from useless or even harmful therapy; 124: 1156 - 62
6. To learn about the quality of clinical care; 130: 377 - 82.

Oxman AD, Guyall GH. Guidelines for reading literature reviews. *Can Med Assoc J.* 1988; 138:697 - 703.

General reference: Motulsky, Harvey. *Intuitive Biostatistics* 1995; New York: Oxford University Press

#### **Helpful literature:**

Haynes RB, McKibbon KA, Fitzgerald D, et al. How to keep up with the medical literature.

*Annals of Internal Medicine.* 1986; Volume 105:

1. 149 - 53 Why to try and how to get started.
2. 309 - 12 Deciding which journals to read regularly.
3. 474 - 8 Expanding the number of journals you read regularly.
4. 636 - 40 Using the literature to solve clinical problems.

Useful internet site: McMaster University, Canada, Centre for Evidence-Based Medicine.

URL: <<http://hiru.hirunet.mcmaster.ca/emb/default.html>> Excellent internet site includes everything from a general overview on the subject to an EMB online discussion group.

#### **Instructional strategy:**

Journal Club is an important didactic forum in the formalized portion of the internal medicine residency at Doctors Hospital. Its major purpose is to facilitate the development of skill in critical appraisal of the medical literature, including practical knowledge of biostatistics and clinical epidemiology. To help the housestaff accomplish this goal, the residents will

participate in didactic instruction in elementary biostatistics. This mini-course will include reading assignments as an advanced organizer and a general reference text. The course will include 8 - 10 small group interactive tutorials with a faculty member knowledgeable in biostatistics. The focus will be interpretation and appropriate use of statistics in the analysis of published literature, **not** calculations and formulas. The course will be completed in the first four to six weeks of training; resident attendance is required. Additionally, all housestaff must demonstrate competence in the use of computers to perform literature searches of databases relevant to internal medicine such as MEDLINE and utilizing and critically assessing internet sites.

Journal Club will occur on \_\_\_\_\_ between \_\_\_\_\_ PM in Conference Room \_\_\_\_; attendance by all IM housestaff is mandatory. Second and third year residents will be responsible for topic selection, arranging appropriate attending physician participation and facilitation of the forum. There will be two journal clubs per month beginning the first week of August in each academic year. Assignments will be made at the beginning of the academic year. Residents must choose a topic for presentation one month in advance and define an attending physician with knowledge in the chosen subject and meet with this individual a minimum of three weeks prior to Journal Club. The housestaff should receive the article(s) at least two weeks in advance of scheduled presentation. Posing a set of questions with the submitted article(s) can be helpful in stimulating and focusing the discussion. Obviously, all attendees are expected to read the articles and be prepared to participate in the discussion.

Three formats are appropriate: a critical appraisal of a recent article of significant clinical import; a pro and con discussion by two residents addressing a controversy in internal medicine, e.g., HIV testing of all patients prior to surgery; using evidence-based medicine to answer a question related to patient care, e.g., the predictive and diagnostic value of a physical finding in the diagnosis of a specific disease. As noted above, the focus of discussion should be directed to a scientific analysis of the selected literature, **not** the reiteration of the author's conclusions. The articles assigned for the housestaff offer relevant background knowledge for this approach to Journal Club. As noted by the Evidence-Based Working Group (JAMA, 1992):

“A new paradigm for medical practice is emerging. Evidence-based medicine de-

emphasizes intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision making and stress the examination of evidence from clinical research. Evidence-based medicine requires new skills of the physician, including efficient literature searching and the application of formal rules of evidence evaluating the clinical literature.”

Two journals available both in print and on-line also provide a scientific approach to the interpretation of medical literature, *ACP Journal Club* and *Evidence-Based Medicine*.

This format will be formally evaluated six months after initiation to assess its process and success as an educational process. The housestaff, with the participation of the residency director, will make changes to maximize the educational outcome of the conference. The housestaff will receive formative feedback regarding their participation in and facilitation of Journal Club. Pre and post testing will assess the value of the biostatistics minicourse for PGY-1 houseofficers.

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**Doctors Hospital IM Residency Journal Club** Checklist for critical analysis

<b>I. Reference:</b>	<b>Statistics:</b>  Continuous variables <u>Parametric</u> <u>Nonparametric</u> <input type="checkbox"/> t-test <input type="checkbox"/> Krashal Wallis <input type="checkbox"/> ANOVA <input type="checkbox"/> Mann Whitney <input type="checkbox"/> Other <input type="checkbox"/> Other
<b>II. Hypothesis:</b>	Categorical variables <input type="checkbox"/> $\chi^2$ <input type="checkbox"/> Fishers exact <input type="checkbox"/> Other
<b>III. Methods</b> <u>Design</u> <input type="checkbox"/> Prospective <input type="checkbox"/> Retrospective <input type="checkbox"/> Randomized <input type="checkbox"/> Non randomized <input type="checkbox"/> Non blinded <input type="checkbox"/> Single blinded <input type="checkbox"/> Double blinded  <u>Descriptive studies</u> <input type="checkbox"/> Correlational <input type="checkbox"/> Case report <input type="checkbox"/> Cross sectional survey <input type="checkbox"/> Cohort <input type="checkbox"/> Case control study <input type="checkbox"/> Interventional	<b>IV. Results</b>  Charts and tables  Sensitivity  Specificity  NPV PPV
<u>Study population</u>  Inclusion criteria:  Exclusion criteria:  Control Group:	Lack of power in a negative study? <input type="checkbox"/> Yes  <input type="checkbox"/> No  Internal & external validity? <input type="checkbox"/> Yes <input type="checkbox"/> No  Measurements (Descriptive variables):
<b>V. Conclusions:</b> Does the hypothesis hold? <input type="checkbox"/> Yes <input type="checkbox"/> No  Flow diagram:	Main outcome variables:  Justification of conclusions based on results? <input type="checkbox"/> Yes <input type="checkbox"/> No  Generalizability of conclusion(s)?  <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>VI. Limitations:</b> Bias?...Type?	Sample size <input type="checkbox"/> Selection <input type="checkbox"/> Recall <input type="checkbox"/> Observer <input type="checkbox"/> Misclassification