

Medicine Clerkship

Department of Internal Medicine
MS 310
2023 - 2024

Clerkship Director: Sonia Ananthakrishnan, MD
Clerkship Coordinator: Yulianna Santos





Medicine Clerkship Syllabus

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Medical Education Program Objectives

A Boston University Chobanian & Avedisian School of Medicine graduate will be able to:

| INSTITUTIONAL LEARNING OBJECTIVES | MEDICAL EDUCATION PROGRAM OBJECTIVES | |
|--|--------------------------------------|---|
| Establish and maintain medical knowledge necessary for the care of patients (MK) | MK.1 | Describe the normal development, structure, and function of the human body. |
| | MK.2 | Recognize that a health condition may exist by differentiating normal physiology from pathophysiologic processes. |
| | MK.3 | Describe the risk factors, structural and functional changes, and consequences of biopsychosocial pathology. |
| | MK.4 | Select, justify, and interpret diagnostic tests and imaging. |
| | MK.5 | Develop a management plan, incorporating risks and benefits, based on the mechanistic understanding of disease pathogenesis. |
| | MK.6 | Articulate the pathophysiologic and pharmacologic rationales for the chosen therapy and expected outcomes. |
| | MK.7 | Apply established and emerging principles of science to care for patients and promote health across populations. |
| | MK.8 | Demonstrate knowledge of the biological, psychological, sociological, and behavioral changes in patients that are caused by or secondary to health inequities. |
| Demonstrate clinical skills and diagnostic reasoning needed for patient care (CSDR) | CSDR.1 | Gather complete and hypothesis driven histories from patients, families, and electronic health records in an organized manner. |
| | CSDR.2 | Conduct complete and hypothesis-driven physical exams interpreting abnormalities while maintaining patient comfort. |
| | CSDR.3 | Develop and justify the differential diagnosis for clinical presentations by using disease and/or condition prevalence, pathophysiology, and pertinent positive and negative clinical findings. |
| | CSDR.4 | Develop a management plan and provide an appropriate rationale. |
| | CSDR.5 | Deliver an organized, clear and focused oral presentation. |
| | CSDR.6 | Document patient encounters accurately, efficiently, and promptly including independent authorship for reporting of information, assessment, and plan. |
| | CSDR.7 | Perform common procedures safely and correctly, including participating in informed consent, following universal precautions and sterile technique while attending to patient comfort. |
| | CSDR.8 | Utilize electronic decision support tools and point-of-care resources to use the best available evidence to support and justify clinical reasoning. |
| | CSDR.9 | Recognize explicit and implicit biases that can lead to diagnostic error and use mitigation strategies to reduce the impact of cognitive biases on decision making. |
| Effectively communicate with patients, families, colleagues and interprofessional team members (C) | C.1 | Demonstrate the use of effective communication skills, patient-centered frameworks, and behavioral change techniques to achieve preventative, diagnostic, and therapeutic goals with patients. |
| | C.2 | Clearly articulate the assessment, diagnostic rationale, and plan to patients and their caregivers. |
| | C.3 | Effectively counsel and educate patients and their families. |
| | C.4 | Communicate effectively with colleagues within one's profession and team, consultants, and other health professionals. |
| | C.5 | Communicate one's role and responsibilities clearly to other health professionals. |
| | C.6 | Demonstrate appropriate use of digital technology, including the EMR and telehealth, to effectively communicate and optimize decision making and treatment with patients, families and health care systems. |

| A Boston University Chobanian & Avedisian School of Medicine graduate will be able to: | | |
|---|--------------------------------------|---|
| INSTITUTIONAL LEARNING OBJECTIVES | MEDICAL EDUCATION PROGRAM OBJECTIVES | |
| | C.7 | Practice inclusive and culturally responsive spoken and written communication that helps patients, families, and health care teams ensure equitable patient care. |
| | C.8 | Communicate information with patients, families, community members, and health team members with attention to health literacy, avoiding medical jargon and discipline-specific terminology. |
| | C.9 | Communicate effectively with peers and in small groups demonstrating effective teaching and listening skills. |
| Practice relationship centered care to build therapeutic alliances with patients and caregivers (PCC) | PCC.1 | Demonstrate sensitivity, honesty, compassion, and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation. |
| | PCC.2 | Demonstrate humanism, compassion, empathy, integrity, and respect for patients and caregivers. |
| | PCC.3 | Demonstrate a commitment to ethical principles pertaining to autonomy, confidentiality, justice, equity, and informed consent. |
| | PCC.4 | Show responsiveness and accountability to patient needs that supersedes self-interest. |
| | PCC.5 | Explore patient and family understanding of well-being, illness, concerns, values, and goals in order to develop goal-concordant treatment plans across settings of care. |
| Exhibit skills necessary for personal and professional development needed for the practice of medicine (PPD) | PPD.1 | Recognize the need for additional help or supervision and seek it accordingly. |
| | PPD.2 | Demonstrate trustworthiness that makes colleagues feel secure when responsible for the care of patients. |
| | PPD.3 | Demonstrate awareness of one's own emotions, attitudes, and resilience/wellness strategies for managing stressors and uncertainty inherent to the practice of medicine. |
| Exhibit commitment and aptitude for life-long learning and continuing improvement (LL) | LL.1 | Identify strengths, deficiencies, and limits in one's knowledge and expertise. |
| | LL.2 | Develop goals and strategies to improve performance. |
| | LL.3 | Develop and answer questions based on personal learning needs. |
| | LL.4 | Actively seek feedback and opportunities to improve one's knowledge and skills. |
| | LL.5 | Locate, appraise, and assimilate evidence from scientific studies related to patients' health. |
| | LL.6 | Actively identify, analyze, and implement new knowledge, guidelines, standards, technologies, or services that have been demonstrated to improve patient outcomes. |
| Demonstrate knowledge of health care delivery and systems needed to provide optimal care to patients and populations (HS) | HS.1 | Identify the many factors that influence health including structural and social determinants, disease prevention, and disability in the population. |
| | HS.2 | Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations. |
| | HS.3 | Demonstrate respect for the unique cultures, values, roles/responsibilities, and expertise of the interprofessional team and the impact these factors can have on health outcomes. |
| | HS.4 | Work with the interprofessional team to coordinate patient care across healthcare systems and address the needs of patients. |
| | HS.5 | Participate in continuous improvement in a clinical setting, utilizing a systematic and team-oriented approach to improve the quality and value of care for patients and populations. |
| | HS.6 | Initiate safety interventions aimed at reducing patient harm. |

| A Boston University Chobanian & Avedisian School of Medicine graduate will be able to: | | |
|--|--------------------------------------|--|
| INSTITUTIONAL LEARNING OBJECTIVES | MEDICAL EDUCATION PROGRAM OBJECTIVES | |
| | HS.7 | Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care. |
| | HS.8 | Integrate preventive interventions into the comprehensive health care of individuals. |
| | HS.9 | Explain how different health care systems, programs and community organizations affect the health of neighborhoods and communities. |
| Exhibit commitment to promoting and advancing health equity for all patients (HE) | HE.1 | Define health equity and describe the individual and population level differences in health outcomes and disease burden due to inequities in health care. |
| | HE.2 | Comprehend the historical and current drivers of structural vulnerability, racism, sexism, oppression, and historical marginalization and how they create health inequity. |
| | HE.3 | Explain how one's own identity, lived experiences, privileges, and biases influences their perspectives of colleagues, patients and clinical decision making. |
| | HE.4 | Comprehend and identify the impact of health care inequities through medical decision making tools, interpreting medical literature and reviewing scientific research. |
| | HE.5 | Identify factors needed to advocate for a more diverse and equitable healthcare environment at a local, community, and systems based level. |

Third Year Learning Objectives

During the third-year clerkships, students will

- Demonstrate use of patient-centered interviewing and communication techniques
- Take a clinical history that demonstrates both organization and clinical reasoning
- Perform accurate and relevant physical exam techniques
- Demonstrate an ability to synthesize clinical information and generate a differential diagnosis, assessment and plan
- Demonstrate a compassionate and patient-sensitive approach to history taking and physical examinations
- Communicate well organized, accurate and synthesized oral presentations
- Counsel and educate patients and families
- Demonstrate timely, comprehensive and organized documentation
- Demonstrate a fund of knowledge in the clinical discipline and apply this to patient care
- Demonstrate an awareness of one's own learning needs and work to address these gaps
- Show respect and empathy for others
- Demonstrate accountability to the responsibilities of the student's role and expectations of a clinical clerk
- Communicate effectively with the interprofessional team

Medicine Clerkship Learning Objectives

By the end of the clerkship, each student will be able to

- I. Demonstrate **professional and humanistic behavior in clinical and clerkship related responsibilities:**
 - Be present and punctual
 - Proactively clarify your role and responsibilities, and reliably respond to patient care needs
 - Appropriately identify your position as "Student" or "Student Doctor"
 - Maintain confidentiality

- Be forthright and accept responsibility for errors
 - Ask for help appropriately
 - Build a therapeutic relationship through a respectful, empathic approach that **gains the trust of the patient**
 - Dress and behave in a way that promotes patient and team comfort, trust and confidence in you
 - Demonstrate that the interests of the patient guide your behavior by:
 - Working to meet the patient's needs – at times this means accepting personal inconvenience
 - Advocating for patient's needs – e.g., getting a test, consult or follow-up appointment
- II. Develop productive, collaborative working relationships with other members of the health care **team** and system, effectively contribute to the provision of quality patient care, and work toward the **improvement of the systems of care.**
 - III. Use proper technique to perform an accurate, appropriately detailed and organized **history and physical examination** in an efficient and sensitive manner, with a special emphasis on the intermediate and advanced physical diagnosis skills involved in volume assessment, the cardiovascular exam and the chest/pulmonary exam.
 - IV. Communicate clinical information accurately and demonstrate your understanding of the patient's problems, through concise, convincing, well-organized **patient presentations, admission write-ups, progress notes, and handoffs** that are appropriately focused for the audience, purpose and time available for the communication.
 - V. **Identify and prioritize your patients' problems, formulate an appropriate differential diagnosis** and outline an approach to diagnosis and management that is supported by clinical data and sound reasoning.
 - VI. **Educate patients** about their conditions and partner with them to develop and implement a treatment plan.
 - VII. Perform the designated **procedures** with appropriate technical proficiency while demonstrating attention to the patient's needs and concerns, and describing a clear understanding of benefits/risks, indications/contraindications.
 - VIII. Demonstrate a core foundation of **knowledge** (scientific, ethical, socio-cultural) guided by the course objectives that is necessary both to provide high quality patient care and to understand advances in medicine.
 - IX. **Identify and address your learning needs** (by asking questions and critically incorporating information from appropriate resources into the decision-making process) and effectively share this information with colleagues.

Solicit and probe for useful **feedback** and respond with **improved performance.**

Contact Information



Clerkship Director

Sonia Ananthakrishnan

Telephone: (617) 358-3523

Email: Sonia.Ananthakrishnan@bmc.org

Pager: 4435

Office: Evans 122

Office Hours: Students may email to set up an appointment



Associate Clerkship Director

Radha Govindraj, M.D.

Telephone: Please email to reach out

Email: Radha.Govindraj@bmc.org

Pager: 1808

Office: Crosstown 2111

Office Hours: Students may email to set up an appointment



Clerkship Coordinator

Yulianna Santos

Telephone: (617) 358-3523

Email: yusantos@bu.edu

Office: Evans 122

Office Hours: 8:00 AM – 4:30 PM

Clerkship Description

Focus of clerkship

The Medicine Clerkship is an 8-week experience designed to develop your ability to function as a caring, increasingly independent clinician while supervised on a multi-professional team. During the clerkship, you will learn clinical medicine while working side-by-side with teams of residents and/or faculty providing care to a cohort of inpatients. As your knowledge and skills grow, you will earn increasing patient care responsibility. This direct patient care experience is complemented by a unique enrichment in which you also work in small groups with a clerkship director and hone essential clinical skills (including intermediate-level communications skills, physical diagnosis, and clinical reasoning). Your education is supplemented with conferences that focus on core topics. The clerkship is divided into two mini-blocks of 4 weeks each, and most students spend time at 1 or 2 of our clinical sites.

The goal of the clerkship is to develop someone who we would want to care for our family members; a professional, highly caring clinician who is increasingly independent and knowledgeable, and who is a strong team member.

The Medicine Clerkship aims to:

- **Introduce you to the world of internal medicine**
- **Develop your skills as a clinician**
- **Enable you to become a contributing, collaborating team member**
- **Support your skills as a self-directed learner**

The Self-Directed Learner

We welcome you to the world of medicine, where growth in the body of knowledge is accelerating and evolving at an unprecedented pace. You must be engaged and take ownership of your learning to maximize your learning experience on this clerkship. The Medicine Clerkship builds upon the learner-centered approach and challenges you to be a self-directed, lifelong learner. The dynamic nature of learning while caring for patients requires that you **become adept at identifying your learning needs and acting upon them**. You will need to continually ask relevant questions, find credible, evidence-based responses, and integrate this information into patient care.

As a student, you will learn to be a flexible learner who employs a variety of appropriate resources ranging from textbooks and the medical literature to consultants, and one who solicits and responds effectively to feedback. The clerkship provides you with many opportunities to read in-depth, to become the “local expert” on your patients, to share your learning with your team, and to improve continuously.

Contributing, Collaborating Team Member

Medicine is team-based, requiring you to **work effectively with multiple health care providers from different disciplines and within a complex system**. The Clerkship challenges you to “identify your niche” from which to consistently contribute to both patient care and team learning, and to develop the habits and skill sets that will enable you to function effectively within and improve the systems in which our patients receive their care.

Becoming a Clinician

The **primary focus of the clerkship** is to increase your ability to function as a caring, increasingly independent clinician while supervised on a multidisciplinary team. A clinician in this setting is someone who addresses all dimensions of patient care: communication, diagnosis, treatment, and healing. You will do so by growing into taking a central role in the care of assigned patients while also learning from other patients who are on your team.

Pre-requisite knowledge and skills

Students must have completed their second-year curriculum and the Transitional Clerkship and have taken the Step-I exam prior to taking this clerkship.

Clerkship Changes Made Based on Feedback

- Didactics schedule- move from daily 12-1pm sessions to alternating Monday and Wednesday half day sessions
- Wellness hour daily from 12-1pm consistently reinforced to BMC house staff and faculty supervisors
- Wellness afternoon- 4th Friday afternoon is off, sometimes adjusted for holidays
- Site Updates:
 - A. We welcomed the addition of St. Elizabeth's Medical Center and a fantastic site director, Dr. Paul Fallon.
 - B. We welcomed the addition of a new site directors at Roger Williams Medical Center, Dr. Lidia Vognar
 - C. Orientation updates at sites
- New ACD at BMC, Radha Govindraj
- 4th year students panel Q and A style at orientation and throughout the clerkship
- Updates to didactics: Chest Pain didactics
- Addition of new didactics on Addiction Medicine and Social Determinants of Health
- Continued faculty and resident development in feedback and assessment at BMC and across sites
- Focused and ongoing Site Director Development and Associate Clerkship Director development around:
 - Bedside teaching
 - Presentation skills (written and oral)
 - Clinical Reasoning, OCRA prep
 - Assessment and Grading
 - Sharing best practices/challenges at sites

Diversity, Equity, and Inclusion Initiatives

- Ongoing updates based on work by the Vertical Integration Group comments regarding Racism in Medicine and Gender and Sexual Diversity VIG
 - HIV Lecture now includes more updated information and language around GSD Health and screening and prevention of HIV
- Addition of new didactics on Addiction Medicine and Social Determinants of Health

Other Recent Changes to the Clerkship

- Clerkship Directors, Associate Clerkship Directors and Site Directors initiative to serve as a Student-Team Liaison

- Clerkship faculty will serve as Team Liaisons to help support expectations setting, encourage feedback exchange, and help to improve transparency and specificity in assessment.

Site Information

Site maps indicating the availability of student resources at our affiliate hospitals can be found under the Clinical Sites section of the Medical Education Office's Student Resources page at <http://www.bumc.bu.edu/busm/education/medical-education/student-resources/#siteinfo>.

Students will work with designated inpatient teams at each site to provide care for and learn from hospitalized patients. Many locations require a car and some provide housing. Some sites provide a complementary set of student conferences while students at some sites will have access to Zoom conference software to access noon student didactics at Boston Medical Center (see below).

Each site has an MD Site Director and Program Coordinator who will partner with you to ensure a great learning experience and will be available to address immediate educational and logistic questions or concerns. The Site Director or designee at each site will function in a role similar to your Clerkship Director at Boston Medical Center and provide you with feedback on your performance.

Berkshire Medical Center

725 North St., Pittsfield, MA 01201

Site Director: Steven Lamontagne, slamontagn@bhs1.org, (413) 447-2839

Site Administrator: Stephanie Wade, swade@bhs1.org, (413) 395-7879

Located in beautiful Berkshire County, Berkshire Medical Center is a 298-bed community teaching hospital. Berkshire Medical Center provides primary and specialized health care services to the people of Berkshire County and surrounding communities. Chobanian & Avedisian SOM students work alongside interns, residents, and attendings, and share experiences with students from the University of Massachusetts Medical School. Housing is provided, some conferences take place on-site, with opportunities to Zoom into BMC noon student didactics, and a car is required.

Beth Israel Deaconess Needham

148 Chestnut St., Needham, MA 02492

Site Director: Jonathan Goldman jgoldma@bidmc.harvard.edu, (781) 453-6100

Site Administrator: Barbara Breslin bbreslin@bidneedham.org

Beth Israel Deaconess Needham is a 58-bed (including 7 ICU beds) community hospital. The inpatient service is staffed by attending hospitalists, who are internal medicine trained physicians specializing in the care of inpatients. This means that essentially 100% of your physician interactions will be with attending physicians, which will afford you a higher level of independence and autonomy. Another bonus at BI Needham is the open-ICU concept, where students will have the ability to observe and sometimes participate in the care of patients requiring ICU level care. There are opportunities to Zoom into BMC noon student didactics, and a car is helpful.

Beth Israel Deaconess Plymouth

275 Sandwich St., Plymouth, MA 02360

Site Director: Albana Mihali, albanabmihali@gmail.com

Site Administrator: MaryJo Donovan mjdovovan@bidplymouth.org

Beth Israel Deaconess Plymouth is a 150-bed community hospital that provides care to patients and communities on the South Shore and on Cape Cod. Students will work directly with hospitalists in the provision of care (with an opportunity for greater independence and autonomy) and get first-hand experience in an accountable care organization. There are opportunities to Zoom into BMC noon student didactics, and housing is provided.

Boston Medical Center

1 Boston Medical Center Place, Boston, MA 02118

Site Director: Sonia Ananthkrishnan, sonia.ananthkrishnan@bmc.org, (617) 358-3523

Site Administrator: Yulianna Santos, yusantos@bu.edu, (617) 358-3523

Boston Medical Center is a private, not-for-profit, 493-bed, academic medical center located in Boston's historic South End. An acute care, full-service hospital, BMC provides healthcare to a diverse patient population, including vulnerable, inner-city residents. The primary teaching affiliate for [Boston University School of Medicine](#), BMC is the largest safety net hospital in New England. Students work on teams composed of interns, residents, attendings, and fellows. Students rotate on the Medicine wards and the Medical Intensive Care Unit as part of their Medicine Clerkship. Didactics occur on noon on many weekdays.

Kaiser Permanente

250 Hospital Parkway, San Jose, CA 95119

Site Director: Marina Dergun, Marina.X.Dergun@kp.org, (408) 972-4576

Associate Site Director: Subbu Lakshmi, Subbu.Lakshmi@kp.org

Site Administrator: Elizabeth Chua, Elizabeth.Chua@kp.org, (408) 972-4495

Sandeep Tumber, Sandeep.X.Tumber@kp.org

Sally Castro, Sally.M.Castro@kp.org

The Kaiser Permanente Regional Campus, Silicon Valley hosts 3rd year core clerkships up to one year in duration. It is an integrated program where student rotations occur at both Kaiser San Jose and Santa Clara Medical Centers; the Medicine Clerkship takes place at the San Jose campus. This clerkship program offers Boston University medical students an opportunity to train within the nonprofit integrated, managed care system that is often hailed as the health care model for the future. You work primarily with hospitalists (there are only rarely psychiatry or family medicine residents). Housing is provided, conferences take place on-site, and a car is required.

MetroWest Medical Center

115 Lincoln St., Framingham, MA 01702

Site Director: Thomas Treadwell, Thomas.treadwell@mwmc.com

Eric Chun, eric.chun@mwmc.com

Site Administrator: Rhonda Carlson, Rhonda.Carlson@mwmc.com

MetroWest is a 300-bed community hospital in Framingham, MA. Students join teams composed of one attending/hospitalist, one resident, and one intern. Students attend didactics at MetroWest and there are sometimes opportunities to Zoom into BMC noon student didactics. A car is required.

Roger Williams Medical Center

825 Chalkstone Ave., Providence, RI 02908

Site Director: Lidia Vognar, Lidia.Vognar@chartercare.org

Site Administrator: Cathy Cardillo, ccardillo@chartercare.org

The medical service at Roger Williams Medical Center in Providence, RI boasts a blend of primary and tertiary care in an academic community hospital and is the site for the state's only bone marrow transplantation program. Students work alongside interns, residents and hospitalists to provide patient care. Students attend didactics at Roger Williams and there are opportunities to Zoom into BMC noon student didactics. Housing is provided.

St. Elizabeth's Medical Center

736 Cambridge St, Brighton, MA 02135

Site Director: Paul Fallon, Paul.Fallon@steward.org

Site Administrator: Caroline Ward, Caroline.Ward@steward.org

Founded in 1868, SEMC is located in Boston's Brighton neighborhood that provides a full range of medical specialties, including family medicine, cardiovascular care, women and infant's health, cancer care and orthopedics. Steward Health Care has always been committed to championing the best in health care for patients in the communities where they live and work. Through this partnership, they are able to open access to academic-based, tertiary level care to patients in communities across Eastern Massachusetts and beyond. Students work alongside interns, residents and hospitalists to provide patient care.

West Roxbury VA (Boston VA Healthcare System)

1400 VFW Parkway, West Roxbury, MA 02132

Site Director: Richard Serrao, Richard.Serrao@va.gov, (857) 203-5056

Site Administrator: Laura Muckerheide, Laura.Muckerheide@va.gov, (857) 203-6942

The VA serves as a major teaching affiliate of Chobanian & Avedisian SOM, and trainees at the VA are exposed to a challenging and rewarding patient population characterized by a heavy burden of chronic illness, particularly cardiovascular and pulmonary diseases, and medical problems resulting from specific circumstances such as traumatic brain injury or spinal cord injury. The VA system also affords you the unique opportunity to experience a national-scope, single-payer, integrated health system. Students work on teams with interns, residents and attendings from both Boston Medical Center and Brigham and Women's Hospital, and attend didactics at the VA. A car is often necessary.

Clerkship Schedules

Block Schedule

Block schedule dates for all clerkships can be located on the Medical Education website:

<http://www.bumc.bu.edu/busm/education/medical-education/academic-calendars/>

The IM Clerkship follows the 8 Week Schedule below:

| | Monday | Tuesday | Wednesday | Thursday | Friday | Weekend |
|--------|------------------------|------------------------|--|------------------------|--|---------|
| Week 1 | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | ON |
| Week 2 | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | OFF |
| Week 3 | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | ON |
| Week 4 | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC | Team 1: Site or BMC Round in AM Wellness Afternoon | OFF |
| Week 5 | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | ON |
| Week 6 | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | OFF |
| Week 7 | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | Team 2: Site or BMC | OFF |
| Week 8 | Team 2: Site or BMC | Team 2: Site or BMC | Unofficial Reading Day -Written OCRA 10 AM -Final Assessments (TBD) | Reading Day | MED SHELF | OFF |

Daily Schedule at Boston Medical Center

| Monday | Tuesday | Wednesday | Thursday | Friday |
|--|--|--|--|--|
| Pre-rounds 6:45-7:45 | Pre-rounds 6:45-7:45 | Pre-rounds 6:45-7:45 | Pre-rounds 6:45-7:45 | Pre-rounds 6:45-7:45 |
| Work Rounds 7:45-11:00am | Work Rounds 7:45-11:00am | Work Rounds 7:45-11:00am | Work Rounds 7:45-11:00am | Work Rounds 7:45-11:00am |
| Wellness Hour 12-1pm | Wellness Hour 12-1pm | CREx/M&M Conference (Optional) 12-1pm | Wellness Hour 12-1pm | Department of Medicine Grand Rounds 12-1pm |
| Didactics 1-5 PM (Alternating Mon & Weds) | | Didactics 1-5 PM (Alternating Mon & Weds) | | |
| Patient Care and/or Small Group Learning with your CD 1-5:30pm (2 x/week) | Patient Care and/or Small Group Learning with your CD 1-5:30pm (2 x/week) | Patient Care and/or Small Group Learning with your CD 2-5:30pm (2 x/week) | Patient Care and/or Small Group Learning with your CD 1-5:30pm (2 x/week) | Patient Care and/or Small Group Learning with your CD 1-5:30pm (2 x/week) |

- You will round with your team on either Saturday or Sunday (see Blackboard for general BMC team “rules” for which weekend day you may work, subject to change); expect to have 1 weekend day off on those weeks.

- The actual times vary slightly by team, but the above schedule gives you a general idea

Didactic Schedule

Didactics take place alternating Mondays and Wednesdays at Boston Medical Center from 1-5 PM starting in Week 2. Med 1 Student Report occurs weekly during didactics at BMC. All conferences are available on ZOOM, thus students at sites other than BMC who cannot come to Boston due to far-off sites will have access to this education. All students within reasonable distance are expected to be in-person for these weekly Didactic sessions on Mondays and Wednesdays and are to be excused from clinical duties at 12 PM to allow time for travel. Zoom conferencing is available and encouraged to access didactics in real-time. Videos of many BMC based didactics will be made available to students at all sites on Blackboard in order to complement didactic sessions at all other sites.

Holidays

Memorial Day: Monday, May 29th, 2023

Juneteenth: Monday, June 19, 2023

Thanksgiving: Wednesday, November 22, 2023 at 12PM – Sunday, November 26, 2023

Intersession: Sunday, December 24, 2023 – Monday, January 1, 2024

Other holidays that occur during specific blocks will be communicated by the clerkship director.

Weekends: Students will work 1 weekend day during the 1st, 3rd and 5th weekend of their 8-week rotation block during the clerkship. They will be excused by 12pm or after rounds on the 4th Friday for a Wellness Afternoon. Students observe the same weekdays on and off as the Internal Medicine residents in order to maintain the integrity of the Medicine ward team, and for students to gain experience functioning on an inter-professional team. Thus, students will work many Monday Holidays.

Students will generally have 2 (TWO) 4-week blocks on this clerkship (with exceptions around holiday seasons). The students have a wellness afternoon the 4th Friday afternoon starting at noon (or after rounds).

Students will also be excused by 5 pm on the day prior to their reading days in week ~8 of the Medicine clerkship.

Holidays by Clerkship can be viewed on the Medical Education website at:

<http://www.bumc.bu.edu/busm/education/medical-education/academic-calendars/#clerkhols>

Assessment and Grading

Clerkship Grading Policy

| HOW MUCH EACH PART OF YOUR GRADE IS WORTH: | |
|---|---|
| Clinical Grade Percentage | 60% |
| Shelf/Exam Percentage | 25% |
| "Other" Components Percentage: Additional Assessments | |
| OCRA: 1 Oral OCRA, 2 written OCRAs, 4% each | 12% |
| Directly Observed FOCUSED H and P | 3% |
| HOW YOUR FINAL WORD GRADE IS CALCULATED: | |
| Honors | ≥ 90 Total Points (this includes CSEF, shelf, additional assessments,) AND average of ≥ 3 in all CSEF domains |

| | |
|--|--|
| High Pass | ≥ 80 to <90 Total Points, AND average of ≥ 2.5 in all CSEF domains |
| Pass | ≥ 75 to <80 Total Points Or Numeric Score or between 1.5-2.49 in any domain on the final CSEF |
| Fail | <75 Total Points Or Numeric Score or <1.5 on any domain on the final CSEF or < 2 averaged on the final CSEF (Clinical Fail) |
| HOW YOUR CLINICAL GRADE IS CALCULATED WITH THE CSEF: | |
| Clinical Honors | >4.45 |
| Clinical High Pass | 3.45-4.44 |
| Clinical Pass | 2.00-3.44 |
| Clinical Fail | <2.00 |
| SHELF/EXAM GRADING | |
| Exam minimum passing (percentile/2 digit score) | 2-digit score of 58 that corresponds to 5 th percentile national on subject exam |
| What is "Other" and what percentage is it worth? | |
| Observed Clinical Reasoning Assessment (OCRA) | 12% |
| Directly observed FOCUSED H and P | 3% |
| Professionalism | See below |
| Other components that need to be completed in order to pass the clerkship | |
| Patient log | |
| Medicine Structured Observations of Clinical Skills Cards (SOCS) | |
| Standard Clerkship Clinical Grade Procedures/Policies | |
| <ul style="list-style-type: none"> Preceptors will provide clinical evaluations that contain the "raw data" on the student's clinical performance. Preceptors DO NOT determine the final "word" grade. You are encouraged to regularly ask for specific behaviorally-based feedback on your clinical skills from your preceptors. However, do not ask them what "word grade" you will get, as that is a multifactorial process of which the clinical evaluation is one component. The CSEF form will be used to numerically calculate your clinical grade: 1 to 5 points (depending on which box is checked) for each domain which will be averaged to give you a final score out of 5. Categories: Needs intensive remediation (1); Needs directed coaching (2); Approaching competency (3); Competent (4) or Achieving behaviors beyond the 3rd year competency criteria (5) to get a final number in each domain. This can be rounded to the nearest number using standard rounding for the CSEF domain and this is the box that should be checked (e.g. if an average of 2.4 then the student should have needs directed coaching (2) checked off). Each CSEF will be weighted based on how long the student worked with each evaluator (Interns weighted at 30%). CSEF Clinical Grade Calculations should be made using the 0.01 decimal point in each domain (though the rounded number will be checked off on the final CSEF) to give a final number. Any average of <1.5 in any domain = an automatic fail for the clerkship Any average of < 2.5 in any domain = an automatic pass for the clerkship and a meeting with the MEO for clinical coaching >2.5 in all domains, standard rounding will be used <2.00 = Clinical fail which will = a fail for the clerkship 2.00-3.44 = Clinical pass 3.45-4.44= Clinical high pass >4.45=Clinical honors The clinical grade will be reported in the CSEF final narrative | |

- Primary preceptors at sites with multiple preceptors will collect evaluation data from the other clinicians with whom the student works. The primary preceptor will collate this data and submit the final clinical evaluation.

Clerkship Specific Clinical Grade Procedures/Policies

Guiding Principles- We strive to provide a grading system that is:

- Fairly applied- a system that we follow for all students.
- Transparent - students can clearly see the process by which the grade is derived.
- Discriminating- the HONORS grade represents a performance of true distinction.
- Based on your absolute performance. There is no 'curve' or fixed percentage about who can/cannot get HONORS.
- Performance –based- what the student does and is reported- not based on potential

The final CSEF score will be converted to a score out of 100 to generate the clinical grade (which would count towards 60% of the overall final grade). Clinical performance grade will be represented on the final grade form, regardless of final grade. Clinical performance grade may also be represented in the final narrative, formative or professionalism grade comments.

The CSEF grade is complemented by a narrative description on the MedHub form and by other observations conveyed by instructors (e.g., verbal or email comments). These may be used by the Clerkship Faculty to help determine the student's final CSEF score, if and when appropriate.

The Observed Clinical Reasoning Assessment (OCRA), including oral and written components, is graded by 1 core clerkship faculty (12% of final grade).

The Directly Observed Focused History and Physical Exam Assessment is graded by 1 core clerkship faculty (3% of final grade).

If the student scores > 5th percentile nationally on the initial attempt at the **NBME Shelf Exam**, they are assigned points for the NBME Shelf Exam component of the final grade in proportion to the 2-digit score. The higher the 2-digit score, the more points the student receives. The shelf points are used in the final grade calculation.

Integrating the Clinical Performance Score into the Final Grade

- To achieve an overall final grade of HONORS, the student must achieve ≥ 90 Total Points.
- To achieve an overall final grade of HIGH PASS, the student must achieve 80 to < 90 Total Points.
- To achieve an overall final grade of PASS, the student must achieve 75 to < 80 Total Points.
- The clinical numeric grade will be worth 60% of the final grade of the clerkship and will be calculated out of a 5-point scale from the CSEF
- The shelf is worth 25% of the final grade of the clerkship. The 2-digit score will be used to calculate the numeric score out of 100

Deriving the Final Composite Grade from the input. An example:

- 60% ---Clinical evaluation---CSEF score converted to score of 80 out of 100 points. $\times 0.6$
- 25 % ---NBME shelf exam--- 84 points $\times .25$
- 15 % --- Other including averaged score of the Observed Clinical Reasoning Assessments (OCRA) and Directly Observed Focused H and P Assessment=87 $\times .15$

$$(80) \times 0.60 + (84) \times 0.25 + (87) \times .15 = 48 + 21 + 13.1 = 82.1$$

This student's final (composite) grade for the clerkship is final grade HIGH PASS with a clinical grade HIGH PASS.

Professional Conduct and Expectations

Evaluation of a medical student's performance while on a clinical clerkship includes all expectations outlined in the syllabus and clerkship orientation as well as the student's professional conduct, ethical behavior, academic integrity, and interpersonal relationships with medical colleagues, department administrators, patients, and patients' families. Student expectations include those listed below in [professional comportment sections](#). If there are multiple professionalism concerns through a clerkship the student will not be eligible to receive honors on the clerkship. A student will be given feedback prior to receiving their final grade for the clerkship if their professional conduct is of concern. Prior to receiving a final grade, if a clerkship director determines that a student does not meet the professional conduct and expectations of the clerkship, a student will fail the clerkship. Any professionalism lapses resulting in either a clerkship fail or ineligibility to receive honors will require narrative comments by the clerkship director in the summative comments section of the final evaluation and the student will be given feedback in advance of the final grade form submission.

Shelf Exam Failure & Remediation

If a student fails their shelf exam, they will receive an Incomplete for the clerkship and retake the exam at the end of the year. Students:

- will not receive a Fail on their transcript if they pass the reexamination.
- will not be eligible for a final grade of honors - if the final grade calculation would earn the student honors, they will receive high pass as a final grade. Students would still be eligible to receive a clinical honors.
- If a student fails the reexamination, they will have Fail on their transcript, and have to remediate the clerkship.

Clerkship Failure & Remediation

Fail Clinical - If the student fails the clinical portion of the clerkship (Numeric Score or <1.5 on any domain on the final CSEF or < 2 averaged on the final CSEF =Clinical Fail), or does not meet the standards for professionalism either clinically or within the core clerkship curriculum, the student will receive a fail overall and must retake the clerkship in its entirety.

Fail Observed Clinical Reasoning Assessment - If the student fails only the OCRA component, the student must repeat the OCRA. If the student fails a 2nd time, the student may fail the clerkship and have to retake the clerkship in its entirety.

If a student fails a third- or fourth-year clerkship (Numeric Score or <1.5 on any domain on the final CSEF or < 2 averaged on the final CSEF =Clinical Fail), the student will receive a Fail grade and will be required to repeat the clerkship. The grade for the repeated clerkship will be calculated based on the grading criteria outlined in the syllabus for Pass, High Pass, or Honors independent of the prior Fail. The original Fail grade will remain on the transcript. The original summative evaluation narrative will be included in the MSPE, in addition to the summative evaluation from the repeated clerkship.

If a student fails the remediated clerkship again and the SEPC allows for another remediation, the grade for the repeat clerkship will still be calculated based on the grading criteria outlined in the course syllabus for (Pass, High Pass, or Honors). The original two failures will remain on the transcript. The repeated course will be listed again, and the word (Repeat) will appear next to both course names.

Grade Review Policy

The School's Grade Reconsideration Policy is located in the Policies and Procedures for Evaluation, Grading and Promotion of Chobanian & Avedisian School of Medicine MD Students:

<http://www.bumc.bu.edu/busm/faculty/evaluation-grading-and-promotion-of-students/>

AME/Kaiser Core Faculty Direct Observation

During the third year, students will be directly observed by their core AME (or Kaiser) faculty three times throughout the year. They will also submit one write up in their core AME/Kaiser faculty's discipline, and one video of a session with an SP for review and feedback. At the end of the year, the core AME/Kaiser faculty will write a narrative summary describing the student's growth trajectory and competency development in the observed domains. This narrative will be included as part of the End of Third Year Assessment (in addition to the EOTYA 6 station OSCE).

Formative Assessments

The purpose of formative assessment is to improve student learning by providing feedback on how well they are learning skills and content during the clerkship. Formative assessments are not included in the calculations of students' final grades. Each clerkship has required **FOCuS (Feedback based on Observation of Clinical UME Student)** forms which must be completed by the mid/end of the clerkship. These forms will provide formative assessment through direct observation of CSEF behaviors. Each student is required to complete one interviewing technique and one physical exam FOCuS form on each clerkship. On the Medicine clerkship, the Directly Observed Focused H and P counts towards this requirement.

In addition, the Medicine clerkship has specific direct observation cards (SOCS) to be filed for review at mid/end of clerkship. Again, these forms are more opportunity for the student to obtain feedback from direct observation of skills that are specific to Internal Medicine.

FOCUS Cards and Internal Medicine Structured Observations of Clinical Skills (SOCS): These exercises are designed to assist the student in obtaining ongoing, real-time feedback after being directly observed performing a variety of skills (interviewing a patient, performing physical exam skills including 1) JVP assessment, 3) Cardiac exam, 4) Pulmonary exam). These exercises will be student-initiated and completed on the wards by residents and attendings.

Two of these cards (SOCS) should be completed by the time of the mid-clerkship feedback sessions. The Internal Medicine SOCS cards will be turned in at the end of the rotation as part of the passport.

Neither the formative assessment exercises of FOCUS cards nor Medicine SOCS cards are not included in the numeric calculations of students' final grades. Narrative comments or other observations from these direct observations may be included in the final grade.

Process for FOCUS and SOCS Forms

(Typically a 5-10 minute exercise)

1. Student initiates by speaking with observer (Resident, Attending or Fellow)
2. MD or student can identify patient
3. Hand observer the passport PRIOR to the patient encounter
4. Observation of encounter
5. Feedback on encounter
6. Observer and student sign card
7. Turn in FOCUS card and SOCS forms as part of the passport at the end of the clerkship

Clinical Problem Solving Cases (see individual case learning objectives)

Student Report These group discussions about real patients provide exposure to clinical problems commonly encountered in medicine. These will provide a good opportunity to practice clinical reasoning and the OCRA style of thinking for commonly encountered medical problems seen on the inpatient wards.

A mini-course on interpreting the ECG –Apply a systematic approach to interpret the EKG. See passport for a sample tool/guide of how to systematically approach interpreting ECGs.

Small group sessions with your Clerkship Director. These sessions focus on refining core skills and building advanced skills in:

- Write-up and oral presentations → ~2 writeups turned in/4 week block
- Bedside rounds → Practice interview, exam skills with a particular focus on the CV exam, Chest/Pulmonary Exam, and Volume Assessment
- Clinical reasoning practice in case-based discussions
- Integrating the medical literature into patient care
- Skills: ECG, Simulation
- Mid-clerkship feedback

Formative Assessment and Feedback Policy

Boston University Chobanian & Avedisian School of Medicine ensures that each medical student is provided with formative assessment early enough during each required course or clerkship to allow sufficient time for remediation. Formative assessment occurs at least at the midpoint of each required course or clerkship four or more weeks in length.

Full Policy: <http://www.bumc.bu.edu/busm/education/medical-education/policies/formative-assessment-and-feedback/>

Mid-Clerkship Review

You and your clerkship director, site director or primary faculty/preceptor will complete the Mid-clerkship Evaluation form at the mid clerkship point.

The purpose of this evaluation is to give the student a chance to understand both their strengths as well as opportunities to improve. The feedback received at the mid-clerkship review is intended to allow the student to improve their clinical skills in real time.

Best practices regarding feedback include:

- Start with getting the student’s perspective on how they performed or are performing. (**Students**- please anticipate being asked “How do you think you performed the skill, i.e., how did it go?”)
- Feedback should be specific and actionable. (**Students:** Ask “What could I do differently next time?”)
- Feedback should be based on direct observation (i.e. What has been seen).
- Feedback should be timely (in close proximity to when behavior was observed).

Feedback should be respectful and encourage future growth.

Final Summative Assessments

The final summative assessment will be based on the clerkship grading policy and include a final narrative describing your overall grade, clinical grade, based on the CSEF (Clinical Student Evaluation Form), and other assessments, depending on the clerkship. The summative narrative must include a final summative statement regarding your professionalism on the clerkship (meet expectations or did not meet expectations) per the AAMC MSPE requirements. The final grade form summative narrative appears in your MSPE and is based on aggregate comments from your individual CSEFs and is written by a site director/clerkship director and is reviewed by the clerkship director before submission.

NBME Subject Examination

Students will take the Medicine NBME Subject Examination on the last Friday of the clerkship (unless otherwise communicated by the Medical Education Office). Students are given a reading day the day before the exam. Students do not report to their clerkship site on the reading day or the day of the exam. Students will be given 2 hours and 45 minutes to complete this exam. Shelf exam dates can be found in the [3rd year google calendar](#).

Remotely administered assessments

Students are responsible for ensuring that they meet any technical needs required for remotely administered assessments (e.g., NBME Shelf Exams, OCRAs). This includes, but is not limited to, ensuring:

- computer specifications meet requirements outlined on the Alumni Medical Library website: <https://www.bumc.bu.edu/medlib/computing/busmrequirements/>
- for NBME shelf exams, the student runs the laptop certification process noted below
- a consistent and stable internet connection
- a quiet testing space where the student will not be disturbed during assessment administration

Clerkships will reserve BUMC space as an onsite testing space for any remotely administered assessments. Students who do not have an appropriate testing space or prefer to test on campus should reach out to their clerkship coordinator at least two weeks prior to the assessment to make arrangements to test on campus.

Students with technical difficulties during a remotely administered assessment who do not take their assessment at a designated campus location will not be able to submit a grade reconsideration request solely for this reason.

Shelf Exam Laptop Certification Process

Students must certify their laptops one week before the NBME Subject Exam and again on the day before the exam. Instructions are provided on the Alumni Medical Library website at:

<http://www.bumc.bu.edu/medlib/services/computing/nbme/>

If a student has technical difficulties during a shelf exam, they must report this to the clerkship coordinator. The clerkship coordinator must inform the Medical Education Office, and the student is required to have their laptop evaluated by BUMC IT before their next shelf exam.

<https://www.bumc.bu.edu/it/support/bumc-it/request/>

Exam Policies

<http://www.bumc.bu.edu/busm/education/medical-education/policies/exam-policies-for-medical-students/>

Testing Center Policies

<http://www.bumc.bu.edu/busm/education/medical-education/policies/l-11-testing-center/>

Make-Up Exams

Students needing to make up the exam or remediate only the exam portion of the clerkship must contact the Clerkship Coordinator to arrange for a make-up/remediation date. **Students may not take a make-up or remediation exam during any block they currently have a scheduled rotation.** Make-up and remediation exams will typically be scheduled at the end of the third-year blocks between mid-May and early June.

Observed Clinical Reasoning Assessments

Key domains of clinical reasoning include information gathering, hypotheses generating, problem representation, differential diagnosis, identifying a leading diagnosis, providing justification, and developing a management plan.

This specific assessment of clinical reasoning highlights the domains of information gathering, identifying a leading diagnosis, providing justification and developing a basic management plan.

Objectives:

- For the clinical problem(s) addressed, generate a patient-specific differential diagnosis, obtain a focused history and physical that is relevant to the differential and develop initial steps to evaluate your differential
- Explain your reasoning and describe the most important and relevant pathophysiology for the condition(s)
- Identify the most useful diagnostic tests, and interpret their results
- Recommend initial treatment

These link to the following clerkship learning objectives:

- IV. Communicate clinical information accurately and demonstrate your understanding of the patient's problems, through concise, convincing, well-organized **patient presentations, admission write-ups, progress notes, and handoffs** that are appropriately focused for the audience, purpose and time available for the communication.
- V. **Identify and prioritize your patients' problems, formulate an appropriate differential diagnosis** and outline an approach to diagnosis and management that is supported by clinical data and sound reasoning.
- VI. Demonstrate a core foundation of **knowledge** (scientific, ethical, socio-cultural) guided by the course objectives that is necessary both to provide high quality patient care and to understand advances in medicine.

Process for the Observed Clinical Reasoning Assessment (OCRA)

- There is one oral OCRA (oral exam with 1 clerkship faculty, date and time TBA and will occur weeks 4-8) and 2 written OCRAs (30 minutes each, administered via Blackboard on the final Wednesday of the Medicine rotation).
- A list of students and their assigned date of the oral OCRA will be disseminated in advance. Assigned dates will be in weeks 4-8 of the clerkship.

- This formal evaluation will be done by core clerkship faculty.
- This evaluation will take place during the 4-8th week of the clerkship, unless extenuating circumstances do not allow.
- The **student will complete the observed oral assessment (1) and written assessments (2) on the dates and times provided by the clerkship.**
- The oral and written OCRAs will each be scored from 0-100 (based on a grading rubric). Each OCRA component (1 oral and 2 written exams) is weighted at 4% of the final grade. Thus the OCRA's 3 components (1 oral and 2 written) will in total be 12% of the final grade.
- Students will be asked to sign an honor code confirming that they will not share any information about the oral and written assessments with any fellow students. This includes the problems, diagnoses, details of the cases, or the questions they are asked.
- Failure to meet the expectations outlined above will result in a reduction in the student's score, and possible failure of the OCRA component.

Fail Observed Clinical Reasoning Assessment - If the student fails only the OCRA, the student must repeat the OCRA. If the student fails a 2nd time, the student may fail the clerkship and have to retake the clerkship in its entirety.

To best prepare for the OCRA: The OCRAs are based on the Medicine BIG 10. For each of the BIG 10 diagnoses in the Medicine clerkship (see Required Patient Encounters), the student should be able to define/describe:

- Illness scripts (IS) of the Medicine Big 10 problems/diagnoses- one way that experts store information (as chunks) about medical conditions in long term memory that enables them to store and readily retrieve that information
 - An Illness Script includes:
 - Who gets the condition? What are predisposing factors
 - How does it present? Clinical manifestations- defining features
 - With regard to symptoms, signs, study results
 - Temporal aspects of the presentation- onset, course of the condition
 - Core pathophysiology
- Differential diagnosis of Medicine Big 10
- Evaluation/Diagnosis- which tests to order, when to order, how to interpret for disease related to the Medicine Big 10
- Initial management of Big 10 and related diagnoses
- Prognosis
- Prevention

Script to be provided to the student at the start of the Observed Clinical Reasoning Assessment:

You will be presented with a case vignette over the next 30 minutes.

We will give you a brief history to read. This is just to get you started. Feel free to take notes as you learn more about your patient.

We will ask you for an initial differential, and then ask you to refine the differential as you gather more history about the patient. TAKE NOTES ON YOUR PATIENT.

WRITE OUT YOUR DIFFERENTIAL- YOU WILL BE ASKED TO COME BACK TO IT REPEATEDLY.

After discussing your initial differential, you will then ask questions to gather more information about the HPI, PMH, Meds, SH, FH, PE, etc. Ask all the questions, then we will give you some available answers. We will give you any information you ask for but will not give you information that you do not ask for.

Ask specific questions (this applies for both the oral and written OCRAs): For example:

Ask specifically about “pain on urination?” or “dysuria?” rather than “any urinary symptoms”.

Do not ask “Any associated symptoms?”. This is not specific- patients would not understand what you mean, and in the OCRAs, you will miss out on points.

Ask specifically about “Any history of heart disease?” rather than “any PMH?”

Some of the history and physical you ask for may not be available. It should be factored into your clinical reasoning as “unavailable data”, **not** as “noncontributory”.

After you have given a differential diagnosis, and gathered a history and Pex, we will discuss your initial evaluation of the patient.

We will end with you telling us your leading diagnosis, what data you have that supports your leading diagnosis and discuss any initial management steps you want to take with your patients.

Throughout this assessment, be sure to tell us WHY you suggest whatever you suggest.

ORAL ONLY: At any time, you can always go back and ask for more information (history/PE) about the patient.

ORAL ONLY: Please go ahead and read the first page of the exam. We will start asking questions in 3 minutes.

Directly Observed FOCUSED H and P Assessment

Objectives linked to this assessment:

- Demonstrate use of patient-centered interviewing and communication techniques
- Take a clinical history that demonstrates both organization and clinical reasoning
- Perform accurate and relevant physical exam techniques
- Demonstrate a compassionate and patient-sensitive approach to history-taking and physical examinations
- Demonstrate a fund of knowledge in the clinical discipline and apply this to patient care

These link to the following clerkship learning objectives:

- I. Use proper technique to perform an accurate, appropriately detailed and organized **history and physical examination** in an efficient and sensitive manner

Process for the Directly Observed Focused H and P Assessment

- Each student will be assigned a clerkship faculty who will contact them to set up a time to observe them take a brief, FOCUSED History and Physical Exam from a patient on the wards.
- This formal evaluation will be done by core clerkship faculty.
- This evaluation will take place during the 4-8th week of the clerkship, unless extenuating circumstances do not allow.
- The Focused H and P will be scored from 0-100 (based on a grading rubric) and will in total be 3% of the final grade.
- Failure to meet the expectations of this assessment will result in a reduction in the student's score, and possible failure of the Focused H and P component.

Fail Directly Observed Focused H and P Assessment - If the student fails only this component of the clerkship, the student must repeat the assessment. If the student fails a 2nd time, the student may fail the clerkship and have to retake the clerkship in its entirety.

To best prepare for the Directly Observed Focused H and P Assessment: Observe residents and faculty and get observed by residents and faculty interviewing and examining patients (use the FOCUS forms) during your Medicine Clerkship.

Roles and Responsibilities

Each clerkship is directed by the School's Clerkship Director who oversees all clerkship sites. Each clinical site is directed by a clerkship site director who ensures that students are appropriately supervised and faculty and residents are prepared to teach at their site. Clerkships also have multiple clinical faculty that have varying degrees of exposure to students. The responsibilities of the directors and coordinators are described below more specifically. Clerkship directors are assisted by assistant clerkship directors, clerkship site directors, and clerkship coordinators.

School's Clerkship Director & Assistant Clerkship Director

- Oversees the clerkship curriculum's design, implementation, and administration

- Defines clerkship specific learning objectives and requirements
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Ensures student and faculty access to appropriate resources for medical student education
- Orients students to the overall clerkship, including defining the levels of student responsibility requirements (i.e., required diagnoses and procedures, direct observations, forms, feedback), grading structure and student schedule
- Oversees teaching methods (e.g., lectures, small groups, workshops, clinical skills sessions, and distance learning) to meet clerkship objectives
- Develops faculty involved in the clerkship and provides faculty development across sites specific to clerkship needs
- Evaluate and grade students
 - Develops and monitors assessment materials
 - Uses required methods for evaluation and grading
 - Assures timely mid-clerkship meetings at all sites with students
 - Ensures students receive timely and specific feedback on their performance
 - Submits final grade form for students via School of Medicine's evaluation system
- Evaluates clerkship, faculty, and programs via peer review and annual data from the Medical Education Office (MEO) and national organizations (AAMC, NBME, etc.)
- Supports each student's academic success and professional growth and development, including identifying students experiencing difficulties and providing timely feedback and resources
- Address any mistreatment and professionalism concerns in real time and communicate with MEO
- Participates in the school's clerkship Educational Quality Improvement and peer review processes with completion of action items
- Ensures LCME accreditation preparation and adherence
- Adheres to the AAMC-developed guidelines regarding Teacher-Learner Expectations

Overall Clerkship Coordinator

- Supports the clerkship director in their responsibilities above
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Responds within one business day to student emails and questions
- Maintains student rosters and clinical schedules
- Coordinates orientations and didactic sessions
- Liaises with site directors and administrators to coordinate student experiences across all sites and timely collection of evaluations
- Verifies completion of clerkship requirements, including midpoint and final evaluations for each student, required diagnoses, and FOCuS forms
- Monitors students' reported work hours and report any work hours violations to the clerkship director
- Coordinates and proctors clerkship exams

Clerkship Site Director

- Oversees the clerkship curriculum and administration at the site
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Is available and responsive to students' questions and concerns

- Ensures all faculty and residents teaching students are oriented to students' expectations, responsibilities, learning objectives, requirements, and assessments used in the clerkship
- Ensures student and faculty access to appropriate resources for medical student education
- Orients students to the clinical site when new students arrive at the site
- Reviews clerkship requirements and student expectations at site
 - Provides site specific information including, but not limited to, lockers, library, call rooms as applicable and required by LCME
 - Reviews site-specific schedule, discusses student role and responsibilities at site, supervision at site, and who to contact with questions and concerns
- Supervises students and ensures clerkship specific required observations are completed
- Meets with the student for the Mid-clerkship review
- Meets with the student for the final exit meeting
- Ensures timely and specific formative feedback based on direct observations
- Works with faculty and residents to delegate increasing levels of responsibility to students based on clerkship requirements
- Provides site didactics when applicable
- Recognizes students with academic or professionalism difficulties and communicates to Clerkship Director in a timely fashion
- Completes and ensures the accuracy of student evaluation forms, including formative and summative narratives for students at the site
 - Ensures collection of feedback and evaluation data from all physicians who work with each student by the end of the clerkship block to meet school's grading deadlines
 - Ensures that narrative data are consistent with and support numerical data
 - Evaluates students fairly, objectively, and consistently following medical school and clerkship rubrics and guidelines
- Addresses any student mistreatment concerns immediately and notifies the Clerkship Director
- Adheres to the AAMC Teacher-Learner Expectations guidelines
- Reviews site specific evaluations at mid-year and end of year and facilitates improvements based on data
- Works with School to provide faculty development for faculty and residents
- Answers Clerkship Director's questions or concerns regarding site evaluation or student concerns
- Participates in educational programming and meetings as requested by Clerkship Director or Assistant Dean for Affiliated Sites
- Adheres to LCME guidelines

Clerkship Site Coordinator

- Supports the clerkship site director in their responsibilities above
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Responds within one business day to student emails and questions

- Sends out welcome email informing students where and when to arrive at least 72 hours before student start date
- Provides students with their contact information and remains available for questions and concerns during working days and hours
- Ensures students are oriented to clinics and hospital
- Obtains, tracks, and manages student rosters
- Obtains and maintains student information required by the site, as applicable
- Creates and distributes:
 - Student schedules to students, faculty, and staff before clerkship start date
 - Didactics/Presentation schedules, if applicable
- Schedules mid-clerkship evaluations; tracks and keeps record of completion and provides to overall Clerkship Coordinator
- Informs faculty and overall Clerkship Coordinator of student absences
- Arranges and schedules educational resources as applicable (e.g., SIM lab, EMR & Scrub training) and helps students troubleshoot
- Provides students with necessary documents and resources needed to be oriented to site
- Monitors and processes evaluations for distribution to faculty and residents
- Collects timely feedback from faculty for mid and end of clerkship evaluations to meet School's deadlines
- Collects feedback and evaluation data from all physicians who work with each student by end of clerkship block to meet School's grading deadlines
- Understands evaluation system and all site requirements
- Communicates site information changes (e.g., faculty, rotation details) to School's Clerkship Director and Clerkship Coordinator
- Maintains communication with Clerkship coordinator centrally and response within one business day
- Coordinates site specific meetings and faculty development with School

Primary Clinical Faculty/Preceptors/Trainees

- Sets and clearly communicates expectations to students
- Observes students' history taking and physical exam skills, and documents it on the FOCuS form
- Delegates increasing levels of responsibility to students based on clerkship requirements
- Maintains appropriate levels of supervision for students at site
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Recognizes students with academic or professionalism difficulties and communicates to Clerkship Director in a timely fashion
- Gives students timely and specific formative feedback based on direct observations
- Assesses students objectively using School of Medicine's evaluation system
- Adheres to the AAMC Teacher-Learner Expectations guidelines

Residents and Fellows

- Supervise students by observing history taking and physical exam skills
- Give appropriate and timely formative feedback
- Delegate increasing levels of responsibility to the student
- Recognize student learning or professional difficulties and communicate to clerkship (site) director

- Create and maintain an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Assess students objectively using the CSEF form

Supplementary Teaching/Supervision Expectations for Residents- Department of Medicine

The Resident ensures that 3rd year students have **meaningful involvement in patient care and learning** by:

- **Setting expectations** and supervising the student
- **Leading effective Work Rounds** and overseeing clinical care during the day that **integrates the student into the team** and provides multiple opportunities for **meaningful involvement** in patient care and learning by delegating increasing levels of responsibility
 - Helps in coordinating the conduct of daily **'CHECK-INS'** in which the student should come with:
 - An organized update on pertinent patient information
 - Interpretation of the information
 - Management recommendations (hopefully)
 - Questions

Check-ins provide opportunities to provide instruction (specifically to ask questions, observe) and feedback.

- **Delivering excellent teaching** by providing **clinical supervision** during the day and during **dedicated student teaching time** (e.g., 20 + minutes ≥ 2 x /week with students to discuss a 'case', critique a presentation, go to bedside...), **that emphasizes:**
 - **Setting expectations**
 - Integrating the clerkship expectations and your own style and preferences- teams are encouraged to use Team Based Orientation tool in passport
 - Providing **multiple brief observations** of the student doing elements of the history/exam, Pex, etc. and able to assist student in completing passport exercises
- Providing frequent, timely positive and constructive **Feedback (and more feedback)** and **evaluation** (on MedHub) using "Ask-Tell-Ask" and the MedHub CSEF frameworks
- Identifying learning or professional **difficulties** and **questions**, and communicate them early to the student education leadership

Supervision

Initially, the primary clinical faculty members should designate time to observe you performing: **history taking, focused physical exam, clinical problem-solving and interaction with patients and patient education.** Once the supervisor establishes the student's level of confidence and competency, the student should be delegated increasing levels of responsibility in patient care, as appropriate. Although students may initiate a particular patient encounter on their own and without direct supervision, the faculty must at some point review the encounter with the student and inform the patient in-person that the student's assessment and management plan has been reviewed and approved by the faculty. The faculty is ultimately responsible for the evaluation, treatment, management, and documentation of patient care. If students have concerns regarding their clinical supervision, the site director and clerkship director should be immediately notified. Any

supervision concerns should also be immediately submitted through the ATM link or directly to the Associate Dean of Medical Education.

Supervision and Delegating Increasing Levels of Responsibility

It is expected that the level of student responsibility and supervision will be commensurate with student's competency and level of confidence. When the student arrives to a new setting, a faculty may wish to observe you for the first session. Thereafter, you should begin to see patients on your own. In the outpatient setting, **the student should initially perform 4-5 focused visits per day in the first week, increasing to 6-12 thereafter. In the inpatient setting, the student should initially follow 1-2 patients and increased to 3-4 thereafter.** When a student feels that they are being asked to perform beyond their level of confidence or competency, it is the responsibility of the student to promptly inform the preceptor. It is then the preceptor's responsibility to constructively address the student's concerns and appropriately restructure the teaching encounter to address the student's learning needs.

Under no circumstances should the following occur:

- Patient leaves the office/hospital without having had a direct face-to-face encounter with clinical faculty/supervising resident.
- Primary faculty gives "prior approval" for student to perform intervention (order labs, prescribe meds) without satisfactory review.
- Patient leaves office/hospital without being informed that assessment/ management plan has been directly reviewed and approved by the faculty.
- Learning in which a student is expected to perform an intervention or encounter without the prerequisite training and/or adequate supervision.
- Student note provides the only record of the visit. Although all faculty see all patients, faculty must document that they were actually the person responsible for seeing and examining the patient.

Intimate Exam Policy

Students participating in an intimate exam with a patient (which includes, pelvic, genitourinary and rectal exam) must have a chaperone with them, irrespective of the gender of the patient or the student. Permission to participate in an intimate exam must be obtained by the supervisor in advance of the examination itself. The patient has the right to decline student attendance at any examination. If a student is unable to perform any intimate exam due to patient preference, the student's evaluation will not be impacted and if necessary, the clerkship director will provide an alternative experience.

Physical Exam Demonstrations

The demonstration of the physical examination on students should not be done by any supervisor of students including residents and attending faculty. Practicing the physical examination on students places them in a position where they may feel pressure to consent to something they may not feel comfortable with.

Third Year Student

The 3rd year student:

- Learns through meaningful involvement in patient care and learning with graduated decision-making responsibility
- Is available to help the team, but "Learning comes first"
- Is a proactive, self-directed learner

Learns through meaningful involvement in patient care and learning/teaching with graduated decision-making responsibility.

- Sees patients independently
- Pre-rounds and initiates discussion with assigned patients on work rounds
- Formally presents assigned patients each day on work rounds
- Enters patient orders under the supervision of physicians
- Follows-up on labs, imaging, consults
- Updates intern, team and patient (CHECK-IN with team members, see above) as new information emerges
- Speaks with consultants
- Provides initial write-up & daily progress notes
- **Admits ~1-3 new patients per week** (ideally new admissions and not transfers from ICU), of which **at least 1 patient/week is “truly new”** (i.e., admitted from the ED or office/clinic; transfer patients and patients initially admitted by night float do not count as “truly new”)
- Provides brief, targeted topic presentations to the team on a regular (at least weekly) basis
- Learns from own patients first but also from all patients on the team
- Participates in discharge planning on patients you directly follow but **do not do discharge summaries!**

The 3rd year student is available to help the team, but learning comes first.

- Learning from direct patient care is complemented by:
 - Attending conferences and small group learning sessions
 - Observing procedures
 - Reading (at night and during slow periods on some days).

The 3rd year student is a proactive, self-directed learner who:

- Elicits and clarifies expectations from your interns, resident, and attendings
- Addresses questions, concerns, confusion with the team or with your CD or site directors ASAP
- Identifies your learning needs and acts upon them
- Solicits feedback from your teachers
- Contacts your Clerkship Director with questions, comments or concerns early
- Adapts to team transitions and realities

See Requirements in the Assignment section of this Syllabus for a listing of responsibilities.

Professional Comportment

Students are expected to adhere to the AAMC-developed guidelines regarding Teacher-Learner Expectations, located on the Policies page, under “Academic Policies and Information”

(<http://www.bumc.bu.edu/busm/files/2015/05/AAMC-Teacher-Learner-Expectations.pdf>)

Students are expected to be aware of and follow the site expectations on professional comportment, including, but not limited to, dress code and the use of phones, pagers, and laptops. Students must arrive on

time at their site and for any scheduled sessions. Any missed sessions and absences must adhere to the Attendance & Time Off Policy.

Further, below are expectations for student professional conduct and behavior in the core clerkship curriculum. These include, but are not limited to:

- Treating and communicating with the clerkship team in a respectful manner.
- Engaging in the core curriculum and participating respectfully with peers and colleagues at all times.
- Arriving at clerkship didactic sessions on time and being present throughout sessions.
- Requesting faculty and resident evaluations in a timely manner.
- Reviewing and responding to e-mail requests in a timely manner.
- Returning borrowed clerkship materials on time.
- Handing in all assignments on time.
- Completing all logs and FOCuS forms by the clerkship specific deadline.
- Informing clerkship leadership and supervising faculty/residents of absences in advance of the absence.

Professional conduct will be reviewed at the mid-clerkship feedback session. Additionally, students will be given feedback prior to receiving their final grade when professionalism concerns are identified on the clerkship. If students are not meeting expectations for professional conduct and behavior in the clerkship or there are concerns, students will be made aware of the concerns noted by the clerkship directors, clerkship coordinator, faculty or residents.

Ethical Behavior for Examinations and Mandatory Sessions

- Refrain from any conversation with your peers during exams and as you leave the L-11 testing space (when applicable), including within the vending room and elevator waiting area, until you are on the elevator.
- Refrain from leaving your computer camera view at any point during the examination. Any time where a student cannot be viewed may result in failure of the examination.
- Don't seek or receive copies of the examinations
- Signing in classmates, or signing in yourself and not staying for mandatory sessions is considered cheating and violations will be referred to Medical Student Disciplinary Committee
- If you are aware of any violations of the ethical standards listed above, within the Student Disciplinary Code of Academic and Professional Conduct, or otherwise, report it to the Clerkship Director

Student Evaluation of the Clerkship

Student feedback is a highly valued, critical resource for helping us continually improve our curriculum. Evaluation of learning experiences is a requirement of the Liaison Committee on Medical Education. To ensure that we have a representative amount of data on our courses and clerkships, all students are expected to complete an evaluation via the School of Medicine's evaluation system, MedHub (<https://bu.medhub.com/>), for each of the courses/modules and their instructors. All evaluations are anonymous and aggregate data is only released to clerkship directors after grades have been submitted for the blocks. Please comment freely and honestly about your experience.

Blackboard

Students will have access to a Blackboard site for the clerkship. The site is listed under “My Courses” as MS310 A1: Medicine 1 Clerkship on your Blackboard landing page.

Students who have questions about the Blackboard site or find that they do not have access to the site should contact the Clerkship Coordinator for assistance.

Blackboard Learn: <https://learn.bu.edu/>

Assignments

1. Complete, sign (along with your observer) and turn in (as part of passport) Medicine Clerkship Structured Observation of Clinical Skills Cards (SOCS)
 - a. JVP Exam
 - b. Cardiac Exam
 - c. Pulmonary Exam
2. Enter your assigned patients into the **MedHub patient encounter log** and ensure that you have seen and documented that you have seen the expected number (≥ 15) and types of patients (Big 10). Provide a paper copy for your Clerkship Director/Adviser at your feedback meetings.
3. Complete the **Observed Clinical Reasoning Assessment** (oral and written) in weeks 4-8 of the clerkship. Dates/times to be assigned.
4. Complete the **Directly Observed Focused H and P Assessment** in weeks 4-8 of the clerkship. Date/time to be assigned.
5. Participate in the **mid-point feedback** sessions and sign the feedback form confirming completion.
6. Complete and review **Preceptor Log** with your CD. Additionally, submit the preceptor log (excel sheet) to Blackboard at the end of week 4 and week 8.
7. Complete MedHub and **Department of Medicine evaluation** of the clerkship and of your supervising residents and attendings.
8. Successfully complete the **Medicine Subject (“Shelf”) Exam** on the final day of the clerkship.
****Optional but highly encouraged:** Complete, sign (along with your observer and turn in (as part of passport) the following FOCuS forms: Interviewing and Data Gathering & Physical Exam

Patient Encounters/Case Logs

Across the third year, there are required patient encounters and procedures that must be logged whenever they are seen. To log the patient encounter, students must have participated in the history, physical exam, assessment and plan development of the patient.

Required Patient Encounters (The Core)

<http://www.bumc.bu.edu/busm/education/medical-education/faculty-resources/>

Students should log every time they see any patient with the required patient encounter and continue to log throughout all clerkships.

| Clerkship/Clinical discipline | Patient type/ Clinical condition | Clinical setting | Level of student responsibility* |
|-------------------------------|-------------------------------------|------------------|----------------------------------|
| Internal Medicine | Fever | I | All |
| Internal Medicine | Low blood pressure | I | All |

| | | | |
|-------------------|--|---|-----|
| Internal Medicine | The hospitalized patient with chest pain | I | All |
| Internal Medicine | Shortness of breath | I | All |
| Internal Medicine | Lab abnormalities (glucose, acid-base, creatinine, sodium, potassium, calcium, hemoglobin) | I | All |
| Internal Medicine | Palpitations | I | All |
| Internal Medicine | Extremity pain/swelling | I | All |
| Internal Medicine | The hospitalized patient with chronic kidney disease | I | All |
| Internal Medicine | The hospitalized patient with congestive heart failure | I | All |
| Internal Medicine | The hospitalized patient with COPD/emphysema | I | All |

Each student is expected to “see” **≥ 15 patients** where you serve as the primary student actively caring for the patient, writing notes... (under the guidance of faculty and house staff). Included among the patients **you must see** are patients with each of the following “Big 10” active problems:

- **Fever**
- **Low Blood Pressure**
- **The hospitalized patient with best pain**
- **Shortness of breath**
- **Lab abnormalities (glucose, acid-base, creatinine, sodium, potassium, calcium, hemoglobin)**
- **Palpitations**
- **Extremity Pain/Swelling**
- **The hospitalized patient with chronic kidney disease**
- **The hospitalized patient with congestive heart failure**
- **The hospitalized patient with COPD/emphysema**

See “Patient Encounters Log” section for details on documenting required patient encounters.

Strongly Recommended Experiences

In addition to the requirements described above, it is strongly recommended that you care for patients with the attributes or conditions described below, and address the recommendations regarding patient education/counseling, prevention, systems and patient safety and procedures.

Socio-demographics

- Elderly patient- > 75 years of age
- A patient who does not speak English
- A patient with limited access to care
- A patient from a culture not your own

Patient Education/Counseling – Perform the following patient education/counseling interactions as clinically indicated on patients you follow.

- Provide discharge instructions
- Promote behavioral change (e.g., tobacco, alcohol, other substance use, diet, weight loss, exercise)

- Facilitate medication adherence

End of Life and Advance Directives Discussions. Join your attending, resident or the Palliative Care Service to observe and participate in these crucial and powerful discussions with the patient and family in which, through partnership, decisions are made that integrate patient prognosis with patient values, priorities and wishes, to guide care in very ill patients who are near the end of their lives.

Prevention (primary, secondary or tertiary)/**health promotion** as a major focus of the interaction. Address an issue of prevention with the patients you follow. Prevention interventions may overlap with the patient education/counseling described above.

Systems and Patient Safety

- Identify instances where systems problems or strengths may have impacted on the quality of care your patients received
- Propose ways to improve the microsystems of care with which you interact
- Educate your patient on their major condition and the key medications you are asking them to take

Procedures you may observe:

- **Observe the following procedures** listed below, **describe the experience from the patient’s perspective**, and **interpret and apply the results** to the patient.
- ****Of note, during the COVID-19 pandemic, you may have to wear an N95 for select procedures.**

Please consult your supervisors to clarify.

- Thoracentesis
 - Paracentesis
 - Lumbar puncture
 - Cardiac stress test
 - Echocardiogram
 - Cardiac catheterization
 - GI endoscopy
 - Bronchoscopy
 - Wound care
- In addition, for each of the procedures listed above you should aim to **describe**:
 - The information it can provide
 - Benefits and risks
 - Indications/Contraindications
 - Potential complications and how to reduce the risk of the complications

Alternative Patient Encounters

If you do not see a patient with one of the required characteristics noted above, you are expected to speak with your Clerkship Director to identify a “real” or “virtual” patient learning opportunity to meet this Clerkship expectation.

If a student has not been able to experience all patient encounters required for the clerkship, students must address any gaps in their patient encounters through an alternative experience. In this clerkship, the alternative experiences are virtual patients, which may come from the Clinical Program Solving cases or other paper or electronic sources approved by the Clerkship Director.

Patient Encounter Log

Students are expected to log their patient encounters in [MedHub \(https://bu.medhub.com/\)](https://bu.medhub.com/). Patient logs help the clerkship ensure that each student is seeing a diagnostically diverse patient population, an adequate number of patients, and performing a sufficient number of required procedures and diagnoses. Students must bring a printed copy of their patient encounter and procedure log to their mid rotation feedback meeting.

Policies and Procedures for Evaluation, Grading and Promotion of Boston University Chobanian & Avedisian School of Medicine MD Students

<http://www.bumc.bu.edu/busm/faculty/evaluation-grading-and-promotion-of-students/>

Collaborative Student Assessment System

<http://www.bumc.bu.edu/busm/education/medical-education/policies/collaborative-student-assessment-system/>

Student Disciplinary Code of Academic and Professional Conduct

<http://www.bumc.bu.edu/busm/faculty/medical-student-disciplinary-code/>

Attendance Policies

On-site hours must be limited to 80 hours per week, averaged over a two-week period. Violations should be reported directly to the clerkship director or to an Associate Dean (Medical Education or Student Affairs). As part of becoming a professional, medical students should have the flexibility to address personal and professional needs at their discretion. In the clerkship year, as students transition to more of a professional work environment, they gain the responsibility of a working professional, yet do not have the agency to attend to their personal needs. As such, the Student Affairs Office and Medical Education Office have developed this personal day policy in conjunction with the clerkship directors for the core clerkship year. In addition to addressing issues of wellness and professional development, this policy will teach students the importance of time management and managing days off.

Time off requests must comply with the Attendance & Time Off Policy.

- Attendance & Time Off Policy: <http://www.bumc.bu.edu/busm/education/medical-education/policies/attendance-time-off-policy/>
 - 3rd Year Excused Absence Form: <https://wwwapp.bumc.bu.edu/MedPersonalDays/home/Index>
- Work Hours: <http://www.bumc.bu.edu/busm/education/medical-education/policies/work-hours/>
- Jury Service: <http://www.bu.edu/dos/policies/lifebook/jury-service/>
- Religious Observance: <https://www.bu.edu/chapel/religion/religiouslifepolicies/>
- Weather Policy: <http://www.bumc.bu.edu/busm/education/medical-education/policies/weather-policy/>

Clerkship Specific Blackout Dates

Students cannot take personal days under the following circumstances:

- The first day on a new team or at a new site (this includes 1st and 2nd day of rotation due to clerkship and site orientation and the 1st day of Week 5)
- Any day of the 8th week. This is a really limited timeframe when students will be 1) Completing final assessments including OCRAs and Directly Observed H and P assessments, and 2) Reading days and final assessments including the Written OCRA and the Medicine shelf exam are assigned during these times. Due to these and other obligations, the students will already have limited face-time with their teams. Additional scheduled absences, such as personal days, will significantly limit preceptors' abilities to complete student CSEF assessments.

Scrubs Policy

<http://www.bumc.bu.edu/busm/education/medical-education/policies/scrubs-policy/>

School of Medicine Policies

In addition to the expectations listed above, all students are expected to adhere to Chobanian & Avedisian School of Medicine and Boston University policies.

<http://www.bumc.bu.edu/busm/education/medical-education/policies/>

BU Policies and Student Support Services

Appropriate Treatment in Medicine

Boston University Chobanian & Avedisian School of Medicine is committed to providing a work and educational environment that is conducive to teaching and learning, research, the practice of medicine and patient care. This includes a shared commitment among all members of the School's community to respect each person's worth and dignity, and to contribute to a positive learning environment where medical students are enabled and encouraged to excel.

Chobanian & Avedisian SOM has a **ZERO** tolerance policy for medical student mistreatment.

Students who have experienced or witnessed mistreatment are encouraged to report it using one of the following methods:

- Contact the chair of the Appropriate Treatment in Medicine Committee (ATM), Dr. Robert Vinci, MD, directly by email (bob.vinci@bmc.org)
- Submit an online Incident Report Form through the online reporting system
<https://www.bumc.bu.edu/busm/student-affairs/atm/report-an-incident-to-atm/>

These reports are sent to the ATM chair directly. Complaints will be kept confidential and addressed quickly.

Appropriate Treatment in Medicine website: <http://www.bumc.bu.edu/busm/student-affairs/atm/>

Needle Sticks and Exposure Procedure

<http://www.bumc.bu.edu/busm/student-affairs/additional-student-resources/needle-stickexposure/>

Boston University Sexual Misconduct/Title IX Policy

<http://www.bu.edu/safety/sexual-misconduct/title-ix-bu-policies/sexual-misconducttitle-ix-policy/>

Boston University Social Media Guidelines

<http://www.bu.edu/policies/information-security-home/social-media-guidelines/>

Using Generative AI in Coursework Guidelines

With the increased use of Generative AI, Boston University's Faculty of Computing & Data Sciences has issued guidelines around use and attribution.

<https://www.bu.edu/cds-faculty/culture-community/conduct/gaia-policy/>

Learning Strategies and Tools

Recommended Texts

Some Guidelines on reading during the clerkship

- Target-- 10-15 hours of reading per week
- Focus on enduring information—differential diagnosis, pathophysiology, natural history, evaluation of a problem
- Re: Therapy-- understand the details of the common medications/interventions you use with your patients (except chemotherapy) and how to use them. Otherwise, place greater emphasis on the principles of therapy than specifics
- Roughly 75% Text / 25% literature

For Reading, we suggest you:

- Find a textbook(s) you will read
- Identify and use some of the “quick and practical” resources (these should NOT be used alone without a textbook)
- Get a question bank

We recommend you choose a textbook that focuses on the needs and realities of the 3rd year clerk. We list below some popular options.

- **Stern SDC. Cifu AS, Altkorn D. Symptom to Diagnosis. 4th edition. Lange Medical Books/McGraw-Hill. 2020.**
- Step-Up to Medicine. 5th edition. Walters Kluwer. 2019
- First Aid for the Medicine Clerkship, 4th edition. McGraw Hill. 2021.
- Internal.Bmc.Org website- Look at the “Department” site for “Pharmacy”: Many great resources related to antibiotics, pain medications, insulin regimens etc.
- Internal Medicine Essentials for Clerkship Students. ACP/CDIM. American College of Physicians. 2015.
- Henderson MC et al. The patient history: An evidence-based approach to differential diagnosis. Lange. 2nd edition.
- Cecil Essentials of Medicine. 9th edition. WB Saunders Company.

UpToDate and Access Medicine (including Harrison's Principles of Internal Medicine. are available on-line through Chobanian & Avedisian School of Medicine and BMC and can be helpful.

Other Textbooks

- "Fat" Books - Harrisons, Cecils, Kelly...

"Quick and dirty"/ Practical

- Pocket Medicine
- Washington Manual,
- Ferri, "Practical Care of the Patient"
- Sanford (antibiotics),
- Programmed ECG text.

Question Books

- IM Essentials Questions- MKSAP
- **USMLE Q Bank**

Evidence-Based Medicine Point-of-Care Resources

Point-of-care tools are reference resources that a clinician can utilize to quickly make evidence-based decisions when interacting with a patient. They usually contain "filtered" information, meaning that the information from primary literature (e.g., randomized clinical trials, cohort studies) has been critically appraised and synthesized. While they are very useful decision-making aids, they are still subject to bias and other forms of error, and you should learn about their strengths and limitations.

A few useful Point-of-Care Resources include:

- **BMJ Clinical Evidence**- provides systematic reviews that summarize the current state of knowledge – and uncertainty – about the prevention and treatment of clinical conditions, based on thorough searches and appraisal of the literature. They don't tell you what to do.
- **Cochrane Database of Systematic reviews** - Includes the full text of the Cochrane Collaboration's regularly updated systematic reviews of the effects of healthcare interventions. Well filtered but not everything is covered.
- **DynaMed**- evidence-based information resource that is designed to answer clinical questions quickly and easily.
- **USPSTF**--<https://www.uspreventiveservicestaskforce.org/Page/Name/recommendations>
The United States Preventive Services Task Force is an independent, volunteer panel of national experts in prevention and evidence-based medicine. The Task Force works to improve the health of all Americans by making evidence-based recommendations about clinical preventive services such as screenings, counseling services, and preventive medications. These recommendations have been considered the "gold standard" for clinical preventive services.

Other useful EBM resources/sites include the Centers for Disease Control, National Guideline Clearinghouse, and the ACC/AHA Joint Guidelines

<http://professional.heart.org/professional/GuidelinesStatements/searchresults.jsp?q=&y=&t=1001>

Online Resources

- Clerkship Directors in Internal Medicine (CDIM) is the national organization that supports student education in internal medicine <http://www.im.org/p/cm/ld/fid=235>.
- The Internal Medicine Clerkship Primer is produced by CDIM and provides a useful overview of the clerkship and suggestions to help you maximize the experience <http://www.im.org/p/cm/ld/fid=664>.
- Simulated Internal Medicine Learning Experiences at CDIM- SIMPLE.
- Boston University Medical Center Alumni Medical Library <http://www.bumc.bu.edu/medlib/>
- ECG Maven – a website that provides a wide variety of ECGs to learn from and test yourself. <http://ecg.bidmc.harvard.edu/maven/mavenmain.asp>
- BMC Intranet Home Page- <http://www.internal.bmc.org/> - available in-house with access to Harrison's Online and other Access Medicine Textbooks, UpToDate online, and other resources, such as the BMC antibiogram.
- The American College of Physicians (ACP) is a national organization of internists — physicians who specialize in the prevention, detection and treatment of illnesses in adults. ACP is the largest medical-specialty organization and second-largest physician group in the United States. Its membership of 133,000 includes internists, internal medicine sub-specialists, and medical students, residents, and fellows. The website provides information relevant to education, practice and policy in internal medicine. <http://www.acponline.org/>
- The Society of General Internal Medicine is a national medical society of 3,000 physicians who are the primary internal medicine faculty of every medical school and major teaching hospital in the United States. Its mission is “to lead excellence, change, and innovation in clinical care, education, and research in general internal medicine to achieve health care delivery that is comprehensive, technologically-advanced and individualized; instills trust within a culture of respect; is efficient in the use of time, people, and resources; is organized and financed to achieve optimal health outcomes; maximizes equity, and continually learns and adapts.” Good exposure to academic internal medicine. www.sгим.org

Journal Articles

- Eric Cassel. The nature of suffering and the goals of medicine. <http://www.ncbi.nlm.nih.gov/pubmed/7057823>

Selected High-Yield Medical Journals

- New England Journal of Medicine- covers all fields of medicine with strong internal medicine influence. The Clinical Problem Solving cases and Clinical Pathologic case discussions are particularly relevant.
- Annals of Internal Medicine-strong internal medicine (IM) journal.
- JAMA- general medicine coverage with strong IM influence.
- Lancet- international general medicine journal with good IM coverage.

MedHub

Chobanian & Avedisian School of Medicine uses MedHub for evaluation and assessment. MedHub uses Single-Sign-On with BU accounts, and contains tutorial and training resources under the “Help” tab once logged in.

Students with technical issues or in need of additional help beyond the resources provided should submit a support ticket via: <https://www.bumc.bu.edu/evaluate/medhub-support-tickets/>

Echo360/Technology

Echo360 may only be used for streaming captured lecture videos; the videos may not be downloaded. Taking smartphone or digital pictures or videos of any part of the lecture in class, or at home, is similar to downloading and is not allowed. There are a number of reasons for this, including that students and/or the University may be liable for violations of federal copyright and privacy laws as a result of the use of copied material.

If you experience any technical problems, please report the issue in one of the following ways to generate an IT ticket:

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School's Policy on Recordings: <https://www.bumc.bu.edu/busm/education/medical-education/policies/classroom-recordings/>

Tutoring

Peer tutors may be requested via the Office of Academic Enhancement's Peer Tutoring Program at: <http://www.bumc.bu.edu/busm/student-affairs/office-of-academic-enhancement/academic-enhancement/peer-tutoring-program/>

Disability & Access Services

Disability & Access Services' goal is to provide services and support to ensure that students are able to access and participate in the opportunities available at Boston University. In keeping with this objective, students are expected and encouraged to utilize the resources of Disability & Access Services to the degree they determine necessary. Although a significant degree of independence is expected of students, Disability & Access Services is available to assist should the need arise.

<https://www.bu.edu/disability/accommodations/>

Session Learning Objectives and Notes

Clinical Problem Solving Cases, High Priority Reading & other Core Learning

These clinical problem solving cases span cases, workshops and didactics incorporated into the clinical clerkship.

Chest Pain/Shelf Review

Objectives

- Review elements of the NBME Medicine shelf exam and the new NBME question format
- Estimate the probability that coronary artery disease is the cause of the patient's presentation with chest pain. Assess the current risk of ACS for the patient with chest pain.
- Describe the role of **stress testing** and cardiac catheterization in patients with suspected coronary heart disease

Evaluation of a patient with palpitations

- Generate differential diagnoses in a patient presenting with palpitations
- Recognize how age of patient helps to determine etiology of palpitations
- Recognize and list that multiple factors can contribute to palpitations in the same patient
- Review EKGs of patients presenting with palpitations

Dyspnea

Objectives

- Formulate a differential diagnosis for acute dyspnea
- Identify the symptoms and signs of heart failure (HF)
- Distinguish between heart failure due to systolic vs diastolic dysfunction
- Identify a patient's cardiac functional status (class) and explain its significance
- Provide a prognosis for a patient with HF and identify data that predicts risk
- Articulate the principles of managing a patient with HF and describe the role of the different medication classes used to treat this disorder

Cough/Weight Loss/Hemoptysis/HIV

Objectives

- Identify persons at-risk for tuberculosis
- Describe the principles of TB skin testing and to which patients it should be applied
- Describe specific and non-specific symptoms of pulmonary tuberculosis
- Outline criteria and reasons for respiratory isolation of potentially infectious cases of TB
- Describe principles of TB chemotherapy, including factors that affect adherence to treatment and strategies available to enforce adherence
- List the strengths and weaknesses of newer diagnostic tests for TB
- Identify "missed opportunities for: (a) prevention and (b) spread of infection to others
- Recognize the signs and symptoms of acute HIV seroconversion
- Describe the pathophysiology of HIV infection
- Explain the current concepts concerning who should be treated with antiretroviral drugs, and when to start prophylaxis for opportunistic infection
- Describe the natural history of HIV and the impact that highly aggressive anti-retroviral therapy (HAART) has had
-

Anticoagulation in the Hospitalized patient

Objectives

- **Identify** risk factors for development of thrombosis in hospitalized patients
- **Assess** the risk of thrombotic disease
- Learn strategies to **prevent** major thrombotic events
 - DVT Prophylaxis
 - Bridging anticoagulation
- **Treatment** – Familiarize yourself with common pharmacotherapy in anticoagulation
- Understand that various factors determine choice of anticoagulation

Rough Breathing in Exam Room

Objectives

- Define Chronic Obstructive Pulmonary Disease (COPD)
- Distinguish among Emphysema, Chronic Bronchitis and Asthma
- Describe the pathogenesis of airflow obstruction in COPD
- Appropriately order and interpret pulmonary function tests (PFT's)
- Describe the principles of managing COPD, both during an acute exacerbation and at times of symptomatic but stable disease
- Identify smoking and other causes in patients with COPD
- Develop an approach to address and assist a patient in stopping smoking

Diabetes: Inpatient and Outpatient DM2

Objectives

- Correctly apply the diagnostic criteria for type 2 diabetes mellitus to a patient
- Describe methods and reasons for controlling blood glucose inpatient vs. outpatient
- Identify the components of a routine evaluation of a diabetic patient
- Identify outpatient and inpatient interventions to control hyperglycemia

Diabetic Hyperglycemic Crisis

Objectives

- Correctly identify the difference between DKA and HHS and overlap syndromes
- Identify underlying pathophysiologic mechanisms that impact management of each syndrome
- Understand the basic management principals involved in managing hyperglycemic crisis

Identifying and treating the source: Pattern recognition in infectious diseases syndromes and antimicrobials: a high yield approach.

Objectives

- Review the distinction between commensals/colonizers/normal flora and pathogenicity
- Understand the general spectrum of antimicrobials used in the inpatient and outpatient setting

- Identify the core “illness scripts” for each primary source for infections (i.e. pulmonary-Pneumonia, CNS, skin/musculoskeletal, etc.) based on demographics, HPI, physical exam and ancillary data and predict the organism and treatment options
- Review representative presentations of fever within the context of each organ source and appreciate the nuances of subtle changes in presentation to identify the etiology and treatment.

Fever and Confusion with Cirrhosis

Objectives

- Identify and recognize the findings of advanced liver disease
- Recognize complications of chronic liver disease
- Assess the prognosis of a patient with chronic liver disease
- In a patient who presents with a change in mental status, demonstrate a mental status assessment, characterize the problem (e.g. delirium, dementia...), develop a differential diagnosis and outline an approach to evaluation
- For a patient with ascites, describe maneuvers to elicit this finding, develop a differential diagnosis for the ascites, and determine the likely cause, by utilizing findings from the history, exam and paracentesis
- Describe the spectrum of alcohol withdrawal and identify factors that put a patient at high risk for major alcohol withdrawal
- Risk stratify a patient regarding risk for alcohol withdrawal and outline initial management

Vomiting Blood

Objectives

- Localize the site of a gastrointestinal bleed by history
- Accurately assess and stabilize a bleeding patient
- Take a focused, timely, but thorough history on a patient with a GI bleed
- Describe the use, and reliability of laboratory and radiologic data in the assessment of a bleeding patient
- Risk stratify and appropriately treat an upper gastrointestinal bleed
- Describe the key mechanisms that protect against peptic ulcer disease and pathogenic processes and insults that can cause mucosal injury.
- Explain the use of the various diagnostic and therapeutic modalities available for Helicobacter Pylori

Fatigue and Icterus

Objectives

- Identify the manifestations, causes, and principles of management of chronic liver disease
- For a patient with ascites, describe maneuvers to elicit this finding, develop a differential diagnosis, and determine the likely cause by utilizing findings from the history, exam, and paracentesis
- Identify patients at high risk for hepatitis C, describe its natural history, and, outline the rationale for specific treatment
- Utilize the history to identify patients at high risk for or with problems due to the misuse of alcohol

Renal Physiology

Objectives

- Assess volume status by history, exam and lab testing
- Define the physiologic basis of orthostatic hypotension
- Estimate GFR in chronic renal failure
- Develop an approach to worsening renal function with particular emphasis on distinguishing pre-renal causes from acute tubular necrosis
- Identify causes of hypobicarbonatemia
- Calculate the anion gap
- Develop a differential diagnosis for anion-gap and non-gap metabolic acidosis
- Evaluate and treat hyperkalemia
- Identify and treat hypernatremia

Acid Base

Objectives

- Demonstrate a systematic approach to acid base disturbances
- List a differential diagnosis for the common acidoses and alkalosis
- Identify complex disorders (dual or triple disorders)

In-Patient Withdrawal Management

Objectives

- Describe withdrawal management for the most commonly used substances
- Explain the importance of inpatient withdrawal management
- Review pathophysiology of withdrawal

Ethics

Objectives

- Identify the ethical dilemma in situations
- Discuss techniques to resolve ethical dilemmas
- Discuss resources at BMC to assist providers when in ethical situations

Pain Management and End of Life Issues

Objectives

- Describe an approach to alleviate pain and suffering for a patient with metastatic cancer
- Demonstrate how to safely and effectively employ commonly –used medications in the treatment of mild, moderate, and severe pain
- Discuss options of care we can offer patients and their families at the end of life
- Define palliative care and hospice, and identify situations in which these approaches to care are appropriate

Social Determinants of Health

- Develop tools to analyze the effect of SDOH on the wards

- Develop tools to see the way SDOH affect us as healthcare practitioners
- Develop micro-aggressions response techniques

Hyponatremia

Objectives

- Apply the foundational pathophysiology principles underlying hyponatremia
- List and organize a differential diagnosis for hyponatremia
- Describe an approach to evaluate and manage hyponatremia
- Identify risk factors for osmotic demyelination syndrome (ODS)
- Initiate safe initial treatment in a patient with hyponatremia
- Identify situations when you should promptly seek renal consultation

Handoffs

Objectives

- Understand the importance of structured communication when handing off patients
- Define the components of the IPASS mnemonic
- Critically construct and observe a verbal IPASS handoff

Abnormal LFTS

Objectives

- Develop a differential diagnosis for the following LFTs patterns:
 - Severely elevated transaminases
 - Severely elevated alkaline phosphatase
 - Mild-moderately elevated transaminases
- Assess the severity of liver dysfunction using clinical, exam, and laboratory features.

Glomerulonephritis/Vasculitis

Objectives

- Diagnose a patient with glomerulonephritis (GN) from clinical history, exam, and laboratory findings.
- Generate a differential diagnosis for GN and state the key findings and laboratory tests that are used to make these diagnoses.
- Propose a treatment plan for the most common causes of GN.

Student Report

Objectives

- For the clinical problem(s) addressed, obtain a focused history and physical, generate a patient-specific differential diagnosis, develop initial steps to evaluate your differential, explain your reasoning and describe the most important and relevant pathophysiology for the condition(s)
- Identify the most useful diagnostic tests, describe the utility and limitations of these diagnostic tests, and interpret their results
- Recommend initial treatment
- Identify the most important components of the context of care including: patient socio-demographics, language, culture, patient belief system and illness behavior, and the system of care (e.g. access to care, finances, care coordination)

- Describe how these factors impact patient care and clinical outcomes, and how the system might be improved or the problem prevented
- Practice the above skill in an OCRA style format, to help prepare for OCRA final assessments

Intravenous Fluids

- Identify the physiology of use of hypotonic vs isotonic solution
- Describe the differences between balanced crystalloids and isotonic saline
- Describe the treatment of a hypovolemic patient
- Describe the treatment of a hypovolemic patient with a severe metabolic acidosis
- Describe the treatment of an NPO patient
- Describe the treatment of a hypovolemic and hypernatremic patient
- Describe the treatment of a hypervolemic and hypernatremic patient

CXR

- Describe the ABCDEF approach to reading CXR
- Identify pulmonary infiltrates on CXR
- Identify pulmonary edema on a CXR
- Identify pleural effusions on a CXR

Autoimmune diseases

- Describe the difference between ANA and ENA testing
- Identify the clinical presentation and laboratory based workup of SLE
- Identify the clinical presentation and laboratory based workup of rheumatoid arthritis
- Identify the clinical presentation and laboratory based workup of scleroderma
- Identify the clinical presentation and laboratory based workup of sjogrens syndrome
- Identify the clinical presentation and laboratory based workup of gout

Hyperkalemia / OCRA practice

- Identify the differential diagnosis of hyperkalemia
- Describe the important questions needed to take an HPI for a patient with hyperkalemia
- Describe the management of a patient with hyperkalemia

ECG Interpretation Sessions

Objectives

- Apply a systematic approach to interpret the EKG
- Begin to recognize common and “can’t miss” EKG diagnoses

Lower Extremity Edema

- Describe how dysregulation of normal intercellular fluid management results in lower extremity edema in common culprit disease states
- Using a conceptual framework, list common causes of lower extremity edema
- Articulate an approach to the work-up of lower extremity edema including history, physical exam, labs, and imaging

Ambulatory Pearls

- Describe an approach to ambulatory evaluation of a patient recently discharged from the ED/hospital, including:
 - Chart review
 - Relevant history (including medication reconciliation and connection with indicated subspecialty services) and physical
 - Relevant exam
 - Describe an illness script for osteoporosis, including
 - Risk factors
 - Presenting concerns
 - Diagnostic imaging and labs
 - List preventive measures and first-line treatments for osteoporosis

CD-Student Small Group Sessions

Objectives (your small group sessions will cover some of these objectives)

- **Beside skills**
 - Demonstrate a focused approach to obtaining a history and performing a physical exam, based on differential diagnosis
 - Demonstrate the method and be able to provide an estimate of the patient's JVP
 - Distinguish systolic ejection murmurs from regurgitant murmurs
 - Perform a systematic CV exam using proper technique
 - Demonstrate a systematic chest/pulmonary exam and detect abnormalities
 - Describe the elements from the history, physical exam and foundational studies that will enable you to assess the patient's volume status
- **Communication skills**
 - Practice delivering a concise, targeted, coherent oral patient presentation that "makes the case" for your assessment and plan
 - Practice composing a well-organized and coherent write-up that 'makes the case' for your assessment and plan
- **Clinical Reasoning practice**
 - Provide a differential diagnosis and support for your proposed conditions that is appropriate to the patient being presented
 - Identify the common and "don't miss" (diagnostic imperatives) conditions associated with presentations of Chest pain, Dyspnea, Fever, Anemia, Acute Kidney Injury and common Acid-base & Electrolyte disorders

- Describe the illness scripts for common and ‘don’t miss’ conditions that often present with: Chest Pain, Dyspnea, Fever, Anemia, Acute Kidney Injury and common Acid-base & Electrolyte disorders and how they differ
- Critically incorporate the relevant evidence (science/medical literature) into your patient assessments
- **Expectations, Feedback and Assessment review**
 - Demonstrate the ability to effectively solicit and incorporate feedback from your supervisors and improve your current performance
 - Discuss and reflect on feedback and assessments from your supervisors and work on a plan to incorporate feedback received
 - Show the actions of a self-directed learner

High Priority Conditions you should read about

In addition to the requirement that you see ≥ 15 patients as the primary student caring for the patient, and seeing patients with each of the “Big 10” active problems, **it is strongly recommended** that you care for real or simulated patients with or read about the conditions described below.

The Big 10 clinical presentations (above) and diagnoses listed below represent a listing of conditions that you should prioritize in your learning. It is not inclusive of all diagnoses/conditions to learn.

For each of the conditions listed below, the student should be able to define/describe:

- Illness script (IS)- one way that experts store information (as chunks) about medical conditions in long term memory that enables them to store and readily retrieve that information
 - An Illness Script includes:
 - Who gets the condition? Predisposing factors
 - How does it present? Clinical manifestations- defining,
 - With regard to symptoms, signs, study results
 - Temporal aspects of the presentation- onset, course of the condition
 - Core pathophysiology
 - Differential diagnosis
 - Evaluation/Diagnosis- which tests to order, when to order, how to interpret
 - Initial management
 - Prognosis
 - Prevention

Keep in mind that many conditions may present in several different ways (e.g. pulmonary embolus may present with chest pain, dyspnea, syncope). The listing that follows is designed to help you organize these conditions; the categories are not mutually exclusive.

High Priority “Diagnoses” and Problems- See as many as possible and read about these problems

Chest pain

- **Diagnostic Imperatives**
 - Acute coronary syndromes
 - Pulmonary embolism
 - Aortic dissection
 - Effort rupture of the esophagus (Boerhaave syndrome)
 - Tension pneumothorax
- **Common causes of isolated chest pain:**
 - Chronic coronary disease/angina
 - GI causes (esp. GERD, esophageal motility/spasm, peptic ulcer disease)
 - Musculoskeletal (e.g., localized, non-rheumatologic syndromes like costochondritis)
 - Psychological causes/triggers (panic disorder, depression)
 - Unexplained chest pain
- **Other**
 - Pericarditis

Dyspnea

- COPD
- Heart failure
 - Preserved ejection fraction
 - Reduced ejection fraction
- Asthma
- Pneumonia
- Interstitial lung disease
- Pleural effusion

Fever

- Bacteremia
- Clostridium difficile
- Endocarditis
- HIV- primary infection and opportunistic infections/cancers suggested by CD 4 count
- Malaria
- Meningitis/encephalitis
- Noninfectious cause
- Pneumonia
- qSOFA/SIRS/Sepsis/Severe Sepsis, is this septic shock or not?
- Skin and soft tissue infections/cellulitis
- Spontaneous bacterial peritonitis
- Tuberculosis
- Urinary tract infection

Anemia

- Fe deficiency

- Anemia of chronic disease (inflammation)
- B12, folate deficiency
- Acute blood loss
- Glucose-6-Phosphatase deficiency –G6PD
- Thalassemias
- DIC- microangiopathic hemolytic anemias
- Sickle cell trait/disease

Kidney injury

- **Acute kidney injury**
 - Prerenal
 - Hypovolemia
 - Heart failure
 - Cirrhosis with ascites
 - Intrinsic renal
 - Glomerular disease
 - Acute tubular necrosis
 - Contrast nephropathy
 - Allergic interstitial nephritis
 - Post-renal causes

Acid-base/electrolyte disorders

- Acid-base
 - Metabolic acidosis
 - Increased anion gap conditions
 - Normal anion gap conditions
 - Metabolic alkalosis
 - Contraction
 - Vomiting
 - Renal acid loss
 - Respiratory acidosis
 - Respiratory alkalosis
- Electrolytes
 - Hyponatremia
 - Hypovolemia, osmotic diuresis
 - Diuretic induced
 - SIADH
 - Adrenal insufficiency
 - Edematous states – Heart failure, cirrhosis, nephrotic syndrome
 - Renal: Acute and chronic kidney disease

- Hypernatremia
 - Unreplaced water loss -involves loss of thirst or ability to access water
 - Decreased total body water and sodium; relatively more TBW loss than sodium: GI loss, skin loss, renal loss (diuretics, osmotic diuresis)
 - Increased sodium with normal total body water: hypertonic saline, NaHCO₃ administration, mineralocorticoid excess
- Hypokalemia
 - Reduced intake
 - Increased entry into cells
 - Increased GI loss
 - Increased urinary loss
 - Diuretic
 - Mineralocorticoid excess
 - Hypomagnesemia
- Hyperkalemia
 - Increased K intake : oral, IV (blood transfusion, IVF, TPN)
 - Increased K release from cells
 - Pseudo-hypokalemia
 - Increased catabolism- tumor lysis
 - Metabolic acidosis
 - Drugs
 - Insulin deficiency (DM)
 - Reduced urinary K excretion
 - Acute and chronic kidney disease
 - Reduced secretion or response to aldosterone (ACEI/ARBs and other drugs, type 4 RTA)
- Hypocalcemia
 - Hypoparathyroidism
 - Vitamin D deficiency
 - Renal insufficiency
 - Medications
 - Hypomagnesemia
- Hypercalcemia
 - PTH dependent: Hyperparathyroidism
 - PTH independent:
 - Malignancy
 - Granulomatous disease- e.g. sarcoidosis
 - Medications – e.g. thiazides, Vitamin D intoxication, calcium

Other High Priority Conditions that do not fit neatly under one of the Big 10 categories

- Arrhythmia with emphasis on atrial fibrillation, supraventricular tachycardias, ventricular tachycardia, heart block
 - Understand causes of atrial fibrillation
- Diabetes- with emphasis on basic inpatient management of DM2, diabetic ketoacidosis, hyperosmotic hyperglycemic nonketotic state (HHNK)
- Hypertensive urgency/emergency
- Hypoxia- mechanisms, approach to..., common causes
- Substance abuse/overdose/withdrawal with emphasis on ethanol, opiates, cocaine
- Volume depletion

High priority components of the physical exam include:

- Cardiovascular
- Chest/Lung
- Volume assessment

Types of Patients/"Diagnoses"- The Next Tier

In addition to the requirements above, we encourage you to see and read about patients with as many of the following problems, clinical conditions, socio-demographics or learning opportunities listed below:

- Acute joint pain and swelling with emphasis on crystal-induced and infectious causes
- Abdominal pain- Approach to...
- Altered mental status - e.g. confusion, delirium, dementia
- Amyloidosis
- Cancer (common solid or blood-borne)- e.g. Lung, breast, colorectal, prostate, Chronic lymphocytic leukemia, multiple myeloma
- Cough
- Chronic kidney disease
- Diarrhea- Approach to... common causes
- Gastrointestinal bleed- peptic ulcer disease, portal hypertension
- Infections
 - Due to resistant organisms- e.g., staphylococcus
 - Antibiotic stewardship
 - Immunocompromised states
 - Nosocomial infections- including pneumonia, intravascular catheter infection
 - Liver Disease- emphasizing cirrhosis and its complications
 - Pain management- approach to ...
 - Rash- approach to...
 - Sarcoidosis
 - Syncope- approach to... common causes
 - Systemic sclerosis (scleroderma)
 - Urinary tract infection- upper tract, complicated UTI
 - Valvular disease with emphasis on aortic stenosis, mitral regurgitation, tricuspid regurgitation

