TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER

Department of Internal Medicine

MS III
Clerkship Manual

January 2007
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WELCOME!!

Welcome to your Internal Medicine Clerkship!

The next eight weeks will be a critical part of your third year of medical school and will contribute greatly to the foundation for your future clinical activities. This experience should be both enjoyable and educational. The scope and diversity of disease encountered in the study of Internal Medicine are challenging and stimulating. You will learn the art and science of medicine by didactics, observation, and participation.

As you go through this clerkship, remember that the best, and indeed the ultimate source of learning medicine is the patient! This was so clearly stated by Sir William Osler:

“In what may be called the natural method of teaching the student begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end.”
LCME Requirement for Educational Objectives

The Liaison Committee on Medical Education requires that each medical school must define the objectives of its educational program. The objectives must address the extent to which students have progressed in developing the competencies that the profession and public expect of a physician.

The goals and objectives given at the beginning of this manual are designed to permit an *analytic* evaluation of the knowledge, skills, and attitudes you demonstrate during your clerkship experience. They provide the basis for assessment that assures you have acquired core clinical skills, behaviors and attitudes needed in subsequent medical training.

Another method for evaluating these goals and objectives uses the synthetic approach. This method places the knowledge, skills, and attitudes into the skill levels of Reporter, Interpreter, Manager, and Educator (RIME). A summary of this approach is included in the Enclosures Section VI of this manual.
Texas Tech University Health Sciences Center
School of Medicine

Institutional Educational
Vision, Goals, and Objectives

**Vision:**
Graduates of the TTUHSC-SOM will be knowledgeable, competent, and compassionate clinicians who communicate and collaborate with patients and colleagues in a caring and professional fashion.

The curriculum that prepares these graduates will emphasize acquisition and application of medical knowledge, clinical skills, and professional behaviors. Multiple modalities of instruction which promote integration of basic and clinical science information, development of problem solving and clinical reasoning abilities, and development of life-long learning habits will be utilized.

The educators involved in the instruction of these graduates will be role models who reflect and emphasize professionalism in their teaching, science, clinical care of patients, and modes of communication with patients and colleagues.

**Goals:**
The goal of medical education at the Texas Tech University Health Sciences Center School of Medicine is to promote excellence in the clinical, scientific, and humanistic skills of our graduates and to instill the competence and compassion that distinguishes outstanding physicians. Our program is designed to graduate physicians who:

- Provide competent and humane medical care to individuals, families and the larger society based on the scientific and clinical principles of health and its promotion; of disease and its prevention and management; and of psychosocial factors influencing patients well being.

- Demonstrate competence in life-long learning including self-directed study of basic and clinical science, critical assessment of medical literature, and use of evidence-based medicine.

- Demonstrate proficiency in clinical assessment, namely the ability to obtain a patient’s history, to perform a comprehensive physical examination, and to assess and treat patients’ medical and emotional needs.

- Demonstrate proficiency in clinical reasoning, including identification of clinical problems using scientific methods, data collection, hypothesis formulation, and the retrieval, management, and appropriate use of biomedical information for decision-making.

- Demonstrate sensitivity to the diverse psychosocial and spiritual needs of their patients and communicate clearly, respectfully, and compassionately with their patients, their families and other health care professionals.
Display the highest standards of professional integrity and exemplary behavior, including compassion, truthfulness, and ethical reasoning.

Objectives:

The Texas Tech University Health Sciences Center School of Medicine has identified key objectives for our educational program relating to the knowledge, skills, behaviors, and attitudes for students acquiring the degree of Doctor of Medicine. Further, the TTUHSC SOM endorses the competencies in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice recognized by the Accreditation Council for Graduate Medical Education. Each course and clerkship sets forth specific learning objectives and their outcome measurements based on these key educational objectives. The School of Medicine will continue to review these objectives to ensure that the vision and goals are met.

A. Knowledge: The student will demonstrate an exemplary and contemporary fund of knowledge in basic and clinical sciences essential to the practice of medicine, to also include:

- Scientific method and its application to problem solving in the basic and clinical sciences.
- Analytical tools for data collection, quantitative analysis, critical reading and investigation, and evidence-based medicine, and their application to the clinical care of patients.
- Definition of clinical problems and formulation of differential diagnosis, diagnostic investigation, clinical treatment and management by application of data from the clinical interview and clinical examination.
- Organization of the health care delivery system and the professional, legal, and ethical expectations of physicians.
- Principles of behavioral and social sciences as applied to family systems and their effect on patient health.

B. Skills: The student will demonstrate excellence in patient care, including the ability to:

- Communicate effectively, both orally and in writing, with patients and their families, colleagues, and other health care professionals about clinical assessments and findings, diagnostic testing, and therapeutic interventions.
- Conduct comprehensive and problem-specific physical examinations appropriate to the patients’ concerns, symptoms, and history.
- Integrate the patient interview and physical examination findings with medical knowledge to identify the clinical problems of patients, formulate differential diagnoses, and develop plans for treatment, diagnostic investigation, and management.
- Utilize varied methods of self-directed learning and information technology to acquire information in the basic and clinical sciences needed for patient care.
- Interpret laboratory results and diagnostic procedures.
- Select and perform basic diagnostic and therapeutic procedures.

C. Behaviors: The student will model the professional behaviors of a skilled and competent physician, including:

- Patient care based on evidence, skilled clinical reasoning, and the current state of medical art and science.
• Patient care that is compassionate and empathic, particularly in settings involving pain management, substance abuse, mental health disorders, or terminal illness.

• Sensitivity to the diverse factors affecting patients and their health care beliefs and needs, including age, gender, sexual orientation, religion, culture, income, and ethnicity.

• Demeanor, speech, and appearance consistent with professional and community standards.

• Dedication to the highest ethical standards governing physician-patient relationships, including privacy, confidentiality, and the fiduciary role of the physician and health care systems.

D. **Attitudes**: The student’s attitude will exemplify the highest ethical standards, including:

• Respect for each patient’s unique needs and background and how they affect the patient’s concerns, values, and health care decisions.

• Recognition of the social nature of health care and respect for patients, other health care professionals, and administrative members of the health care systems.

• Commitment to life-long learning as a hallmark of professional excellence throughout a physician’s career.

Approved, Educational Policy Committee, Texas Tech University School of Medicine, March 10, 2003
GOALS AND OBJECTIVES
Internal Medicine Clerkship
Department of Internal Medicine
Texas Tech University Health Sciences Center School of Medicine

GOALS: During the third year 8-week Internal Medicine Clerkship the medical student will rotate as a clinical clerk on inpatient internal medicine wards and outpatient clinics with a goal of evaluating 24 or more patients in an inpatient and/or ambulatory clinic setting and attend a series of core classes as well as departmental conferences and morning reports. As a result, the student will develop basic competencies in evaluation and management of adult patients, build a core knowledge of common diseases seen in Internal Medicine, and acquire clinical skills, professional attitudes, and humanistic qualities needed for the care of Internal Medicine patients.

OBJECTIVES: Given a set of diagnostic categories for Internal Medicine disease processes, the opportunity to evaluate a minimum of one real or simulated patient from each of these disease categories with completion of a comprehensive history, physical examination, assessment, and treatment plan, and core classes that complement these experiences with patient simulations and/or patient based discussions, students will be able to:

KNOWLEDGE  Describe and define:
- The basic disease processes commonly seen in Internal Medicine patients as included in the following diagnostic groups: cardiovascular, respiratory, renal, infectious diseases, gastrointestinal, endocrine, hematology/oncology, rheumatology, neurology, general medicine (see Master Data Collection Key for details on diagnostic groups).
- The pathophysiology, diagnosis, and treatment of these diseases.
- Key sources for obtaining current information on issues relevant to the medical management of adult patients.
- Bioethics of care to include informed consent and advance directives

SKILLS  Demonstrate the ability to:
- Perform and accurately record a complete history and physical examination on an ambulatory and/or hospitalized patient.
- Perform a focused history and physical examination during a 15 minute ambulatory visit and accurately record the history, pertinent physical findings, assessment with differential diagnosis, and plan for therapy and/or further evaluation.
- Communicate effectively with both colleagues and patients to include discussing with the patient (and family as appropriate) ongoing health care needs, using appropriate language and avoiding jargon and medical terminology.
- Construct a problem list with an appropriate differential diagnosis for each diagnostic problem using the data collected in the history and physical examination.
- Maintain adequate written records on the progression of illnesses of each patient to whom they are assigned.
- Interpret an arterial blood gas, electrocardiogram, chest x-ray, and urinalysis.
• Perform a computerized literature search to find the best evidence for making decisions about the care of individual patients.
• Assess the limits of medical knowledge in relation to patient problems.

**ATTITUDES** Demonstrate professional attitudes in their approach to the care of patients by:
• Use of a non-judgmental and patient-centered manner, showing concern for the patient and the patient’s family, and assuming responsibility for the care of the patient in keeping with their level of experience and training.
• Ongoing efforts to improve clinical knowledge and skills through effective use of available learning resources and life-long self-directed learning.

**Master Data Collection Key:** Internal Medicine Patient Log Book Diagnosis Groups. Applicable to Patients Seen by Clinical Clerks in Amarillo, El Paso, and Lubbock.

(Note: Diagnostic Groups are listed in bold followed by abbreviations used in log book charts)

<table>
<thead>
<tr>
<th>Cardiovascular CV</th>
<th>Endocrine ENDO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest Pain (including CAD/MI)</td>
<td>Diabetes</td>
</tr>
<tr>
<td>CHF</td>
<td>DKA</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>Thyroid disease</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Adrenal disease</td>
</tr>
<tr>
<td>Shock</td>
<td>Other (specify)</td>
</tr>
<tr>
<td>Thrombophlebitis/DVT</td>
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<tr>
<td>Other (Specify)</td>
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<table>
<thead>
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<th>Rheumatology RHEUM</th>
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</thead>
<tbody>
<tr>
<td>COPD (including acute exacerbation)</td>
<td>Arthritis</td>
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<tr>
<td>Asthma</td>
<td>Vasculitis</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>Lupus/SLE</td>
</tr>
<tr>
<td>Pulmonary embolus</td>
<td>Other (specify)</td>
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<tr>
<td>Other (specify)</td>
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<table>
<thead>
<tr>
<th>Renal/Genitourinary Disease RENAL</th>
<th>Hematology/Oncology HEM/ONC</th>
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<tbody>
<tr>
<td>ARF</td>
<td>Anemia</td>
</tr>
<tr>
<td>CRF</td>
<td>Thrombocytopenia</td>
</tr>
<tr>
<td>Transplant</td>
<td>Coagulopathy</td>
</tr>
<tr>
<td>Stone</td>
<td>Other (specify)</td>
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<td>Other (specify)</td>
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<th>Neurology NEURO</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Stroke/CVA</td>
</tr>
<tr>
<td>Sepsis</td>
<td>Syncope/Dizziness</td>
</tr>
<tr>
<td>UTI/Urosepsis</td>
<td>Epilepsy</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>Drug overdose</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>Other (specify)</td>
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<table>
<thead>
<tr>
<th>Gastrointestinal GI</th>
<th>General areas GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.I. Bleed (upper or lower)</td>
<td>Drug problem</td>
</tr>
<tr>
<td>Diarrhea (any cause)</td>
<td>Dermatological problem</td>
</tr>
<tr>
<td>Liver disease</td>
<td>Psychiatric problem</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>Alcohol problem</td>
</tr>
<tr>
<td>Ascites</td>
<td>Pain</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>Testing/Diagnostic evaluation</td>
</tr>
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<td>Other (specify)</td>
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CORE
MEDICINE
CLERKSHIP
CURRICULUM GUIDE

Version 2.0
September 1998
Core Medicine Clerkship Learning Objectives

Introduction

The "Core Medicine Clerkship Curriculum Guide" was produced as a cooperative project of the Society of General Internal Medicine (SGIM) and the Clerkship Directors in Internal Medicine (CDIM). Version 2.0 was released in September 1998.

This abbreviated, condensed curriculum resulted from a group effort aimed at providing a practical, usable reference for medical students. A list of competencies that should be addressed in the medicine core clerkship was developed using a national survey of CDIM. It was concluded that the medicine core clerkship should emphasize fundamental competencies. This resulted in the development of this curriculum which features a prioritized set of basic generalist competencies and specifies the requisite knowledge, skills, and attitudes/values needed to master them, as well as a list of suggested training problems.

Demand for the guide led to production of this second edition. A follow-up survey of clerkship directors administered soon after completion of the first edition revealed widespread use of the curricular guide. It has been found very helpful in giving medical students practical expectations for their core internal medicine education.

The guide addresses curricular objectives in two areas: clinical core competencies and disease or symptom focused training problems.

1. **Basic or clinical core competencies** relate to the care of internal medicine patient. Included in the Clinical Core Competencies are:
   - Diagnostic Decision-Making (pg 5)
   - Case Presentation Skills (pg 7)
   - History-Taking and Physical Examination (pg 9)
   - Communication and Relationships with Patients and Colleagues (pg 11)
   - Test Interpretation (pg 13)
   - Therapeutic Decision-Making (pg 14)
   - Bioethics of Care (pg 16)
   - Self-Directed Learning (pg 18)
   - Prevention (pg 19)
   - Coordination of Care (pg 21)
   - Basic Procedures (pg 23)
   - Geriatric Care (pg25)
   - Community Health Care (pg 27)
   - Nutrition (pg 28)
• Advanced Procedures (pg 28)
• Occupational Health Care (pg 29)
• Continuous Improvement in Systems of Medical Practice (pg 30)
• Practice Management (pg 32)

2. Training problems help define the core knowledge base, clinical skills, and professional attitudes requisite to general internal medicine training in medical school. Included are:

• The Healthy Patient: Health Promotion, Disease Prevention, and Screening (pg 34)
• Cough (pg 35)
• Dysuria (pg 36)
• Back Pain (pg 37)
• Joint Pain (pg 38)
• Chest Pain (pg 39)
• Abdominal Pain (pg 40)
• Fluid, Electrolyte, and Acid-Base Disorders (pg 41)
• Anemia (pg 42)
• Hypertension (pg 43)
• COPD/Obstructive Airway Disease (pg 45)
• HIV Infection (pg 46)
• Congestive Heart Failure (pg 48)
• Diabetes Mellitus (pg 50)
• Evaluation and Management of Dyslipidemias (pg 51)
• Substance Abuse (pg 52)
• Smoking Cessation (pg 53)
• Depression (pg 54)
• Common Cancers (pg 55)
• Altered Mental Status (pg 56)
• Acute Renal Failure (pg 57)
• Pneumonia (pg 59)
• Dyspnea (pg 60)
• Nosocomial Infection (pg 62)
• Acute Myocardial Infarction (pg 63)
• Gastrointestinal Bleeding (pg 64)
• Venous Thromboembolism (pg 66)
• Liver Disease (pg 67)

The curricular objectives are presented as specific learning objectives under three headings:

• Knowledge: Specific knowledge students should be able to describe and define.
• Skills: Specific skills students should be able to demonstrate.
• Attitudes: Specific attitudes students should demonstrate
While specific attitudinal learning objectives have been eliminated from the training problems, it is expected that for every training problem and for every patient, specific attitudinal objectives should be met. Students should:

- Approach the care of patients in a non-judgmental and patient-centered manner.
- Value disease prevention and health promotion.
- Provide cooperative care with other health care professionals.
- Commit to serving as advocates for patients.
- Consider the needs of special populations.
- Consider the role of community in health care.
- Understand barriers to compliance and issues related to long-term care.

The development and evaluation of this curriculum and learning objectives are discussed in the following references:


Clinical Core Competencies

Diagnostic Decision-Making


*Physicians are responsible for directing and conducting the diagnostic evaluation of a broad range of patients, including acutely and chronically ill patients. In a time of rapidly proliferating tests, internists must design safe, expeditious, and cost-effective diagnostic evaluations. This requires well-developed diagnostic decision-making skills that incorporate probability-based thinking.*

Specific Learning Objectives

**Knowledge:**

Students should be able to describe and define:

- Key history and physical examination findings pertinent to the differential diagnosis.
- Information resources for determining diagnostic options for patients with common and uncommon medical problems.
- Key factors to consider when selecting diagnostic tests, including pretest probabilities, performance characteristics of tests (sensitivity, specificity, likelihood ratios), costs, risk, and patient preferences.
- The relative costs of diagnostic tests.
- How critical pathways or practice guidelines can be used to guide diagnostic test ordering.
- The method of deductive reasoning.

**Skills:**

Students should demonstrate specific skills, including:

- Formulating a differential diagnosis based on the findings from the history and physical examination.
- Using probability-based thinking to identify the most likely diagnoses.
- Using the differential diagnosis to help guide diagnostic test ordering and sequence.
- Using pretest probabilities and scientific evidence about performance characteristics of tests (sensitivity, specificity, likelihood ratios) to determine post-test probabilities according to the predictive value paradigm.
- Participating in selecting the diagnostic studies with the greatest likelihood of providing useful results at a reasonable cost.
**Attitudes:**

Students should demonstrate specific attitudes that:

- Incorporate the patient's perspective into diagnostic decision-making.
- Limit the chances of false positive/false negative results by demonstrating thoughtful test selection.
Clinical Core Competencies

Case Presentation Skills


*Communicating patient care information to colleagues and other health professionals is an essential skill regardless of specialty. Internists have traditionally given special attention to case presentation skills because of the comprehensive nature of patient evaluations and the various settings in which internal medicine is practiced. Students should develop facility with different types of case presentation: written and oral, new patient and follow-up, inpatient and outpatient.*

Specific Learning Objectives

**Knowledge:**

*Students should be able to describe and define:*

- Components of comprehensive and abbreviated case presentations (oral and written) and the settings appropriate for each.

**Skills:**

*Students should demonstrate specific skills, including:*

- Preparing legible, comprehensive, and focused new patient workups that include, when clinically appropriate:
  - Present illness organized chronologically, without repetition, omission, or extraneous information.
  - A comprehensive physical examination with detail pertinent to the patient's problem.
  - A succinct and, where appropriate, unified list of all problems identified in the history and physical examination.
  - A differential diagnosis for each problem (appropriate to level of training).
  - A diagnosis/treatment plan for each problem (appropriate to level of training).
- Orally presenting a new patient's case in a logical manner, chronologically developing the present illness and summarizing the pertinent positive and negative findings as well as the differential diagnosis and plans for further testing and treatment.
- Orally presenting a follow-up patient's case in a focused, problem-based manner that includes pertinent new findings and diagnostic and treatment plans.
- Selecting the appropriate mode of presentation pertinent to the clinical situation.
**Attitudes:**

Students should demonstrate specific attitudes that:

- Demonstrate a commitment to improving case presentations skills by regularly seeking feedback on presentations.
- Demonstrate accuracy and objectivity in recording and presenting data.
Clinical Core Competencies

History-Taking and Physical Examination


The ability to obtain an accurate medical history and carefully perform a physical examination is fundamental to providing comprehensive care to adult patients. In particular, the internist must be thorough and efficient in obtaining a history and performing a physical exam with a wide variety of patients, including healthy adults (both young and old), adults with acute and chronic medical problems, and adults with complex life-threatening diseases.

The optimal selection of diagnostic tests, choice of treatment, and use of subspecialists, as well as the physician’s relationship and rapport with patients, depend on well developed history-taking and physical-diagnosis skills. These skills, fundamental to effective patient care, should be a primary focus of the student’s work during the core clerkship in internal medicine.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- The significant attributes of a symptom, including location and radiation, intensity, quality, temporal sequence (onset, duration, frequency), alleviating factors, aggravating factors, setting, associated symptoms, functional impairment, and patient's interpretation of symptom.
- The four methods of physical examination (inspection, palpation, percussion, and auscultation), including where and when to use them, their purposes, and the findings they elicit.
- The physiologic mechanisms that explain key findings in the history and physical exam.
- The diagnostic value of history and physical exam information.

Skills:
Students should demonstrate specific skills, including:
- Using language appropriate for each patient.
- Using non-verbal techniques to facilitate communication and pursue relevant inquiry.
Skills Cont.

- Eliciting the patient's chief complaint as well as a complete list of the patient's concerns.
- Obtaining a patient's history in a logical, organized, and thorough manner, covering the history of present illness; past medical history (including usual source of and access to health care, childhood and adult illnesses, injuries, surgical procedures, obstetrical history, psychiatric problems, hospitalization, transfusions, medications, tobacco and alcohol use, and drug allergies); preventive health measures; social, family, and occupational history; and review of systems.
- Obtaining, whenever necessary, supplemental historical information from other sources such as significant others or previous physicians.
- Demonstrating proper hygienic practices whenever examining a patient.
- Positioning the patient and self properly for each part of the physical examination.
- Performing a physical examination for a patient in a logical, organized, respectful, and thorough manner, giving attention to the patient's general appearance, vital signs, and pertinent body regions.
- Adapting the scope and focus of the history and physical exam appropriately to the medical situation and the time available.

Attitudes:

Students should demonstrate specific attitudes that:

- Recognize the essential contribution of a pertinent history and physical examination to the patient's care by continuously working to improve these skills.
- Establish a habit of updating historical information and repeating important parts of the physical exam during follow-up visits.
- Demonstrate consideration for the patient's feelings, limitations, and cultural and social background whenever taking a history and performing a physical exam.
Clinical Core Competencies

Communication and Relationships
With Patients and Colleagues


The physician-patient relationship forms the core of the practice of internal medicine. Many physicians view it as the most satisfying aspect of their work. The medical interview and the relationship between physician and patient are important diagnostic and therapeutic tools. Effective communication skills are needed for a physician to serve as an effective patient advocate. Communication skills also are needed to address patient concerns and requests. Proficiency in communication with patients results in increased patient and physician satisfaction, increased adherence to therapy, and reduced risk of malpractice claims.

The student on the internal medicine clerkship interacts with a diverse array of patients, physicians, and other health team members, necessitating proficiency in communication and interpersonal skills. Students also witness how diversities of age, gender, race, culture, socioeconomic class, personality, and intellect require sensitivity and flexibility. The result of proficiency in communication and interpersonal skills is increased satisfaction for both doctor and patient.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

• How patients' and physicians' perceptions, preferences, and actions are affected by cultural and psychosocial factors and how these factors affect the doctor-patient relationship.
• The role and contribution of each team member to the care of the patient.
• The role of psychosocial factors in team interactions.
• The role of the physician as patient advocate.

Skills:
Students should demonstrate specific skills, including:

• Demonstrating appropriate listening skills, including verbal and non-verbal techniques (e.g., restating, probing, clarifying, silence, eye contact, posture, touch), to demonstrate empathy and help educate the patient.
Skills Cont.

- Demonstrating effective verbal skills, including appropriate use of open- and closed-ended questions, repetition, facilitation, explanation, and interpretation.
- Determining the information that a patient has independently obtained about his/her problems.
- Identifying the patient's emotional needs.
- Seeking the patient's point of view and concerns about his/her illness and the medical care he/she is receiving.
- Determining the extent to which a patient wants to be involved in making decisions about his/her care.
- Assessing patient commitment and adherence to a treatment plan taking into account personal and economic circumstances.
- Working with a variety of patients, including multiproblem patients, angry patients, somatizing patients, and substance abuse patients.
- Working as an effective member of the patient care team, incorporating skills in interprofessional collaboration.
- Giving and receiving constructive feedback.

Attitudes:

Students should demonstrate specific attitudes that:

- Develop effective doctor-patient communication skills.
- Consider, in each case, the patient's psychosocial status.
- Show respect for patients.
- Actively involve the patient in his/her health care whenever possible.
- Result in teamwork and respect toward all members of the health care team, as manifested by reliability, responsibility, honesty, helpfulness, selflessness, and initiative in working with the team.
- Respond pertinent to patient concerns.
- Attend to or advocate for the patient's interests and needs in a manner appropriate to the student's role.
Clinical Core Competencies

Test Interpretation


Physicians, in particular internists, order a wide variety of medical tests in the course of their clinical practice. They must be able to interpret the results of such tests accurately and properly determine how the results should influence patient management.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- The various components of a complete blood count, blood smear, electrolyte panel, general chemistry panel, electrocardiogram, urinalysis, pulmonary function tests, and body fluid cell counts and chemistries.
- The range of normal variation in the results of a complete blood count, blood smear, electrolyte panel, general chemistry panel, electrocardiogram, chest x-ray, urinalysis, pulmonary function tests, and body fluid cell counts and chemistries.
- The results of the above tests in terms of the related pathophysiology.
- Test sensitivity, test specificity, pre-test probability, and predictive value.
- How errors in test interpretation can affect clinical outcomes and costs.

Skills:
Students should demonstrate specific skills, including:
- Interpreting a blood smear, gram stain, electrocardiogram, chest x-ray, and urinalysis.
- Recording the results of laboratory tests in an organized manner, using flow sheets when appropriate.
- Estimating post-test probability based on test results and stating the clinical significance of these findings.

Attitudes:
Students should demonstrate specific attitudes that:
- Demonstrate their ability to estimate the implications of test results before ordering tests and after test results are available.
- Result in personally reviewing x-ray films, blood smears, etc., to assess the accuracy and significance of the results.
Clinical Core Competencies

Therapeutic Decision-Making


*Internists are responsible for directing and coordinating the therapeutic management of patients with a wide variety of problems, including critically ill patients with complex medical problems and the chronically ill. To manage patients effectively, physicians need basic therapeutic decision-making skills that incorporate both pathophysiologic reasoning and evidence-based knowledge.*

Specific Learning Objectives

**Knowledge:**
Students should be able to describe and define:
- Information resources for determining medical and surgical treatment options for patients with common and uncommon medical problems.
- Key factors to consider in choosing among treatment options, including risk, costs, evidence about efficacy, and consistency with pathophysiologic reasoning.
- How to use critical pathways and clinical practice guidelines to help guide therapeutic decision-making.
- Factors that frequently alter the effects of medications, including drug interactions and compliance problems.
- Factors to consider in selecting a medication from within a class of medications.
- Factors to consider in monitoring a patient’s response to treatment, including potential adverse effects.
- Various ways that evidence about clinical effectiveness is presented to clinicians and the potential biases of using absolute or relative risk or number of patients needed to treat.
- Methods of monitoring therapy and how to communicate them in both written and oral form.

**Skills:**
Students should demonstrate specific skills, including:
- Formulating an initial therapeutic plan.
- Accessing and utilizing, when appropriate, information resources to help develop an appropriate and timely therapeutic plan.
Skills Cont.

- Explaining the extent to which the therapeutic plan is based on pathophysiologic reasoning and scientific evidence of effectiveness.
- Beginning to estimate the probability that a therapeutic plan will produce the desired outcome.
- Writing prescriptions accurately.
- Counseling patients about how to take their medications and what to expect when they take their medications, including beneficial outcomes and potential adverse effects.
- Monitoring response to therapy.

Attitudes:

Students should demonstrate specific attitudes that:

- Incorporate the patient in therapeutic decision-making, explaining the risks and benefits of treatment.
- Respect patient’s informed choices, including the right to refuse treatment.
- Incorporate the elements of patient autonomy, treatment efficacy, quality of life, and societal demands into decision-making.
- Provide close follow-up of patients under care.
Clinical Core Competencies

Bioethics of Care


A basic understanding of ethical principles and their application to patient care is essential for all physicians. During the internal medicine core clerkship, the student can put into practice some of the ethical principles learned in the preclinical years, especially by participating in discussions of informed consent and advance directives. Additionally, the student learns to recognize ethical dilemmas and respect different perceptions of health, illness, and health care held by patients of various religious and cultural backgrounds.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

- Basic elements of informed consent.
- Circumstances under which informed consent is necessary and unnecessary.
- Basic concepts of autonomy, treatment efficacy, quality of life, and societal demands.
- Potential conflicts between individual patient preferences and societal demands.
- The role of the physician in making decisions about the use of expensive or controversial tests and treatment.

Skills:
Students should demonstrate specific skills, including:

- Participating in a discussion about advance directives with a patient.
- Participating in informed consent for a procedure.
- Participating in the care of a consent-requiring terminally ill patient.
- Participating in a preceptor’s discussion with a patient about a requested treatment that may not be considered appropriate (e.g., not cost-effective).

Attitudes:
Students should demonstrate specific attitudes that:

- Take into account the individual patient’s perspective and perceptions regarding health and illness.
Attitudes Cont.

- Exhibit a commitment to caring for all patients, regardless of gender, race, socioeconomic status, intellect, sexual orientation, ability to pay, or cultural background.
- Recognize the importance of allowing terminally ill patients to die with comfort and dignity when that is consistent with the wishes of the patient and/or the patient’s family.
- Recognize the potential conflicts between patient expectations and medically appropriate care.
Clinical Core Competencies

Self-Directed Learning


Because of the breadth of the problems encountered in clinical practice, internists face an extraordinary challenge to keep up with the burgeoning amount of new information relevant to providing high quality care. Therefore, they must master and practice self-directed life-long learning, including the ability to access and utilize information systems and resources efficiently.

Specific Learning Objectives

Knowledge:

Students should be able to describe and define:
- Key sources for obtaining updated information on issues relevant to the medical management of adult patients.
- A system for managing information from a variety of sources.
- Key questions to ask when critically appraising articles on diagnostic tests or therapies.

Skills:

Students should demonstrate specific skills, including:
- Performing a computerized literature search to find articles pertinent to a clinical question.
- Demonstrating critical review skills.
- Reading critically about issues pertinent to their patients.
- Assessing the limits of medical knowledge in relation to patient problems.
- Using information from consultants critically.
- Recognizing when they need additional information to care for the patient.
- Asking colleagues (students, residents, nurses, faculty) for help when needed.
- Using available instruments to assess one’s own knowledge base.

Attitudes:

Students should demonstrate specific attitudes that:
- Demonstrate self-directed learning in every case.
- Acknowledge gaps in knowledge to both colleagues and patients and request help.
Clinical Core Competencies

Prevention


One of the most important responsibilities of primary care physicians is to promote health and prevent disease in a cost-effective manner. Appropriate care by internists includes not only recognition and treatment of disease but also the routine incorporation of the principles of preventive health care into clinical practice. All physicians should be familiar with the principles of preventive health care to ensure their patients receive appropriate preventive services.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- Primary, secondary, an tertiary prevention.
- Criteria for determining whether or not a screening test should be incorporated into the periodic health assessment of adults.
- General types of preventive health care issues that should be addressed on a routine basis in adult patients (i.e., cancer screening; prevention of infectious diseases, coronary artery disease, osteoporosis, and injuries; and identification of substance abuse).
- Vaccines that have been recommended for routine use in at least some adults (i.e., influenza, pneumococcal, measles, mumps, rubella, tetanus-diphtheria, hepatitis).
- Indications for endocarditis prophylaxis.
- Methods for counseling patients about risk-factor modification.
- Influence of age and clinical status on approach to prevention.
- General categories on high-risk patients in whom routine preventative health care must be modified or enhanced (e.g., family history, travel to an underdeveloped area, etc.)
- The major areas of controversy in screening.

Skills:
Students should demonstrate specific skills, including:
- Locating recently published recommendations regarding measures that should be incorporated into the periodic health assessment of adults.
• Identifying patients at high risk for developing coronary artery disease and cancer by screening for major risk factors.
• Obtaining a sexual history and counsel patients about safe-sex practices.
• Obtaining and interpreting a Pap smear report.
• Counseling a patient on smoking cessation.
• Performing a breast exam.
• Performing a digital rectal exam.
• Placing and interpreting a tuberculin skin test (PPD).

**Attitudes:**
**Students should demonstrate specific attitudes that:**
• Address preventive health care issues as a routine part of their assessment of patients.
• Encourage patients to share responsibility for disease prevention.
Clinical Core Competencies

Coordination of Care


The task of coordinating a patient’s care is central to the internist’s role and involves communication with the patient and his/her family; colleagues; consultants; nurses; social workers; and community-based agencies. It is essential for the student to learn that the physician’s responsibility toward the patient does not stop at the end of the office visit or hospitalization, but continues in collaboration with other professionals to ensure that the patient receives optimal care.

Specific Learning Objectives

Knowledge:

Students should be able to describe and define:

- The role of consultants and their limits in the care of a patient.
- Key personnel and programs in and out of the hospital that may contribute to the ongoing care of an individual patient for whom the student has responsibility.
- The role of the primary care physician in coordinating the comprehensive and longitudinal patient care plan, including communicating with the patient and family through telecommunications and evaluating patient well-being through home health and other care providers.
- The role of the primary care physician in the coordination of care during key transition (i.e., outpatient to inpatient, inpatient to hospice, etc.).

Skills:

Students should demonstrate specific skills, including:

- Discussing with the patient (and family as appropriate) ongoing health care needs, using appropriate language, avoiding jargon and medical terminology.
- Participating in requesting a consultation and identifying the specific question(s) to be addressed.
- Participating in the discussion of the consultant’s recommendations.
- Participating in developing a coordinated, ongoing care plan in the community.
• Obtaining a social history that identifies potential limitations in the home setting which may require an alteration in the medical care plan to protect the patient’s welfare.

**Attitudes:**

**Students should demonstrate specific attitudes that:**

• Exhibit teamwork and respect toward all members of the health care team.
• Demonstrate responsibility for patients’ overall welfare.
• Result in their participation, whenever possible, in coordination of care and in provision of continuity.
Clinical Core Competencies

Basic Procedures


For many students, the internal medicine clerkship is where the basic procedural skills required in other clerkships, subinternships, and residencies are learned.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- Key indications, contraindications, risks, and benefits of each of the following basic procedures:
  - Venipuncture.
  - Blood culture.
  - Arterial blood gas.
  - Electrocardiogram.
  - Nasogastric intubation.
  - Urethral catheterization.
  - Peripheral intravenous catheter insertion.
  - Throat culture.
  - Pap smear.
  - Digital rectal examination.
  - Place and interpret a tuberculin skin test PPD).
- Alternatives to a given procedure.
- What the patient’s experience of the procedure will be.

Skills:
Students should demonstrate specific skills, including:
- Demonstrating obtaining informed consent, when necessary, for basic procedures, including the explanation of the purpose, possible complications, alternative approaches, and conditions necessary to make the procedure as comfortable, safe and interpretable ad possible.
- Demonstrating step-by-step performance of basic procedures with technical proficiency.
- Observing precautions and contraindications for the procedures used.
**Attitudes:**

*Students should demonstrate specific attitudes that:*

- Result in their participation in obtaining informed consent for basic procedures they perform or in which they participate.
- Cause them to explain what the patient’s experience is likely to be in understandable terms.
- Communicate risks and benefits to patients.
- Always encourage efforts to maximize patient comfort during a procedure.
Clinical Core Competencies

Geriatric Care


Care of the elderly is one of the traditional functions of the internist, and with the “greying” of the population, geriatrics will become a larger part of the practice of all physicians who care for adults. The student should understand the unique health care needs and presentation of the elderly, key management strategies, and the importance of an interdisciplinary approach to care.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- Functional implications of aging organ systems.
- Special nutritional needs of the elderly.
- Key illnesses in the elderly, focusing on their often atypical presentation (e.g., urinary tract infection, pneumonia, tuberculosis, depression, thyroid disease, myocardial infarction, acute abdomen).

Skills:
Students should demonstrate specific skills, including:
- Taking a history from a geriatric patient with special emphasis on physical and mental functioning.
- Performing a physical examination and functional assessment on an elderly patient, adapting it to possible conditions of frailty, immobility, hearing loss, memory loss, and other impairment.
- Performing a mental status examination to evaluate confusion and/or memory loss in an elderly patient.
- Identifying patients at high risk for falling.
- Practicing an interdisciplinary approach to management and rehabilitation of elderly patients.
Attitudes:

Students should demonstrate specific attitudes that:

- Result in obtaining historical information from significant others, whenever possible.
- Respect the increased risk for iatrogenic complications among elderly patients by always taking into account risks and monitoring closely for complications.
- Respect older patients by making efforts to preserve their dignity.
Clinical Core Competencies

Community Health Care


The increasing number of physicians practicing under managed care and in community-oriented primary care practices necessitates expanding medical education to prepare graduates for population-based clinical practice. Population-based clinical practice includes (in a managed care setting) the health of an enrolled population and/or (in a community-based setting) the health of a population, in addition to that of the individual patient through concerns with resource allocation, epidemiology, and the care of patients whose needs are not currently met by the health care system.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- How disease epidemiology in a community differs from that experienced in office or hospital practice.
- How health care financing and organization affect individual patients, physicians, and the community,
- How community and individual responses to health problems may be affected by both individual and community social characteristics
- Local government, social service, or community organizations that provide links between underserved members of the community and medical care systems.
- The barriers faced by their patients in the community setting

Skills:
Students should demonstrate specific skills, including:
- Identifying patients whose illnesses may put the community at risk.
- Identifying the unique characteristics of a community that affect an individual’s health as well as the health of the community
- Considering how a patient’s community and cultural context may affect his or her approach to health care.

Attitudes:
Students should demonstrate specific attitudes that:
- Incorporate a population-based perspective in analyzing clinical problems.
- Use, in daily patient care, an understanding of the social characteristics of a particular community that affect patient attitudes toward health care.
Clinical Core Competencies

Nutrition


Despite the importance of nutritional factors in health and illness, physicians frequently have been criticized for giving these factors inadequate attention. Internists, by virtue of their dedication to providing comprehensive care to their patients, should assess nutritional factors on a routine basis. Physicians, particularly general internist, also should be prepared to provide patients with basic advice regarding ways to optimize their nutritional status. All physicians also need to have at least a basic working knowledge of the principles of nutritional assessment and intervention.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- Key symptoms and signs that may indicate a nutritional problem.
- Nutritional problems that occur most commonly in adults.
- Common medical problems that can cause nutritional deficiencies.
- Contributions of dietary indiscretion to hyperlipidemia, diabetes, hypertension, etc.

Skills:
Students should demonstrate specific skills, including:
- Obtaining a nutritional history for patients with obesity, hyperlipidemia, diabetes mellitus, hypertension, alcoholism, cancer, COPD, CHF, and GI diseases, giving attention to weight change, appetite, eating habits, digestive problems, dental problems, physical handicaps, psychiatric problems, socioeconomic factors, alcohol abuse, medications, and physical activity.
- Identifying physical findings relevant to the nutritional assessment of patients including: truncal distribution, abdominal striae, cachexia, decubitus ulcers, temporal wasting, glossitis, peripheral neuropathy, peripheral edema, ascites, depression, and weakness.
- Ordering appropriate initial tests for evaluating a patient’s nutritional status.

Attitudes:
Students should demonstrate specific attitudes that:
- Assess the nutritional status of each patient.
- Consult a dietitian for patients with significant nutritional problems.
Clinical Core Competencies

Advanced Procedures


A number of advanced procedures may be performed by internists but usually not third-year clerks. However, a knowledge of the key indications, contraindications, risks, and benefits of these procedures is essential for high quality patient care. Physicians, regardless of specialty, must be able to explain to their patients, in understandable terms, what will be experienced during a procedure.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

- Key indications, contraindications, risks, and benefits of each of the following advanced procedures:
  - Arthrocentesis.
  - Central venous catheterization.
  - Flexible sigmoidoscopy.
  - Lumbar puncture.
  - Thoracentesis.
  - Paracentesis
  - Swan Ganz catheterization.
  - Bone marrow aspiration.
  - Skin biopsy.
- Alternatives to a given procedure.
- What the patient’s experience of the procedure will be.

Skills:
Students should demonstrate specific skills, including:

- Participating in obtaining informed consent for advanced procedures, including the explanation of the purpose, possible complications, alternative approaches, and conditions necessary to make the procedure as comfortable, safe, and interpretable as possible.

Attitudes:
Students should demonstrate specific attitudes that:

- Demonstrate responsibility for helping to provide informed consent.
- Exhibit a commitment to explaining the patient’s experience in understandable terms.
- Communicate risks and benefits of procedures to patients regularly.
- Maximize patient comfort during a procedure.
Clinical Core Competencies

Occupational Health Care


Despite increasing recognition of the health hazards found in living and working environments, physicians previously have received little training in the assessment and management of occupational and environmental health problems. Nevertheless, physicians, in particular general internists, should be able to provide their patients with sound advice on the prevention of such problems, accurately assess patient’s risks, accurately diagnose common environment-related problems, and determine the need for further intervention when problems are discovered. Physicians in other specialties also should be aware of the potential effects of occupational and environmental exposures on patients’ health.

Specific Learning Objectives

Knowledge:

Students should be able to describe and define:

- Common environmental diseases likely to be encountered by an internist and the principal etiologic agents associated with them.
- Types of risks that may be encountered in a work site (i.e., ergonomic, inhalational, traumatic, chemical, heat, radiation, noise, and emotional stress); this should include the hospital and student-specific encounters.
- Information sources for determining the risk of specific environmental and occupational health hazards.
- The purpose of the Occupational Safety and Health Act (OSHA) regulations.

Skills:

Students should demonstrate specific skills, including:

- Identifying a patient whose health may have been affected by the living or work environment.
- Recognizing common occupational health problems (e.g., carpal tunnel syndrome, asthma, asbestosis).
- Recognizing when to refer a patient to a specialist in environmental medicine.

Attitudes:

Students should demonstrate specific attitudes that:

- Regularly assess the occupational risks of patients and elicit from patients any concerns that they may have about risks associated with their living or work environment.
Clinical Core Competencies

Continuous Improvement in Systems of Medical Practice


Clinical education has emphasized the role of the physicians as an individual decision-maker. Problems with cost and quality of care have usually been attributed to errors in individual decision-making. In recent years, it has become clear that systems, from simple to complex, are also critical in achieving high quality patient care. Furthermore, we have begun to think of quality from the patient’s perspective as well as that of the profession. The physician, both as an individual and as a member of the health care community, must make use of systems thinking and participate in the process of assessing current practice and testing new methods to improve patient care.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

• Principle of clinical quality improvement, including the notion of variation in practice as a quality issue and the concept of medical care as a process which can be studied and improve.
• The analysis and improvement of systems to address common quality problems (treatment delays, medication errors, failure to give preventive care).
• Principles of medical record organization in both inpatient and ambulatory settings.
• The need for a multidimensional approach to the assessment of quality, including the patient’s perspective of quality.
• The relationship of quality and cost in health care.

Skills:
Students should demonstrate specific skills, including:

• Using hospital-based support systems to assist in making clinical decisions (e.g., antibiotic control program),
• Recognizing systems flaws in the provision of care at the clerkship site (e.g., inability to arrange a post-discharge appointment within a needed time frame, delays in obtaining test results).
• Using patient education materials (e.g., pamphlets for patients started on warfarin) which help patients participate in their care.
• Using the medical records system efficiently and writing legible notes.
• Working collaboratively with other health professionals in the delivery of care.
Attitudes:
Students should demonstrate specific attitudes that:

- Recognize the importance of systems (especially interprofessional collaboration) in delivering high quality patient care.

- Strive to improve the timeliness of their diagnostic and therapeutic decision-making to improve quality of care, increase patient satisfaction, and reduce costs.

- Strive to improve the timeliness of their diagnostic and therapeutic decision-making to improve quality of care, increase patient satisfaction, and reduce costs.
Clinical Core Competencies

Practice Management


To deliver optimal health care to patients, physicians, in particular general medicine internists, must be able to effectively manage personnel, resources and time in their clinical practices. Practice management skills are particularly important to internists because they provide patients with a wide variety of services that require special resources and personnel. It is most appropriate for skills in practice management to be developed during and/or after residency training. However, students should have some familiarity with practice management issues.

Specific Learning Objectives

Knowledge:
Students should be able to describe and define:
- Basic organizational features of offices or clinics in which he/she works, including the roles of all health care personnel.
- Key features of the record keeping system used in each facility.
- Methods used by each practice to promote continuous improvement in the quality of care provided to patients.
- Distinguishing features of alternative types of practice (e.g., private office, HMO site, hospital clinic).
- Major types of health insurance carried by patients in the area.

Skills:
Students should demonstrate specific skills, including:
- Apply basic time management principles to his/her own clinical work.

Attitudes:
Students should demonstrate specific attitudes that:
- Recognize the importance of assessing patient satisfaction with the delivery of health care services.
- Recognize the importance of non-physician health care personnel.
Training Problems

The Healthy Patient: Health Promotion, Disease Prevention, and Screening


Knowledge:
Students should be able to describe and define:
• Distinction between screening in the asymptomatic general population, surveillance in individuals with risks factors for a disease, and diagnosis in a symptomatic patient.
• Epidemiology, recommendations for screening, early detection symptoms and signs, and impact of early treatment on survival from breast, skin, cervical, colorectal, and prostate cancer (and controversies in the literature).
• Current recommendations for immunization of adults.
• Nutritional, environmental, and safe-life practice important for the maintenance and promotion of health, including: safe sexual practice, efficacy of seat belt use, diet characteristics and activity profiles that promote health, methods and efficacy of stress reduction, and common environmental and occupational hazards.

Skills:
Students should demonstrate specific skills, including:
• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that includes diet, exercise level, substance and domestic abuse detection, psychosocial and environmental risks, cancer risks, cardiac risks, high-risk sexual practices, immunization history, and seat belt use.
• Physical Exam Skills: students should be able to perform an appropriate physical exam, including blood pressure, skin, breast, pelvic (with Pap smear under supervision), rectal, and prostate as well as functional status examination in the geriatric patient.
• Laboratory Interpretation Skills: Students should be able to determine when to recommend and how to interpret the results of a cholesterol level and stool guaiac.
• Communication Skills: Students should be able to explain disease prevention recommendations.
Training Problems

Cough


Knowledge:
Students should be able to describe and define:
- The criteria used to classify a cough as chronic or productive.
- Signs and symptoms associated with the most common causes of acute cough (viral tracheitis, bronchitis, pneumonia) and chronic cough (post nasal drip, asthma, gastroesophageal reflux, cigarette smoking, lung cancer, tuberculosis, and congestive heart failure).

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among the etiologies listed above.
- **Physical Exam Skills:** Students should be able to perform a physical examination establish the diagnosis and severity of disease, including accurately determining respiratory rate and level of respiratory distress; recognizing the pharyngeal signs of post-nasal drip; identifying rales, rhonchi, and wheezes; and recognizing signs of pulmonary consolidation.
- **Differential Diagnosis:** Students should be able to generate an appropriate differential diagnosis recognizing history and physical exam findings that suggest a specific etiology for cough.
- **Laboratory Interpretation:** Students should be able to interpret a chest x-ray, pleural fluid cell count and chemistries, spirometry, sputum, gram stain, and sputum acid-fast stain. Students should be able to understand results of sputum culture and sensitivities, barium swallow, and sputum cytology. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to counsel and educate patients about environmental contributors to their disease, pneumococcal and influenza immunizations, and smoking cessation.
- **Management skills:** Students should be able to design an appropriate management plan for the treatment of post-nasal drip, allergic rhinitis, viral tracheitis, bronchitis, and gastroesophageal reflux.
Training Problems

Dysuria


Knowledge:
Students should be able to describe and define:

- Presenting signs and symptoms of the common causes of dysuria in a female, including cystitis, vaginitis, atrophic vaginitis, and urethritis; and in a male, including urethritis, prostatitis, and cystitis.
- Signs and symptoms of pyelonephritis and how to distinguish an upper from a lower urinary tract infection (UTI).
- Common bacteria that cause UTI.
- Aspects of pathogenesis that affect UTI, including gender, sexual activity, pregnancy, obstruction, bladder dysfunction, anatomic anomalies, and use of an indwelling catheter.

Skills:
Students should demonstrate specific skills, including:

- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate history that distinguishes cystitis from non-cystitis causes of dysuria and upper from lower URI.
- Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including percussion and palpation of the bladder to accurately recognize distention and tenderness; palpation and massage of the male urethra and prostate to obtain discharge; and accurate recognition of perineal or vaginal atrophy and inflammation.
- Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that suggest a specific etiology for dysuria.
- Laboratory Interpretations: Students should be able to interpret a urinalysis, including cells and casts, urine gram stain, gram stain of urethra discharge, and KOH stain. Students should be able to recommend when each of these tests should be ordered.
- Communication Skills: Students should be able to explain the diagnosis, treatment plan, and prognosis to patients and educate patients about safe sexual activity.
- Management Skills: Students should be able to select appropriate antibiotic therapy prior to culture results and select the appropriate duration of therapy for cystitis and pyelonephritis.
Training Problems

Back Pain


Knowledge:
Students should be able to describe and describe:

- Signs and symptoms of muscle strain, lumbar disc herniation, vertebral compression fracture, spinal metastasis, spinal epidural abscess, and cauda equina syndrome and the clinical features that differentiate one etiology from another.
- Role of radiologic imaging studies in the evaluation of back pain, including their indications, limitations, and costs.
- Response to therapy of the various etiologies and the roles of bed rest, exercise, analgesia, and anti-inflammatory agents.
- Methods of limiting disability and chronicity.

Skills:
Students should demonstrate specific skills, including:

- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among etiologies of disease, including radicular pain, focal numbness or weakness, bladder or bowel dysfunction, rapid progression of symptoms, saddle anesthesia, focal back tenderness with fever, and prior history of cancer.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including accurate interpretation of the straight-leg raising test, assessment for radiculopathy and spinal cord compression, as well as evaluation for saddle anesthesia and focal tenderness.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing history and physical exam findings that suggest a specific cause for back pain.
- **Laboratory Interpretations:** Student should be able to interpret the results of a sedimentation rate (ESR), back x-ray, CT scan, and MRI scan.
- **Communication Skills:** Students should be able to explain the diagnosis, treatment plan, and prognosis of the disease to patients and their families
- **Management skills:** Students should develop an appropriate evaluation and treatment plan, including analgesics and muscle relaxants, proper use of bed rest and exercises, mechanics of lifting and standing, and appropriate use of consultants.
Training Problems

Joint Pain


Knowledge:
Students should be able to describe and define:
• Presenting signs and symptoms and key diagnostic criteria for osteoarthritis, rheumatoid arthritis, crystalline arthritis, lupus, and specific arthritis.
• The pathophysiology of joint stiffness and pain.
• The distinction between arthralgia, arthritis, and bursitis.

Skills:
Students should demonstrate specific skills, including:
• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among etiologies of joint pain and determines the impact of joint pain on a patient’s daily activities.
• Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including accurately identifying joint erythema, swelling, tenderness, effusion, crepitus, decreased range of motion, and synovial thickening; Heberden’s nodes; Dupuytren’s contracture; ulnar deviation; and tophi.
• Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing medical history and physical exam findings that suggest a specific etiology for joint pain.
• Laboratory Interpretations: Students should be able to recommend when to order and be able to interpret the results of joint fluid analysis, sedimentation rate, rheumatoid factor, complement levels, antinuclear antibodies, and uric acid.
• Communication Skills: Students should be able to explain the diagnosis, evaluation and treatment plan, and prognosis to patients and their families.
• Management Skills: Students should be able to develop an appropriate initial evaluation and treatment plan, including selection of appropriate medications to use for the relief of joint pain based on their mechanism of action and side effects profile, and role of exercise and occupational therapy.
Training Problems

Chest Pain


Knowledge:
Students should be able to describe and define:
- Signs and symptoms associated with ischemic cardiac pain (stable and unstable angina), non-ischemic cardiovascular pain (dissecting aortic aneurysm, acute pericardial pain), valvular heart disease (aortic stenosis and mitral valve prolapse), gastrointestinal disorders (gastroesophageal reflux and esophageal spasm), pulmonary disorder (pneumothorax, pulmonary embolism, inflammation of the pleura), and musculoskeletal disorders (costochondritis and muscular strain).
- Factors that exacerbate angina pectoris.
- Cardiac risk factors.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among the main etiologies of chest pain in the adult listed above.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish the diagnosis and severity of the main etiologies of chest pain in the adult listed above.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing history and physical exam findings that differentiate ischemic chest pain from nonischemic causes of chest pain.
- **Laboratory Interpretation:** Students should be able to interpret an electrocardiogram, chest x-ray, arterial blood gases, and cardiac enzymes. Students should be able to understand results of an echocardiogram; exercise stress test and radionuclide scan; cardiac catheterization; V/Q lung scan; and pulmonary angiography. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to communicate the diagnosis, treatment plan, and prognosis of the disease to patients and their families and educate patients about cardiovascular risk factors.
- **Management Skills:** Students should be able to develop an evaluation and treatment plan for patients with ischemic chest pain demonstrating knowledge of the indications, actions, side effects, and adverse drug reactions of nitrates, beta blockers, calcium channel blockers, aspirin, heparin, and warfarin as well as the indications for thrombolytic therapy, coronary angioplasty, and coronary artery bypass surgery.
Training Problems

Abdominal Pain


Knowledge:
Students should be able to describe and define:

• Pathophysiologic mechanisms of abdominal pain (i.e., obstruction, peritoneal irritation, vascular insufficiency, abnormal motility, mucosal irritation, metabolic aberrations, nerve injury, and referred pain).
• Signs and symptoms of the common causes of abdominal pain, including peptic ulcer disease; dyspepsia; pancreatitis; cholecystitis; appendicitis; diverticulitis/diverticulosis; hepatitis; irritable bowel syndrome; bowel obstruction; iliac, pseudomenbranous, and ischemic colitis.
• Signs and symptoms of an acute abdomen.

Skills:
Students should demonstrate specific skills, including:

• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among etiologies of abdominal pain.
• Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including accurate recognition of peritoneal inflammation; abdominal tenderness and guarding; abdominal, pelvic, or rectal masses; abdominal bruits and ascites; and hepatosplenomegaly.
• Differential Diagnoses: Students should be able to generate a differential diagnosis recognizing specific history and physical exam findings that distinguish among etiologies of abdominal pain listed above.
• Laboratory Interpretation: Students should be able to interpret a urinalysis, complete blood count, liver enzymes, stool guiac test, and fecal leukocytes. Students should be able to understand and interpret the results of stool culture, sigmoidoscopy, colonoscopy, barium studies, abdominal ultrasound and CT scan, and radionuclide scan of hepatobiliary system. Students should be able to recommend when each of these tests should be ordered.
• Communication Skills: Students should be able to explain the evaluation and treatment and prognosis to the patient and family.
• Management Skills: Students should be able to develop an appropriate evaluation plan for patients with diseases listed above, including appropriate request for GI consultation or surgery.
Training Problems

Fluid, Electrolyte, and Acid-Base Disorders


Knowledge:
Students should be able to describe and define:
- The pathophysiology, presenting signs and symptoms, and most common causes of elevated or decreased blood volume; elevated or decreased serum sodium, potassium, calcium, phosphorus, magnesium; and simple acid-base disorders.
- How to distinguish hyponatremia from pseudohyponatremia and recognize spurious or acidosis-related hyperkalemia.
- The risks of too rapid or delayed therapy for hyponatremia.
- How to calculate the anion gap and explain its relevance to determining the cause of a metabolic acidosis.
- How to calculate total body water and understand its distribution.
- The types of fluid preparations and methods of administration to treat fluid and electrolyte disorders.

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among etiologies of the diseases above.
- Physical Exam Skills: Students should be able to perform a physical exam to aid in assessment of fluid and electrolyte balance, including orthostatic vital signs; recognition of lethargy, weakness, encephalopathy, delirium, seizures, cramping, tetany, and Chvostek’s and Trousseau’s signs.
- Differential Diagnosis: Students should be able to generate an appropriate differential diagnosis and approach to patients with the above listed disorders.
- Laboratory Interpretation: Students should be able to interpret arterial blood gases, serum electrolytes, serum and urine osmolality, anion gap, fractional excretion of sodium, and ECG findings of electrolyte abnormalities. Students should be able to recommend when each of these tests should be ordered.
- Communication Skills: Students should be able to explain the evaluation and treatment plan and prognosis to the patient and family.
- Management Skills: Students should be able to write appropriate fluid orders for volume and electrolyte replacement and calculate the free water needs to correct hypernatremia.
Training Problems

Anemia


Knowledge:
Students should be able to describe and define:
- Classification and morphologic definition of anemia as normocytic, microcytic, or macrocytic.
- Morphological and laboratory characteristics (as well as pathophysiologic and prevalence) of iron deficiency anemia, megaloblastic anemia, and hemolytic anemia, including microangiopathic and congenital disorders (sickle cell, thalassemias).
- Indications, contraindications, and complications of blood transfusion

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate history that differentiates among the above etiologies of anemia.
- Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including recognition of pallor, tachycardia, and heart failure.
- Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that suggest a specific etiology of anemia.
- Laboratory Interpretation: Students should be able to interpret a complete blood count, reticulocyte count, blood smear, iron studies, B12 and folate levels, haptoglobin, and LDH. Students should be able to recommend when each of these tests should be ordered.
- Communication Skills: Students should be able to explain the results of an initial evaluation and treatment plan to patients and their families. Students should be able to recognize when genetic counseling is appropriate.
- Management Skills: Students should be able to develop an appropriate evaluation plan to determine the etiology of anemia and should be able to develop an appropriate treatment plan for iron deficiency and pernicious anemia.
Training Problems

Hypertension


Knowledge:
Students should be able to describe and define:
- Classification and prevalence of primary and secondary hypertension and the most common causes of secondary hypertension.
- Hypertensive urgency and emergency and their initial management.
- Manifestation of target-organ damage from hypertension.
- Pathophysiology, presentation, and diagnostic approach for Cushing’s disease, renovascular hypertension, pheochromocytoma, and hyperaldosteronism.

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate history that differentiates essential from secondary hypertension, assesses target-organ damage and other cardiovascular risk factors, and identifies dietary and lifestyle habits that may elevate blood pressure.
- Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including proper measurement of blood pressure; accurate recognition of the complications of hypertension in the eye, cardiovascular system, and abdomen; and accurate recognition of findings suggestive of specific causes of secondary hypertension.
- Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that suggest a specific etiology for secondary hypertension if applicable and that accurately assess the patient’s cardiovascular risk profile, state of target-organ damage from hypertension, and the appropriateness of prior antihypertensive therapy.
- Laboratory Interpretation: Students should be able to interpret an electrocardiogram, chest x-ray, urinalysis, blood glucose, creatinine, lipid profile, and serum electrolytes. Students should be able to recommend when each of these tests should be ordered.
- Communication Skills: Students should be able to explain the diagnosis, treatment plan, and prognosis to patients and their families and educate
Training Problems: Hypertension

- patients about cardiovascular risk factors and the sequelae of uncontrolled hypertension.
- **Management Skills:** Students should be able to develop an appropriate evaluation and treatment plan for patients with essential hypertension, including current national recommendations for pharmacologic therapy; recognition of the common side effects of antihypertensive medications; and management of other cardiovascular risk factors (i.e., smoking cessation and management of dyslipidemia).
Training Problems

COPD/Obstructive Airway Disease (OAD)


Knowledge:
Students should be able to describe and define:
- Disease entities and pathophysiologic processes of common, serious, or prototypical respiratory diseases that can result in OAD, including asthma, chronic bronchitis, and emphysema.
- Allergic and non-allergic factors that may precipitate bronchospasm and asthma.
- Basic principles of O₂, antibiotic bronchodilator, and corticosteroid therapy.
- Role of influenza and pneumococcal vaccine in care of OAD patients.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history, including duration and severity of shortness of breath, sputum production, cough, wheezing, hemoptysis, fever, abnormal nocturnal/diurnal sleep patterns, and patient’s occupational smoking and environmental exposure history.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish the diagnosis and severity of disease including accurate assessment of the use of accessory muscles for breathing, recognition of abnormal breath sounds, and detection of the signs that differentiate consolidation, effusion, and pneumothorax.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing history and physical exam findings that confirm or refute a diagnosis of asthma, chronic bronchitis, or emphysema.
- **Laboratory Interpretations:** Student should be able to interpret a chest x-ray, arterial blood gases, sputum gram stain, and pulse oximetry. Students should be able to understand results of spirometry. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to communicate the diagnosis, prognosis, and treatment plan of the disease to patients and their families. Students should be able to counsel about smoking cessation when appropriate.
- **Management skills:** Students should develop an appropriate evaluation and treatment plan for patients with OAD, including oxygen, antibiotic, bronchodilator, and corticosteroid therapy; smoking cessation strategies where applicable; and appropriate use of pneumovax and influenza vaccinations.
Training Problems

HIV Infection


Knowledge:
Students should be able to describe and define:
- HIV infection and AIDS (CDC case definition).
- The relationship of the CD4 count to the development of the complications of AIDS.
- Signs and symptoms of HIV-related opportunistic infections (including pneumocystis carinii, candidiasis, cryptococcosis, cryptosporidiosis, cytomegalovirus, mycobacterium avium complex, tuberculosis, and toxoplasmosis) and malignancies (including Kaposi’s sarcoma, non-Hogkins lymphoma, and cervical carcinoma).
- What constitutes hospice care.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that includes HIV infection risk factors, HIV serology results and CD4 lymphocyte counts, history of HIV-related opportunistic infections, and current symptoms of infection, dementia, malignancy, or wasting syndrome.
- **Physical Exam Skills:** Students should be able to perform a physical examination to establish the diagnosis and severity of disease, including recognition of evidence of infection, malignancy, neurologic disease, or wasting syndrome.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing specific history and physical exam findings that suggest the diagnosis of infection or AIDS and its sequelae.
- **Laboratory Interpretations:** Students should be able to interpret sputum gram, acid-fast, KOH, and silver stains. Students should be able to understand results of serologic and other diagnostic tests for HIV infection, including viral titers; CD4 lymphocyte count as a predictor of disease; and serum and cerebral spinal fluid cryptococcal antigen. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to explain the results of the evaluation, treatment plan, and prognosis of the disease to the patient and their family. Students should be able to counsel and educate patients about HIV prevention and the complications of HIV drug therapy.
Training Problems: HIV Infection

- **Management skills:** Students should be able to develop an appropriate evaluation and treatment plan, including prophylactic antiviral therapy, P. carinii prophylaxis, assessment of PPD status, and administration of pneumococcal and H. influenza vaccines.
Training Problems

Congestive Heart Failure (CHF)


Knowledge:
Students should be able to describe and define:
- Processes (i.e., ischemic, valvular, hypertrophic, infiltrative, inflammatory) and the most common disease etiologies of CHF.
- Systolic vs. diastolic dysfunction and most common etiologies for each.
- Signs and symptoms of left-sided and right-sided heart failure.
- Compensatory mechanisms in heart failure.
- Factors leading to exacerbation of CHF, including hypoxemia, anemia, fever, hypertension, tachyarrhythmia, and hyperthyroidism.
- Indications for SBE prophylaxis.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among etiologies of disease, including presence or absence of the following: dyspnea, orthopnea, paroxysmal nocturnal dyspnea, peripheral edema, fatigue, and exercise tolerance.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including accurate recognition of major arterial pulses and abnormalities, including bruits; edema; cyanosis; rales, rhonchi, and wheezes; heart rhythm; neck vein assessment; hepatojugular reflux; presence and characterization of cardiac murmurs, rubs, gallops, or extra sounds (e.g., clicks); hepatomegaly; and ascites.
- **Differential diagnosis:** Students should be able to generate a differential diagnosis recognizing history and physical exam findings that confirm or refute CHF and distinguishing among the etiologies listed above.
- **Laboratory Interpretations:** Students should be able to interpret a chest x-ray and electrocardiogram. Students should be able to understand results of echocardiogram and radionuclide gated pool scintigraphy. Students should be able to recommend when each of these tests should be ordered.
- **Communications Skills:** Students should be able to communicate the diagnosis, treatment plan, and prognosis of the disease to patients and their families and educate patients about cardiovascular risk factors and risk reduction.
Training Problems: Congestive Heart Failure (CHF)

- **Management Skills:** Students should be able to develop an appropriate evaluation and treatment plan, including the appropriate use of diuretics, vasodilators, positive inotropic agents, ACE inhibitors, calcium channel blockers, diet, and exercise.
Training Problems

Diabetes Mellitus


Knowledge:
Students should be able to describe and define:
- Diagnostic criteria for (and pathogenesis, epidemiology, major causes of morbidity and mortality, and presenting signs and symptoms of) type I and type II diabetes mellitus.
- Signs and symptoms of diabetic ketoacidosis and nonketotic hyperglycemic coma.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that addresses diagnosis, disease complications, exacerbating factors, diet and activity history, and vascular risk profile.
- **Physical Exam Skills:** Students should be able to perform a physical examination to establish the diagnosis and severity of disease focusing on accurate recognition of chronic and acute complications and baseline assessment of areas to target for disease prevention.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing history and physical exam findings to diagnose diabetes, distinguish between type I and type II, and accurately assess disease complications.
- **Laboratory Interpretations:** Students should be able to recommend when to order and how to interpret serum glucose, electrolytes, blood urea nitrogen, creatinine, and ketones; arterial blood gas; glycosylated hemoglobin; urine glucose, ketones, and albumin; creatinine clearance and EKG.
- **Communication Skills:** Students should be able to explain the results of the evaluation and treatment plan to the patient; counsel on dietary recommendations, risk reduction, prevention of complications, hypoglycemic symptoms, and home glucose monitoring.
- **Management skills:** Students should be able to develop an appropriate evaluation and treatment plan that addresses the goals of treatment, appropriately determines the approach to and initiation of therapy to achieve glycemic control, incorporates ADA dietary recommendations, appropriately manages DKA and hyperosmolar nonketototic state, and obtains timely consultation.
Training Problems

Evaluation and Management of Dyslipidemias


Knowledge:

Students should be able to describe and define:

• Contribution of hypercholesterolemia to coronary heart disease (CHD) risk.
• Appropriate population to screen and appropriate methods of screening.

Skills:

Students should demonstrate specific skills, including:

• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history including pertinent history suggesting the diagnosis of a lipid disorder and presence of other cardiovascular risk factors.
• Physical Exam Skills: Students should be able to perform a physical examination to establish the diagnosis and severity of disease, including accurate recognition of the stigmata of hyperlipidemia (e.g., xanthomata), cardiovascular risk factors (e.g., hypertension), evidence of end organ damage, and atherosclerosis (e.g., bruits, diminished peripheral pulses).
• Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings to suggest the diagnosis of dyslipidemia.
• Laboratory Interpretations: Students should be able to recommend when to order and how to interpret lipoprotein fractions, TSH, and serum glucose.
• Communication Skills: Students should be able to explain the diagnosis, evaluation and treatment plan, and prognosis to patients and their families and address the lipid and cardiovascular risk problems in the patient’s family.
• Management skills: Students should be able to develop an appropriate evaluation and treatment plan, including a program of dietary modifications, weight reduction, exercise, and appropriate pharmacologic therapy.
Training Problems

Substance Abuse


Knowledge:
Students should be able to describe and define:
- Presenting signs and symptoms of abusing the following substances: alcohol, opioids, cocaine, amphetamines, hallucinogens, barbiturates and other related medications, and benzodiazepines.
- Signs, symptoms, risk factors, and major causes of morbidity and mortality of alcohol and drug abuse intoxication, overdose, and withdrawal.
- Diagnostic criteria for substance abuse, dependency, and addiction.
- Questions in the CAGE questionnaire*.
- Health benefits of substance abuse cessation.

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able elicit a social history in a nonjudgmental, supportive manner, using appropriate questioning (CAGE questions, etc.)
- Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease, including accurate recognition of withdrawal, stigmata of drug or alcohol use, chronic disease states, and acute complications secondary to substance abuse.
- Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings to determine the diagnosis of substance abuse of drugs or alcohol and its sequelae.
- Laboratory Interpretation: Students should be able to recommend when to order and be able to interpret a blood alcohol level, urine and serum toxicology screens, liver enzymes, amylase and lipase levels, and tests for HIV. Students should be able to recommend when each of these tests should be ordered.
- Communication Skills: Students should be able to explain the evaluation and treatment plan to the patient and counsel regarding cessation and available community referral resources.
- Management Skills: Students should be able to develop an appropriate evaluation and treatment plan, including accurate assessment of the patient’s motivation for achieving sobriety/abstinence and appropriate fluid and medication orders for the treatment of alcohol and/or drug withdrawal.

Training Problems

Smoking Cessation


Knowledge:
Students should be able to define and describe:
- Pharmacological effects of nicotine, nicotine withdrawal symptoms, and interventions to use for symptoms of nicotine dependence.
- Common barriers preventing patients from undertaking smoking cessation.
- Principles of at least one theory of behavior modification.
- Common medical diseases associated with chronic smoking.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history to determine if a patient has nicotine dependence, assess a patient’s past experiences with smoking cessation, and review and determine patient’s barriers to stopping.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish diagnoses related to smoking, especially lesions with malignant potential on the lips and in the oral cavity and chest findings consistent with COPD.
- **Communication Skills:** Students should be able to counsel a patient on smoking cessation. Students should be able to administer a non-judgmental “stop smoking” message to every patient who smokes.
- **Management Skills:** Students should be able to design an intervention that is appropriate for the patient, explain how to use nicotine patch and nicotine gum therapy, and negotiate a follow-up plan with the patient.
Training Problems

Depression


Knowledge:
Students should be able to describe and define:
• The prevalence of depression in the general population, the impact of major illness on the prevalence of depression, and the impact of depression on the outcome of medical illness.
• The nine symptoms of major depression and the common somatic symptoms associated with major depression.

Skills:
Students should demonstrate specific skills, including:
• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate history that accurately determines a patient’s risk for depression and suicide and the presence of underlying dementia, anxiety, adverse drug effect, illicit drug use, and grief.
• Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease including a complete neuropsychiatric exam.
• Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that suggest depression.
• Laboratory Interpretations: Student should be able to recommend when to order and how to interpret the results of drug screen, lumbar puncture, VDRL, and thyroid function tests. Students should be able to recommend when each of these tests should be ordered.
• Communication Skills: Students should be able to effectively communicate the diagnosis, to the patient and their families, advice the patient the need for psychiatric consultation when necessary.
• Management skills: Students should be able to select appropriate initial anti-depressive drugs and refer patients appropriately for psychiatric consultation.
Training Problems

Common Cancers


Knowledge:
Students should be able to define and describe:
- Clinical presentation, typical course, complications, and prognosis for breast, skin, lung, colorectal testicular, ovarian, and prostate cancers.
- Appropriate screening and early detection techniques for the cancers listed above.

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that suggest the diagnosis of cancer, including weight loss, fatigue, fever, and site-specific symptoms.
- Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease.
- Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that support diagnosis of cancer and its clinical stage.
- Laboratory Interpretation: Students should be able to interpret the results of chest CT scan; pleural fluid analysis; Pap smear; upper and lower GI imaging and endoscopy; bone scan; and PSA level. Students should be able to recommend when each of these test should be ordered.
- Communication Skills: Student should be able to explain the diagnostic and treatment plan and prognosis to patients and families.
- Management skills: Student should be able to develop an appropriate evaluation and treatment plan, including primary medical evaluation, provision of support and information from the patient, and the coordination of interdisciplinary care.
Training Problems

Altered Mental Status


Knowledge:
Students should be able to describe and define:
• Key diagnostic criteria and differential diagnosis for altered mental status, including the definitions of dementia and delirium and how to distinguish between them.
• Pathophysiology, signs, and symptoms of the common causes of altered mental status.

Skills:
Students should demonstrate specific skills, including:
• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate history, including onset, progression, current level of physical and mental disability, and symptoms associated with common causes of altered mental functioning.
• Physical Exam Skills: Students should be able to perform a physical exam to establish the diagnosis and severity of disease including accurate recognition of neurologic findings and evidence of systemic disease.
• Differential Diagnosis: Students should be able to generate a differential diagnosis recognizing history and physical exam findings that differentiate delirium from dementia and suggest a specific diagnosis.
• Laboratory Interpretation: Students should be able to interpret the results of lumbar puncture, serum electrolytes and chemistries, arterial blood gases, vitamin B12 and thiamine levels, VDRL, and thyroid function tests. Students should be able to understand results of head CT and MRI scans, EEG, and drug screens. Students should be able to recommend when each of these tests should be ordered.
• Communication skills: Students should be able to explain the results of the evaluation and treatment plan and prognosis of the disease to the patient and their family.
• Management Skills: Students should be able to develop appropriate management and treatment plans, including appropriate fluid replacement and treatment of metabolic derangements, underlying infections, and other systemic diseases.
Training Problems

**Acute Renal Failure**


**Knowledge:**
**Students should be able to describe and define:**
- Define and describe ARF and be able to distinguish between the three major pathophysiologic etiologies for ARF: decreased renal perfusion (pre-renal), intrinsic renal disease (renal), and acute renal obstruction (post-renal).
- Distinguish major pathophysiologic etiologies of “pre-renal” ARF, including: hypovolemia, decreased cardiac output, systemic vasodilatation, and renal vasoconstriction.
- Distinguish major pathophysiologic etiologies of intrinsic “renal” ARF, including: vascular lesions, glomerular lesions, interstitial nephritis, intratubule deposition/obstruction, and acute tubular necrosis (ATN).
- Discuss natural history, initial evaluation and treatment, and complications of ARF.

**Skills:**
**Students should demonstrate specific skills, including:**
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate history that distinguishes among the three major reasons for ARF, including the pre-disposing conditions, nephrotoxic drugs or agents, and systemic disease.
- **Physical Exam Skills:** Students should be able to perform a physical examination to aid in the diagnosis and etiology of ARF, including: the determination or a patient’s volume status through estimation of the central venous pressure using the height of jugular venous distention and measurement of pulse and blood pressure in the standing position; palpation and percussion of the bladder to recognize bladder distention; palpation of the prostate; and examination for evidence of systemic disease, including skin, joints, and nails.
- **Laboratory Interpretation:** Students should be able to perform and interpret a urinalysis, including the recognition of casts, red blood cells, white blood cells, and crystals; calculate fractional excretion of sodium and appreciate its usefulness in distinguishing between pre-renal and intrinsic renal disease; calculate creatinine clearance; and interpret the results of renal ultrasonography. Students should be able to recommend when each of these tests should be ordered.
Training Problems: Acute Renal Failure

- **Communication Skills:** Students should be able to communicate the diagnosis, prognosis, and treatment plan to patients and their families.
- **Management Skills:** Students should be able to design an appropriate management plan for initial management of ARF, including volume management, dietary recommendations, drug dosage alterations, electrolyte monitoring, and indications for dialysis.
Training Problems

Pneumonia


Knowledge:
Students should be able to describe and define:
- Acute and chronic pneumonia.
- Pathogenic, epidemiologic, and clinical features of community-acquired, nosocomial, or aspiration pneumonia and pneumonia in the immunocompromised host.
- Patients who are at risk for impaired immunity.
- Complications of acute bacterial pneumonia: bacteremia, sepsis, empyema, meningitis, metastatic microabscesses.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among the etiologies of pneumonia.
- **Physical Exam Skills:** Students should be able to perform an appropriate physical exam to establish the diagnosis and severity of disease, including determining respiratory rate and level of distress; recognizing rales, rhonchi, and wheezes; recognizing signs of pulmonary consolidation, parenchymal collapse, and pleural effusion; and recognizing signs of pneumonia complications listed above.
- **Differential Diagnosis:** Students should be able to generate an appropriate differential diagnosis recognizing specific history and physical exam findings that suggest the etiology of pneumonia.
- **Laboratory Interpretation:** Students should be able to interpret a chest x-ray; gram stain and acid-fast stain of sputum; pleural fluid cell count, gram stain, and chemistries; and arterial blood gases. Students should be able to understand results of sputum culture and sensitivities and sputum cytology. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to explain the results of the evaluation, treatment plan, and prognosis of the disease to the patient and their family and educate about pneumococcal and influenza immunizations.
- **Management Skills:** Students should be able to select an appropriate empiric antibiotic regimen for community-acquired, nosocomial, immunosuppressed-host, and aspiration-pattern pneumonia, taking into account pertinent patient features.
Training Problems

Dyspnea


Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

- The major organ system/pathologic states causing dyspnea such as cardiac, pulmonary, anemia/hypovolemia, and neurologic weakness and their pathophysiology.
- Signs and symptoms associated with respiratory failure.
- The most common causes of acute dyspnea (pulmonary edema, pulmonary embolism, asthma, hypovolemia, and pneumothorax) and chronic dyspnea (congestive heart failure, COPD, pulmonary parenchymal and vascular disease, anemia, and neurologic weakness.

Skills:
Students should demonstrate specific skills, including:

- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that differentiates among the etiologies listed above.
- **Physical Exam Skills:** Students should be able to perform a physical exam to establish the diagnosis and severity of disease including accurately determining respiratory rate and level of respiratory distress; accurately measuring pulsus paradox; recognizing rales, rhonchi, wheezes, and subcutaneous emphysema; recognizing signs of pulmonary consolidation and hyperresonance, and elevated central venous pressure; identifying S₃ gallop, edema, and pallor.
- **Differential Diagnosis:** Students should be able to generate differential diagnosis recognizing history and physical exam findings that suggests a specific etiology for dyspnea.
- **Laboratory Interpretation:** Students should be able to interpret a chest x-ray, spirometry, arterial blood gases, electrocardiogram, and complete blood count. Students should be able to understand and interpret the results of a ventilation/perfusion lung scan, cardiac echocardiogram, and exercise stress test. Students should be able to recommend when each of these tests should be ordered.
- **Communication skills:** Students should be able to explain the results of the evaluation and treatment plan and prognosis to the patient and their family.
Training Problems: Dyspnea

- Students should be able to counsel and educate patients about environmental contributors to their disease, risks factors for their disease, smoking cessation and the risks of blood transfusion.
- **Management Skills:** Students should be able to design an appropriate initial management plan for the treatment of asthma, pneumothorax, pulmonary embolism, and congestive heart failure and appropriately prescribe blood transfusions for severe anemia.
Training Problems

Nosocomial Infection

Knowledge:
Students should be able to define and describe:
• The conditions which predispose patients to nosocomial infection, the most common body sites involved, and the microorganisms which are most commonly isolated in the various types of nosocomial infection.
• The effect of widespread use of broad spectrum antimicrobial agents on endogenous body flora and the hospital microbial flora.
• The importance of hand washing between each patient, use of aseptic precautions in invasive hospital procedures, appropriate isolation procedures, and appropriate use of prophylactic antibiotics in prevention of hospital acquired infection.

Skills:
Students should demonstrate specific skills, including:
• History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that will differentiate among the organ system(s) likely to be involved with nosocomial infection.
• Physical Exam Skills: Students should be able to perform a physical examination of skin, vascular access sites, lungs abdomen, wounds, and catheter and drain sites and recognize signs of local or systemic infection.
• Differential Diagnosis: Students should be able to generate a differential diagnosis of the likely sites and organisms involved, recognizing specific history and physical exam findings which suggest a specific etiology.
• Laboratory Interpretation: Students should be able to interpret a chest x-ray. Students should be able to understand and interpret the results of microbiologic stains, cultures, and susceptibility tests. Students should be able to recommend when each of these tests should be ordered.
• Communication Skills: Students should be able to communicate the diagnosis, the reason for diagnostic tests, necessity for any isolation procedures, treatment plans, and prognosis to patients and their families.
• Management Skills: Students should be able to develop a plan for the evaluation and treatment of hospital acquired infection, demonstrating appropriate choice of antimicrobial drugs which considers mechanisms of action, spectrum of activity, pharmacokinetics, drug interactions, and adverse reactions. Students should also recognize when catheter removal, incision, and drainage or other mechanical procedures are necessary.
Training Problems

Acute Myocardial Infarction


Knowledge:
Students should be able to define and describe:
- The pathogenesis, signs and symptoms, clinical course, therapeutic options, and complications of acute subendocardial (non-Q wave) and transmural (Q wave) myocardial infarction (MI).
- Primary and secondary prevention of ischemic heart disease through the reduction of cardiovascular risk factors (e.g., controlling hypertension and hyperlipidemia, avoiding tobacco, and aspirin prophylaxis).

Skills:
Students should demonstrate specific skills, including:
- History-Taking Skills: Students should be able to obtain, document, and present an age-appropriate medical history that identifies cardiac risk factors and suggests the diagnosis of acute MI, including location, duration, and intensity of chest pain as well as its radiation and associated symptoms.
- Physical Exam Skills: Students should be able to perform a physical exam that suggests acute MI or injury, including accurate recognition of anxiety, dyspnea, hypotension, abnormal heart sounds, pulmonary congestion, left ventricular failure, and peripheral cyanosis.
- Differential Diagnosis: Students should be able to generate a differential diagnosis of acute MI by recognizing the specific history and physical exam findings that differentiate cardiac (stable/unstable/Prinzmetal's angina, acute MI, dissecting aortic aneurysm) from non-cardiac causes of chest pain.
- Laboratory Interpretation: Students should be able to interpret an electrocardiogram, chest x-ray, and serum markers (LDH and CK isoenzymes, troponins, myoglobin). Students should be able to understand and interpret the results of cardiac echocardiogram and radioisotope studies. Students should be able to recommend when each of these tests should be ordered.
- Communications Skills: Students should be able to explain the diagnosis, management plan, and prognosis to patients and their families and educate patients about reducing treatable cardiovascular risks through behavior modification and cardiac rehabilitation.
- Management Skills: Students should be able to develop an appropriate evaluation and management plan for acute MI, including CCU monitoring, and indications for and complications of thrombolytic therapy, coronary arteriography, PTCA, and CABG.
Training Problems

Gastrointestinal Bleeding


Specific Learning Objectives

Knowledge:
Students should be able to describe and define:

- The common causes for and symptoms of upper and lower gastrointestinal blood loss, including esophagitis, esophageal/gastric varices, gastritis, peptic ulcer disease, gastric neoplasm, colonic neoplasm, intestinal angiodysplasia, diverticuli, hemorrhoids, and anal fissures.
- The distinguishing features of upper versus lower GI bleeding.
- The indications for inpatient versus outpatient evaluation and treatment.
- The principles of stabilization and treatment of acute massive GI blood loss.
- The role of contributing factors in GI bleeding such as H. Pylori infection; NSAID, alcohol, and cigarette use; coagulopathies; and chronic liver disease.

Skills:
Students should demonstrate specific skills, including:

- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate history that distinguishes upper from lower GI bleeding and the different causes and/or contributors for each (as outlined above).
- **Physical Exam Skills:** Students should be able to perform a physical examination to aid in making a specific diagnosis of GI blood loss and to ascertain the acuity and severity of the blood loss, including postural blood pressure and pulse and their interpretation; abdominal palpation for organomegaly, masses, and tenderness; a search for stigmata of chronic liver diseases; and anal and rectal examination.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis recognizing specific history and physical examination findings which: distinguish an upper from a lower GI bleed; distinguish an acute severe bleed from a more mild and/or chronic GI bleed; and suggest a specific etiology.
- **Laboratory Interpretation:** Students should be able to interpret the results/findings of stool and gastric fluid tests for occult blood, hemoglobin and hemocrit, platelet count, protime and partial thromboplastin time, liver function tests, tests for H. Pylori (i.e., serology, CLO test, biopsy, or culture). Students should understand and be able to interpret the results of endoscopy,
Training Problems: Gastrointestinal Bleeding

- colonoscopy, and barium studies of the gastrointestinal tract. Students should be able to recommend when each of these tests should be ordered.

- **Communication skills:** Students should be able to explain the diagnosis, management plan, and prognosis to patients and their families.

- **Management Skills:** Students should be able outline the appropriate management for a patient with severe blood loss, including establishing adequate venous access, crystalloid fluid resuscitation, blood and blood product transfusion, appropriate utilization of consultative services (gastroenterology and/or general surgery) and for long term management where appropriate (e.g., H. Pylori eradication, antacid, H-2 blocker or proton pump inhibitor therapy, smoking/alcohol cessation, NSAID restriction, and diet).
Training Problems

**Venous Thromboembolism**


**Knowledge:**
**Students should be able to define and describe:**
- Risk factors for developing deep venous thrombosis (DVT).
- Presenting symptoms of DVT and pulmonary embolus/infarction.
- The long term sequelae of DVT.

**Skills:**
**Students should demonstrate specific skills, including:**
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that suggests the diagnosis of DVT or pulmonary embolus, including risk factors, leg pain and swelling, dyspnea, and pleuritic chest pain.
- **Physical Exam Skills:** Students should be able to perform a physical examination which includes accurate identification of leg swelling, erythema, and warmth; palpation for a Baker’s cyst, inspection for ecchymosis, identification of pleural friction rubs, wheezes, rales, rhonchi, and signs of pneumothorax; and assessment of severity of dyspnea, including heart rate, respiratory rate, and blood pressure.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis for acute shortness of breath and/or pleuritic chest pain.
- **Laboratory Interpretation:** Students should be able to interpret an electrocardiogram, chest x-ray, and arterial blood gasses. Students should understand the indications and limitations of diagnostic studies for DVT (IPG, duplex scan, venogram), the utility and limitation of ventilation perfusion (V/Q) lung scan, and the utility and risks of a pulmonary angiogram. Students should be able to recommend when each of these tests should be ordered.
- **Communication Skills:** Students should be able to explain the diagnosis, management plan, and prognosis to patients and their families.
- **Management Skills:** Students should be able to outline the acute and long-term treatment of isolated calf vein phlebitis, DVT, and thromboembolism, including appropriate use and monitoring of heparin and warfarin, indications for placement of inferior vena cava filter, and indications and complications of thrombolytic therapy.
Liver Disease


Knowledge:
Students should be able to define and describe:
- The pathogenesis, clinical features, typical course, and complications of the common causes of liver and biliary tract disease, including cirrhosis, hepatitis, and gallbladder disease.
- Preventive measures for decreasing the risk of transmission of viral hepatitis, including vaccination and safe-health and –sexual practices.

Skills:
Students should demonstrate specific skills, including:
- **History-Taking Skills:** Students should be able to obtain, document, and present an age-appropriate medical history that suggests the diagnosis of liver or biliary disease, including constitutional symptoms, abdominal pain, and the use of drugs or alcohol.
- **Physical Exam Skills:** Students should be able to perform a physical exam to diagnose liver or biliary disease, including accurate recognition of jaundice, ascites, stigmata of cirrhosis, and signs of liver failure.
- **Differential Diagnosis:** Students should be able to generate a differential diagnosis of liver and biliary tract diseases by recognizing the specific history and physical exam findings that differentiate these disorders.
- **Laboratory Interpretation:** Students should be able to interpret tests of liver function (e.g., serum albumin, prothrombin time), screening tests for hepatobiliary disease (e.g., serum bilirubin, alkaline phosphatase), tests of ascitic fluid components, and serologic tests for viral hepatitis. Students should be able to recommend when each of these tests should be ordered.
- **Communications Skills:** Students should be able to: explain the diagnosis, management plan, and prognosis to patients and their families; identify risk factors; and educate patients regarding high risk.
- **Management Skills:** Students should be able to develop an appropriate evaluation and management plan for acute and chronic liver and biliary tract disease.
Internal Medicine

MS III Core Clerkship Manual

Amarillo
El Paso
Lubbock

January 2007
CLERKSHIP OVERVIEW

Duration The clerkship in Internal Medicine is a fast-paced 8-week experience. It is divided into three activities: conferences and classes, inpatient ward rotations, and ambulatory continuity clinics. Ward rotations are four weeks in duration and end on the last Friday. Students will then be off until starting the next rotation the following Monday morning. During these rotations you will be assigned to ward teams and take call according to the published team call schedule. You can expect at least 9 - 10 night calls during the 2 blocks of ward rotation. An objective structured clinical examination (OSCE) will be scheduled at the end of the clerkship. Students will have Thursday off before the final written (NBME) exam on Friday.

Core Curriculum The didactic or core teaching program is designed to supplement the patient-contact experience by introducing the student to a number of the major medical illnesses. Similar classes are given on all campuses to assure that all students in the Texas Tech School of Medicine system have a comparable learning experience in Internal Medicine.

Behavior Code Similarly, there is no behavior code; it should be obvious that conduct befitting a future physician is expected at all times. Nurses, ancillary medical personnel, and other hospital employees should always be treated with proper professional respect. They are vital members of the health care team and are there for the patient’s benefit just like you. Professionalism is the standard you should develop and maintain.

Professional Appearance The Department of Internal Medicine does not have a specific dress code except that you should be neat, clean, and professional in appearance at all times. Jeans are not appropriate. In general, women should dress in business attire; men should wear a shirt and tie (if you have one…if not, your local Goodwill Retail Store may be able to help). The white coat should be worn at all times when in patient care areas. You should also wear a nametag identifying you to your patient and to hospital personnel. Wearing of scrubs is determined by your campus policy but is typically authorized during overnight call. Maintaining a professional appearance also implies that eating or drinking while on rounds or during any other patient-related activities is usually inappropriate.

Attendance is expected at medical student core curriculum classes, and other conferences as indicated by your Clerkship Director. Attendance at departmental and resident conferences is encouraged, as the subject matter tends to have significant educational potential.

Absences If you find you will be late or absent from clerkship duties, call the clerkship office as soon as possible and notify your ward attending and senior resident. And please don’t forget, the guidelines for years 3 and 4 (see your TTUHSC School of Medicine Student Handbook) require there be no unexcused absences during clerkships. Any absence must be reported to the Clerkship Director and a Student Absence Form (see Enclosures section of this manual) should be filled out. See your Student Handbook for details.

Scheduled conferences Morning report, core classes, and other conferences are scheduled by your local department.

Associated Skills - Obtaining Informed Consent Professional ethics place the burden on the physician to disclose to the patient all potential benefits and risks involved in a given course of action...
as part of the process of informed consent. Therefore, in addition to developing basic procedural skills, you will need additional skills to include obtaining informed consent, when necessary for basic procedures. You should be able to explain the purpose, possible complications, alternative approaches, and conditions necessary to make the procedure as comfortable, safe, and interpretable as possible.

**Equipment** Have these items with you at all times:
- Stethoscope
- Penlight
- Reflex hammer
- Tuning fork
- Eye chart
- Pens (10 points off if from drug companies)
- Tape measure

**Consider having:**
- Otoscope and ophthalmoscope
- Personal Digital Assistant
- Little book (see end of guidelines)
- Reference books as needed. Most students and residents and many attendings like to have a copy of the latest version of the Sanford Guide. The *History and Physical Examination in Medicine*, 10th Edition, by Paul D. Chan MD, Current Clinical Strategies Publishing (http://www.CCSPublishing.com) is also a useful reference.

**Procedures** Junior students who have demonstrated their competency may perform diagnostic and therapeutic procedures under supervision.

**Basic Procedural Skills** For many students, the clerkship is where the basic procedural skills are learned and practiced. Upon completion of your clerkship rotation in Internal Medicine students should be able to describe and define the key indications, contraindications, risks, and benefits of the following basic procedures:
- Venipuncture
- Blood culture
- Arterial blood gas
- Electrocardiogram
- Nasogastric intubation
- Urethral catheterization
- Peripheral intravenous catheter insertion
- Digital rectal examination

**Logbooks** A log of *all patients evaluated* should be maintained and kept current throughout the clerkship. Keep this in your white coat pocket. As soon as you get a patient assigned, enter this in your logbook. List all patients on whom you have done a complete H&P. In general, you should average at least three patients per week. Thus, you will be able to evaluate 24 or more patients during an 8-week medicine clerkship.

The log entry for each patient should include the following:
- Patient’s initials, age, sex, medical record number
- Date of encounter (usually the date of admission or clinic visit)
- Primary Diagnosis (the main problem for which the patient was seen or admitted)
• Secondary Diagnosis (other active problems or comorbidities for which the patient was treated and are addressed during the hospitalization or visit)
• Level of interaction with the patient:
  - I = performed and recorded an H&P
  - II = limited encounter, e.g., office visit or daily ward visit and note written
  - III = performed or assisted with a procedure
• Place or location of the encounter:
  - H = hospital
  - C = clinic or private office

It is important for you to enter the information on each patient you work up. In addition to the ward patients please include any clinic patients that you are able to personally obtain a history and perform a physical examination. Take a look at the Master Data Collection Key (contained in your logbook). This will give you an idea of the various diagnostic groups for patients seen during your Internal Medicine clerkship. While our goal is for you to evaluate 24 or more adult patients with various internal medicine problems during your clerkship, you should try to evaluate at least one patient from each of the diagnostic groups to facilitate your learning experience. You will have an opportunity to review this information at the mid-rotation evaluation conference but should also periodically review your patient types with your resident and attending to ensure a good spectrum of learning opportunities.

The logbook provides a means of monitoring the scope and diversity of your learning experience. The logbook is to be turned in to the Clerkship Office in the Department of Internal Medicine no later than the last working day of the rotation.

**Clerkship Student Interview and Examination Exercise** During the clerkship you will be scheduled to interview and examine a patient while being observed by a faculty member. The faculty member will then provide feedback on your performance and complete an evaluation form for signature by both you and the faculty member. A copy of this form is included in the Enclosures section. Review it carefully prior to the exercise. The primary emphasis of this exercise is to provide constructive feedback as you develop and improve your techniques for interview and examination. The results of this examination will not be part of your final clerkship grade. However, if the overall assessment indicates that expectations for the exercise are not met, the exercise should be rescheduled during a fourth year rotation to assure the appropriate interview and examination skills have been acquired.

**Mid-Rotation Evaluation** Half way through the clerkship you will have a one on one meeting with the Clerkship Director to review your clerkship experience to date. This conference is designed for you to give feedback about the clerkship and how you are meeting your training objectives. It is also designed to give you feedback about your clinical performance to date. You will be given a questionnaire entitled “Mid-Rotation Evaluation and Review” (see Section V). Prior to your appointment with the Clerkship Director please complete the sections CLERKSHIP EXPERIENCES and SELF-ASSESSMENT. Also, be sure to bring your log book with the “First Half Summary” table completed so your patient care experiences can be reviewed with the Clerkship Director.
GRADING POLICY

You will be evaluated on your performance during ward and clinic rotations. The standards for the performance ratings are shown on the Clinical Rating form (see Section V, Evaluation Forms). The rating categories are:

- **Honors** 90-100  Consistently functions at or near the PGY-1 level
- **High Pass** 80-89  Consistently met & at times exceeded expectations
- **Pass** 70-79  Met expectations
- **Fail** <70  Failed to meet expectations

Your grade will be based on:

- The National Board of Medical Examiners (NBME) Medicine Subject Exam: **30%**
- Evaluations by faculty physicians and house staff using the Clinical Rating form: **70%**
- End of clerkship OSCE: Pass/Fail

IN-PATIENT WARD ROTATIONS

**Team Assignment**  You will have two four-week block assignments to an inpatient team. Each "team" is typically composed of a faculty attending, one senior medical resident (PGY-2), one or two interns (PGY-1), and one or two medical students - a total of four to seven persons. The student is a member of the team and participates actively in the care of assigned patients and may assist with the care of other team patients as needed.

**Ward Activities**  While on ward rotations, specific responsibilities and educational activities include Attending Rounds and Work Rounds. Bedside rounds tend to be management focused and patient oriented. This is where your learning can be most productive. This time should also be used to develop effective doctor-patient and doctor-doctor communication skills. Longer academic discussions that do not require the patient’s participation can usually be held in one of the conference rooms.

**The Rights of the Patient**  Please remember to respect the patient’s right for privacy and always show respect for your patients. Maintain patient confidentiality; discussion of patients should not occur in public areas, such as elevators and hallways. Make sure you are familiar with the federal regulations that provide national standards for security and privacy of patient information as given in The Health Insurance Portability and Accountability Act of 1996 (HIPAA). Under these rules the security and privacy of patient information must be protected. For example, when you print out lab values on your patient make sure you discard the printouts in a secure manner, typically in a collection container for papers that will be shredded.

**Patient Evaluations**  See your patients as soon as possible after they are assigned to you. Your completed evaluation should then be written up and, if time permits, reviewed with your resident or intern before presenting to your attending physician on rounds.

**Call**  During ward rotations you will be on call with your ward team for the purpose of working up new patients and to observe and participate in the care of acutely ill patients. The call system is similar although not identical at the various campuses. You should expect to work up two patients during most long call periods and one to two patients when on short call. You may remain in the hospital on
your “on-call” nights to participate in cross-coverage and acute care activities for the entire call period (on-call beds will be available). You are encouraged to stay overnight with your ward team for at least one or two long calls to become familiar with cross-coverage activities. However, residents are authorized to release students after patient care requirements have been met.

**History and Physical Examinations** Each student is expected to complete three to five written histories and physical examinations (H&Ps) per week and to present the patients to the attending. A suggested format for the written history and physical exam is provided in the Enclosures Section of this manual. Please note the comments on assessment and plan. You should define the problem list for each patient, starting with the presenting problem to include a differential diagnosis for this problem.

**Clerical Duties** Present your new patients to the attending physician on rounds the next day. Give the attending your write-up immediately after rounds and ask for comments, critique, compliments, or any feedback. Keep your logbook current. You should write progress notes on all of your patients daily. Use the problem-oriented format, e.g., SOAP notes, to provide a concise and informative style of documentation, rather than simply transcribe sets of laboratory values. Progress and procedure notes can be written under the supervision of the house staff. It’s OK to write orders relative to the work-up and therapy of your patients. However, do this under the direct supervision of your residents. These orders must be co-signed by the resident at the time they are written. Never sign your name to any order that you do not understand, and never order medications without knowing the purpose and the effects of such drugs.

**Patient Presentations** The presentation of the patient evaluation should be focused on effective interprofessional communication. A suggested guideline for presenting your patient on ward rounds entitled “33 things in 3 minutes” is also included in the Enclosures Section of this manual. This guideline should be followed when you present your patient unless your attending directs otherwise. **Please do not read from your detailed written H&P.** Using this guideline will help you focus on the key issues pertinent to the care of your patient and will also encourage you to identify clinical questions which need to be answered.

**LITERATURE, TEXTBOOKS, STUDY GUIDES, AND JOURNALS**

**Key Learning Sources** When you read about your patient you will likely find yourself challenged by the immense and continuously growing literature relevant to providing high quality care. You should become familiar with the key sources for obtaining updated information on issues relevant to the medical management of adult patients. We recommend that you obtain or have access to one of the standard textbooks of internal medicine (see below) as your basic resource for reading about patients you evaluate. We recommend you obtain one of the abbreviated textbooks listed below for use as a basic source for study that can be covered during the clerkship. Study guides such as *Blueprints in Medicine* are useful in providing an overview of subject areas before class and when reviewing for exams. You can use them for scanning your knowledge base to determine specific subject areas for more in-depth study. Do not use a study guide as a substitute for an abbreviated textbook. They have repeatedly not been shown to adequately address knowledge base needs when used alone. There are also collections of review questions that have been found to be very helpful in organizing your knowledge base. Use of one of these books, e.g., *PreTest Medicine* or *MKSAP for Students 3*, is highly recommended. In summary, it is recommended that you:

- Have a standard textbook available to read in depth about your patients.
Read your abbreviated textbook (Cecil Essentials of Medicine) to develop your knowledge base about internal medicine.

Use a study aid with many review questions such as PreTest Medicine or MKSAP for Students to help define and assess mastery of the core knowledge base requisite to internal medicine education in medical school.

Information Access  Textbooks are limited in terms of the scope and timeliness of information. To make sure that you are aware of new developments in medicine, try to regularly scan some of the key journals such as The New England Journal of Medicine, JAMA, etc. Consider performing a computerized literature search to find articles pertinent to a specific clinical question at least once a week. The National Library of Medicine (PubMed) at [http://ncbi.nlm.nih.gov/PubMed](http://ncbi.nlm.nih.gov/PubMed) is ideal for this. Bookmark this site on your PC and use it frequently.

Basic Textbooks

- Harrison’s Principles of Internal Medicine, 16th Ed. (McGraw-Hill, 2004). It is an excellent a basic reference for reading in depth about your patients during the clerkship. [www.harrisonsonline.com](http://www.harrisonsonline.com) $125.00
- Cecil Textbook of Medicine, 22nd Ed. 2506 pages. (Elsevier Science, 2003). Also an excellent textbook and source for reading about your patients. $125.00 at Barnes & Noble.com.

Abbreviated Textbooks

- Internal Medicine Clerkship Guide, 2nd edition, by Paauw, Burkholder, and Migeon (Mosby, 2003). Although titled as a guide, this is really a 635 page mini-textbook. Just published, it is designed to present core concepts of internal medicine in a brief format “to allow cover-to-cover reading during the medicine clerkship.” It is very well organized and is formatted around basic questions frequently asked during the care of internal medicine patients. A multiple-choice exam at the end of the guide is useful for exam preparation. [www.elsevierhealth.com](http://www.elsevierhealth.com) $29.95.
- The Osler Medical Handbook, first edition, edited by Cheng and Zaas (Mosby, 2003). The Osler Medical Housestaff at the Johns Hopkins Hospital and their faculty advisors developed this book as a team effort. Its purpose is “to improve on the practice of medicine for the benefit of all as Sir William Osler envisioned many years ago.” In most chapters the format includes the subheadings Fast Facts, Epidemiology, Clinical Presentation, Diagnostics, Management, Pearls and Pitfalls, and References. Included in the back are a 206 page formulary and a 34 page section called “Rapid References.” The price includes an 8 megabyte PDA package which promises to put it all at the point of decision. [www.elsevierhealth.com](http://www.elsevierhealth.com) $69.95.

Focused Textbooks and References

- Rapid Interpretation of EKG’s, 6th edition, by Dale Dubin, MD (COVER Publishing Company, 2000). This is the place to start to learn about EKG’s. It is an extremely well
thought out interactive text which makes axis, rhythm, blocks, infarcts make sense. Available in the Medical Library but you may want to consider getting a copy for your own library.

- *Felson’s Principles of Chest Roentgenology*, 2nd edition, by Lawrence Goodman MD (W.B. Saunders Company, 1999). An update of the original by Dr. Felson, this is a fun book to read that makes chest x-rays make sense. Again, available in the Medical Library but you may want to consider getting a copy for your own library.

**Study Guides**

- *Internal Medicine Essentials for Clerkship Students 2007-2008* has just been published as a cooperative effort by the American College of Physicians and the Clerkship Directors in Internal Medicine (the publishers of *MKSAP for Students*). It is organized around the major training problems that are included in the Core Medicine Clerkship Curriculum Guide (available at [www.im.org/CDIM](http://www.im.org/CDIM)). It is relatively brief (293 pages plus color plates) but offers an excellent and up to date summary of key internal medicine subjects.

- *Step-Up to Medicine* by Steven Agabegi, an orthopedic resident, and Elizabeth Derby, a hospitalist (Lippincott Williams & Wilkins, 2005) seems to be the current favorite among 3rd year students and recommended by 4th year students.

- *Case Files Internal Medicine* by Toy, Parlan, Cruse, and Faustinella (Lange Medical Books/McGraw-Hill, 2004) comes from the University of Texas-Houston and again has been found helpful by several students.


- *PreTest Medicine, 11th Edition* by Steven L. Berk, Marjorie R. Jenkins, William R. Davis, and Robert S. Urban. This is one of the most frequently used set of test questions used by our students. Most students recommend it. Has 500 USMLE-type (vignette style) questions with answers and explanations. [books.mcgraw-hill.com](http://books.mcgraw-hill.com) $24.95

- *MKSAP for Students 3* developed by American College of Physicians and Clerkship Directors in Internal Medicine. Includes CD-ROM. This is the 3rd edition of the *MKSAP for Students*. MKSAP stands for Medical Knowledge Self-Assessment Program. This is the 2006 edition with all new questions plus added ECG and color dermatology questions. Several students here have used the previous 2nd edition and recommended it highly. An excellent printed and electronic collection of patient centered self-assessment questions and their answers. Available from American College of Physicians [www.acponline.org](http://www.acponline.org) for $44.50 or call 800-523-1546, ext 2600. Ask for product code 190350010.

- *101 Biggest Mistakes 3rd Year Medical Students Make and How to Avoid Them* by Samir Desai, Assistant Professor of Medicine at Baylor College of Medicine (MD2B, 2003). Excellent guidance with lots of common sense advice about how to have a successful clerkship rotation. Although it sounds like a negative approach, it helps to focus on some of the dumb things everyone does at one time or another and how to avoid them. It also
includes a sprinkling of “Success tips” which provide a positive approach to doing well. Available at http://www.MD2B.net for $19.95.

**Journals**

- *Annals of Internal Medicine* www.acponline.org
- *Archives of Internal Medicine* www.ama-assn.org/internal
- *Lancet* www.thelancet.com
- *British Medical Journal* Free access to entire journal www.bmj.org

**Concluding Thoughts**

**THE FOCUS:**

“In what may be called the natural method of teaching the student begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end.”

(Quoted from William Osler, in his address entitled “The Hospital as a College,” given to the Academy of Medicine, New York in 1903, and reprinted in his book Aequanimitas, with Other Addresses.)

**THE VALUE OF THE LIBRARY:**

“To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all.”

(Quoted from William Osler, in his address entitled “Books and Men,” given at the dedication of the new Boston Medical Library in 1901, and reprinted in his book Aequanimitas, with Other Addresses.)

**THE FORMULA FOR LEARNING:** \( WD_{LB} + LU_{BB} = K \)

If you **Write it Down in the Little Book,** then **Look it Up in the Big Book,** your **Knowledge will grow.**


**THE SOURCE:**

- Learning by: Didactics, Observation, and Participation
- The ultimate source: **THE PATIENT**

The Clerkship Directors in Internal Medicine wish you a positive, productive, and enjoyable clerkship experience!

- Amarillo: Steven Urban, MD, FACP
- El Paso: Harry E. Davis II, MD, FACP
- Lubbock: Robert Neilson, MD
GENERAL

Duration. The clerkship in Internal Medicine at the Texas Tech University Health Sciences Center (TTUHSC) - Regional Academic Health Center (RAHC), El Paso, is a fast paced 8-week patient centered experience. The clerkship is divided into three activities: inpatient ward rotations, a weekly ambulatory patient experience in the Internal Medicine Continuity Clinic, and core curriculum classes and conferences throughout the clerkship. The inpatient ward rotations are divided into blocks of four weeks duration. Each ward rotation ends on the last Friday of each rotation. Students will then be off until starting the next ward rotation the following Monday morning. During these rotations you will be assigned to a ward team at Thomason Hospital or William Beaumont Army Medical Center (WBAMC). All continuity clinics are scheduled in the TTUHSC Clinic Building. Assignment schedules for medical students are published for the entire 8 week clerkship and updated as needed. The Department of Internal Medicine On-Call Schedule is published monthly and gives the ward team assignments and call schedule. Teams are on long call (overnight) every 5 days at Thomason and every 4 to 5 days at WBAMC. You can expect 9 to 10 long calls during the 2 ward rotation blocks. Clerkship ward duties end by 5 pm on Tuesday of week 8. An end of clerkship Objective Structured Clinical Examination (OSCE) will be given on the last Wednesday or Thursday and the final written (NBME) exam on the last Friday of the clerkship rotation.

Absences. If you find you will be late or absent from any clerkship duties, call Virginia Pacheco in the Resident/Clerkship Office at (915) 545-6626 ext. 227 as soon as possible (not later than 8:30 am preferably). If Virginia is not available, call Josie Guardado in the same office at 545-6626 ext. 248. In addition to notifying Virginia, please notify your Ward Attending AND Senior Resident. If you are unable to attend a scheduled continuity clinic at TTUHSC, call Tracy Acosta, the Clinic Coordinator at 545-6626 ext. 272. At WBAMC, call the Medical Education Coordinator in the Office of Graduate Medical Education, at 569-3243 for any absences. Back ups for this at WBAMC are Dr. Kevin Akers, the Chief Medical Resident via pager (call 569-1277, then pager #3002), Kathy Leonard (Coordinator for Graduate Medical Education) at 569-2521, Linda Palomarez, the Medical Education Coordinator in the Department of Medicine at 569-2180, or Dr. (MAJ) C. Rebecca Sherer, the WBAMC Site Coordinator for Clerkship Rotations at 569-2504. And please don’t forget, the guidelines for years 3 and 4 (see your TTUHSC School of Medicine Student Handbook) require there be no unexcused absences during clerkships. Any absence must be reported to the Clerkship Director and a Student Absence Form filled out (see Enclosures section of this manual).

IN-PATIENT WARD ROTATIONS

Ward Activities. While on ward rotations, specific responsibilities and educational activities include attending rounds and work rounds. Work rounds typically take place between 6:30 and 7:30 a.m. daily at both Thomason General Hospital and WBAMC. Teaching/attending rounds are usually scheduled in the morning from 9:00 a.m. to 11:30 a.m. on most days, but this may vary according to the schedule of the attending physician. Teaching/attending rounds tend to be at the bedside and patient focused. They will address many issues including the interpretation of clinical findings and management of patient problems. Stay alert and involved in the discussion of each patient (whether you are personally following the patient or not). This is where your learning can be most productive. This time should also be used to develop effective doctor-patient and doctor-doctor communication skills. Longer academic discussions that do not require the patient’s participation may be held in one of the conference rooms.

Patient Evaluations. See your patients as soon as possible after they are assigned to you. Your completed evaluation should then be written up using the format in the Enclosures section and, if time permits, reviewed with your resident or intern before presenting to your attending physician on rounds. Remember to use the “33 things in 3 minutes” format for the oral presentation, though, and not the complete H&P write-up.
Call. During ward rotations you will be on call with your ward team for the purpose of working up new patients and to observe and participate in the care of acutely ill patients. During the week, on-call duties at Thomason Hospital are divided into “Short Call” from 7 am to 3 pm and “Long Call” from 3 pm to 7 am the next morning. On weekends, there is an abbreviated Short Call on the weekends. The Long Call Team usually takes patient calls after 11 am. You are not required to be available for weekend Short Call (but you’re always welcome.) You are required to be present for long call and post long call rounds on weekends during the four-week ward rotation. The on-call system is similar although not identical at WBAMC. You should expect to work up two patients during most long call periods and one to two patients when on short call. You may remain in the hospital during on-call nights to participate in cross-coverage, practice in doing procedures, and acute care activities for the entire call period (on-call beds will be available). I recommend spending at least one or two overnights to become familiar with on call and cross-coverage activities. There is no extra charge for this educational opportunity; it is covered in your tuition. However, residents are authorized to release students after patient care and educational requirements have been met (to include completion of a minimum of two patient evaluations).

History and Physical Examinations. Each student is expected to do three to five beautifully completed written histories and physical examinations (H&Ps) per week and to present these patients to the attending. The format for the written history and physical exam is provided in the Enclosures Section of this manual. Please note the comments on “assessment and plan.” You should define the problem list for each patient, starting with the presenting problem. Be sure to include a differential diagnosis for this problem. Also, the yellow H&P form used on the wards at Thomason Hospital is for resident use only. It was designed to capture billing information and is not adequate for the student H&P write up. Instead, your complete H&P should be written up on the blue Progress Record sheets and placed in the H&P section of the chart or as directed by your attending. One copy of a reviewed/graded (by your attending) H&P should be turned in to the Clerkship Office each week for filing in your clerkship portfolio.

Procedure Training. During the Internal Medicine Clerkship you will likely have opportunities to develop your skills in performing basic clinical procedures such as venipuncture, blood culture, arterial blood gas, electrocardiogram, nasogastric intubation, urethral catheterization, peripheral intravenous catheter insertion, throat culture, and digital rectal examination. Training for arterial blood gases is conducted by Respiratory Therapy and will include a preliminary didactic session to cover the basics of obtaining an arterial specimen. Development of skill in performance of rectal exams will be supervised by Internal Medicine Residents during clinic and ward rotations.

CONTINUITY CLINIC

Ambulatory Medicine Clinics include Internal Medicine Resident Continuity Clinics and Faculty Clinics. They are held in the General Internal Medicine Clinic located on the second floor of the Clinic Building (TTUHSC Medical Center). During your Internal Medicine Clerkship you will be assigned to a continuity clinic with a second year Internal Medicine Resident or to a faculty clinic with one of the internists from the Division of General Internal Medicine. In this ambulatory setting, you will continue in your role as clinical clerk by working with the resident or faculty and assisting with the evaluation of patients.

Clinical Duties. In most cases, your duties will be very similar to those on the general medicine wards and will entail obtaining histories, performing physical exams, and performing the usual reporter, interpreter, and manager functions of the clinical clerk. When permitted by patient schedules, students will have an opportunity to see some patients first. In these cases the student will perform an initial evaluation independently, draft plans for further diagnosis or therapy, and then review the evaluation and plans with the resident or faculty. The student will thus have an opportunity to develop and practice
focused patient evaluation skills in a supervised environment. All patients seen by medical students are presented to the attending or to the resident to whom the patient is scheduled to see. You should document the patients' visits in the problem-oriented format and update the problem and medication lists as needed. History and physical findings pertinent to patient's problems should be described and the results of pre-visit laboratory studies, X-rays, and procedures checked and included in the visit note. Make sure all entries are dated and the author and patient are identified. Clinic patient visit notes should be written using the SOAP format. See “MS III Guidelines: The Continuity Clinic” in the enclosures section of this manual for complete details. One copy of a reviewed clinic patient visit note (signed by you and the reviewer) should be turned in to the Clerkship Office each week after your continuity clinic for filing in your clerkship portfolio.

CORE CURRICULUM CLASSES AND CONFERENCES

Scheduled conferences. Morning report is held weekdays at 7:30 am in Room 212 at TTUHSC or at 7:45 am in the Clinic Assembly Room at WBAMC Room. While at TTUHSC, a separate morning report will be scheduled for third year students on Tuesday mornings at 7:30 am in Room 211. Core classes are scheduled on Monday afternoons from 1:10 to 4:00 and Friday afternoons from 1:10 to 3:00. Check your student class schedule for topics, time and location.

- At TTUHSC resident conferences are held at noon.
- At WBAMC resident conferences are scheduled Monday through Thursday morning (0815-0900). Medical Grand Rounds are on Friday at 11:00 am.

Attendance. You are expected to attend morning report daily (unless your team is making post-long call rounds with your attending at that time), medical student core curriculum classes, and selected noon conferences (specifically, Morbidity and Mortality Conference, Medical Grand Rounds, and Performance Improvement Conferences). To permit more discretionary time for study, many noon lectures are optional. However, attendance should be considered, as the subject matter tends to have significant educational potential. Keep your eye on the schedule for Journal Club presentations by residents. A copy of the article to be discussed will be placed in your distribution box in the Department of Internal Medicine. If you don’t get one just let Virginia know. If you do attend a noon conference, your active participation in the conference with questions or comments is welcome.

STUDENT PORTFOLIO

A Student Portfolio for each student is maintained in the Clerkship Office and can be viewed by the student at any time during the clerkship. Note that you have two write-ups to turn in each week.

Portfolio Contents include the following:

- Clinic patient notes (at least one from each weekly continuity clinic session)
- Copies of inpatient history and physical exam write-ups that have been reviewed/graded by the attending (at least one H&P turned in each week).
- Blood gas training certification
- Evidence-Based Medicine search report
- OSCE documents
- Ward evaluations
- Mid-rotation review comments
- Observed H&P exercise report
- Approved absence forms
- Patient logbook (turned in at end of clerkship)
Conclusion

I wish you a positive, productive, and enjoyable clerkship experience. If at any time you have any questions or suggestions, please do not hesitate to contact Virginia Pacheco in the Residency/Clerkship Office (Room 125, 545-6626 ext. 227).

If Virginia is not available, call Josie Guardado, also in the Residency/Clerkship Office (545-6626 ext. 248) or Lydia Espinoza, Director of Academic Programs (Room 134, 545-6626, Ext 252), or me at anytime.

Harry E. Davis II, MD, FACP
Associate Professor of Medicine
Clerkship Director, Department of Internal Medicine
Office: Room 130, TTUHSC, El Paso. Phone (915) 545-6626, Ext 263.
Home: (915) 833-3889. Cell: (915) 525-1642
Pager: (915) 663-1145/FAX: (915) 545-6634
Email: harry.davis@ttuhsc.edu
ATTENDING EVALUATION FORM  
Department of Internal Medicine

<table>
<thead>
<tr>
<th>Attending: ___________________________</th>
<th>Rotation Dates: ___________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service: Ward ____ Elective_____ Clinic ____ Other (specify) ______</td>
<td></td>
</tr>
</tbody>
</table>

Your support is requested by completing this evaluation form to help us improve our educational effectiveness. Thanks for taking your time to provide this information.

**Teaching techniques**

<table>
<thead>
<tr>
<th></th>
<th>UNSATISFACTORY</th>
<th>SATISFACTORY</th>
<th>SUPERIOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall interest in teaching</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>2. Knowledge of subject matter</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>3. Discusses pathophysiology of disease</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>4. Interested in patients as individuals</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>5. Emphasis cost-effectiveness</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
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</table>

**Learning enhancement**

<table>
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<tbody>
<tr>
<td>1. Encourages questions and discussions</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
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<tr>
<td>2. Makes himself/herself readily available</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
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<tr>
<td>3. Seems to enjoy teaching</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>4. Discusses patients with students</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>5. Values student opinions</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
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**Attending methods**

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<th>SATISFACTORY</th>
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<tbody>
<tr>
<td>1. Provides appropriate and effective feedback</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
</tr>
<tr>
<td>2. Provides a good role-model of a physician/clinician</td>
<td>1 2 3</td>
<td>4 5 6</td>
<td>7 8 9</td>
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</table>

**OVERALL RANKING**

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<td>1 2 3</td>
<td>4 5 6</td>
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</table>

What were the strengths of this faculty member?

What were the weaknesses of this faculty member?

General comments:

Attending Evaluation Form 042803
TEXAS TECH UNIVERSITY SCHOOL OF MEDICINE
CLINICAL RATING FORM

Department of Internal Medicine    Campus: Amarillo    El Paso    Lubbock    Rating Period ________________

Student ___________________________    Evaluator _________________________

Type of contact with student:    Attending_______ Resident ________    Clerkship    Subinternship    Elective

Please rate how this student-physician has performed with respect to each of the criteria below and place a NUMERIC score in the box:

90-100 Honors    Consistently functions at or near the PGY-1 level
80-89 High Pass    Consistently met & frequently exceeded expectations
70-79 Pass    Met expectations
<70 Fail    Failed to meet expectations

If you are unable to assess a specific performance objective or it doesn’t apply, enter (CA) Cannot Assess or (NA) Not applicable.

<table>
<thead>
<tr>
<th>SCORE</th>
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<tr>
<td>FUND OF KNOWLEDGE—applies broad base of pertinent information to explain/analyze cases, shows understanding of issues relevant to patient problems, responds intelligently to questioning, etc. (Optional category for Resident Evaluators)</td>
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<tr>
<td>HISTORY AND INTERVIEWING SKILLS—establishes rapport with patients, demonstrates mastery of technical skills, makes adjustments in format appropriate to the circumstances, elicits information sufficient for differential diagnosis and management plan, etc.</td>
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<tr>
<td>PATIENT EXAM SKILLS—approaches each case with a clear sense of organization, completes each phase of the exam with sufficient thoroughness, shows understanding/appreciation of significant findings, etc. (Optional category for Attending Evaluators)</td>
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<tr>
<td>ORAL AND WRITTEN PRESENTATIONS—presents findings in an organized format, covers major headings, notes significant findings from the H&amp;P, offers appropriate differential diagnosis and management plan, etc.</td>
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<tr>
<td>PROBLEM-SOLVING, JUDGEMENT—identifies appropriate questions/issues regarding diagnosis and management, develops a logical approach to clinical problems, etc.</td>
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<tr>
<td>STAFF/PEER INTERACTIONS—elicits cooperation of other health care professionals, participates fully in providing patient care, accepts feedback from faculty/residents, etc.</td>
</tr>
<tr>
<td>INTERACTIONS WITH PATIENTS—conveys empathy, develops a relationship with the patient consistent with the professional role, provides explanations to patients in a respectful, knowledgeable manner, etc.</td>
</tr>
<tr>
<td>PROFESSIONAL BEHAVIOR—appears professionally dressed and groomed when on duty, demonstrates professional demeanor in interactions with patients and staff, completes clinical and academic assignments in a timely fashion, etc.</td>
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</table>

OVERALL RATING: ___________________________ (Honors, High Pass, etc.)    SCORE : __________

NARRATIVE COMMENTS: Address strengths, weaknesses, and deficiencies. Please provide comments regarding the development status of RME skills, i.e., Reporter, Interpreter, Manager, Educator. NOTE: “Honors” and “Fail” grades must be specifically addressed in the narrative comments section below or on back as needed

Evaluation was verbally reviewed and discussed with student    Yes ☐ No ☐ DATE: ___________

SIGNATURES:    Student ___________________________    Supervisor ___________________________
Department of Internal Medicine
Mid-Rotation Evaluation and Review

Student name: _____________________    Date: _____________________

For completion by student prior to mid-rotation meeting with clerkship director:

CLERKSHIP EXPERIENCES: (feedback from student about the clerkship)

• Positive (reinforcing): what is being done well and should be continued:

• Negative (corrective): what is not being done very well, or should be improved:

SELF-ASSESSMENT: (student’s assessment of his/her own performance as a physician, at this point in his/her training)

• Strengths: things you are doing well:

• Areas for improvement: things you would like to work on at this point in training:

For completion by Clerkship Director at mid-rotation meeting:

OBSERVATIONS: (feedback to student from evaluations, observations, logbook analysis)

• Reinforcing (good, keep):

• Corrective (improvement possible):

• Suggestions for “next step”

Clerkship Director Signature    Date    Student Signature    Date

MidRotationEvalFm062105
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<th>Name</th>
<th>Well Organized</th>
<th>Encouraged for learning</th>
<th>Enthusiasm for teaching</th>
<th>Class objectives met</th>
<th>Clear explanations</th>
<th>Recommended reading valuable</th>
<th>Acceptable pace</th>
<th>Overall effectiveness as a teacher</th>
<th>What were the best aspects of the class and why?</th>
<th>In what way could the class be improved?</th>
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</table>
Use reverse side for any additional comments

Thanks very much for your assistance.
ENCLOSURES
Presentation Format for New Patients

“33 things in 3 minutes*”

1. The patient’s name.
2. The patient’s age.
3. The patient’s gender.
4. When the patient was admitted.
5. The chief complaint(s) that led to admission. For each complaint, mention the following:
   6. Where in the body it is located.
   7. Its quality.
   8. Its quantity, intensity and degree of impairment.
10. Its setting: under what circumstances did/does it occur.
11. Any aggravating or alleviating factors.
13. Whether a similar complaint had happened previously. If so:
   14. How it was investigated.
   15. What the patient was told about its cause.
   16. How the patient been treated for it.
17. Pertinent past history of other conditions that are either of prognostic significance or would affect the evaluation or treatment of the chief complaint.
18. And how those other conditions have been treated.
19. Family history, if pertinent to chief complaint of hospital care.
20. Social history, if pertinent to chief complaint or hospital care.
21. Their:
   a. Ideas (what they think is wrong with them)
   b. Concerns (about their illness, and other issues)
   c. Expectations (of what’s going to happen to and for them).
22. Their condition on admission:
   a. Acutely and/or chronically ill
   b. Severity
   c. Requesting what sort of help
23. The pertinent physical findings on admission.
24. The pertinent diagnostic test results.
25. Your concise, one-sentence problem synthesis.
26. What you think the most likely diagnosis is.
27. And the other items in your differential diagnosis.
28. Any further diagnostic studies you plan to carry out.
29. Your estimate of the patient’s prognosis.
30. Your treatment plans.
31. How you will monitor the treatment.
32. And what you will do if the patient doesn’t respond to the treatment.
33. The educational prescription you would like to write for yourself in order to better understand the patient’s disorder (“background” knowledge) in order to become a better clinician.
Rx Educational Prescription

Patient’s Name: _________________________ Learner: _________________________

3-part Clinical Question

Target Disorder: _________________________

Intervention (+/- comparison): _________________________

Outcome: _________________________

Date and place to be filled: _________________________

Presentations will cover:
1. search strategy;
2. search results;
3. the validity of this evidence;
4. the importance of this valid evidence;
5. can this valid, important evidence be applied to your patient;
6. your evaluation of this process

Presentation Format for New Patients

“33 things in 3 minutes*”

1. The patient’s name.
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Rx Educational Prescription

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3-part Clinical Question

Target Disorder: ___________________________

Intervention (+/- comparison): ___________________________

Outcome: ___________________________

Date and place to be filled: ___________________________

Presentations will cover:
1. search strategy;
2. search results;
3. the validity of this evidence;
4. the importance of this valid evidence;
5. can this valid, important evidence be applied to your patient;
6. your evaluation of this process

In keeping with the accreditation standards of the Liaison Committee on Medical Education, the objectives for clinical education must include quantified criteria for the types of patients, the level of student responsibility, and the appropriate clinical settings needed for the objectives to be met. To comply with these requirements and permit a review of your patient experience, a log of all patients evaluated should be maintained and kept current throughout the clerkship. Keep this in your white coat pocket. As soon as you get a patient assigned, enter this in your logbook. List all patients who you have evaluated and indicate the extent of your interaction (Levels I, II, or III, see below) as well as the location of the interaction (e.g., hospital or clinic).

The log entry for each patient should indicate: the patient's initials, age, sex, medical record number, date of encounter, primary and secondary diagnoses, level of interaction, and place of encounter.

The primary diagnosis is usually the problem for which the patient was admitted. It can be stated as a problem, e.g., chest pain, or as a diagnosis, e.g., non-ST segment elevation MI, depending on the information available. Listed under secondary diagnosis should be other active problems which require specific attention, e.g., diabetes, hypertension, etc.

Under L indicate the level of your interaction with the patient: I=performed and recorded H&P; II=limited encounter, e.g., office visit or daily ward visit and note written; III=performed or assisted with a procedure. Under P indicate the place or location of the encounter: H=hospital; C=clinic or private office.

The logbook provides a means of monitoring the scope and diversity of your learning experience and is part of the record of your clerkship performance. It is to be turned in to the Clerkship Office in the Department of Internal Medicine no later than the last working day of the clerkship.
Patient Logbook Review

As you go through your rotation, you should keep this logbook current and review it frequently with your ward and clinic attendings and residents. While there are no specific maximum numbers of patients for each category, you should aim for a reasonably balanced distribution and have at least one patient in each category as shown on the Master Data Collection Key. This will compliment your core curriculum classes and facilitate development of your Internal Medicine fund of knowledge.

In general, you should average at least three to four patients per week. Thus, you will be able to evaluate 24 or more patients during an 8-week medicine clerkship, or 12 or more patients during a subinternship.

The patient logbook will be reviewed during the mid-rotation evaluation (for MSIIIs) and at the end of the rotation (for both MSIIIs and MSIVs). Before your scheduled evaluation, use the following table to record the number of diagnoses or problems seen (there may be more than one per patient). For an explanation of the disease categories, see the Master Data Collection Key.

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<tr>
<th>Diagnosis Group</th>
<th>Tabulation</th>
<th>Total</th>
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<tr>
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<td>TOTAL</td>
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</table>

Clerkship Director Comments

I have reviewed the student’s log book during the mid-rotation evaluation and recommend the following:

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

Clerkship Director Signature Date

I have reviewed the student’s log book at the end of the rotation. Deficiencies have been identified and remedied in the following ways:

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

Clerkship Director Signature Date
<table>
<thead>
<tr>
<th>PT. INITIALS</th>
<th>AGE/SEX</th>
<th>MED.RECORD#</th>
<th>DATE</th>
<th>PRIMARY DIAGNOSIS</th>
<th>SECONDARY DIAGNOSIS</th>
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<th>PT. INITIALS</th>
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<th>DATE</th>
<th>PRIMARY DIAGNOSIS</th>
<th>SECONDARY DIAGNOSIS</th>
<th>L</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
## Master Data Collection Key

**Internal Medicine Patient Log Book Diagnosis Groups**

Applicable to Patients Seen by Clinical Clerks in Amarillo, El Paso, and Lubbock

(Note: Diagnostic Groups are listed in bold followed by abbreviations used on charts)

<table>
<thead>
<tr>
<th>Cardiovascular CV</th>
<th>Cardiac Pain (including CAD/MI)</th>
<th>Diabetes ENDO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHF</td>
<td>DKA</td>
</tr>
<tr>
<td></td>
<td>Arrhythmia</td>
<td>Thyroid disease</td>
</tr>
<tr>
<td></td>
<td>Hypertension</td>
<td>Adrenal disease</td>
</tr>
<tr>
<td></td>
<td>Shock</td>
<td>Other (specify)</td>
</tr>
<tr>
<td></td>
<td>Thrombophlebitis/DVT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Endocrine ENDO</th>
<th>Diabetes ENDO</th>
<th>DKA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thyroid disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adrenal disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
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<table>
<thead>
<tr>
<th>Respiratory RESP</th>
<th>COPD (including acute exacerbation)</th>
<th>Arthritis RHEUM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Asthma</td>
<td>Vasculitis</td>
</tr>
<tr>
<td></td>
<td>Pneumonia</td>
<td>Lupus/SLE</td>
</tr>
<tr>
<td></td>
<td>Pulmonary embolus</td>
<td>Other (specify)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Rheumatology RHEUM</th>
<th>Arthritis</th>
<th>Vasculitis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lupus/SLE</td>
<td>Other (specify)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Renal/Genitourinary Disease RENAL</th>
<th>ARF</th>
<th>Anemia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CRF</td>
<td>Thrombocytopenia</td>
</tr>
<tr>
<td></td>
<td>Transplant</td>
<td>Coagulopathy</td>
</tr>
<tr>
<td></td>
<td>Stone</td>
<td>Other (specify)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hematology/Oncology HEM/ONC</th>
<th>Anemia</th>
<th>Thrombocytopenia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ARF</td>
<td>Coagulopathy</td>
</tr>
<tr>
<td></td>
<td>CRF</td>
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<table>
<thead>
<tr>
<th>Infectious Diseases ID</th>
<th>AIDS</th>
<th>Stroke/CVA</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sepsis</td>
<td>Syncope/Dizziness</td>
</tr>
<tr>
<td></td>
<td>UTI/Urosepsis</td>
<td>Epilepsy</td>
</tr>
<tr>
<td></td>
<td>Cellulitis</td>
<td>Drug overdose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neurology NEURO</th>
<th>Stroke/CVA</th>
<th>Syncope/Dizziness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Epilepsy</td>
<td>Drug overdose</td>
</tr>
<tr>
<td></td>
<td>Other (specify)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gastrointestinal GI</th>
<th>G.I. Bleed (upper or lower)</th>
<th>Drug problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Diarrhea (any cause)</td>
<td>Dermatological problem</td>
</tr>
<tr>
<td></td>
<td>Liver disease</td>
<td>Psychiatric problem</td>
</tr>
<tr>
<td></td>
<td>Pancreatitis</td>
<td>Alcohol problem</td>
</tr>
<tr>
<td></td>
<td>Ascites</td>
<td>Pain</td>
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</table>

<table>
<thead>
<tr>
<th>General areas GEN</th>
<th>Drug problem</th>
<th>Dermatological problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Psychiatric problem</td>
<td>Pain</td>
</tr>
<tr>
<td></td>
<td>Alcohol problem</td>
<td>Testing/Diagnostic evaluation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other (specify)</th>
<th>Drug problem</th>
<th>Dermatological problem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Psychiatric problem</td>
<td>Pain</td>
</tr>
<tr>
<td></td>
<td>Alcohol problem</td>
<td>Testing/Diagnostic evaluation</td>
</tr>
</tbody>
</table>

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**Developed by the Clerkship Directors in Internal Medicine:**

- Steven Urban, MD, FACP - Amarillo
- Robert Neilson, MD - Lubbock
- Harry Davis II, MD, FACP - El Paso

Revised June 5, 2006
Guidelines for History and Physical Examination Write-Ups

Department of Internal Medicine
Texas Tech University Health Sciences Center

Amarillo       El Paso       Lubbock

The following guidelines provide a basic format for writing up the history and physical examination findings of your patient. The most important parts of the write-up are the history of present illness and the assessment/plan at the end of the write-up. The latter should address the patient’s primary problem and give a differential diagnosis with a plan for evaluation and therapy. The plan should indicate your strategy for determining the actual diagnosis and show how you will manage the various diagnostic possibilities. The first item in the plan/assessment section should include the differential diagnosis with the most likely diagnosis first.

1. **Identifying Information**
   - Your name
   - Date patient seen
   - Patient’s name
   - Patient’s age, DOB, sex
   - Date of Admission
   - Source of information

2. **Chief Complaint**
   (The main reason patient came to the hospital, usually given with duration. The chief complaint may be given using the patient’s own words.) For example: “Chest pain of four hours duration.”

3. **History of Present Illness**
   Begin at the beginning or onset of the problem (using the date of admission [DOA] as point of reference). For example, “The patient is a 48 year old male with a history of diabetes and hypertension who noted the sudden onset of substernal chest pressure 4 hours prior to admission….” Then, proceed to describe the course of the present illness up to the day or time of admission, giving the setting in which it developed, its manifestations, and any treatment. Describe in terms of (1) location, (2) quality, (3) quantity or severity, (4) timing (e.g., onset, duration, and frequency), (5) the setting in which they occur, (6) factors that have aggravated or relieved them, and (7) associated manifestations. Also note pertinent negative (to aid in differential diagnosis).

4. **Past Medical History**
   Include adult illnesses, hospitalizations, surgery, trauma. Current medications should be listed. This can be given separately or with the illness the drug is used for. Please try to give generic name (but can include the trade name) with strength, dose, and schedule. You need to know all medications and why each is given, including herbals/OTC and supplements.

5. **Family History**
   - Age and health of parents, siblings, children
   - Age and cause of death of grandparents, other close relatives
   - Hereditary of familial diseases
6. Social History
   Personal background
   Family relations, marital status, previous marriages, divorces
   Education, occupation, employment status, sexual habits
   Social “habits” (tobacco, alcohol, illicit drugs)

7. Review of Systems
   General (weight change, appetite, fatigues, sleep, fever, chills)
   Information given in HPI need not be repeated. Simply state “see HPI”
   System specific positives and negatives as needed. Consider skin, head, eyes, ears, nose, mouth,
   throat, respiratory, cardiovascular, gastrointestinal, genitourinary, gynecological, endocrine,
   musculoskeletal, skin, lymphatic, and neuropsychiatric areas.

8. Physical Examination
   Appearance (age, sex, build, grooming, comfort)
   Vital signs (BP, pulse, respiratory rate, temperature, height, weight, body mass index/BMI)
   Skin, hair, nails (rashes, scars, capillary refill in seconds)
   Head (bruises, masses, other evidence of trauma)
   Eyes (pupil shape, reaction to light and accommodation, extra ocular movements, visual fields
   and acuity, fundus evaluation for papilledema, arteriovenous nicking, hemorrhages, exudates,
   scleral icterus, ptosis)
   Ears (acuity, tympanic membranes)
   Mouth and Throat (mucous membrane color and moisture, oral lesions, dentition, pharynx,
   tonsils)
   Neck (jugular venous distention typically at 45 degree incline, thyromegaly, lymph nodes,
   masses, bruits, abdominojugular reflex)
   Chest/legs (expansion, fremitus, percussion, auscultation, rhonchi, crackles, rubs, breath
   sounds, egophony, whispering pectoriloquy)
   Cardiovascular (rate, rhythm, point of maximal impulse in sitting position, thrills, S1, S2, S3, S4,
   murmurs graded 1-6, pulses graded 0-2+)
   Breasts (symmetry, tenderness, lumps, nipple discharge, dimpling)
   Abdomen (contour, scars, bowel sounds, bruits, tenderness, masses, liver span, hepatomegaly,
   splenomegaly, guarding, rebound, costovertebral angle tenderness, suprapubic tenderness)
   Genitalia (skin lesions, inguinal masses, hernias, scrotum, testes)
   Rectal (sphincter tone, masses, fissures, stool color, consistency, occult blood test, prostate
   nodules, tenderness, size)
   Extremities Include musculoskeletal evaluation, cyanosis, clubbing, edema graded 0-4+, pulses,
   varicosities
   Neurological Mental status (give mini-mental status exam results if appropriate), cranial nerves,
   gait, motor (strength graded 0-5), sensation, deep tendon reflexes, Romberg test

9. Laboratory data
   Include initial laboratory, x-ray, electrocardiogram, and related objective information.
10. Assessment/Plan
At this point you should define the problem list.
Start with the presenting problem that led to the patient’s hospital visit and admission
Give the most specific name that can be substantiated at the time of admission, e.g., acute right upper quadrant abdominal pain. Then give a differential diagnosis listing at least three or more specific disease entities that could be the cause of the problem (remember the USMLE Step 2CS requires five). Begin with what you think is the most likely diagnosis and your plan to evaluate and treat the problem.

For example:

#1 48-year-old male presenting with chest pain of 4 hours duration.
DDx:

1. Acute coronary syndrome:
   - Serial ECGs
   - Serial troponins
   - Aspirin 325 mg po
   - Morphine 2-4 mg iv q 2 h prn pain
   - Oxygen 2L/min by nasal catheter
   - Metoprolol 50 mg po q 12 h

2. Pneumothorax
   - Chest x-ray

3. Pulmonary embolus
   - Lower extremity doppler study if above studies inconclusive.

4. Pericarditis
   - Follow ECGs
   - Consider echocardiogram

5. GERD
   - Maalox 30 mL po q2h prn

Next, list the remainder of the active problems. Indicate a diagnostic and/or therapeutic plan for each problem. Be sure to check the medication list in your history. All medications in your plan should address an item on the problem list.

For example:

#2 Diabetes mellitus type 2
   - 1800 cal DASH diet
   - Check capillary glucose qid: ac and hs
   - Give supplemental regular insulin for preprandial hyperglycemia according to correction algorithm.

#3 Hypertension
   - Continue HCTZ 12.5 mg po daily

#4 Etc (listing all active problems and your plan for their management)

11. Documentation
Your signature and stamped name should be placed at the end of the write-up. Each page should have the date and time of the write-up and your signature.
MS III Guidelines: The Continuity Clinic

Effective July 10, 2006

These guidelines describe the role of the medical student in the Internal Medicine Resident or Faculty Continuity Clinic during the Internal Medicine Clerkship. The Resident Clinic provides supervised ambulatory continuing patient care experience for residents in Internal Medicine as specified in ACGME Program Requirements. The Faculty Clinics similarly provide scheduled primary care ambulatory patient appointments. During the third year Internal Medicine Clerkship, the student will be assigned to the Continuity Clinic of a Resident or Faculty member one afternoon each week to assist with the evaluation and management of patients.

These guidelines address the following Continuity Clinic questions and issues:

- Why are students assigned to a continuity clinic?
- What is the first question to ask when handed the chart of a patient scheduled to see your assigned resident or faculty physician?
- How do you approach the evaluation of a patient new to the clinic?
- How do you approach the evaluation of a patient new to you but not to the clinic (an established patient)?
- How do you document your patient evaluation?
- What is a “BP Check” and how do you respond?
- What is a “Lab Check” and how do you respond?
- When and how do you address health maintenance and disease prevention?
- How do you write prescriptions?
- How do you manage your time in the clinic?

Why are you assigned to a continuity clinic?

In this ambulatory setting, students will contribute in their role as clinical clerks by working with the resident or faculty and assisting with the evaluation of patients. As permitted by patient schedules, students will have an opportunity to see some patients first. In these cases the student will perform an initial evaluation independently, draft plans for further diagnosis or therapy, and then review the evaluation and plans with the resident or faculty. The student will thus have an opportunity to develop and practice focused patient evaluation skills in a supervised environment.

What are first steps to take when handed the chart of a patient scheduled to see your resident or faculty?

1. Determine why this patient is here today, e.g., for a scheduled follow up visit (check the last visit note), for a new patient visit, or evaluation of a new problem in a returning patient.
2. Review the problem list and medication list. At the end of the visit you should try to validate or correct these based on your patient evaluation and review of the medications with the patient.
3. Read the note of the last visit carefully to determine the patient’s condition and any evaluation or therapeutic plans that need follow up.
4. If diagnostic studies were planned check to see if the results are available. If not, review this with the patient to determine if the studies have actually been done.

How do you approach the evaluation of a patient new to the clinic?
1. Determine why the patient requested the appointment. This will usually be noted as the chief complaint (CC). Identify and record the CC clearly.
2. Take a history. Then document it. For Medicare Evaluation and Management (E/M) documentation for a level 99203 new patient visit you need to indicate:
   - 4 or more elements from HPI (location, quality, severity, duration, timing, context, modifying factors, associated signs and symptoms).
   - 2-9 systems from ROS (constitutional symptoms, eyes, cardiovascular, ENMT, GI, respiratory, musculoskeletal, GU, neurological, skin, endocrine, psychiatric, allergic/immunologic, hematologic/lymphatic).
   - 1 element from any of the 3 areas in PFSH (Past history, Family history, Social History)
3. Examine the patient. Document 6 body systems 2 elements from each, or 2 systems 12 elements
4. Then: decision-making. Indicate your assessment, i.e., the diagnosis or the problem to the level you can determine with differential diagnosis and plans for evaluation.

How do you approach the evaluation of a patient new to you but not to the clinic (an established patient)?
1. Determine why the patient requested the appointment. This will usually be noted as the chief complaint (CC). Identify and record the CC clearly.
2. Take a history. Then document it. Medicare Evaluation and Management (E/M) documentation for a level 99213 established patient visit requires:
   - 1-3 or more elements from HPI (location, quality, severity, duration, timing, context, modifying factors, associated signs and symptoms).
   - 1 system from ROS (constitutional symptoms, eyes, cardiovascular, ENMT, GI, respiratory, musculoskeletal, GU, neurological, skin, endocrine, psychiatric, allergic/immunologic, hematologic/lymphatic).
   - 0 element from any of the 3 areas in PFSH (Past Hx, Fam Hx, Social Hx)
3. Perform a focused physical examination. Document 6 elements
4. Then: decision-making. Indicate your assessment, i.e., the diagnosis or the problem to the level you can determine with differential diagnosis and plans for evaluation and therapy.
How do you document your patient evaluation?
1. Immediately after each patient encounter record pertinent medical history and physical examination findings on the appropriate Clerkship Clinic Note. The format of these notes is patterned after the Patient Note used in Step 2 Clinical Skills component of the USMLE. They are designed to help you develop your skills at performing and recording a focused patient evaluation and planning the subsequent diagnostic and therapeutic management steps.
2. Use the Clerkship Clinic Note: New Patient/Problem. Rev 061306 (see copy attached) to write your findings for a new patient or a patient who presents with a new problem. After recording the pertinent medical history and physical examination findings give your initial differential diagnosis and list the diagnostic studies you would order next for that particular patient.
3. Use the Clerkship Clinic Note: Follow Up Patient Visit. Rev 061306 (see copy attached) to write your findings for an established patient. After recording the pertinent medical history and physical examination findings list the problems addressed in order of priority and indicate the diagnostic studies and/or therapy you would then order for that particular patient.
4. Please note that these notes are to be reviewed either with the resident, faculty, or clinic attending. Following that review the notes should be forwarded to the Clerkship Office to be placed in your clerkship file.
5. BP and Lab checks can be annotated on the clinic progress note sheet for review with and decision by the assigned provider.

What is a “Lab Check” and how do you respond?
A “Lab Check” is a minimal patient visit (Medicare E/M level 99211) in which the necessary data (lab, x-ray, EKG, etc.) is obtained by the nursing staff and presented to the doctor for response.
What do you do?
1. Find out when and why the lab check was ordered. Make a brief note to indicate this. E.g., this 45 year old male had an LDL-C of 166 on 6/23/06. Pravastatin 40 mg at bedtime was added to his therapy.
2. Determine the level of control at this point. Check with your attending for current guidelines, e.g., Adult Treatment Panel III for lipids.
3. Develop response to address accordingly. E.g., if goal met and no evidence of Myalgia is noted, current therapy can be met. If goal not met, try to determine why (non-adherence, dietary indiscretion, poor life-style, etc) and develop a proposed response. This may mean increasing the dose of a current medication or adding a new medication.
4. Remember, most medications cost money. So, consider the generic version if available and use evidence-based strategies to develop therapy.
What is a “BP Check” and how do you respond?
A “BP Check” is a minimal patient visit (Medicare E/M level 99211) in which the necessary data (blood pressure) is obtained by the nursing staff and presented to the doctor for response. What do you do?
1. Find out when and why the BP check was ordered. Make a brief note to indicate this. E.g., this 45 year old male had a BP of 166/92 on 6/23/03. HCTZ 12.5 mg daily was added to his therapy.
2. Determine the level of control at this point. Use JNC7 guidelines.
3. Develop response to address accordingly. E.g., if BP goal met, can continue current therapy. If BP goal not met, determine why (non-compliance, eating salt, poor life-style, etc) and recommend response. This may mean increasing the dose of a current medication or adding a new medication.
4. Note, medications for hypertension are typically doubled when an increased dose is needed.
5. Per JNC 7, a diuretic is usually the drug of choice for the initial drug therapy of hypertension. If a second drug is needed, it should be a diuretic if the first drug is not.

JNC7 Classification and Management of Blood Pressure for Adults Aged 18 Years or Older

<table>
<thead>
<tr>
<th>BP Classification</th>
<th>Systolic BP*</th>
<th>Diastolic BP*</th>
<th>Mgt: Lifestyle Modification</th>
<th>Mgt: Drug Rx Without Compelling Indication*</th>
<th>Mgt: Drug Rx With Compelling Indication*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>&lt;80</td>
<td>Encourage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120-139</td>
<td>80-89</td>
<td>Yes</td>
<td>None</td>
<td>Drugs as indicated**</td>
</tr>
<tr>
<td>Stage 1 HTN</td>
<td>140-159</td>
<td>90-99</td>
<td>Yes</td>
<td>Thiazide-type diuretics for most; may consider ACE inhibitor, ARB, β-blocker, CCB, or combination</td>
<td>Drugs as indicated Others (diuretics, ACE inhibitor, ARB, β-blocker, CCB) as needed</td>
</tr>
<tr>
<td>Stage 2 HTN</td>
<td>≥160</td>
<td>≥100</td>
<td>Yes</td>
<td>2-drug combination for most (usually thiazide plus other)</td>
<td>Drugs as indicated Others (diuretics, ACE inhibitor, ARB, β-blocker, CCB) as needed</td>
</tr>
</tbody>
</table>

*Treatment determined by highest BP category: BP goal <140/90 except as below
**Treat patients with chronic kidney disease or diabetes to BP goal of less than 130/80 mm Hg

When and how do you address prevention?
- At any and all visits, time permitting.
- Use the U.S. Preventive Services Task Force (USPSTF) Guidelines.
- Identify interventions for the general population for the patient's age group: screening, counseling, immunizations, and chemoprophylaxis.
- Identify any high-risk characteristics in your patient and consider the potential interventions.
- See attachment for examples of USPSTF age-specific guidelines

How do you write prescriptions?
Follow the TTUHSC Policy and Procedure “Prescription Form Completion” dated 12/2000. Key points include:
- Make sure the patient’s name is on the prescription. The nursing staff usually will fill out the details of address but you need to at least write the patient’s last name on the prescription. The prescription may be misplaced or fall out of the chart. Without a name the potential for error is significant.
- Date the prescription when you write it.
- Give the name, strength, and quantity of drug prescribed. Try to use generic names. Indicate the explicit amount of medication per filling. Avoid indicating a quantity as “one month.” For stable conditions on maintenance drugs you may be able to write for a three month supply with one or more refill. That will help the patient by reducing the number of refill visits and keep the drug in supply for the patient until the next visit.
- Indicate the prescriptions given in your note. This can be done by annotating the list of meds provided by the nurse screener or the problem list in the patient’s chart.
- Give the diagnosis for each medication. This is especially important for GERD medications such as H₂ blockers and proton pump inhibitors. It is a Medicare requirement. No diagnosis, no funding.
- The prescription must be signed by the intern/resident. The medical student (clinical clerk) can prepare the prescription but the responsibility for correctness lies with the individual who is authorized to sign.
- The name stamp of the signer should be used on all prescriptions….as well as with all provider entries and signatures in health records.

How do you manage your time in the clinic?
- Carefully.
- Start at 1:00 pm sharp. If the noon lecture is dragging on, depart promptly at 1:00 pm. If you don’t have a noon conference, go a little early. Your patients will be there waiting.
- Check the patient appointment schedule for your assigned resident or attending for the day. Budget your time accordingly. New patients will take
longer usually but workups are not usually as detailed as they are on the wards.

- Don’t waste time. If you are getting hung up on a patient evaluation, ask for help from the resident or attending.
- Stay focused. The patient will occasionally need prescriptions for all medications so plan for this by drafting the prescriptions after you see the patient.

References:


Please note: A complete copy of this guide with all subsequent updates, preventive care timelines, risk profiles and flow sheets, preventive care flow sheets, and multiple references on prevention can be found at:
- The USPSTF Web Site www.preventiveservices.ahrq.gov or
- The National Guideline Clearinghouse www.guideline.gov

Texas Tech University Health Science Center – El Paso Ambulatory Clinic Policy and Procedure. Title: Prescription Form Completion (Required Information). Date Issued: 12/2000 Policy # 0.10

Best wishes for a productive learning experience in the Internal Medicine Continuity Clinic!!

Harry E. Davis II, MD, FACP
Clerkship Director
HISTORY: Include significant positives and negatives from history of present illness, past medical history, review of system(s), social history, and family history.

PHYSICAL EXAMINATION: Indicate only pertinent and negative findings related to the patient’s chief complaint.

DIFFERENTIAL DIAGNOSES: In order of likelihood (with 1 being the most likely), list up to 5 potential diagnoses for this patient’s presentation (in many cases, fewer than 5 diagnoses are likely).

1.  
2.  
3.  
4.  
5.  

DIAGNOSTIC WORKUP: List immediate plans (up to 5) for further diagnostic workup:

1.  
2.  
3.  
4.  
5.  

Name of Student: ___________________________  Name of Supervisor: ___________________________
STUDENT PERFORMANCE GOALS

R I M E

Purpose: To describe the R.I.M.E. (synthetic) approach to the evaluation of student performance. In contrast to the traditional analytic (skills, knowledge, attitudes) system, the R.I.M.E. approach provides a vocabulary for describing student performance objectives based on a developmental approach. It distinguishes between basic and advanced levels of performance and is designed to enhance both the learning process and the feedback process.

Reporter (Skills identified in preclinical years, now must be mastered.)
- Accurately gathers and communicates the clinical facts
- Has mastery of the history and physical examination
- Recognizes normal vs abnormal and knows what to look for.
- Can identify and label a new problem.
- Gives effective oral case presentations.
- Dependably follows up daily on all patients.
- Demonstrates day to day reliability, e.g., on time for rounds.
- Provides timely updates of patient’s medical status and workup (labs, other studies, consults, etc.)

Interpreter (Transition to interpreter essential step in third year.)
- Develops priorities for problems identified in all patients
- Offers a differential diagnosis, e.g., at least three diagnostic possibilities for new problems.
- Evaluates initial and follow-up tests including basic EKGs, chest x-rays, labs, and applies results appropriately.
- Participates actively in patient care.

Manager (These skills are introduced at the third year level, practiced at the fourth year, and mastered in postgraduate training.)
- Decides when action should be taken
- Propose and select among options for diagnosis, therapy.
- Tailors plan to patient’s circumstances, preferences, and values.

Educator (Self-directed learning should be mastered early in the clinical experience. Skills in the evaluation of clinical evidence and research and then sharing/teaching it to colleagues will be mastered during residency.)
- Pursues self-directed learning
- Demonstrates mastery of the basics
- Reads deeply, critically.
- Shares new learning with others
- Defines important questions to research
- Uses library and computer well
- Shares leadership in educating the team

USUHS Medicine Curriculum Matrix for the development of clinical skills, a synthetic system (Reporter-Interpreter-Manager-Educator) for setting goals and evaluation criteria.

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>Clinical Skills</th>
<th>Year in Training</th>
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<tbody>
<tr>
<td></td>
<td>Reporter</td>
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<td>Oral case</td>
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<td>Respect</td>
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<td>Interpreter</td>
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<td>Problem Lists</td>
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<td>Diagnosis</td>
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<td>Interpreting</td>
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<td>Manager</td>
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<td>Therapeutic</td>
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<td>Benefit/Risk</td>
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<td>Decision Making</td>
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<td>Procedures</td>
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<td>Incorporates</td>
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<tr>
<td>Educator</td>
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<td>Self-directed</td>
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<td>Teaching</td>
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I = introduced in the curriculum
P = practiced, repetition
M = mastered, sufficient proficiency for the next level of independence

The Matrix illustrates the concept of progressive mastery. Typically, by the time a skill has been in the curriculum for three years, proficiency will have been attained. At that point it becomes a passing criterion, or prerequisite for advancement. For each level of performance, examples are given which illustrate but do not exhaust the category.

STUDENT ABSENCE FORM

Please complete this form for ANY absence during a clinical rotation and return to the Clerkship Director’s Office.
If absence known in advance, turn in one week prior to the absence.

The TTUHSC School of Medicine Student Affairs Handbook provides attendance guidelines for Medical Students in years 3 and 4 as follows:
1. There are no unexcused absences for clerkships or elective
2. Any absence for any reason must be reported to the Clerkship Director.
3. Absence must be cleared in advance with the Clerkship Director/Preceptor and the absence shall be documented in the campus Student Affairs Office for inclusion in the student’s file
4. In the event of an emergency, the student must contact the campus Office of Student Affairs as soon as possible.
5. If a student misses more than 6 working days in a twelve-week clerkship, more than 4 working days in a six-week clerkship, more than 2 working days in a four-week clerkship or elective, or more than 12 working days during the year, then the student will meet with the Clerkship Directors to discuss the circumstances of the missed days. As a result of this discussion, it is possible that a student could:
   a. Be required to repeat a clerkship or elective; OR
   b. Be required to repeat the year; OR
   c. Be dismissed
6. Absences will be reported as part of the final clerkship grade

Note: This form provides documentation and authorization for all absences. Please complete and return to the Clerkship Director’s Office after review with your attending.

STUDENT NAME:_______________________ DATE SUBMITTED____________

DATE(S) OF ABSENCE:___________________________________________________

REASON FOR ABSENCE:_________________________________________________

ACTION BY ATTENDING

CONCUR / NONCONCUR   Comment:
_______________________________________________________________________
_______________________________________________________________________

Name of Attending (Please Print)  (Signature of Attending)                            (Date)
----------------------------------------------------------------------------------------------------------------------

ACTION BY CLERKSHIP DIRECTOR

ABSENCE EXCUSED_________ ABSENCE UNEXCUSED_________

__________________________      _________________________       _____________
(Signature of Clerkship Director)    (Date)

Rev060505
Texas Tech University Health Sciences Center, El Paso
Department of Internal Medicine
MS III Clerkship

Syllabus

Core Curriculum Classes and Learning Objectives

Introduction

During your third year 8-week Internal Medicine Clerkship you will develop basic competencies in the evaluation and management of adult patients and will build a core knowledge of common diseases seen in Internal Medicine. The Internal Medicine Core Curriculum is designed to compliment learning experiences on wards, in clinics, at conferences, and at morning Report by providing a structured review of the basic disease processes seen in Internal Medicine patients.

This syllabus provides an outline of these basic disease processes organized by diagnostic groups: cardiovascular, respiratory, renal, infectious diseases, gastrointestinal, endocrine, hematology/oncology, rheumatology, neurology, and general medicine. The diagnostic groups are further broken down into disease categories with assigned reading and classroom discussions of patient simulations. The learning objectives and reading assignments for each class are given in the following pages.

Learning objectives have three characteristics: performance, conditions, and criterion. In this syllabus, the performance objectives are given with each group of assigned readings and the corresponding classroom discussion. They tell what you should be able to do by the time you complete the clerkship. The conditions associated with each learning objective include completion of the assigned reading and participation in the classroom patient simulations. Finally, the criterion of acceptable performance is that you should have a level of proficiency for each learning objective compatible with what you need to be able to do as you begin your internship.

Note: Readings are found in Carpenter CCJ, Griggs RC, Loscalzo J, eds. Cecil Essentials of Medicine, 6th Edition. W.B. Saunders Company, 2004. Additional references are included when Assigned by the instructor.
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Section 1: Cardiology

Class: Chest Pain/Coronary Heart Disease
Instructor: Zainul Abedin, MD

Assigned Reading:
- Chapter 4, pp 33-36
- Chapter 5, pp 51-53
- Chapter 9, pp 87-108.

Learning Objectives:
- Describe cardiovascular and noncardiac causes of chest pain.
- Describe the epidemiology of coronary heart disease.
- Name the coronary arteries and describe the ECG localization of myocardial infarction for each vessel.
- Describe the adverse sequelae of myocardial infarction to include arrhythmias, conduction abnormalities, hemodynamic changes, and mechanical complications.
- Describe the pathophysiology of myocardial ischemia and infarction.
- Interpret the results of tests for myocardial infarction to include enzymes and EKG changes.
- Discuss the diagnostic and therapeutic approach to patients with symptoms suggestive of an acute coronary syndrome.
- Describe therapeutic interventions available for the management of acute ST elevation myocardial infarction.
- Analyze the advantages and disadvantages of the therapeutic interventions available for the management of acute ST elevation myocardial infarction.

Class: Heart Failure
Instructor: Omosalewa Lalude, MD

Assigned Reading: Chapter 6, pp 63-70

Learning Objectives:
- Define heart failure
- Describe the epidemiology and natural history of heart failure
- Discuss the pathophysiology of heart failure
- List the types and etiologies of heart failure
- Describe the clinical features/stages/classes and physical examination findings of heart failure
- Recognize the precipitating factors of acute presentations of heart failure
- Identify the pertinent laboratory and diagnostic test modalities for evaluation of heart failure
- Describe treatment options for heart failure: pharmacologic and non-pharmacologic
Class: Cardiac Arrhythmias  
Instructor: Jorge Martinez, MD

Assigned Reading: Chapter 10, pp 117-131

Learning Objectives:

- Interpret the code used for describing the function of a pacemaker.
- Describe the difference between synchronization and defibrillation in the treatment of tachyarrhythmias.
- Identify sinus node rhythm disturbances to include sinus arrhythmia, wandering atrial pacemaker, sinus tachycardia, sinus pause, sinus node reentrant tachycardia, and sick sinus syndrome.
- Identify atrial rhythm disturbances to include atrial premature complexes, ectopic atrial tachycardias, multifocal atrial tachycardia, atrial fibrillation, and atrial flutter and describe associated conditions and management of each.
- Identify the atrioventricular nodal rhythm disturbances junctional escape rhythm and AV nodal reentrant tachycardia and describe the therapy of each.
- Describe the basis of characteristic changes seen WPW syndrome on an ECG.
- Recognize and describe the management of ventricular rhythm disturbances to include ventricular premature complexes and ventricular tachycardia.
- Describe the types and management of heart block occurring at the level of the AV node to include first-degree, second-degree Mobitz I, second degree Mobitz II and complete or third-degree heart block.

Class: Vascular Diseases and Hypertension  
Instructor: Harry E. Davis, MD

Assigned Reading: Chapter 13, pp 155-173

Learning Objectives:

- Describe the pathology, clinical features, physical findings, laboratory findings, and treatment of peripheral vascular diseases.
- Describe the diagnosis and management of venous thrombotic disease and pulmonary embolism.
- Classify hypertension in adults based on systolic and diastolic blood pressure readings.
- Recognize the components of cardiovascular risk stratification in patients with hypertension.
- Apply cardiovascular risk stratification to therapeutic decisions in hypertension management.
- Interpret key items of the history relevant to the management of hypertension.
- Interpret key items of the physical exam relevant to causes of hypertension, target organ damage and extent of disease, and cardiovascular risk factors.
- List basic laboratory tests and other diagnostic procedures helpful in the diagnosis and management of hypertension (ECG, CXR, U/A, glucose, creatinine, electrolytes, lipids).
- Describe the management of hypertension to include lifestyle modification and drug therapy.
- Recognize the causes, characteristics, and management of secondary hypertension to include renovascular hypertension and adrenal causes of hypertension.
- Identify and manage hypertensive urgency and emergency.
- Define target organ damage.
**Class: Cardiac Evaluation**  
Instructor: Harry E. Davis, MD

Assigned Reading:
- Chapter 4, pp 37-45

Learning Objectives:
- Describe the chest wall anatomy and identify the key listening areas.
- Recognize the first and second sounds at the apex and base.
- Recognize the effect of P-R interval on the intensity of the first heart sound.
- Recognize physiological and paradoxical splitting of S2.
- Recognize third heard sounds, pericardial knock, tumor plop (atrial myxoma), and the opening snap of mitral stenosis.
- Recognize fourth heart sounds.
- Evaluate the timing of murmurs and correctly identify systolic and diastolic murmurs as well as friction rubs.
- Evaluate pulsus paradoxus and identify clinically significant measurements.
- Describe the auscultation findings of a normal heart examination to include the rate, rhythm, and heart sounds.

  E.g. “The heart has a rate of 70 beats/minute and a regular rhythm. At the apex, $S_1 > S_2$ and is constant. $S_2$ splits normally; $A_2 > P_2$.”

**Class: EKG I, II, III**  
Instructor: Harry E. Davis, MD

Assigned Reading: Chapter 5, pp 47-57

Helpful References:


Learning Objectives: Given a discussion of a systematic approach to interpreting the electrocardiogram (ECG), a review of commonly encountered ECG findings, and practice with sample ECGs showing commonly encountered findings, students should be able to:
• Describe the rate, rhythm, intervals, axis, hypertrophy, and infarct related findings.
• Recognize normal variation in the 12-lead electrocardiogram.
• Identify common abnormal electrocardiographic findings to include:
  o Early repolarization, e.g., WPW
  o Chamber enlargement, e.g., RAE, LAE, LVH, RVH
  o Bundle branch blocks/hemiblocks
  o Ischemic syndromes/acute infarction
  o ST-T wave changes
  o Arrhythmias such as atrial flutter, fibrillation, AV block, PVCs
  o Electrolyte abnormalities such as hyperkalemia, hypokalemia

Section 2: Endocrine

**Class: Diabetes Mellitus**
Instructor: Tamis Bright, MD

Assigned Reading: Chapter 68, pp 621-638

Learning Objectives:

• Define the diagnosis of diabetes
• Discuss the appropriate questions to cover on the history, and describe the physical findings to look for on the patient's exam
• Recognize the usual medications for treatment of diabetes and how they are given
• Recognize how to screen for complications of diabetes and discuss the importance of screening
• Describe how the complications of diabetes are treated

**Class: Thyroid Diseases**
Instructor: Tamis Bright, MD

Assigned Reading: Chapter 65, pp 593-602

Learning Objectives:

• Recognize the signs and symptoms of hyper and hypothyroidism
• Describe which thyroid laboratory and x-ray tests to order to diagnose thyroid disease
• Discuss the differential diagnosis of hypo and hyperthyroidism and how to diagnose each of them
• Differentiate between primary and secondary thyroid disease
• Demonstrate the appropriate way to examine a thyroid gland

**Class: Calcium, Osteoporosis**
Instructor: Tamis Bright, MD

Assigned Reading: Chapter 73, pp 695-703, Chapter 75, pp 715-722

Learning Objectives:
Department of Internal Medicine MS III Clerkship Syllabus

- Recognize the signs and symptoms of hyper and hypocalcemia
- Describe the differential diagnosis of hyper and hypocalcemia
- Discuss the treatment of hyper and hypocalcemia, and osteoporosis
- Analyze a bone density report

**Class: Adrenal and Pituitary Disorders**  
Instructor: Tamis Bright, MD

Assigned Reading: Chapter 64, pp 583-592, Chapter 66, pp 603-614

Learning Objectives:

- Recognize the signs and symptoms of pituitary tumors and pituitary insufficiency
- Review the appropriate work-up to diagnosis the various pituitary tumors
- Identify the usual treatment of pituitary tumors
- Discuss the work-up and treatment of pituitary insufficiency
- Recognize the signs and symptoms of pheochromocytoma, adrenal insufficiency, and hyperaldosteronism.
- Discuss the diagnosis and differential diagnosis of pheochromocytoma, adrenal insufficiency, and hyperaldosteronism.
- Review the treatment of pheochromocytoma, adrenal insufficiency, and hyperaldosteronism.

**Class: Lipid Disorders**  
Instructor: Harry E. Davis, MD

Assigned Reading: Chapter 61, pp 563-570

Useful References:


Learning Objectives:

- Describe the Assigned guidelines for evaluation of serum lipoprotein concentrations.
- Describe therapeutic lifestyle changes that would be Assigned to a patient with a lipid abnormality
- Recognize LDL-C levels at which therapeutic lifestyle changes and drug therapy are indicated according to risk category in adult patients.
• Identify the indications, side effects, and contraindications for commonly used lipid drugs including resins, fibrates, niacin, and statins.
• Identify the metabolic syndrome as a secondary target of therapy
• Describe therapeutic measures for the metabolic syndrome, hypertriglyceridemia, and hypercholesterolemia.
• Apply the ATP III Guidelines At-A-Glance Quick Desk Reference to determine CHD risk and lipid therapy for adult patients.

Section 3: Gastrointestinal

Class: Diseases of the Pancreas
Instructor: William Chamberlin, MD

Assigned Reading: Chapter 38, pp 379-387

Learning Objectives:

• Identify causes of acute pancreatitis.
• Recognize the criteria for the diagnosis and severity assessment of acute pancreatitis.
• Describe the treatment of acute pancreatitis.
• Identify nonobstructive and obstructive causes of chronic pancreatitis.
• Recognize the clinical manifestations of chronic pancreatitis.
• Describe the treatment of chronic pancreatitis.
• Describe the evaluation of a patient with suspected pancreatic carcinoma to include diagnosis and staging.

Class: Diseases of the Stomach and Duodenum; GI Bleeding
Instructor: Marc Zuckerman, MD

Assigned Reading: Chapter 32B, pp 317-320, Chapter 35, pp 347-362,

Learning Objectives:

• Identify the presenting symptoms and common sources of gastrointestinal bleeding.
• Describe the historical points and objective findings that enable localization of upper and lower GI bleeding.
• Describe the role of Helicobacter pylori in the pathogenesis of peptic ulcer disease.
• Describe the evaluation and diagnosis of peptic ulcer disease.
• Describe the pharmacological therapy of ulcers and H. pylori infection

Class: Inflammatory Bowel Disease, Diarrhea, Malabsorption
Instructor: Carmela Morales, MD

Assigned Reading: Chapter 36, pp 363-371, Chapter 32C, pp 320-327, Chapter 32D, pp 327-332,

Learning Objectives:

• Distinguish the mechanism and characteristics of secretory and osmotic diarrhea
• Describe the approach to the patient with suspected malabsorption
• Recognize the clinical presentation of Celiac sprue
• Identify the major complications of Ulcerative Colitis and Crohn’s Disease
• Describe the approach to the patient with acute diarrhea

Class: Liver Disease: Tests, Jaundice, Hepatitis, Cirrhosis and its Complications
Instructor: Marc Zuckerman, MD

Assigned Reading: Chapter 39, pp 391-393, Chapter 40, pp 395-398, Chapter 41, pp 399-407, Chapter 43, pp 411-417

Learning Objectives:

• Interpret commonly ordered clinical tests of liver function
• Describe the use of imaging studies in the approach to the patient with liver disease
• Describe the differential diagnosis of viral hepatitis
• Describe the epidemiology, serologic tests, and prevention of hepatitis A, B, C, D, and E.
• Recognize the major clinical complications of cirrhosis
• Distinguish different causes of ascites based on the serum ascites-albumin gradient
• Identify the major precipitating factors for hepatic encephalopathy
• Distinguish between Type I and Type II hepatorenal syndrome
• Outline the approach for the prevention and treatment of variceal bleeding

Section 4: General Medicine

Class: Orientation to Internal Medicine Clerkship
Instructor: Harry E. Davis, MD and Department of Internal Medicine Faculty and Staff

Assigned Reading: MS III Clerkship Manual

Learning Objectives:

• Identify Department of Internal Medicine key personnel involved in the clerkship training program.
• Describe the sequence of events involved in the case of an absence during the clerkship.
• Summarize the distinction between business and professional ethics.
• Describe the goals and objectives for the clerkship rotation to include the numbers and types of real or simulated patients each student is expected to evaluate.
• Describe the function of the master data collection key.
• Maintain an up to date log book containing data on all patients evaluated by the student during the clerkship including the patient’s initials, age, sex, medical record number, date of admission or visit, primary diagnosis, and pertinent secondary diagnoses.
• Describe the Mid-Rotation Evaluation process and identify the student’s responsibilities for completing the student section of the questionnaire.
• Recognize common mistakes 3rd year medical students make and describe how to avoid them.
• Explain the formula: \( WD_{LB} + LU_{BB} = K \)
• Describe the medical student’s responsibilities as part of an inpatient ward team.
• Describe the medical student’s role in the continuity clinic.
• Pursue an educational experience in which the patient is the central focus for learning clinical medicine.

Class: Information Access/PubMed/EBM
Instructors:
Delia Montes-Gallo Library of the Health Sciences, TTUHSC, El Paso
  Rebecca R. Ruddock, MLS, Director
  Linda Y. Schaake, MLS, Assistant Director,
Department of Internal Medicine, TTUHSC, El Paso
  Harry E. Davis II, M.D., Clerkship Director
  Luis Eraso, M.D., General Internal Medicine Division

Assigned Reading:

Other References:
3. Tutorial from Duke and UNC: http://www.hsl.unc.edu/services/tutorials/ebm/index.htm This tutorial is easy to browse, user friendly, a good place to start. Provides a basic introduction to the principles of Evidence-Based Medicine.
4. Tutorial from Vanderbilt: http://www.mc.vanderbilt.edu/biolib/ebmportal/login.html? This tutorial was recently developed with an NIH grant. It is more extensive, very current, and well linked. Do this one next. It is a “comprehensive tutorial covering locating and appraising evidence, principles of EBM.”

Learning Objectives. On completion of this class and given the use of a computer with Internet access, the student will be able to:
• Identify an information requirement relevant to a current patient management problem
• Develop a focused clinical question to address the information requirement
• Perform a computerized literature search using Ovid, the National Library of Medicine PubMed, or similar database to find information, e.g., journal articles, literature reviews, etc., pertinent to the clinical question.
• Identify evidence on which to base an answer to the focused clinical question.
• Determine the validity of a study based on evidence hierarchies.
• Describe the MeSH hierarchy and explain its use
  • in searching,
  • the “mapping” of terms in PubMed,
  • and when to select sensitivity or specificity in searching.
• Develop a strategy to determine whether a proposed therapy is in keeping with current evidence-based guidance.
• Use current best evidence in making decisions about the care of individual patients.

Class: Communication Competency/Approach to the Patient
Instructor: Harry E. Davis, MD

Assigned Reading:
  ▪ Pages 2-4, The health history: structure and purposes
  ▪ Pages 4-8, The comprehensive adult health history
  ▪ Pages 13-18, Recording your findings
  ▪ Pages 21-57, Chapter 2: Interviewing and the health history
  ▪ Pages 783-800, Chapter 18: Clinical reasoning, assessment, and plan
• Clinical Core Competencies: Communication and Relationships With Patients and Colleagues. From "Core Medicine Clerkship Curriculum Guide," Society of General Internal Medicine (SGIM) and the Clerkship Directors in Internal Medicine (CDIM), Version 2.0, September 1998. (A copy of this clinical core competency is in the Department of Medicine MS III Clerkship Manual in the CDIM/SGIM section.)

Learning Objectives:
• Describe the differences between the interviewing process and the health history format.
• Describe the sequence of events involved in the interview of the patient to include:
  o Greeting the patient and establishing rapport
  o Inviting the patient’s story, beginning with open-ended questions
  o Establishing the agenda for the interview (a manageable list)
  o Expanding and clarifying the patient’s story, including pursuit of the seven attributes of a symptom)
  o Creating a shared understanding of the problem(s), taking into account the distinction between disease and illness.
  o Negotiating a plan (including further evaluation, treatment, and patient education)
  o Planning for follow-up and closing the interview
• Summarize the techniques for skilled interviewing to include active listening, adaptive questioning, nonverbal communication, facilitation, echoing, empathic responses, validation, appropriately timed reassurance, summarization, and highlighting transitions
• Document the history and physical examination of a new patient using Guidelines for History and Physical Examination Write-Ups (HPWriteUp0403) found in the Department of Medicine MS III Clerkship Manual in Section VI: Enclosures
• Present the history and physical findings of a new patient concisely with pertinent diagnostic test results, problem synthesis, differential diagnosis, further diagnostic studies, and treatment plans in an effective and professional manner
• Summarize a 15 minute focused evaluation of an ambulatory patient visit on a Clerkship Clinic Note (patterned after the Patient Note used in the Clinical Skills component of the USMLE Step 2 Examination) by recording the pertinent medical history and physical examination findings, differential diagnosis, diagnostic studies and, for follow up patients, therapy planned.

Class: Geriatrics
Instructor: Paul Casner, MD, PhD

Assigned Reading:
• Chapter 123, pp 1035-1046
• Chapter 132, pp 1101-1108

Learning Objectives:
• Discuss core issues in geriatrics and related management to include
  o Clinical consequences of aging
  o Geriatric assessment
  o Dementia and delirium
  o Polypharmacy
  o Falls and gait instability
  o Urinary incontinence
  o Health care financing for the elderly

Class: Alcohol and Substance Abuse
Instructor: Paul Casner, MD, PhD

Assigned Reading:
• Chapter 132, pp 1105-1106
• Chapter 133, pp 1114-1118
• Chapter 133, pp 1111-1114

Learning Objectives:

Describe the pharmacologic effects of benzodiazepines.
Identify the features of benzodiazepine withdrawal.
Describe the effects of opioid overdose.
Discuss the management of opioid withdrawal.
Explain the pharmacologic effects of cocaine and describe the medical complications associated with cocaine use.
Discuss the treatment of acute cocaine intoxication.
Define alcohol abuse and dependence.
Describe the social impact of alcohol abuse on the patient, family and community.
Recognize the clinical manifestations of alcohol ingestion to include acute alcohol intoxication, withdrawal syndrome, delirium tremens, and fetal alcohol syndrome.
Describe strategies for screening and intervention in alcohol use.
Describe treatment strategies for alcohol abuse, both pharmacologic and non-pharmacologic.

Section 5: Hematology/Oncology

Class: Anemia
Instructor: Javier Corral, MD
Assigned Reading: Chapter 48, pp 449-460

Learning objectives:

- Interpret the key components of the laboratory evaluation of anemia.
- Explain the value of the reticulocyte count and mean cell volume (MCV) in the classification of anemia.
- Classify anemia based on red cell morphology.
- Describe the use of peripheral blood iron indices in diagnosing iron deficiency anemia and the anemia of chronic inflammatory conditions.
- Explain the importance of identifying the cause of iron deficiency anemia.
- Describe the laboratory findings in the anemia of chronic disease.
- Distinguish between types of hemolytic anemia that are due to causes intrinsic to the red cell and causes extrinsic to the red cell.
- Summarize the clinical spectrum of the thalassemic syndromes.
- Describe the structural defect in the common hemoglobinopathies (sickle syndromes and the thalassemias).
- Recognize the acute and chronic manifestations of Sickle Cell Disease.
- Describe the acute and chronic clinical manifestations of Sickle Cell Disease.

Class: Coagulation Disorders
Instructor: Javier Corral, MD

Assigned Reading: Chapter 51, pp 481-488, Chapter 52, pp 489-503, Chapter 53, pp 505-513

Learning Objectives:

- List the procoagulant and anticoagulant functions of the blood vessel wall.
- Describe coagulation factors the “extrinsic” and “intrinsic” pathways of the coagulation cascade.
- Describe the aspect of hemostasis tested and causes of abnormalities for the screening laboratory assays used in the assessment of the bleeding patient.
- Recognize the appropriate management in patients with bleeding disorders.
- Recognize the clinical manifestation of Von Willebrand’s disease and its management.
- Recognize the clinical manifestations of hemophilia and its management.
- Distinguish between bleeding disorders caused by thrombocytopenia and those caused by coagulation factor disorders.
- Recognize acquired risk factors for venous thrombosis.
- Describe the laboratory evaluation of venous and arterial thrombosis.
- Determine the appropriate therapy for the thromboembolic diseases.

Class: Cancer Epidemiology and Cancer Prevention, Solid Tumor.
Instructor: Javier Corral, MD

Assigned Reading: Chapter 55, pp 521-524, Chapter 56, pp 525-536

Learning Objectives:

- Describe the three levels of cancer prevention.
- List the types of cancer with demonstrated benefit screening tests.
- Define sensitivity and specificity of a screening test.
- Recognize the hereditary cancer syndromes for which genetic testing is available.
- Describe the criteria to be met for a cancer screening test to be Assigned.
- Describe the medical and legal implications of genetic testing.
- Review the epidemiology, natural history, staging, clinical presentation, and treatment of solid tumors of the lung, head and neck, gastrointestinal tract, breast, kidney, ovary, uterus, and skin.

Class: Complications of Cancer
Instructor: Javier Corral, MD

Assigned Reading: Chapter 57, pp537-540

- Recognize the clinical presentation and management of spinal cord compression.
- Recognize appropriate management in patients presenting with hypercalcemia.
- Define paraneoplastic syndromes
- Describe the long-term effects and complications of cancer treatment in cancer survivors.

Class: Coagulation Disorders
Instructor: Javier Corral MD

Assigned Reading: chapter 51, pp 481-448, Chapter 52, pp 489-503, chapter 53, pp 505-513

- Learning Objectives:
  - List the procoagulant and anticoagulant functions of the blood vessel wall.
  - Describe coagulation factors the “extrinsic” and “intrinsic” pathways of the coagulation cascade.
  - Describe the aspect of hemostasis tested and causes of abnormalities for the screening laboratory assays used in the assessment of the bleeding patient.
  - Recognize the appropriate management in patients with bleeding disorders.
  - Recognize the clinical manifestation of Von Willebrand's disease and its management.
  - Recognize the clinical manifestations of hemophilia and its management.
  - Distinguish between bleeding disorders caused by thrombocytopenia and those caused by coagulation factor disorders.
  - Recognize acquired risk factors for venous thrombosis.
  - Describe the laboratory evaluation of venous and arterial thrombosis.
  - Determine the appropriate therapy for the thromboembolic diseases.
Section 6: Infectious Diseases

Class: Meningitis
Instructor: Rhonda Fleming, MD

Assigned Reading: Chapter 96, pp 843-853

Learning Objectives:
- Recognize the appropriate management in patients presenting with acute CNS infections
- Identify the most common pathogens in bacterial meningitis according to risk groups
- Interpret CSF analysis and differentiate the patterns between bacterial and aseptic meningitis
- Identify relevant exposures associated with the acquisition of CNS infections
- Name the first line antibiotics indicated in cases of acute bacterial meningitis
- Identify the role of chemoprophylaxis in invasive \textit{N. meningitides} meningitis
- Name causative agents associated with chronic meningitis

Class: Urinary Tract Infections
Instructor: Hoi Ho, MD

Assigned Reading: Chapter 104, pp 899-901 & 906

Learning Objectives:
- Describe the pathogenesis and clinical features of UTI
- Determine the appropriate methods for the laboratory and clinical diagnosis of UTI
- Identify the appropriate therapy for infections of the urinary tract

Class: Sexually Transmitted Diseases
Instructor: Rhonda Fleming, MD

Assigned Reading: Chapter 106, pp 907-915

Learning Objectives:
- Describe the epidemiology of the more prevalent STDs in US.
- Discuss the clinical manifestations of ulcerative and non-ulcerative STDs.
- Describe the mechanisms of transmission of HSV.
- Discuss the diagnostic and treatment approach to patients with gonococcal and nongonococcal urethritis and/or cervicitis.
- Discuss the natural history of Syphilis and its treatment.
- Analyze and discuss measures to prevent STDs and long term sequelae.

Class: HIV Part I: Epidemiology, Pathophysiology, Diagnosis and Management
Instructor: Armand D. Meza, MD
Assigned Reading: Chapter 107, pp 917-935

Learning Objectives:
- Identify the risk factors, clinical syndrome and diagnosis of acute HIV infection
- Describe methods used for the diagnosis and basic work up of HIV infection and the Acquired Immunodeficiency Syndrome.
- Recognize common opportunistic infections and malignancies associated with the Acquired Immunodeficiency Syndrome.
- Describe the basic concepts of antiretroviral therapy, the toxicity that may be encountered, and prophylaxis for opportunistic infections.

Class: Infective Endocarditis
Instructor: Hoi Ho, MD

Assigned Reading: Chapter 99, pp 871-877

Learning Objectives:
- Describe the epidemiology and pathogenesis of infective endocarditis (IE)
- Recognize the physical findings of IE
- Establish the diagnosis of IE
- Describe commonly used regimens for the treatment of IE
- Recognize conditions for which prophylaxis of IE is Assigned

Section 7: Renal/Genitourinary Disease

Class: Acid-Base Disturbances
Instructor: German Hernandez, MD

Assigned Reading: Chapter 26, pp 253-258

Learning Objectives:
- Define acidosis and alkalosis
- Describe the 4 primary acid-base disorders
- List the common causes of each disorder
- Diagnose and evaluate patients with these disorders
- Manage each disorder

Class: Fluid and Electrolytes
Instructor: Ramin Tolouian, MD

Assigned Reading: Chapter 26, pp 243-253

Learning Objectives:
- Describe commonly encountered volume disorders to include volume depletion, dehydration and volume excess.
- Identify the common causes of volume depletion and volume excess.
- Describe the characteristics of commonly used diuretics and their clinical use in volume management.
- Identify common causes of pseudohyponatremia.
Describe the use of serum osmolality, urine osmolality, and volume status in the differential diagnosis of sodium disorders.

Describe the mechanism of water excretion impairment, diagnosis, and clinical management of SIADH.

Identify common causes of hyperkalemia and hypokalemia.

Recognize EKG changes associated with hyperkalemia and hypokalemia.

Describe therapeutic modalities used in the treatment of hyperkalemia.

Describe the use of the transtubular potassium gradient in the evaluation of hyperkalemia and hypokalemia.

Class: Acute Renal Failure
Instructor: Azikiwe Nwosu, MD

Assigned Reading: Chapter 30, pp 291-299

Learning Objectives:

- Define and describe ARF and be able to distinguish the three major groups of etiologies of ARF: decreased renal perfusion (pre-renal), intrinsic renal disease (renal), and acute renal obstruction (post-renal)
- Distinguish major pathophysiologic etiologies of “pre-renal” ARF, including: hypovolemia, decreased cardiac output, systemic vasodilatation, and renal vasoconstriction
- Distinguish major pathophysiologic etiologies of intrinsic “renal” ARF, including: vascular lesions, Glomerular lesions, interstitial nephritis, intra-tubule deposition/obstruction, and acute tubular necrosis (ATN)
- Discuss natural history, initial evaluation and treatment, and complications of ARF

Class: Chronic Renal Failure
Instructor: Pedro Blandon, MD

Assigned Reading: Chapter 31, pp 301-310

Learning Objectives:

- Define and describe CRF and the most common etiologies for chronic kidney disease (CKD)
- Discuss the pathophysiology and clinical findings of CRF and uremia
- Diagnose CRF and evaluate patients with clinical and biochemical features of uremia
- Treat CRF and its complications

Class: Glomerular Disease
Instructor: Ramin Tolouian, MD

Assigned Reading: Chapter 27, pp 259-272

Learning Objectives:

- Apply the results of common urine tests to the diagnosis and differential diagnosis of glomerular diseases
- Identify the common glomerular diseases given their clinical characteristics
- Describe the use of serological tests to the diagnosis and differential diagnosis of glomerular diseases.
- Differentiate nephritic syndrome from nephritic syndrome
• Describe the use of serum complement levels in the differential diagnosis of glomerular diseases
• List the indications for renal biopsy in the diagnosis of glomerular diseases
• Describe the pathology of glomerular diseases

Section 8: Respiratory

Class: Pleural Disease
Instructor: Mohamed Mohamed-Aly, MD

Assigned Reading: Chapter 19, pp 209-212

Learning Objectives:

• Explain the anatomy and physiology of pleural space and describe the pathogenesis of pleural fluid accumulation.
• Identify symptoms and physical findings in a patient with pleural effusion.
• Identify different radiographic features seen in pleural effusions.
• Distinguish exudative from transudative pleural effusions.
• Interpret pleural fluid laboratory studies that suggest specific diagnosis of pleural effusions.
• Recognize the indications for pleural biopsy.
• Select the appropriate therapy of pleural effusions.
• Describe management of spontaneous pneumothorax and tension pneumothorax.

Class: Obstructive Lung Disease and Asthma
Instructor: Harold Hughes, MD

Assigned Reading: Chapter 17, pp 193-200

Learning Objectives:

• Describe the pathophysiologic processes that result in airflow obstruction in the airways.
• Identify the clinical features and laboratory findings that distinguish the common obstructive lung diseases.
• Describe the characteristic changes in pulmonary function testing seen in airway obstruction.
• Identify the pathophysiologic and clinical differences between emphysema and chronic bronchitis.
• Recognize the value of smoking cessation in limiting the progression of COPD.
• Review the four major groups of drugs used in the treatment of obstructive lung disease.

Class: Venous Thromboembolic Disease/Pulmonary Embolism
Instructor: Mohamed Mohamed-Aly, MD

Assigned Reading: Chapter 13, pp 162-165

Learning Objectives:

• Identify the conditions that predispose to Venous Thromboembolic Disease.
• Recognize that PE may be the initial manifestation for DVT, and that the majority of pulmonary thromboemboli originate in the deep veins of the thigh.
• Recognize the difficulty in distinguishing PE from other cardiopulmonary disorders based on clinical presentation only, and the importance of specific testing for confirmation of the diagnosis.
• Interpret Ventilation/Perfusion scan and its role in the diagnosis of PE.
• Interpret Ultra Fast CT after iv contrast injection and its role in the diagnosis of PE.
• Recognize the importance of early anticoagulation in the treatment of Venous Thromboembolic Disease.
• Describe how to approach a patient with suspected PE.
• Describe alternative therapies and their indications in PE.

Class: Interstitial Lung Disease
Instructor: Harold Hughes, MD

Assigned Reading: Chapter 18, pp 201-208

Learning Objectives:

• Recognize the broad range of disease processes that may manifest as interstitial and infiltrative lung diseases.
• Define the characteristic pulmonary function findings indicative of interstitial lung disease (ILD).
• Recognize the importance of eliciting environmental exposure, occupation, medication, and non-pulmonary symptoms when obtaining the medical history of a patient with suspected ILD.
• Describe the usefulness and limitations of common clinical studies in the diagnosis of interstitial lung diseases.
• Identify the indications for steroid use in patients with sarcoidosis.
• Describe the common causes of eosinophilic pulmonary syndromes.

Class: Chest X-Ray Interpretation
Instructor: Harold Hughes, MD

Assigned Reading: Online tutorial from the University of Virginia at http://www.med-ed.virginia.edu/courses(rad/cxr/index.html

Learning Objectives:

• Describe an orderly scheme for viewing the PA chest film that addresses technical aspects, trachea, heart and mediastinum, diaphragms, pleural spaces, lungs, hidden areas, hila, below diaphragms, soft tissues, and bones.
• Describe the effects of penetration and positioning on the PA and portable chest film.
• Describe the normal mediastinal appearance and common causes for abnormal mediastinal configurations.
• Recognize pulmonary parenchymal infiltrates and lung masses.
• Identify the chest radiographic manifestations of common disease processes to include pneumonia, lung cancer, congestive heart failure, pneumothorax, pleural effusion, atelectasis, pulmonary embolus, interstitial lung disease, and rib fractures.
Class: Lung Cancer
Instructor: Juan Figueroa, MD

Assigned Reading: Chapter 20, pp 213-216

Learning Objectives:
- Recognize the risks factors for lung cancer, with emphasis on smoking
- Identify possible clinical presentations of lung cancer
- Diagnose a solitary pulmonary nodule that needs no further evaluation
- Describe the main classification of lung carcinoma and its principles of treatment

Class: Pulmonary Physiology and Diagnosis
Instructor: Juan Figueroa, MD

Assigned Reading:
- Chapter 15, pp 181-188
- Chapter 16, pp 189-192

Learning Objectives:
- Describe the basic principles of ventilation and gas exchange and transport
- Recognize the main mechanisms of hypoxemia and hypercapnia
- Identify the utility and limitations of pulse oxymetry
- Define and identify the different lung compartments: volumes and capacities
- Identify the diagnostic utility of spirometry and diffusing capacity

Class: Infections of the Lower Respiratory Tract
Instructor: Manuel Rivera, MD

Assigned Reading: Chapter 98, pp 861-870

Learning Objectives:
- Describe the process whereby microbes enter the lung and produce an infection severe enough to become clinically manifest as pneumonia.
- List the common microbes causing community acquired pneumonia and nosocomial pneumonia.
- Identify the symptoms and physical findings in a patient with pneumonia.
- Describe the microbiologic studies and radiological findings of pneumonia.
- Select the appropriate management and therapy of pneumonia.
- Discuss clinically available measures for prevention of pneumonia.

Section 9: Rheumatology

Class: Monoarticular and Polyarticular Arthritis
Instructor: Kanchan Pema, MD

Assigned Reading:
- Chapter 77, pp 731-734
- Chapter 78, pp 735-739
Learning Objectives:
- Distinguish arthritis from periarticular diseases.
- Distinguish localized from systemic processes.
- Recognize the clinical features that are helpful in evaluation of arthritis.
- Interpret laboratory and radiographic studies that can provide confirmatory and sometimes diagnostic information.
- Diagnose acute gout and septic arthritis.
- Distinguish the epidemiology of gout and septic arthritis.
- Recommend the appropriate treatment.
- Describe the epidemiology, genetics and pathology in RA.
- Recognize the clinical and laboratory characteristics of RA.
- Select appropriate treatment for RA.
- Describe the epidemiology and pathogenesis of the spondyloarthropathies.
- Identify the common clinical features among the spondyloarthropathies.
- Identify the specific clinical features of the spondyloarthropathies.
- Detect the radiographic features seen in spondyloarthropathies.
- Select the appropriate treatment for spondyloarthropathies.

Class: Connective Tissue Diseases
Instructor: Kanchan Pema, MD

Assigned Reading:
- Chapter 80, pp 745-749
- Chapter 81, pp 751-752
- Chapter 82, pp 753-757
- Chapter 83, pp 759-762

Learning Objectives:
- Recognize the pathogenic mechanism involved in SLE.
- Review the clinical manifestations of SLE.
- Identify the autoantibodies in patients with SLE, SS, IIM.
- Recognize the criteria for classification of SLE.
- Define drug-induced lupus erythematosus and neonatal lupus erythematosus.
- Define the criteria for the diagnosis of the antiphospholipid antibody syndrome.
- Compare the two subsets of scleroderma/systemic sclerosis.
- Choose the appropriate therapy for scleroderma/systemic sclerosis.
- Describe the clinical presentation of idiopathic inflammatory myopathy (IIM).
- Interpret the pathology.
- Summarize the diagnostic criteria of IIM.
- Recognize other conditions that have a presentation similar to IIM (e.g., differential diagnosis: drug, hypothyroid).
- Choose the appropriate therapy for IIM.
TEXAS TECH UNIVERSITY HSC SCHOOL OF MEDICINE
YEAR III CLINICAL CALENDAR

2006-2007

Period 1    July 10 - Sept 1
Period 2    Sept 5 - Oct 27
Period 3    Oct 30 - Dec 22
Period 4    Jan 8 - Mar 2
Period 5    Mar 5 - Apr 27
Period 6    Apr 30 - Jun 22

HOLIDAYS

**Labor Day** holiday begins close of business Friday, September 1, 2006. Return to clinical duties Tuesday, September 5, 2006.


**Martin Luther King, Jr.** holiday begins close of business Friday, January 12, 2007. Return to clinical duties Tuesday, January 16, 2007.


MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Designation of Federal Holidays/WBAMC Training Holidays (CHANGE 1)

1. William Beaumont Army Medical Center (WBAMC) staff will observe the following Federal and Training Holidays for the remainder of FY 06 and FY 07.

<table>
<thead>
<tr>
<th>FEDERAL HOLIDAYS</th>
<th>TRAINING HOLIDAYS</th>
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<tbody>
<tr>
<td>Monday, 04 September 2006 Labor Day</td>
<td>Friday, 01 September 2006</td>
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<tr>
<td>Monday, 09 October 2006 Columbus Day</td>
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<tr>
<td>Friday, 10 November 2006 Veteran’s Day</td>
<td>Monday, 13 November 2006 (change from 9 Nov)</td>
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<td>Thursday, 23 November 2006 Thanksgiving</td>
<td>Friday, 24 November 2006</td>
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<td>Monday, 25 December 2006 Christmas Day Observed</td>
<td>Tuesday, 26 December 2006</td>
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<td>Monday, 01 January 2007 New Year’s Day Observed</td>
<td>Tuesday, 02 January 2007</td>
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<td>Monday, 15 January 2007 MLK Day</td>
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<td>Monday, 19 February 2007 President’s Day</td>
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<tr>
<td>Monday, 28 May 2007 Memorial Day</td>
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<tr>
<td>Wednesday, 04 July 2007 Independence Day</td>
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<tr>
<td>Monday, 03 September 2007 Labor Day</td>
<td>Friday, 31 August 2007</td>
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</tbody>
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2. Supervisors should allow a liberal leave policy for civilian employees.

3. Point of Contact is LTC Kimball, Chief of Staff, at 569-2203.

//signed//
JOHN A. POWELL
COL, MC
Commanding

DISTRIBUTION:
Aa