

GOALS & OBJECTIVES

Internal Medicine Clerkship Goals and overall description

Welcome to the Medicine Clerkship! The next eight weeks of your medical school career will be both challenging and immensely rewarding. By immersing yourself in the care of acutely ill patients, with the guidance of expert faculty and resident educators, you will emerge after these short weeks with the core skills that will make you a successful resident and future physician. And, we hope that we can show you the excitement of a life as an internist.

The focus of the Medicine Clerkship is the care of hospitalized patients with complex medical and psychosocial problems. You will take a complete history, conduct a thorough and accurate physical exam, take into consideration complex psycho-social issues, formulate a problem list, construct a relevant differential diagnosis, and along with your team begin to manage the daily details of the care of your patients. The clerkship is composed of two 4-week components at two sites: NMH and the Jesse Brown VA. Every student will spend at least 4 weeks at NMH; some will go to the VA for a month while others will be at NMH for 2 months (on two separate teams).

We consider our students to be integral parts of the ward team. Year in and year out, students say (and we agree) that the best learning experience is to take an H&P 1-on-1 with a patient, develop an independent assessment and plan, and get feedback from your teachers. Thus, the majority of your time will be spent on the wards, caring for patients. To supplement this core aspect of your teaching, we have a number of additional requirements, including weekly conferences, physical examination rounds, and meetings with your Site Director faculty liaison to discuss your performance.

In addition to the above activities, students will be responsible for completing and actively maintain their online clerkship log to ensure they are completing the clinical requirements of the clerkship; they will also take the end of rotation Objective Structured Clinical Examination (OSCE) and the NBME Subject Examination at the end of the clerkship.

The Phase 2 Medicine Clerkship will provide the foundation of knowledge and skills which you will need in caring for sick patients, regardless of the specialty you decide to enter. During this eight-week clerkship, we will assist you in achieving the following important objectives. We do not expect mastery of all objectives listed but through efficient use of your time good progress will be made in attaining these objectives.

Phase 2 (All Clerkships) Common Objectives

Objective 1: Perform comprehensive and targeted patient histories and physicals when appropriate and document efficiently in the medical record (EPA 1, EPA 2, EPA 5) (PCMC-1; PCMC-2; PCMC-3; PCMC-5; ECIS-1; ECIS-2)

Expectations

Faculty and residents will teach students the important and unique components of the diagnostic and therapeutic process in internal medicine and how to document these findings.

It is expected that all students should demonstrate proficiency with the core physical examination

techniques during the clerkship. These skills have been previously introduced and practiced during Phase 1. Students will be supervised when necessary. Finally, students will be directly observed and given feedback on their history and examination skills. Students will complete a total of at least 16 H&Ps, documented in the clerk log. Students will participate in physical examination rounds with a faculty preceptor.

Assessment

At least two of these H&Ps will be reviewed and critiqued by medicine faculty, though faculty will perform and verify student exam findings on each patient, and residents will read and review student notes on an ongoing basis during the clerkship. Evaluators will complete 4 mobile observations on each student during the clerkship, one of which will assess EPA1: History and/or Physical Examination.

Objective 2: Acquire and apply evidence-based knowledge about internal medicine-specific conditions and diseases. (EPA 2, EPA 3, EPA 7) (MKS-1b,1c,1d,1e,1f; MKS-3a,3b; CLQI-3; PBMR-1; PBMR-2, PCMC-3)

Expectations

Students will learn about each of the knowledge objectives. This list of required objectives aligns with the Alliance for Academic Internal Medicine objectives and is available on Canvas (<https://canvas.northwestern.edu/>). In addition, students will practice constructing clinical questions and answering them by retrieving and analyzing the pertinent medical literature.

Opportunities to achieve the objective

1. Students will actively participate in the evaluation and care of patients presenting with a variety of medical concerns or needs.
2. Students will participate in scheduled conferences, including case-based discussions and didactic sessions.
3. Students will participate in an interdisciplinary conference collaborating with physical therapy focused on mobility assessment in hospitalized patients
4. Students will participate in a conference focused on identifying, discussing, and analyzing ethical issues specific to internal medicine.

Assessment

1. Students will document all relevant patient encounters in the online clerkship log.
2. If the student has not been actively involved with an actual patient in each of the assigned clerk log categories by the end of the last week of the clerkship, the student will fulfill the requirement by utilizing alternative methods including Aquifer cases.
3. Students will demonstrate their acquisition of knowledge by successful completion and passage of the NBME Subject Examination in Internal Medicine (minimum score in the 10th percentile nationally).
4. Students will identify and submit a brief description of an ethical dilemma they encountered during their clerkship for online and in-person discussion.
5. Students will be evaluated specifically on their ability to search and analyze the literature using CPA forms (EPA 7).

Objective 3: Demonstrate effective interpersonal communications skills as a member of the healthcare team (EPA 6, EPA 9) (ECIS-1; ECIS-3; ECIS-4; PCMC-6; CES-2)

Expectations

Students will:

- Establish rapport with patients.

- Work cooperatively with others.
- Establish sufficient visibility and rapport with residents, fellows and attendings to be fairly evaluated.
- Communicate in a way patients understand by avoiding medical jargon and checking back for understanding.
- Contribute information effectively to the team in a clear and timely manner.

Assessment

Students will be evaluated specifically on these interpersonal skills through the use of the CPA forms (Professionalism domains and EPA 9). Students will request evaluations from nurses. This evaluation will be reflected in the Final Grade Narrative.

Objective 4: Demonstrate professional characteristics as a caregiver and a member of the healthcare team (EPA 9) (PBMR-3; PBMR-5; PBMR-6; PBMR-7; SATBC-2a-b; CLQI-1a-b; CLQI-2)

Expectations

Faculty will model appropriate behavior. Students will:

- Demonstrate dependability, truthfulness and integrity.
- Participate actively in learning opportunities and work assignments.
- Acknowledge and demonstrate awareness of own limitations.
- Take initiative for their own learning and patient care.
- Remain open to feedback and implement it.
- Treat all patients with respect and compassion
- Protect patient confidentiality.
- Students participating in patient care activities are expected to present a professional image in both conduct and attire, including the following:
 - Personal cleanliness
 - Attire appropriate to professional environment
 - Clean white coat
 - Jade green scrubs only in the proper locations, covered when appropriate and never worn outside the hospital
- Professional conduct also includes the following:
 - Charting is to be completed in a timely manner
 - Do not remove hard copies of medical records from the hospital
 - Do not discuss patients in public places
 - Do not argue diagnoses or management plans in front of patients or in the medical record
 - Arrive for clinics on time and well-prepared

Assessment

Students will be evaluated specifically on these interpersonal skills and this evaluation will be reflected in the Clinical Performance Assessment (EPA 9 and Professionalism Domains). Feedback on interpersonal skills will be incorporated into the Final Grade Narrative where appropriate.

Objective 5: Advocate on behalf of patients. (CES-1, CES-2, SATBC-1)

Expectations

Students will:

- Identify social barriers to care and link patients to resources to address them.
- Effectively call on system resources to provide care that is of optimal value.

Assessment

Students will be evaluated specifically on these skills through the use of the CPA forms and Professionalism Assessment Tool (PAT form) requested from nurses. This evaluation will be reflected in the Final Grade Narrative.

Medicine Clerkship Objectives

PATIENT-CENTERED MEDICAL CARE

- Efficiently obtain a full history from an adult patient, tailored to the nature of the patient's presentation. [PCMC-1](#), [ECIS-1](#) (CPA, DO, OSCE)
- Independently perform a complete physical exam in a sensitive manner on adult patients, tailored to the nature of the visit or complaint. [PCMC-2](#) (CPA, DO, OSCE, PEX)
- Interpret history and physical exam findings to generate differential diagnosis. [PCMC-3](#) (CPA, OSCE, NBME, MT, EPA)
- Formulate a patient care plan based on the most likely differential diagnosis. Include necessary diagnostic tests, therapeutic treatment, and family education. [PCMC-3](#), [PCMC-6](#) (CPA, OSCE, NBME, EPA)
- Recognize criteria for admission and discharge from the hospital. [PCMC-3](#) (CPA)
- When appropriate, reassess patients after initial examination. [PCMC-2](#) (CPA)
- Efficiently report findings of history, physical exam, labs/studies and other findings to members of the medical team. [ECIS-2](#), [PCMC-3](#) (CPA)
- Efficiently share relevant clinical information with primary care physicians and other outpatient clinicians as appropriate. [ECIS-3](#) (CPA)
- Write admission orders for straightforward patients. [PCMC-3](#) (EPA)
- Practice appropriate infection control measures while caring for patients. [PCMC-4](#) (DO)

MEDICAL KNOWLEDGE AND SCHOLARSHIP, CONTINUOUS LEARNING AND QUALITY IMPROVEMENT

Depending on the specific disease/symptom, describe the common causes, and/or the relevant differential diagnosis, and/or a logical diagnostic plan and/or the appropriate initial management for each of the following conditions: [MKS-1b](#), [1d](#), [1e](#), [3a](#), [3b](#) (CPA, OSCE, NBME, MT, CC, CL)

- Acid-base disorders
 - Describe the most common causes of respiratory acidosis, respiratory alkalosis, metabolic acidosis and metabolic alkalosis, and know how to distinguish between them from chemistry and arterial blood gas data. [MKS-1b](#), [1d](#)
 - Calculate the anion gap and explain its relevance to determining the cause of a metabolic acidosis. [MKS-1b](#)
- Alcoholism and substance use
 - Describe the presenting signs and symptoms of acute alcohol and drug intoxications. [MKS-1d](#)
 - Describe the presenting signs and symptoms of acute alcohol and drug withdrawal [MKS-1d](#) syndromes.
 - Describe the diagnostic criteria for alcohol use disorder [MKS-1d](#)
 - Describe the diagnostic criteria for opioid use disorder [MKS-1d](#)

- Anemia
 - Describe the morphologic characteristics and laboratory findings of iron deficiency anemia, macrocytic anemias, anemia of chronic inflammation, and common hemoglobinopathies (sickle cell and thalassemias). [MKS-1b, 1d](#)
 - Generate a differential diagnosis, based on specific history and examination findings, to suggest a specific etiology of anemia. [MKS-1d, 3a](#)
- Atrial Fibrillation
 - Describe the clinical and electrocardiographic manifestations of atrial fibrillation, including risk factors [MKS-1d, 1f](#)
 - Estimate annual stroke risk of patients with atrial fibrillation and develop appropriate treatment strategies [MKS- 1f, 1e](#)
- Cancer
 - Describe the epidemiology, risk factors, and clinical presentation of the following common malignancies in adults: lung cancer, colon cancer, prostate cancer, pancreatic cancer, and multiple myeloma. [MK-1d, 1f](#)
 - Describe the common patterns of metastatic spread in each of these malignancies. [MKS-1b](#)
- Congestive heart failure (CHF)
 - Describe the common disease entities that cause CHF (i.e. ischemic, valvular, hypertrophic, inflammatory, and infiltrative cardiomyopathies). [MKS-1b](#)
 - Distinguish the etiologies and pathophysiology of systolic and diastolic dysfunction. [MKS-1b](#)
 - Describe factors leading to exacerbation of CHF including hypoxemia, anemia, fever, hypertension, tachyarrhythmia, and hyperthyroidism. [MKS-1b](#)
 - Describe the pathophysiology of symptoms and signs characteristic of CHF (for example orthopnea, PND, peripheral edema, and pulmonary edema). [MKS-1d](#)
 - Ability to perform pertinent cardiac physical exam of the heart, including measurement of jugular venous pulsations. [PCMC-2](#)
 - Generate a differential diagnosis of CHF based on history, physical examination, and diagnostic testing. [MKS-1d, 3a](#)
 - Describe the principles of non-pharmacologic and pharmacologic management (for example diuretics, vasodilators, positive inotropic agents, ACE inhibitors, and anticoagulants). [MKS-1e, 3b](#)
 - Describe the clinical and electrocardiographic manifestations of the following common arrhythmias: atrial fibrillation, heart block, ventricular tachycardia, and ventricular fibrillation. [MKS-1d](#)
- Coronary heart disease
 - Construct a differential diagnosis, appropriate to the characteristics of the patient's chest pain, considering potential cardiac (ischemic and non-ischemic), gastrointestinal, pulmonary and musculoskeletal etiologies. [MKS-1d, 3a](#)
 - Construct an appropriate and focused assessment of the patient with acute chest pain of potential ischemic origin, including history, physical examination, electrocardiographic interpretation, and initial steps in urgent management. [MKS-1d, 1e, 3a,3b; PCMC-3](#)
 - Describe the risk factors for coronary artery disease, and the means available for their modification. [MKS-1f, 1e, 3b](#)
- Diabetes Mellitus (DM)
 - Describe the epidemiology, pathogenesis, diagnosis and presenting signs and symptoms of

- Type I and Type II DM. [MKS-1b, 1d, 3a](#)
 - Describe the goals of treatment of DM and the indications for diet therapy, oral hypoglycemic therapy, and insulin therapy. [MKS-1e, 1c,](#)
 - Describe management strategies for DKA and nonketotic hyperglycemic states, including similarities and differences in fluid and electrolyte replacement.
- Electrolyte disorders
 - Describe the pathophysiology of hypo- and hypervolemia, hypo- and hypernatremia, hypo- and hyperkalemia, and hypercalcemia, and of simple acid-base disorders (respiratory acidosis and alkalosis, metabolic acidosis and alkalosis). [MKS-1b](#)
 - Describe the differential diagnosis of hyponatremia and hypernatremia in the setting of volume depletion, euvolemia, and hypervolemia. [MKS-1b, 1d, 3a](#)
 - Describe the types of fluid preparations to use in the treatment of fluid and electrolyte disorders. [MKS-1e](#)
- HIV
 - Describe risk factors for HIV infection. [MKS-1f, 1b](#)
 - Describe the CDC AIDS case definition. [MKS-1b, 1d](#)
 - Interpret the results of CD4 lymphocyte count and quantitative HIV RNA testing, and describe the implications of the results for overall prognosis and risk of opportunistic infection. [MKS-1b, 1d, 1c](#)
 - Construct a differential diagnosis for an HIV-positive patient presenting with fever, dyspnea, diarrhea, headache, or altered mental status. [MKS-1d, 3a](#)
 - Consider the bioethical and social issues concerning patient confidentiality and HIV infection. [PBMR-1,2,6; CES-1](#)
- Hypertension
 - Identify the etiologies and prevalence of primary and secondary hypertension. [MKS-1b, 1f](#)
 - Define and describe the manifestations of target-organ disease due to hypertension. [MKS-1b, 1d](#)
 - Describe the prevention strategies for reducing hypertension including lifestyle factors, dietary intake of sodium, weight, and exercise level. [MKS-1f, 1c, 3b; CES-1](#)
 - Describe the pharmacologic management of chronic hypertension and causes for lack of responsiveness to therapy. [MKS-1e, 3a](#)
- Abnormal Liver Function
 - Construct a differential diagnosis of a patient with jaundice, including intrahepatic and extra-hepatic etiologies. [MKS- 1d, 3a](#)
 - Construct an initial diagnostic plan for evaluating the patient with jaundice. [MKS-1e, 3b](#)
 - Describe the common infectious, toxic, pharmacologic, and immune-mediated causes of hepatitis. [MKS-1b](#)
 - Delineate the routes of transmission, clinical manifestations, and natural history of the viral infections associated with acute and chronic hepatitis. [MKS-1b, 1d, 1c](#)
 - Describe the serologic tests available to characterize viral hepatitis. [MKS-1d](#)
 - Describe the medical complications pathophysiology, and pertinent physical exam of a patient with hepatic cirrhosis. [MKS-1b, 1d](#)
- Pain management
 - Elicit a patient-centered history of pain complaints and differentiate between different categories of pain (i.e. acute vs. chronic, neuropathic vs. nociceptive) [MKS-1b; PCMC-1](#)

- Propose pharmacologic and non-pharmacologic treatment strategies focused on alleviating and addressing acute pain [MKS-1b, 1e, 3b](#)
- Describe the indications for opioid analgesics in the management of pain and convert opioid prescriptions from one formulation to another. [MKS-1e](#)
- Pneumonia
 - List the most common microorganisms responsible for community-acquired pneumonia and hospital-acquired pneumonia. [MKS-1b](#)
 - Identify appropriate antibiotics for community-acquired pneumonia. [MKS-1e, 3b](#)
 - Describe the physical examination maneuvers and findings that can be utilized in the assessment of pulmonary consolidation and pleural effusion. [MKS-1d, PCMC-2](#)
 - Describe the differential diagnosis of pleural effusions and the initial diagnostic approach. [MKS-1d, 3a](#)
- Psychosocial issues
 - Identify social determinants that influence patient health and disease, as well as those that influence patient choices or decisions in their care. [MKS-1, CES-1](#)
 - Describe genetic, environmental, interpersonal, and social issues that impact the care of hospitalized patients. [CES-1; SATBC-1](#)
- Renal impairment
 - Describe common etiologies of acute renal failure, and distinguish between pre-renal, renal, and post-renal etiologies. [MKS-1b, 3a](#)
 - Construct an appropriate laboratory investigation for a patient with acute renal failure (chemistries, urinary diagnostic indices, urinalysis, imaging techniques). [MKS-1d, 3a](#)
 - Describe the renal glomerulopathies and the systemic illnesses commonly associated with nephrotic syndrome in adults. [MKS-1b](#)
- Rheumatologic conditions
 - Conduct targeted physical examinations of patients with joint pain [MKS-1d; PCM2](#)
 - Describe the pathophysiology and common signs and symptoms of osteoarthritis, crystalline arthropathies, and septic arthritis [MKS-1b, 1d](#)
 - Discuss the common signs and symptoms of and diagnostic approach to rheumatoid arthritis, spondyloarthropathies, systemic lupus erythematosus, systemic sclerosis, Raynaud's syndrome/phenomenon, Sjögren's syndrome, temporal arteritis and polymyalgia rheumatica, vasculitis, polymyositis, dermatomyositis, and fibromyalgia. [MKS-1b, 1d, 3a](#)
- Thromboembolism
 - Describe the risk factors for deep venous thrombosis. [MKS-1b, 1f](#)
 - Describe the laboratory tests commonly used to assess hemostasis. [MKS-1d](#)
 - Construct a diagnostic evaluation for a patient with suspected DVT and/or PE. [MKS-1b, 1d, 3a, PCMC-3](#)
- Describe the relevant differential diagnosis and develop a logical diagnostic plan for the workup of the following chief complaints: [MKS-1d, 3a; PCMC-3 \(CPA, OSCE, CC, CL\)](#)
 - Abdominal pain
 - Altered mental status
 - Chest pain
 - Diarrhea
 - Dyspnea
 - Fever

- GI bleeding
- Syncope
- Weight loss
- Interpret and recognize abnormalities in vital signs and common laboratory findings, including complete blood count and differential, electrolytes, electrocardiogram, chest X-ray, pleural fluid studies, and CSF studies). MKS-1d (CPA, OSCE)
- Consistently apply relevant literature to daily patient care. MKS-3a,3b, CLQI-3 (CPA)

COMMUNICATION AND INTERPERSONAL SKILLS

- Communicate effectively with patients and families using non-medical jargon and checking for understanding. ECIS-1, ECIS-3 (CPA, OSCE, RN, EPA)
- Provide culturally-sensitive patient education at an appropriate literacy level. ECIS-3, CES-1 (CPA, EPA)
- Communicate patient information accurately and efficiently to all health care team members in a timely manner. ECIS-3 (CPA, EPA, OSCE)
- Deliver clear, properly-timed, and well-formatted oral presentations. ECIS-3 (CPA, EPA, CL)
- Write concise, accurate admission and progress notes in the EHR with up-to-date information including current patient assessments, appropriate physical exams, and problem-based plans. ECIS-2, PCMC-3, PCMC-5 (CPA, SDHP, CL)

PROFESSIONAL BEHAVIOR AND MORAL REASONING, PERSONAL AWARENESS & SELF-CARE

- Consistently take initiative for own learning and patient care. PASC-3, PBMR-7 (CPA, CL)
- Demonstrate accountability, dependability, and integrity when interacting with patients, families, and members of the health care team. PBMR-3, PBMR-5, SATBC-2a (CPA, RN)
- Demonstrate respect, compassion, accountability, dependability, and integrity. PBMR-5 (CPA)
- Observe all patient privacy guidelines. PBMR-6 (CPA)
- Adhere to standards regarding punctuality, dress, and professional boundaries. PBMR-7 (CPA)

SYSTEM AWARENESS AND TEAM-BASED CARE

- Work as an effective member of the healthcare team in an outpatient clinic, inpatient teaching team, or urgent care setting. SATBC-2a, 2b (CPA)
- Interact effectively with clerical staff, nurses, physician assistants, nurse practitioners, and physicians in a cooperative manner to effectively and efficiently provide patient care. SATBC-2a, 2b (CPA, IDR)
- Collaborate effectively to help the healthcare team achieve its goals. SATBC-2a, 2b (CPA, RN, IDR)
- Implement provided feedback. CLQI-1a (CPA)

COMMUNITY ENGAGEMENT AND SERVICE

- Identify a patient's medical and social needs and assess barriers in accessing care. CES-1, SATBC-1 (CPA)
- Appropriately utilize community resources and multidisciplinary consultants including social work, nutrition, and physical therapy, for patients in both inpatient and outpatient settings. CES-2, SATBC-1 (CPA, PT, IDR)

- Assess and reflect on ethical challenges when caring for adult patients. [PBMR-2 \(E\)](#)
- Demonstrate awareness of community/social factors that influence medical decision-making. [CES-1](#), [PBMR-2 \(CPA\)](#)

Assessment Type

CPA	Clinical Performance Assessment
DO	Direct Observation
EPA	EPA-Based Mobile Observation
PEX	Physical Exam Rounds
RN	Nurse Professionalism Evaluation
NBME	Shelf Exam
MT	Midterm Quiz
OSCE	Observed Simulated Clinical Examination
CC	Core Topic Conferences
ES	Ethics Blog Post and Discussion
PT	Physical Therapy Workshop
IDR	IDR Attendance
SDHP	Site Director H&P Review
RN	Nurse Professionalism Evaluation
CL	Clerklog