

G. EMERGENCY MEDICINE ROTATION

General Description

The emergency department rotation is a 4 week rotation for PGY1s and a 4 weeks rotation for PGY2s designed to teach the resident the fundamentals of diagnosis and management of commonly encountered emergency cases. While in the emergency department (ED), residents are exempted from internal medicine conferences and continuity clinics.

Structure of the rotation

- Interns and residents from the internal medicine department will rotate in medical and surgical emergency rooms.
- They take 8 to 12 hours shift as not to exceed 80 hours per week and to have a minimum of 10 hours rest between shifts
- Interns and residents assess patients unassisted first (except for unstable patients) and present them to the ED attending later to decide on plan of care
- Residents take high acuity patients

Goals of the Rotation

- To become familiar with the expedient evaluation and management of both critical and noncritical medical/surgical conditions as they present to the ED
- To take a focused history and do a focused physical exam
- To learn how to efficiently select appropriate laboratory and radiologic studies in order to diagnose and treat patients in the ED.
- To learn about non-internal medicine related problems and how internal medicine conditions may be masked by other special problems.
- To improve teaching skills pertaining to medical problems encountered in the ED.
- To learn how to triage which patients require hospitalization from those who do not.
- To gain experience in procedural skills such as thoracentesis, abdominal paracentesis, central line placement, intubation...
- To become more familiar in ACLS and BLS protocols

Topics expected to be covered are as follows

Acute aortic Dissection

Acute appendicitis

Acute Chronic Obstructive Pulmonary Disorder Exacerbation

Acute Coronary Syndromes

Acute Decompensated Heart Failure/Congestive Heart Failure Exacerbations

Acute Pain
Adrenal Crises/Insufficiency
Altered Mental Status
Anaphylaxis/Acute Allergic Reactions/Angioedema
Arrhythmias
Asthma Emergencies
BLS/ACLS
Carbon Monoxide Exposure
CNS Infections
Cholecystitis/Cholangitis/Pancreatitis
Complications of Cirrhosis
Diabetic ketoacidosis/Hyperosmolar Hyperglycemic State
Emergencies in Renal Failure and Dialysis Patients
Endocarditis
Gastrointestinal Bleeding
Hypertensive Emergencies
Hypoglycemia/Hyperglycemia
Intracranial Hemorrhage
Ischemic Stroke
Obstetrics Emergencies
Obstruction
Pericardial Tamponade
Pulmonary Embolism
Rash
Respiratory Distress
Rhabdomyolysis
Seizures
Sepsis
Substance Abuse/Withdrawal
Urolithiasis
Vertigo
Psychiatric emergencies

Legends for learning activities

DPC Direct patient care
DSP Directly supervised procedure
FS Faculty supervision

Legends for evaluation methods:

GA Global assessment by ED attendings (myevaluation.com)
ISE In-service examination
PL Procedure Log (myevaluation.com)
PRE Peer Evaluation

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, FS	GA, PRE	PGY-1
Formulate and carry out effective management plans	DPC, FS	GA, PRE	PGY-2
Clearly and succinctly document patient management in the medical record	FS, DPC	GA, PRE	PGY-1
Competently perform invasive procedures	DPC, FS, DSP	PL, GA, PRE	PGY-3

II. Medical Knowledge

Goal

1. By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to emergency medicine. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to emergency medicine	DPC, FS	GA, ISE, PRE	PGY- 2
Accurately interpret ER laboratory and basic imaging	DPC, FS	GA, ISE, PRE	PGY- 2

Learn current ER literature and standard of care guidelines	DPC, FS	GA, ISE, PRE	PGY-2
---	---------	--------------	-------

III. Practice- Based Learning and Improvement

Goal

1. Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, FS	GA, PRE, ISE	PGY 1
Effectively perform a literature search to answer clinical questions	DPC, FS	GA, PRE	PGY-2
Facilitate the learning of interns and other health care providers	DPC	GA, PRE	PGY-2

IV. Systems Based Practice

Goal

1. Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	DPC	GA, PRE	PGY-2
Demonstrate the ability to work as a member of a larger health care team	DPC	GA, PRE	PGY-2

V. Professionalism

Goal

1. Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, FS	GA, PRE	PGY-1
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, FS	GA, PRE	PGY-1
Maintain patient confidentiality at all times	DPC, FS	GA, PRE	PGY-1

VI. Interpersonal and Communication Skills

Goal

1. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, FS	GA, PRE	PGY-2
Clearly communicate transfer of care to other providers	DPC, FS	GA, PRE	PGY-1
Professionally interact with entire health care team	DPC, FS	GA, PRE	PGY-1

H. Coronary Care Unit Rotation

The coronary care unit (CCU) in American University of Beirut Medical Center is a total of 18 beds unit, including 9 post-monitor beds and 9 monitor beds. In addition to a dedicated heart failure unit that includes 4 monitored beds. The CCU rotation provides an excellent training opportunity for the residents to acquire experience in the diagnosis and management of critically ill patients with cardiovascular diseases. Residents are exposed to a broad range of problems including acute coronary syndromes, congestive heart failure, arrhythmias, valvular heart diseases, endocarditis, hypertensive crisis, cardiomyopathy, pericarditis, cor pulmonale, aortic dissection, aortic aneurysm and cardiac tamponade. The resident will also be exposed to a variety of invasive and noninvasive cardiac testing.

Description of Rotation

- The CCU team consists of one attending physician, one cardiology fellow and 6-7 house-staff; two second-year residents (PGY2) and 4-5 first-year residents (PGY1).
- PGY2s take in-hospital overnight calls every fourth night (Cross-covered by two residents from an elective rotation). PGY1s take in-hospital overnight calls every 4-5 nights.
- The CCU team admits patients with primary cardiac diagnoses requiring acute care including acute coronary syndromes, valvular heart diseases, cardiogenic syncope, decompensated heart failure, and arrhythmias (including cardiac pacemaker/defibrillator management).
- The PGY1s (excluding the on- and post-call PGY1s) alternate admissions from 7:30 am to 2:00 pm. The on-call PGY1 admits patients from 2:00 pm until 7:30 am the next day. The post-call PGY-1 does not admit patients.
- The pre-call second-year resident admits patients from 7:30 am until 5:00 pm. The on-call second-year resident takes care of the admissions from 5:00pm until 7:30 am the next day.
- The post-call PGY1 signs off his patients to the team at 12:00 pm and then leaves the hospital. The Post-call second year resident would leave the hospital at 1 pm. Post-call PGY1s would leave the hospital exceptionally at 1:00 pm when there are medical grand rounds at 12:00 pm
- When on call, PGY1 and PGY2 residents respond to all cardiac arrests at the CCU, and participate in ACLS resuscitation efforts. PGY2 residents direct and coordinate ACLS protocols, when required.

Legends for learning activities:

- DPC Direct patient care
- RWR Resident work rounds
- AR Attending rounds/didactics
- DSP Directly supervised procedures

Evaluation Methods:

- GA Global assessment by attending (myevaluation.com)
- PRE Peer evaluation (360° evaluation)
- NE Nursing evaluation (360° evaluation)
- ISE In-service examination
- PL Procedure log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, RWR, AR	GA, PRE	PGY-1
Formulate and carry out effective management plans	DPC, RWR, AR	GA, PRE	PGY-2
Clearly and succinctly document patient management in the medical record	RWR, AR	GA, PRE	PGY-1
Competently perform invasive procedures (A-lines, central lines, nasogastric and feeding tubes*)	DSP	GA, PRE, PL	PGY-2 *PGY-1

Specific Objectives and goals:

1. ST-segment Elevation Myocardial Infarction: PGY2 residents will be able to identify STEMI immediately and with the fellow, appropriately activate the cardiac catheterization laboratory for primary PCI. Evidence-based medical therapies, including aspirin, clopidogrel, anticoagulants, beta blockers, statins, ACE inhibitors will be administered according to ACC/AHA guidelines. Mechanical and electrical complications will be identified and appropriately managed. They should recognize major risk factors for cardiovascular disease and display knowledge of standard preventative cardiovascular care.
2. Non-ST-segment Elevation Myocardial Infarction and Unstable Angina: PGY2 residents will use resources appropriately in the evaluation of patients with suspected ACS, including serial biomarkers and ECG testing and non-invasive evaluation for ischemia. They will recognize high risk features and appropriately apply more intensive therapies to higher risk subjects, including invasive therapy and GP IIb/IIIa inhibitors. They will administer evidence based medical therapies according to the ACC/AHA guidelines.
3. Cardiogenic shock: PGY2 residents will recognize and manage patients with cardiogenic shock with the fellow and attending, including monitoring of PA catheters, and use of inotropic agents.
4. Congestive Heart Failure. PGY1 residents will appropriately diagnose heart failure, demonstrating expertise with physical examination skills, and appropriately categorize to initiate therapy on the basis of their findings. They will understand the role of non-invasive imaging and cardiac biomarkers in the management of heart failure. PGY2 residents will use and understand nuances of evidence based therapies, including beta blockers, ACE inhibitors, aldosterone antagonists, and nitrates/hydralazine. They will refer appropriate patients for ICDs and cardiac resynchronization therapy.
5. Cardiac Arrhythmias:
 - i. Atrial arrhythmias. PGY2 residents will review ECGs to appropriately diagnose atrial tachy-arrhythmias and distinguish them from ventricular arrhythmias. They will perform cardioversion under supervision when indicated and will administer rate controlling agents or anti-arrhythmic drugs as appropriate. They will refer appropriate patients with SVT, atrial

flutter, or atrial fibrillation to the EP service for ablation and will risk stratify patients for stroke risk in atrial fibrillation and start warfarin as dictated by the risk/benefit ratio.

- ii. Ventricular arrhythmias. PGY2 residents will recognize malignant ventricular arrhythmias and perform emergent interventions including cardioversion and drug therapy
 - iii. PGY2 residents will recognize heart block and identify when temporary and permanent cardiac pacing is indicated, contacting appropriate fellows and faculty.
6. Valvular Heart Diseases: PGY2 residents will recognize valvular heart disease on physical examination and appropriately order echocardiography to arrive at a diagnostic and treatment plan. They will understand the natural history of valvular diseases with and without surgery, and know the indications for surgical therapy.
 7. PGY2 residents will appropriately suspect pericardial tamponade and contact the fellow and faculty for diagnosis and performance of pericardiocentesis when indicated.
 8. PGY1 and PGY2 residents will use appropriate diagnostic tools and guideline-based treatment strategies for other important cardiovascular conditions, including pericardial constriction, aortic dissection, pericardial disease, congenital heart disease, endocarditis, and pulmonary embolism.

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental cardiac disorders including ischemic heart disease, congestive heart failure, hypertensive heart disease, valvular heart diseases, cardiac arrhythmias. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage critically ill cardiac patients	DPC, RWR, AR	GA, PRE, NE	PGY-2
Accurately interpret laboratory, ECG, chest X-ray, *swan ganz data	DPC, RWR, AR	GA, PRE, ISE	PGY-1 *PGY 2
Learn current cardiology literature and standard of care guidelines	RWR, AR	GA, PRE, ISE	PGY-2

Specific Objectives and goals:

1. PGY1:

- a. Develop a working knowledge of common cardiovascular disorders (as above) through diagnosis and management of these conditions, clinically oriented teaching rounds, and faculty-led didactic sessions.
- b. Learn concepts of normal cardiovascular physiology and pathophysiology
- c. Understand basic principles of ECG interpretation to recognize acute coronary syndromes and arrhythmias.
- d. They should understand performance characteristics of cardiovascular biomarkers.
- e. They should understand the basis for common radiology and functional studies, including stress tests and echocardiograms, and be able to request appropriate testing for common cardiovascular conditions.
- f. Become familiar with the indications and use of inotropic and vasoactive agents
- g. Understand basic principles of invasive hemodynamic monitoring
- h. Understand the principles behind and develop proficiency in performing common non-surgical procedures, such as central venous catheter placement, arterial catheter placement, and endotracheal intubation

2. PGY2 (in addition to the above):
 - a. Expand on current understanding and management of common cardiovascular disorders through direct patient care, clinically oriented teaching rounds and didactic sessions.
 - b. Understand specific treatment strategies for particular disease states, with a focus on pathophysiologic mechanisms and evidence-based practice based on current guidelines
 - c. Develop skills in ECG interpretation and understand principles of testing modalities used in cardiovascular diagnosis.
 - d. They should understand reasons for ordering specific cardiovascular tests (exercise vs. chemical, nuclear vs. echocardiography, non-invasive vs. invasive) to be able to select appropriate testing for a given patient. They should be able to determine pre-test probability for cardiac disease, and statistical predictive value of different testing modalities.
 - e. Be able to interpret results of invasive hemodynamic monitoring
 - f. Become proficient with the indications for and use of inotropic and vasoactive agents
 - g. Develop proficiency in performing common non-surgical procedures such as central venous catheter placement, arterial catheter placement, and endotracheal intubation
 - h. Direct and coordinate ACLS protocols when required
 - i. Supervise and teach PGY1 resident in all aspects of care of the critically ill patient.

III. Practice- Based Learning and Improvement

Goal

1. Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.
2. Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, RWR, AR	GA, PRE, ISE	PGY-2
Effectively perform a literature search to answer clinical questions	RWR, AR	GA, PRE	PGY-1
Facilitate the learning of interns and other health care providers	RWR, AR, DSP	GA, PRE	PGY-2

IV. Systems Based Practice

Goal

1. Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care. Cardiovascular testing can be very costly to the healthcare system, and we expect the residents to judiciously use these resources.
2. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, RWR, AR	GA, NE	PGY-2

Clearly communicate sign out and transfer of care to other providers	DPC, RWR	PRE, NE	PGY-1
Professionally interact with entire health care team	DPC, RWR, AR	GA, PRE, NE	PGY-1

V. Professionalism

Goal

1. Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, RWR	GA, PRE, NE	PGY-1
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, RWR, AR	GA, PRE, NE	PGY-1
Maintain patient confidentiality at all times	DPC, RWR, AR	GA, PRE, NE	PGY-1

VI. Interpersonal and Communication Skills

Goal

1. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

2. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	RWR, AR, DPC	GA, PRE	PGY-2
Demonstrate the ability to work as a member of a larger health care team	RWR, AR, DPC	GA, PRE	PGY-2

I. NEUROLOGY ROTATION

General Description

The neurology rotation is a 4 weeks rotation for PGY1s designed to teach the resident the fundamentals of diagnosis and management of commonly encountered inpatient neurology cases. The major emphasis will be on the management of stroke and intracranial bleed. Issues related to neuro-ICU, epilepsy and multiple sclerosis will also be covered. While rotating in neurology department, residents will attend neurology didactic lectures and conferences as well as internal medicine grand rounds.

Structure of the rotation

- Interns from the internal medicine department will rotate on the inpatient neurology floor as well as neuro-ICU for one month during their training.
- The neurology team consists of one attending physician, one second-year resident (PGY2) or third year resident (PGY3) from the neurology department and 1-2 first-year residents (PGY1) from the internal medicine department or from other departments. Medical students are also part of the team as acting interns (3-4 per team).
- PGY2-3s are in charge of leading the morning round, assisted by the attending physician on call, assigning the cases to the students and interns, setting a plan of care for the day, coordinating the sign-out rounds, as well as teaching the juniors.
- The internal medicine PGY1s alternate admissions from 7:30 am to 2:00 pm and supervise students' work. They also are in charge of critical patients on the floor . The on-call PGY1 admits patients from 2:00 pm till next day 7:30am.
- The PGY1 alternates duties with the medical students and is first call on all patients when on call and takes care of new admissions.
- When a PGY 1 is on call, the neurology resident is second call on all patients on neurology floor and sees new admissions with the PGY1.
- The internal medicine PGY1s attend the neurology morning report on Tuesday morning, neurology grand round on Wednesdays, neuroscience lecture or neuromuscular journal club on Tuesdays and Thursdays, and on Fridays, multiple sclerosis conference. They also attend internal medicine grand round on Tuesdays.

Goals of the Rotation

- To demonstrate an understanding of the basic and neurological science background of neurological medicine and apply this knowledge to the clinical care of patients.
- To be able to explain and examine the interaction of neurological diseases with other organ systems and with other medical illnesses.
- To have knowledge of the pathophysiological explanations for neurological disorders.
- To gain experience in localization of findings on neurological exam.

- To gain experience in diagnosis and management of neurological emergencies including status epilepticus, acute stroke, increased intracranial pressure, meningitis, etc.
- To develop neurological exam skills under guidance of neurology attending.
- To gain experience in the inpatient evaluation and management of common neurological problems.
- To be exposed to the neurology literature
- To teach the medical students on the team.
- To develop skills in neurological procedures such as lumbar puncture.

Topics expected to be covered are as follows

Neurological Exam

Headache

Cerebrovascular disease- Ischemic and Hemorrhagic stroke

Intracranial bleed

Clinical Approach to Weakness

Neuro-infectious diseases

Seizures and Epilepsy

Delirium and Dementia

Movement Disorders

Multiple Sclerosis

Legends for learning activities

AR Attending rounds

DPC Direct patient care

DSP Directly supervised procedures

JC Journal Club

WR Ward round

TA Teaching activities

Legends for evaluation methods:

GA Global assessment by attending on the floors (myevaluation.com)

ISE In-service examination

PL Procedure Log (myevaluation.com)

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, AR,WR	GA	PGY-1
Formulate and carry out effective management plans	DPC, AR,WR, TA	GA	PGY-2
Clearly and succinctly document patient management in the medical record	AR,WR	GA	PGY-1
Competently perform invasive procedures	DSP, DPC	PL, GA	Not applicable (Optional Procedures)

**II. Medical Knowledge
Goal**

By the end of this rotation, residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to neurology. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to neurology	DPC, AR,WR, TA	GA, ISE	PGY- 2,3
Accurately interpret laboratory including blood and CSF results as well as basic neuroimaging	DPC, AR,WR, TA	GA, ISE	PGY-1,2
Learn current neurology literature and standard of care guidelines	DPC, AR,WR, TA, JC	GA, ISE	PGY-2,3

III. Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, AR,WR, TA, JC	GA, ISE	PGY 1
Effectively perform a literature search to answer clinical questions	DPC, AR,WR, JC	GA	PGY-1
Facilitate the learning of interns and other health care providers	DPC, AR,WR	GA	PGY-2,3

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	DPC, AR,WR	GA	PGY-2,3
Demonstrate the ability to work as a member of a larger health care team	DPC, AR,WR	GA	PGY-1

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, AR,WR,	GA	PGY-1
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, AR,WR	GA	PGY-1
Maintain patient confidentiality at all times	DPC, AR,WR	GA	PGY-1

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, AR,WR	GA	PGY-2
Clearly communicate transfer of care to other providers	DPC, AR,WR	GA	PGY-1
Professionally interact with entire health care team	DPC, AR,WR	GA	PGY-1

J. Scholar Rotation

Rotation structure:

Residents can elect to have a scholar (research) rotation for a total of 4 weeks during the 3 years program. Further electives can be taken on more than one occasion if the resident has a special interest in research. Most residents will not take a research block in PGY1 year and it is generally not recommended for PGY1(s).

Resident duties during the rotation:

The resident will work on a research project under the supervision of a faculty member
The resident should attend the continuity clinic on his/her pre-scheduled day (Half day) along with the IM core curriculum lectures at noon.

The resident will be called if needed to cover other residents in case of absenteeism or sickness since he/she is on the jeopardy list.

Goals and Objectives:

Each categorical resident (PGY1-PGY3) will work on one research project throughout the residency program years under the supervision of a faculty attending and a clinical epidemiologist. Residents come up with a rudimentary clinical question and discuss it with a mentor. He/She will then go through background, check on data to reproduce basic study design. Under the supervision of a clinical epidemiologist, residents will learn how to utilize basic statistics and develop knowledge of research ethics, database management and research team integration. Residents will be given the chance to present their work through presentations at local, regional, national, or international meetings or through publication in the peer-reviewed medical literature.

I. Elective Rotation Curricula

A. Gastroenterology Elective

Rotation Specific Objectives and goals

The gastroenterology/hepatology elective is an inpatient and outpatient rotation that exposes the resident to the common problems encountered in the diagnosis and management of diseases in the field of gastroenterology/hepatology. GI (Gastrointestinal) emergencies will be covered in didactic lectures and on the ICU/CCU rotations in addition to the consultations seen in ED during the elective rotation.

While on GI elective, residents will attend all required didactic lectures and conferences.

Description of Rotation

- The resident reports daily in the morning to the Endoscopy unit at 8:00 am where he/she meets the gastroenterology team, and joins the team in the morning round on patients that are on the GI service. The resident may elect to assess some patients by himself and finalize with the fellow or attending physician on the service.
- After the morning round, the elective rotating residents and the fellows are called to see new patients/Consultations on the floor or in ED. The resident can examine and manage new cases in ED or Inpatient Wards. Residents participate by performing a history and physical exam on patients on whom the service is consulted, present those patients to the attending in the afternoon round, and write new and follow up consult notes that are reviewed, amended, and co-signed by the attending.
- Residents spend two half days per week in gastroenterology clinic over the course of the elective rotation.
- In the afternoon, the consultation team that consists of the fellow, residents/students round again with the attending physician on the new cases/consultations and the follow up cases to finalize the updates and the changes applied to the management plan.
- The resident attends and evaluates patients in the gastroenterology OPD on Mondays in the afternoon, and finalizes cases with GI fellows and attending physicians if deemed necessary.

- The resident should attend the routinely scheduled GI chapter presentation on Wednesdays at noon, and the conference / journal club activity that take place on Thursdays in the morning. He is also required to attend Internal Medicine noon didactic sessions and medical grand rounds.
- The resident may attend/assist in the procedures in the Endoscopy unit (upper endoscopy, Colonoscopy, endoscopic ultrasound +/- FNA, ERCP,etc)

Goals of the Rotation

At the end of this rotation, Residents will be able to

1. Recall the basic differential diagnosis for each gastroenterologic/hepatologic item in their problem list with particular attention to those diagnoses that are immediately life-threatening or that require immediate intervention.
2. Recall the approach to therapy for common gastroenterology-related disorders, including information necessary to guide clinical decision making.
3. Recommend the initial care in gastroenterologic/hepatologic emergencies such as acute GI bleeding.
4. Recall the typical presentations of diseases common to Gastroenterology/hepatology.
5. Supplement their medical knowledge with information from sources including textbooks, review articles, and on-line data bases. They will begin to understand and apply information from current medical literature. (Practice based learning and improvement)
6. Recall the specific indications and contraindications for the treatment of common gastroenterologic/hepatologic diagnoses.
7. Begin to critically evaluate current medical literature as it applies to the care of their patients. (Practice based learning and improvement)
8. Recognize cultural barriers to treating disease and maintaining good health. These barriers will be addressed with sensitivity and with respect for the patient's beliefs. (Interpersonal and communication skills)

Legends for learning activities:

OPD Outpatient Clinics

DPC Direct patient care

AR Attending rounds/didactics

GC GI conference

DSP Directly supervised procedures

DPC Direct Patient Contact

GCS GI Consultation

Evaluation Methods:

GA: Global assessment by attending (myevaluation.com)

PTR: Patient-to-Resident Evaluation

PRE: Peer evaluation (360° evaluation)

NE: Nursing evaluation (360° evaluation)

ISE: In-service examination

PL: Procedure log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, OPD, AR, GCS	GA, PRE, PTR	PGY-1,2,3
Formulate and carry out effective management plans	DPC, OPD, AR, GC,GCS	GA, PRE	PGY-1,2,3
Clearly and succinctly document patient management in the medical record	OPD, AR, GCS	GA, PRE	PGY-1,2,3

Competently perform invasive procedures	DSP, GCS	GA, PRE, PL	PGY-1,2,3
---	----------	-------------	-----------

A. Rotation Specific Objectives and goals:

The residents will learn about

- a. The anatomy, embryology, physiology and pathology of the digestive system including the pancreas and liver;
- b. Principles of biochemistry and genetics as they apply to the digestive system;
- c. Pharmacology including the principles of metabolism, action and toxicity of drugs that are commonly used in gastroenterology;
- d. The principles of endocrinology, metabolism and nutrition, oncology, microbiology, and psychiatry as they apply to the digestive system;
- e. Principles of gastrointestinal surgery including the indications for and the complications of operations on the gastrointestinal tract;
- f. Diseases affecting the digestive system, pancreas and liver including the epidemiology, pathophysiology, methods of diagnosis, management and prognosis of such diseases;
- g. The indications, interpretations, limitations, and complications of diagnostic procedures performed on the digestive tract;
- h. New advances in the management of gastrointestinal disorders (e.g. organ transplantation, therapeutic Endoscopy).

Residents will gain experience about:

- a. Ability to perform a complete history and physical with particular emphasis on areas specific to the digestive system and its disorders;
- b. The appropriate use of the clinical database to formulate problems and to correctly develop investigation and management plans;
- c. The evaluation and management of gastrointestinal emergencies including acute gastrointestinal hemorrhage, acute abdominal pain, liver failure and removal of foreign bodies from the gastrointestinal tract;

- d. Communication and interaction with patients, families and allied health-care personnel;
- e. The selection and interpretation of x-rays and other imaging techniques of the digestive system, pancreas and liver;
- f. The selection, performance, and interpretation of tests commonly employed in gastrointestinal function laboratories (including motility studies);
- g. Selection, performance and interpretation of:
 - i) Tissue biopsies of the gastrointestinal tract and liver;
 - ii) Endoscopic procedures of the upper and lower gastrointestinal tract; the trainee should be knowledgeable in the use and care of equipment.
- h. Appraisal and evaluation of scientific publications in the field of gastroenterology.

Since gastroenterology elective rotation is a four week elective, the educational goals are the same for residents at each level of training.

II. Medical Knowledge

Goal

1. By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental GI disorders including upper and lower GI Bleeding, gastrointestinal neoplastic diseases such as FAP & HNPCC , Inflammatory Bowel Diseases such as Crohn’s and Ulcerative colitis, Peptic Ulcer disease, Malabsorptive disorders such as celiac disease, dysfunctional disorders such as Achalasia, esophageal diseases (diffuse spasm, transfer dysphagia...etc) ...etc
2. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with GI disorders	DPC, OPD, AR, GC, GCS	GA, PRE, PTR	PGY-1,2,3

Accurately interpret laboratory, Abdominal ultrasound, CT Scan of the abdomen and pelvis, upper endoscopy and colonoscopy, EUS-FNA, ERCP, barium swallow	DPC, GCS, OPD, AR, GC	GA, PRE, ISE	PGY-1,2,3
Learn current GI literature and standard of care guidelines	OPD,GCS, AR, GC	GA, PRE, ISE	PGY-1,2,3

III. Practice- Based Learning and Improvement

Goal

1. Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.
2. Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, OPD, AR, GC, GCS	GA, PRE, ISE	PGY 1,2,3
Be receptive and responsive to constructive criticism Seek help in situations in which they would benefit from the assistance of an upper year resident or attending.	DPC, OPD, AR, GC, GCS	GA, PRE, ISE	PGY 1,2,3

Effectively perform a literature search to answer clinical questions	OPD, AR, GC	ARD	PGY-1,2,3
Facilitate the learning of interns and other health care providers	OPD, AR, GC, GCS	GA, PRE	PGY-1,2,3

IV. Systems Based Practice

Goal

1. Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.
2. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, OPD, AR	GA, PTR	PGY-1,2,3
Clearly communicate transfer of care to other providers	DPC, OPD, GCS	PRE	PGY-1,2,3
Professionally interact with entire health care team	DPC, OPD, AR, GCS	GA, PRE, NE	PGY-1,2,3
Utilize hospital resources to deliver effective, efficient, high quality patient care.	DPC, OPD, GCS, AR,	GA, PRE, NE	PGY-1,2,3
Remain sensitive to health care costs while providing high	DPC, OPD, GCS,	GA, PRE, NE	PGY-1,2,3

quality care. Demonstrate awareness of the insurance status of their patients and its impact on their care options	AR,		
---	-----	--	--

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Provide accurate, complete and timely documentation	DPC, OPD, GCS	PRE, GA	PGY-1,2,3
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, OPD, AR, GCS	GA, PRE, NE, PTR	PGY-1,2,3
Maintain patient confidentiality at all times	DPC, OPD, AR, GCS	GA	PGY-1,2,3

The residents should

- In nearly all situations, put the needs of their patients ahead of their own and ensure adequate attention to their own needs, particularly those of rest, sleep, and personal relationships, to optimize their readiness to provide the highest quality care for their patients.
- Act as patient advocates.
- Manage work efficiently to allow attendance at educational conferences.
- Acknowledge errors and work to minimize them.

- Act as a role model for medical students.
- Be willing to challenge the accepted plan of care when their professional judgment differs from that of other providers.
- Recognize situations in which junior colleagues would benefit from their assistance.
- Act as a role model for interns and fellow residents.

VI. Interpersonal and Communication Skills

Goal

1. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.
2. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	OPD, AR, CS	GA	PGY-1,2,3
Demonstrate the ability to work as a member of a larger health care team	OPD, AR, CS	GA, PRE	PGY-1,2,3

Residents will:

1. Develop effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Be effective listeners in medical and professional encounters, including recognizing verbal and non-verbal cues from the people with whom they interact.
3. Write legibly in all situations.
4. Continually communicate with their patients in understandable terms the nature of their care, including diagnoses, the level of certainty regarding those diagnoses, the diagnostic and therapeutic plan, indications for and adverse effects of prescribed medications, and follow-up after hospitalization.

5. Develop skills for dealing with difficult patients and stressful situations.
6. Develop skills for handling situations of unprofessional behavior by other health care professionals.

PGY-2&3 residents will:

1. Model effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Model skills for dealing with difficult patients and stressful situations.
3. Model skills for handling situations of unprofessional behavior by other health care professionals.
4. Be able to direct sensitive or difficult interactions with patients or their representatives, including the delivery of bad news or initiation of end-of-life discussions.

B. Hematology-Oncology Elective and Resident Team Rotations

The Hematology-Oncology elective and floor team rotations provide a training opportunity for the resident to acquire experience in the diagnosis and management of patients with Hematological and Neoplastic diseases. Residents are exposed to a broad range of problems including acute oncologic emergencies, symptoms of advanced malignancy, acute leukemia, inpatient administered chemotherapy regimens, complications of oncologic therapies, and end-of-life management in addition to indications and contraindications of transfusion and its complications.

Description of Rotation

- The resident will start by rounding daily in the morning with the Hem-Onc (Hematology-Oncology) team that consists of one attending physician, one Hem-One fellow and 5-6 housestaff, one senior residents (PGY2 or 3), 2 first-year residents (PGY1) and 2 students.
- The resident attends the rounds on the Hem-Onc floor on a daily basis with the medical team.
- The resident may attend the routinely scheduled teaching sessions and conferences:
 - Basic Science Lecture on Wednesdays
 - Neurology tumor Board on Thursdays
 - Head and Neck Tumor Board on Fridays
- The resident can attend the procedures such as Bone marrow aspiration and biopsy shadowing the fellow and attending physician.
- The resident also rotates in Bone Marrow transplant (BMT) Unit, rounding daily in AM with the hematology team, where they become more experienced with the pre-BMT preparation protocols and with the Induction Chemotherapy protocols in addition to the Prophylactic treatments and measurements used to prevent opportunistic infections.
- The resident has the chance to see and analyse different imaging studies such as Screening mammography, Pan-CT Scan done for staging of neoplastic diseases, and PET Scan... etc
- The residents should attend two half days in the OutPatient clinics per week with two different attending physicians when in elective rotation.
- During this rotation the resident will get the chance to round with the palliative care team who will take care of patients with end-stage illnesses and determine appropriate end-of-life care.

- Finally the residents can see and examine patients as a part of the consultation team, supervised by the fellow and attending physician.

Goals of the Rotation

- Inpatient Hematology service provides an opportunity for residents to participate in the care and management of adult patients admitted to the hospital with acute benign and malignant hematologic medical needs.
- The resident operates within the context of a multi-disciplinary team, managing conditions that include, but are not limited to, acute oncologic emergencies, symptoms of advanced malignancy, acute leukemia, inpatient administered chemotherapy regimens, complications of oncologic therapies, immune-mediated cytopenia, bone marrow failure states, and hemophilia.
- The exposure to bone marrow transplant unit is an experience designed to educate the fellows and residents on the management of the patient referred for stem cell transplantation immediately prior to, during and following the transplant inclusive of the myeloablation, stem cell infusion, acute post-transplant complications and marrow recovery.
- The palliative care rounds provide the residents with the opportunity to participate in the care and management of patients admitted to the hospital in the acute settings who require palliative acute symptom relief and/or end-of-life management as well as outpatients with cancer and chronic pain or palliative needs.
- This rotation provides a unique opportunity for exposure to routine and advanced pain management techniques and organ-based and systemic symptom management techniques when disease-specific therapy alone has been insufficient.
- During this rotation the resident will review the topics pertinent to the hematologist regarding transfusion medicine and cellular therapies.
- The residents become familiar with the complications of blood product administration and participate in the investigation of possible transfusion reactions and other related complications.
- The resident is expected to gain an understanding of the clinical uses of apheresis therapy and the procedures involved in such. Legends for learning activities:

DPC Direct patient care
RWR Resident work rounds
AR Attending rounds/didactics
HOC Hem-Onc conference
DSP Directly supervised procedures
OPD OutPatient Clinics
MDR Multidisciplinary rounds

Evaluation Methods:

- GA Global assessment by attending (myevaluation.com)
- PTR Patient-to-Resident Evaluation
- PRE Peer evaluation (360° evaluation)
- NE Nursing evaluation (360° evaluation)
- ISE In-service examination
- PL Procedure log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, AR , OPD	GA, PRE	PGY-1,2,3
Formulate and carry out effective management plans	DPC, AR, HOC, OPD	GA, PRE	PGY-1,2,3
Clearly and succinctly document patient management in the medical record	AR, OPD	GA, PRE	PGY-1,2,3
Competently perform invasive procedures (A-lines, central lines, nasogastric and feeding tubes*)	DSP, HOC	GA, PRE, PL	PGY-1,2,3

Rotation Specific Objectives and goals:

1. Develop diagnostic skills and an evidence-based approach to patients with hematological problems or malignancies;
2. Develop skills in history taking and physical examination of patients with hematological diseases or malignancies;
3. Develop skills necessary for the development of an integrated differential diagnosis for patients with hematological problems or malignancies;

4. Use of evidence-based medicine in hematology and become familiar with the mainstream hematology/oncology journals;
5. Develop procedure skills and learn the indications of and how to do a bone marrow aspirate and biopsy;
6. Develop communication skills with patients and families with hematological conditions or malignancies;
7. Develop discharge skills and how to arrange for follow up for patients with hematological diseases or malignancies;
8. Develop presentation skills for patients with hematological diseases or malignancies;
9. Develop skills of interactions with other consulting physicians asking for hematology/oncology advice;
10. Develop skills to manage very sick patients with hematological diseases or malignancies
11. Develop basic morphology skills in the hematology lab; and Develop skills in using the hematology lab effectively and appropriately.

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to hematology and oncology, including acute oncologic emergencies, symptoms of advanced malignancy, acute leukemia, inpatient administered chemotherapy regimens, complications of oncologic therapies, and end-of-life management in addition to indications and contraindications of transfusion and its complications. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage critically ill patients, with the side effects and complications of chemotherapy	DPC, OPD, AR, HOC	GA, PRE	PGY-2
Accurately interpret laboratory, ECG, chest X-ray,	DPC, OPD, AR, HOC,	GA, PRE, ISE	PGY-1 *PGY 2
Learn current literature and standard of care guidelines	OPD, AR, HOC	GA, PRE, ISE	PGY-2

Rotation Specific Objectives and goals

1. Resident understands the epidemiology, pathophysiology, and treatment of common malignancies especially breast lung and colon cancer
2. Resident becomes familiar with systemic effects of cancer
3. Resident becomes familiar with the impact of cancer on other major organ systems
4. Resident becomes familiar with side effects of most common chemotherapy drugs
5. Resident develops an analytic approach to clinical scenarios
6. Resident will be familiar with common targeted therapies for cancer
7. Resident demonstrates the ability to interpret a complete blood count, PT, PTT and related abnormalities to specific disease processes
8. Resident demonstrates the ability to manage common emergencies such as fever/neutropenia, blood product transfusions

III. Practice- Based Learning and Improvement

Goal

1. Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.
2. Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, OPD, AR, HOC,	GA, PRE, ISE	PGY-1,2,3
Effectively perform a literature search to answer clinical questions	OPD, AR	GA	PGY-1,2,3
Facilitate the learning of interns and other health care providers	OPD, AR	GA, PRE, NE	PGY-2,3

IV. Systems Based Practice

Goal

1. Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care. Oncologic evaluation can be very costly to the healthcare system, and we expect the residents to judiciously use these resources.
2. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, OPD, AR	GA,PTR	PGY-1,2,3
Clearly communicate sign out and transfer of care to other providers	DPC, OPD	PRE	PGY-1,2,3
Professionally interact with entire health care team	DPC, OPD, AR	GA, PRE, NE	PGY-1,2,3

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, OPD	GA	PGY-1,2,3

Treat all patients, health care providers & hospital employees with respect and integrity	DPC, OPD, AR	GA, MCX, PRE, NE	PGY-1,2,3
Maintain patient confidentiality at all times	DPC, OPD, AR	GA, PRE	PGY-1,2,3

The residents should

- In nearly all situations, put the needs of their patients ahead of their own and ensure adequate attention to their own needs, particularly those of rest, sleep, and personal relationships, to optimize their readiness to provide the highest quality care for their patients.
- Act as patient advocates.
- Manage work efficiently to allow attendance at educational conferences.
- Acknowledge errors and work to minimize them.
- Act as a role model for medical students.
- Be willing to challenge the accepted plan of care when their professional judgment differs from that of other providers.
- Recognize situations in which junior colleagues would benefit from their assistance.
- Act as a role model for interns and fellow residents.

VI. Interpersonal and Communication Skills

Goal

1. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.
2. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	OPD, AR, MDR	GA, NE	PGY-1,2,3

Demonstrate the ability to work as a member of a larger health care team	OPD, AR, MDR	GA, PRE, NE	PGY-1,2,3
--	--------------	-------------	-----------

Residents will:

1. Develop effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Be effective listeners in medical and professional encounters, including recognizing verbal and non-verbal cues from the people with whom they interact.
3. Write legibly in all situations.
4. Continually communicate to their patients in understandable terms the nature of their care, including diagnoses, the level of certainty regarding those diagnoses, the diagnostic and therapeutic plan, indications for and adverse effects of prescribed medications, and follow-up after hospitalization.
5. Develop skills for dealing with difficult patients and stressful situations.
6. Develop skills for handling situations of unprofessional behavior by other health care professionals.

PGY-2&3 residents will:

1. Model effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Model skills for dealing with difficult patients and stressful situations.
3. Model skills for handling situations of unprofessional behavior by other health care professionals.
4. Be able to direct sensitive or difficult interactions with patients or their representatives, including the delivery of bad news or initiation of end-of-life discussions.

3. Infectious Diseases Elective

General Description

This elective rotation is designed to teach the resident the fundamentals of diagnosis and management of commonly encountered cases in infectious diseases (ID). The major emphasis will be on the management of inpatient commonly encountered infections. ICU related infections, infections in the immunocompromised patients as well as outpatient commonly seen cases will also be covered. While on infectious diseases elective, residents will attend all internal medicine as well as infectious diseases-specific required didactic lectures and conferences.

Structure of the rotation

- The electiver will rotate daily on the floors with the fellows to follow up on old cases and can be assigned new consult(s) (Floor or emergency room).
- The electiver will finalize new cases seen with the attending on call in the afternoon round.
- The electiver will have to attend infectious diseases private clinics twice per week. He/she will see the first patient and finalize with the attending, then will participate in assessing the rest of the cases.
- The electiver should attend the weekly infectious diseases conference, the weekly ID core curriculum as well as the ID journal club every other week.

Goals of the Rotation

- The interns and residents will develop the skills to evaluate, diagnose and manage ID cases, whether inpatients, i.e. under the care of ID or as ID consults
- They will be exposed to outpatient management in clinics
- They will learn to recognize the ID emergencies such as febrile neutropenia, meningitis and necrotizing fasciitis
- They will be exposed to immunosuppressed patients' related infections (for example during the rounds in the bone marrow transplant unit...)

Topics expected to be covered are as follows

Sinusitis/pharyngitis
Pneumonia
Urinary tract infection
Cellulitis/ Erysipelas /Necrotizing fasciitis
Infectious diarrhea
Sexually transmitted diseases
Primary care and infections in the HIV patient
Common parasitic infections
Advice to travelers
Meningitis/encephalitis
Endocarditis

Fever of unknown origin
 Sepsis syndromes
 Septic arthritis/osteomyelitis
 Antibiotic associated colitis
 Toxic shock syndrome
 Tuberculosis
 Infections in the immunocompromised host
 Febrile neutropenia

Legends for learning activities

AR Attending rounds
 CC Core Curriculum
 DPC Direct patient care
 IC ID conference
 JC Journal Club
 WR Ward round
 ICS ID consult
 SC Subspecialty Clinics

Legends for evaluation methods:

GA Global assessment by attending (myevaluation.com)
 ISE In-service examination

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	AR, DPC, IC, WR, ICS, SC, CC	GA	PGY-1
Formulate and carry out effective management plans	AR, DPC, IC, WR, ICS, SC, CC	GA, ISE	PGY-2
Clearly and succinctly document patient management in the medical record	AR, WR, ICS, SC	GA	PGY-1

II. Medical Knowledge**Goal**

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to ID.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to ID	AR, DPC, IC, WR, ICS, SC, CC, JC	GA, ISE	PGY- 2,3
Accurately interpret microbiology related data	AR, DPC, IC, WR, ICS, SC, CC, JC	GA, ISE	PGY-1,2
Learn current ID literature and standard of care guidelines	AR, DPC, IC, WR, ICS, SC, CC, JC	GA, ISE	PGY-2,3

III. Practice- Based Learning and Improvement**Goal**

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency

Identify deficiencies in knowledge base and develop independent reading program to address these gaps	AR, DPC, IC, WR, ICS, SC, CC, JC	GA	PGY 1
Effectively perform a literature search to answer clinical questions	AR, DPC, WR, ICS, SC, CC, JC	GA	PGY-2,3
Facilitate the learning of interns and other health care providers	AR, DPC, WR, ICS, SC	GA	PGY-2,3

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	AR, DPC, WR, ICS, SC	GA	PGY-2,3
Demonstrate the ability to work as a member of a larger health care team	AR, DPC, WR, ICS, SC	GA	PGY-2,3

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	AR, DPC, IC, WR, ICS, SC, CC, JC	GA	PGY-1,2
Treat all patients, health care providers & hospital employees with respect and integrity	AR, DPC, WR, ICS, SC	GA	PGY-1,2
Maintain patient confidentiality at all times	AR, DPC, WR, ICS, SC	GA	PGY-1

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	AR, DPC, WR, ICS, SC	GA	PGY-2
Clearly communicate transfer of care to other providers	AR, DPC, WR, ICS, SC	GA	PGY-1
Professionally interact with entire health care team	AR, DPC, WR, ICS, SC	GA	PGY-1

4. Nephrology Elective

General Description

This elective rotation is designed to teach the resident the fundamentals of diagnosis and management of commonly encountered cases in nephrology. The major emphasis will be on the management of acid base disorders, acute kidney injury and chronic kidney disease/End stage renal disease. Proteinuria, hematuria, primary and secondary hypertension, fluid and electrolyte disturbances, glomerulonephritis and renal replacement therapy will also be covered. While on nephrology elective, residents will attend all internal medicine as well as nephrology-specific required didactic lectures and conferences.

Structure of the rotation

- The resident will rotate daily on the floors with the fellows, to follow up on old cases and will be assigned new consult(s) to see.
- The resident will finalize new consult(s) seen during the afternoon attending round.
- The resident will have to attend nephrology private clinics twice per week. He/she will see the first patient and finalize with the attending, then will participate in assessing the rest of the cases.
- The resident should attend the weekly kidney unit meeting as well as the weekly nephrology conference.
- The resident may attend kidney biopsies if available, or be exposed to the dialysis unit

Goals of the Rotation

- The interns and residents will develop the skills to evaluate, diagnose and manage basic nephrology cases, whether inpatients, i.e. under the care of nephrology or nephrology consults.
- They will be exposed to outpatient management in clinics.
- They will be exposed to renal replacement therapy in the dialysis unit as well as during the kidney unit meeting.

Topics expected to be covered are as follows

1. Acid Base Disturbances
2. Glomerulonephritis
3. Interstitial nephritis
4. Hereditary and congenital renal diseases-systemic diseases
5. Systemic diseases such as diabetes, lupus, and vasculitides and their effect on the kidney
6. Preventive renal dysfunction by optimal treatment of systemic disorders
7. Acute renal failure
8. Chronic renal failure

9. Kidney stones
10. Renal transplantation
11. Electrolyte and body fluid disorders
12. Hypertension and associated renal complications including their prevention
13. Hematuria
14. Proteinuria
15. Nephrotic syndrome

Legends for learning activities

- DPC Direct patient care
- AR Attending rounds
- WR Ward round
- NC Nephrology conference
- DUC Dialysis Unit Conference
- NCS Nephrology consult
- SC Subspecialty clinic

Legends for evaluation methods:

- GA Global assessment by attending on the floors (myevaluation.com)
- ISE In-service examination

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, AR, WR, NCS, SC	GA	PGY-1
Formulate and carry out effective management plans	DPC, AR, WR, NCS, NC, DUC, SC	GA	PGY-2
Clearly and succinctly document patient management in the medical record	NCS, WR, SC	GA	PGY-1

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to nephrology.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to nephrology	DPC, AR,WR, NCS, NC, DUC, SC	GA, ISE	PGY- 2,3
Accurately interpret laboratory including acid base disorders, serum and urine electrolytes, urine microscopy.	DPC, AR,WR, NCS, NC, SC	GA, ISE	PGY-1,2
Learn current nephrology literature and standard of care guidelines	DPC, AR,WR, NCS, NC, DUC, SC	GA, ISE	PGY-2,3

III. Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, AR,WR, NCS, NC, DUC, SC	GA	PGY 1
Effectively perform a literature search to answer clinical questions	DPC, AR,WR, NCS, NC, DUC, SC	GA	PGY-2,3

Facilitate the learning of interns and other health care providers	DPC, AR,WR, NCS, NC, DUC	GA	PGY-2,3
--	--------------------------	----	---------

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	DPC, AR,WR, NCS, NC, DUC, SC	GA	PGY-2,3
Demonstrate the ability to work as a member of a larger health care team	DPC, AR,WR, NCS, NC, SC	GA	PGY-2,3

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, AR,WR, NCS, SC	GA	PGY-1,2
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, AR,WR, NCS, NC, DUC, SC	GA	PGY-1,2

Maintain patient confidentiality at all times	DPC, AR,WR, NCS, DUC, SC	GA	PGY-1
---	--------------------------	----	-------

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, AR,WR, NCS, SC	GA	PGY-2
Clearly communicate transfer of care to other providers	DPC, AR,WR, NCS, SC	GA	PGY-1
Professionally interact with entire health care team	DPC, AR,WR, NCS, SC	GA	PGY-1

5. Pulmonary Elective

General Description

This elective rotation is designed to teach the resident the fundamentals of diagnosis and management of commonly encountered cases in pulmonary medicine. The major emphasis will be on the management of pneumonia, asthma and COPD. Pleural effusions, lung cancer and ICU care will also be covered. While on pulmonary elective, residents will attend all internal medicine as well as pulmonary-specific required didactic lectures and conferences.

Structure of the rotation

- During his elective rotation, the resident rounds daily on the floors with the fellow or the attending, to follow up on old cases and can be assigned new consult(s) (Floor or Emergency room).
- The resident will have to attend pulmonary private clinics twice per week
- When in clinic, he/she will see the first patient and finalize with the attending, then will participate in assessing the rest of the cases.
- The resident should attend the weekly pulmonary conference.
- The resident may perform or assist in thoracentesis and central line placement

Goals of the Rotation

- Identify key principles in evaluating complaints related to pulmonary medicine
- Enhance physical examination skills in patients with pulmonary diseases
- Expand differential diagnosis skills in the pulmonary patient
- Learn and practice common bedside procedures necessary in patients with pulmonary diseases
- Improve interpretation skills in common laboratory and radiographic procedures as they apply to patients with pulmonary diseases
- Expand medical knowledge in pulmonary medicine

Topics expected to be covered are as follows

- Asthma
- Pneumonia
- Chronic Obstructive Pulmonary Disease
- Interstitial Lung Diseases
- Bronchiectasis
- Disorders of the Pleura
- Deep Venous Thrombosis and Pulmonary Thromboembolism

- Environmental Lung Disease
- Hypersensitivity Pneumonitis
- Sleep Apnea
- Interpretation of Pulmonary Function Tests
- Interpretation of a chest x-ray and chest CT scans

Legends for learning activities

AR Attending rounds
 DPC Direct patient care
 DSP Directly supervised procedures
 PC Pulmonary conference
 WR Ward round
 SC Subspecialty Clinic

Legends for evaluation methods:

GA Global assessment by attending on the floors (myevaluation.com)
 ISE In-service examination
 PL Procedure Log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, AR,WR, SC	GA	PGY-1
Formulate and carry out effective management plans	DPC, AR,WR, SC, PC	GA	PGY-2
Clearly and succinctly document patient management in the medical record	DPC, AR,WR, SC	GA	PGY-1
Competently perform invasive procedures	DSP, SC, WR, AR, DPC	PL, GA	PGY-3

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to pulmonary

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to pulmonary	DPC, AR,WR, SC, PC	GA, ISE	PGY- 2
Accurately interpret laboratory including pleural studies and pulmonary function tests as well as chest imaging	DPC, AR,WR, SC, PC	GA, ISE	PGY-2
Learn current pulmonary literature and standard of care guidelines	DPC, AR,WR, SC, PC	GA, ISE	PGY-2

III. Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency

Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, AR,WR, SC, PC	GA, ISE	PGY 1
Effectively perform a literature search to answer clinical questions	DPC, AR,WR, SC, PC	GA	PGY-2
Facilitate the learning of interns and other health care providers	DPC, AR,WR, SC, PC	GA	PGY-2

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	DPC, AR,WR, SC, PC	GA	PGY-2
Demonstrate the ability to work as a member of a larger health care team	DPC, AR,WR, SC, PC	GA	PGY-2

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, AR,WR, SC,	GA	PGY-1
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, AR,WR, SC	GA	PGY-1
Maintain patient confidentiality at all times	DPC, AR,WR, SC	GA	PGY-1

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, AR,WR, SC	GA	PGY-2
Clearly communicate transfer of care to other providers	DPC, AR,WR, SC	GA	PGY-1
Professionally interact with entire health care team	DPC, AR,WR, SC	GA	PGY-1

6. Rheumatology Elective

General Description

This elective rotation is designed to teach the resident the fundamentals of diagnosis and management of commonly encountered cases in rheumatology. It mainly consists of ambulatory outpatient exposure as well as inpatient consultations. The major emphasis will be on the management of osteoarthritis, rheumatoid arthritis and SLE. Gout, regional pain syndromes, vasculitis and fibromyalgia will also be covered. While on rheumatology elective, residents will attend all internal medicine as well as rheumatology-specific required didactic lectures and conferences.

Structure of the rotation

- The resident will have to attend rheumatology private clinics twice per week. He/she will see the first patient and finalize with the attending, then will participate in assessing the rest of the cases.
- The resident will attend OPD on Mondays, Wednesdays, and Fridays and see cases unassisted first, then finalize with the fellow or attending physician
- On Tuesdays afternoon, the resident attends the OPD round with med III students where they present and finalize cases with the attending in charge.
- The resident should attend the weekly rheumatology conference.
- The resident should present one rheumatology conference per month.
- The resident may perform synovial fluid aspiration and intra-articular steroid injections

Goals of the Rotation

- The interns and residents will develop the skills to evaluate, diagnose and manage basic rheumatology outpatient cases.
- They will be exposed or may perform procedures such as synovial fluid aspiration and intra-articular steroids injection.

Topics expected to be covered are as follows

Regional pain syndromes

Bursitis: Hip, shoulder, knee

Tendinitis: shoulder, elbow, wrist

Back pain

Neck pain

Rheumatoid arthritis

Scleroderma

Septic arthritis

Seronegative spondyloarthropathies

SLE

Vasculitis

Giant cell arteritis

Polyarteritis and hypersensitivity

Crystal-induced synovitis

Degenerative joint disease

Fibromyalgia

Myositis

Occupational and overuse syndromes

Achilles tendonitis

Iliotibial band

Epicondylitis

Plantar fasciitis

Rotator cuff tendonitis

Trochanteric bursitis

Osteoarthritis

Crystal related arthritis

Legends for learning activities

DSP Directly supervised procedures

OPD Outpatient Department

RC Rheumatology conference

SC Subspecialty Clinic

Legends for evaluation methods:

GA Global assessment by attending (myevaluation.com)

ISE In-service examination

PL Procedure Log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	OPD, SC	GA	PGY-1

Formulate and carry out effective management plans	OPD, RCS, SC	GA	PGY-2
Clearly and succinctly document patient management in the medical record	OPD, RCS, SC	GA	PGY-1
Competently perform invasive procedures	DSP, OPD, SC	PL	Not applicable (Optional Procedures)

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental disorders related to rheumatology.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with disorders related to rheumatology Assess disability and functional status in patients with rheumatological diseases	OPD, RC, SC	GA, ISE	PGY- 2,3
Accurately interpret laboratory including inflammatory markers and serology as well as basic joint x-rays	OPD, RC, SC	GA, ISE	PGY-1,2
Learn current rheumatology literature and standard of care guidelines	OPD, RC, SC	GA, ISE	PGY-2,3

III. Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	OPD, RC, SC	GA	PGY 1
Effectively perform a literature search to answer clinical questions	OPD, RC, SC	GA	PGY-2,3
Facilitate the learning of interns and other health care providers	OPD, SC	GA	PGY-2,3

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	SC, OPD	GA	PGY-2,3

Demonstrate the ability to work as a member of a larger health care team	OPD, SC	GA	PGY-2,3
--	---------	----	---------

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	OPD, SC	GA	PGY-1,2
Treat all patients, health care providers & hospital employees with respect and integrity	OPD, SC	GA	PGY-1,2
Maintain patient confidentiality at all times	OPD, SC	GA	PGY-1

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	OPD, SC	GA	PGY-2

Internal Medicine Residency Training Program Curriculum

Clearly communicate transfer of care to other providers	OPD, SC	GA	PGY-1
Professionally interact with entire health care team	OPD, SC	GA	PGY-1

G. Cardiology Elective

The cardiology elective rotation provides a training opportunity for the resident to acquire experience in the diagnosis and management of patients with cardiovascular diseases. Residents are exposed to a broad range of medical problems including acute coronary syndromes, congestive heart failure, arrhythmias, valvular heart disease, endocarditis, hypertensive crisis, cardiomyopathy, pericarditis, cor pulmonale, aortic dissection, aortic aneurysm and cardiac tamponade. The resident will also be exposed to a variety of invasive and noninvasive cardiac testing.

Description of Rotation

- The resident rounds daily in the morning with the CCU team that consists of one attending physician, one cardiology fellow and 5-7 housestaff, two second-year residents (PGY2) and 3-5 first-year residents (PGY1).
- The resident attends the attending physician rounds on a daily basis with the CCU medical team.
- The resident may attend the routinely scheduled ECG sessions and Cardiology conferences once per week.
- The resident can observe the procedures in the Cath Lab (Coronorography, Angioplasty, EP study etc...)
- The resident has the opportunity in this elective rotation to attend the procedures in the Electro-Physiology Lab where they get the chance to learn more about arrhythmias and their pathophysiology, and are exposed to electrophysiological procedures.
- The resident is exposed to Echocardiography techniques in the Echo Lab by shadowing the cardio fellow and attending physician.
- In CCU, the electiver has the chance to attend and sometimes assists in bedside procedures like pericardiocentesis and Trans-Esophageal Echocardiography.
- The resident can shadow an attending during his clinics, and is expected to attend two clinics per week.
- Finally the residents can see and examine patients as a part of the consultation team, supervised by the fellow and attending physician.

Goals of the Rotation

- To deliver compassionate and evidence-based care for common cardiovascular conditions, including acute coronary syndromes, heart failure, hypertensive

emergencies, congenital heart disease, valvular heart disease , aortic dissection, atrial and ventricular arrhythmias, and other severe cardiovascular disorders.

- To use noninvasive and invasive cardiovascular testing appropriately, demonstrating understanding of the risks and costs of different testing strategies.
- To understand Physiology of Arrhythmias and learn more about EP therapies
- To become more experienced in reading ECGs demonstrating Ischemic heart disease, hypertrophic cardiomyopathies, A-V conduction abnormalities, Arrhythmias, pericarditis...
- To be more experienced in describing echocardiography findings and interpret them.
- To identify cardiac emergencies and become more comfortable in treating them.

Legends for learning activities:

DPC Direct patient care
 RWR Resident work rounds
 AR Attending rounds/didactics
 CC Cardiology conference
 DSP Directly supervised procedures
 ECG ElectroCardioGram sessions

Evaluation Methods:

GA: Global assessment by attending (myevaluation.com)
 PTR: Patient-to-Resident Evaluation
 PRE: Peer evaluation (360° evaluation)
 NE: Nursing evaluation (360° evaluation)
 ISE: In-service examination
 PL: Procedure log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
-----------	-----------------------	--------------------	------------------------------

Perform a comprehensive history and physical examination	DPC, WR, AR	GA, PRE,PTR	PGY-1
Formulate and carry out effective management plans	DPC, RWR, AR, ECG, CC	GA, PRE	PGY-2,3
Clearly and succinctly document patient management in the medical record	RWR, AR	GA, PRE	PGY-1
Competently perform invasive procedures (A-lines, central lines, nasogastric and feeding tubes*)	DSP, CC	GA, PRE, PL	PGY-2,3 *PGY-1

Rotation Specific Objectives and goals:

1. ST-segment Elevation Myocardial Infarction: residents will be able to identify STEMI immediately and with the fellow, appropriately activate the cardiac catheterization laboratory for primary PCI. Evidence-based medical therapies, including aspirin, clopidogrel, anticoagulants, beta blockers, statins, ACE inhibitors will be administered according to ACC/AHA guidelines. Mechanical and electrical complications will be identified and appropriately managed. They should recognize major risk factors for cardiovascular disease and display knowledge of standard preventative cardiovascular care.
2. Non-ST-segment Elevation Myocardial Infarction and Unstable Angina: residents will use resources appropriately in the evaluation of patients with suspected ACS, including serial biomarker and ECG testing and noninvasive evaluation for ischemia. They will recognize high risk features and appropriately apply more intensive therapies to higher risk subjects, including invasive therapy and GP IIb/IIIa inhibitors. They will administer evidence based medical therapies according to the ACC/AHA guidelines.
3. Cardiogenic shock: PGY2 residents will recognize and manage patients with cardiogenic shock with the fellow and attending, including placement and monitoring of PA catheters, and use of inotropic agents.
4. Congestive Heart Failure. PGY1 residents will appropriately diagnose heart failure, demonstrating expertise with physical examination skills, and appropriately categorize to initiate therapy on the basis of their findings. They

will understand the role of noninvasive imaging and cardiac biomarkers in the management of heart failure. PGY2 residents will use and understand nuances of evidence based therapies, including beta blockers, ACE inhibitors, aldosterone antagonists, and nitrates/hydralazine. They will refer appropriate patients for ICDs and cardiac resynchronization therapy.

5. Cardiac Arrhythmias:

- Atrial arrhythmias. residents will review ECGs to appropriately diagnose atrial tachyarrhythmias and distinguish them from ventricular arrhythmias. They will perform cardioversion when indicated and will administer rate controlling agents vs anti-arrhythmic drugs as appropriate. They will refer appropriate patients with SVT, atrial flutter, or atrial fibrillation to the EP service for ablation and will risk stratify patients for stroke risk in atrial fibrillation and start warfarin as dictated by the risk/benefit ratio.
- Ventricular arrhythmias. residents will recognize malignant ventricular arrhythmias and perform emergent interventions including cardioversion and drug therapy
- Residents will recognize heart block and identify when temporary and permanent cardiac pacing is indicated, contacting appropriate fellows and faculty.

6. Valvular Heart Disease: residents will recognize valvular heart disease on physical examination and appropriately apply echo and invasive testing to arrive at a diagnostic and treatment plan. They will understand the natural history of valvular disease with and without surgery, and know the indications for surgical therapy.

7. Residents will appropriately suspect pericardial tamponade and contact the fellow and faculty for diagnosis and performance of pericardiocentesis when indicated.

8. Residents will use appropriate diagnostic tools and guideline-based treatment strategies for other important cardiovascular conditions, including pericardial constriction, aortic dissection, pericardial disease, congenital heart disease, endocarditis, and pulmonary embolism.

9. To be more experienced in describing echocardiography findings and interpret them.

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental cardiac disorders including ischemic heart disease, congestive heart failure, hypertensive heart disease, valvular heart disease, cardiac arrhythmias. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage critically ill cardiac patients	DPC, RWR, AR, CC	GA, PRE	PGY-2
Accurately interpret laboratory, ECG, chest X-ray, *swan ganz data	DPC, RWR, AR, CC, ECG	GA, PRE, ISE	PGY-1 *PGY 2
Learn current cardiology literature and standard of care guidelines	RWR, AR, CC	GA, PRE, ISE	PGY-2

Rotation Specific Objectives and goals

○ PGY1:

- Develop a working knowledge of common cardiovascular disorders (as above) through diagnosis and management of these conditions, clinically-oriented teaching rounds, and faculty-led didactic sessions.
- Learn concepts of normal cardiovascular physiology and pathophysiology
- Understand basic principles of ECG interpretation to recognize acute coronary syndromes and arrhythmias.
- Understand performance characteristics of cardiovascular biomarkers.
- Understand the basis for common radiology and functional studies, including stress tests and echocardiograms, and be able to request appropriate testing for common cardiovascular conditions.

- Become familiar with the indications and use of inotropic and vasoactive agents
- Understand basic principles of invasive hemodynamic monitoring
- Understand the principles behind and develop proficiency in performing common non-surgical procedures
 - PGY2,3 (in addition to the above):
- Expand on current understanding and management of common cardiovascular disorders through direct patient care, clinically oriented teaching rounds and didactic sessions.
- Understand specific treatment strategies for particular disease states, with a focus on pathophysiologic mechanisms and evidence-based practice based on current guidelines
- Develop skills in ECG interpretation and understand principles of testing modalities used in cardiovascular diagnosis.
- Understand reasons for ordering specific cardiovascular tests (exercise vs. chemical, nuclear vs. echocardiography, noninvasive vs. invasive) to be able to select appropriate testing for a given patient.
- Determine pre-test probability for cardiac disease, and statistical predictive value of different testing modalities.
- Interpret results of invasive hemodynamic monitoring
- Become proficient with the indications for and use of inotropic and vasoactive agents
- Understand indications of echocardiography and be able to interpret the results
- Understand the indications and complications of coronary angiography and angioplasty
- Understand the indications and complications of invasive EP studies
- Become familiar with the cardiac procedures such as pericardiocentesis and TEE
- Direct and coordinate ACLS protocols when required
- Supervise and teach PGY1 resident in all aspects of care of the critically ill patient.

III. Practice- Based Learning and Improvement

Goal

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, RWR, AR, CC, ECG	GA, PRE, ISE	PGY-2
Effectively perform a literature search to answer clinical questions	RWR, AR	AR	PGY-1
Facilitate the learning of interns and other health care providers	RWR, AR, CC, ECG	GA, PRE	PGY-2

IV. Systems Based Practice

Goal

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care. Cardiovascular testing can be very costly to the healthcare system, and we expect the residents to judiciously use these resources.

They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, RWR, AR	GA, PTR	PGY-2

Clearly communicate sign out and transfer of care to other providers	DPC, RWR	PRE	PGY-1
Professionally interact with entire health care team	DPC, RWR, AR	GA, PRE, NE	PGY-1

V. Professionalism

Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, RWR		PGY-1
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, RWR, AR	GA, PRE, NE	PGY-1
Maintain patient confidentiality at all times	DPC, RWR, AR	GA	PGY-1

- The residents should in nearly all situations, put the needs of their patients ahead of their own and ensure adequate attention to their own needs, particularly those of rest, sleep, and personal relationships, to optimize their readiness to provide the highest quality care for their patients.
- Act as patient advocates.
- Manage work efficiently to allow attendance at educational conferences.
- Acknowledge errors and work to minimize them.
- Act as a role model for medical students.
- Be willing to challenge the accepted plan of care when their professional judgment differs from that of other providers.
- Recognize situations in which junior colleagues would benefit from their assistance.
- Act as a role model for interns and fellow residents.

VI. Interpersonal and Communication Skills

Goal

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.

Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	RWR, AR	GA	PGY-2
Demonstrate the ability to work as a member of a larger health care team	RWR, AR	GA, PRE	PGY-2

Residents/Interns will:

1. Develop effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Be effective listeners in medical and professional encounters, including recognizing verbal and non-verbal cues from the people with whom they interact.
3. Write legibly in all situations.
5. Remain quickly, reliably, and easily accessible by beeper when on duty.
6. Provide effective and detailed sign-out to allow covering physicians to continue taking care of the patient.
7. Continually communicate to their patients in understandable terms the nature of their care, including diagnoses, the level of certainty regarding those diagnoses, the diagnostic and therapeutic plan, indications for and adverse effects of prescribed medications, and follow-up after hospitalization.

8. Develop skills for dealing with difficult patients and stressful situations.
9. Develop skills for handling situations of unprofessional behavior by other health care professionals.

PGY-2&3 residents will:

1. Model effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Model skills for dealing with difficult patients and stressful situations.
3. Model skills for handling situations of unprofessional behavior by other health care professionals.
4. Be able to direct sensitive or difficult interactions with patients or their representatives, including the delivery of bad news or initiation of end-of-life discussions.

7. Endocrinology Elective

Rotation Specific Objectives and goals

This elective rotation is designed to teach the resident the fundamentals of diagnosis and management of commonly encountered endocrine disorders. The major emphasis will be on the management of diabetes mellitus and thyroid disorders. Pituitary disorders, hirsutism, adrenal disorders, disorders of calcium homeostasis, as well as disorders growth and development will also be covered. With the advent of computerized tomography and magnetic resonance imaging, the evaluation of the patient with the thyroid nodule and the adrenal nodule has assumed an important role in medicine and as such will be reviewed. Endocrine emergencies will be covered in didactic lectures and on the ICU/CCU wards during rounds. While on Endocrinology elective residents will attend all required didactic lectures and conferences.

Description of Rotation

- The resident will rotate by reporting daily in the morning to the Endocrine Outpatient Department where he/she will be seeing patients with endocrine disorders and finalizing the cases with Endocrine fellows and attending physicians
- After the OPD, the elective rotating residents and the fellows round on new patients/Consultations on the floor and will also check on previously seen patients as a follow up
- The resident should attend the endocrine private clinics twice per week where he can elect to primary assess patients and discuss the case with the attending physician.
- The resident should attend the routinely scheduled endocrine conference once per week.
- The resident may attend the procedures in the endocrine Lab (Thyroid ultrasound + FNA of thyroid nodules, RAI uptake, DEXA Scan...etc)
- The resident has the opportunity in this elective rotation to see consultations in Emergency Department and Inpatient Floors, supervised by the fellow and attending physician.
- Each internal medicine resident is expected to complete at least 4 weeks of Endocrinology elective during his 3 years of training.

Goals of the Rotation

- Upon completion of the rotation the resident will understand the complexities of Endocrine diagnoses and testing. The resident will understand that interpretation of Endocrine testing depends on the circumstances under which the testing was performed, the limits of radioimmunoassays, that abnormal assays may be associated with primary or secondary organ dysfunction, abnormal hormones, abnormal receptors, or underlying medical conditions, or medications given.
- To interview and examine patients with common endocrine and metabolic disorders.

- To recognize the symptoms and signs of common endocrine and metabolic disorders.
- To describe the pathophysiology of common endocrine and metabolic disorders.
- To understand the indications and limitations of commonly ordered endocrine tests (biological assays, immunoassays, circadian rhythm, hormone resistance, etc.).
- To understand the indications for and limitations of therapy for endocrine diseases.

Legends for learning activities:

OPD Outpatient Clinics
 DPC Direct patient care
 AR Attending rounds/didactics
 EC Endocrinology conference
 DSP Directly supervised procedures
 DPC – Direct Patient Contact
 CS – Endocrine Consultation

Evaluation Methods:

GA Global assessment by attending (myevaluation.com)
 PRE Peer evaluation (360° evaluation)
 NE Nursing evaluation (360° evaluation)
 ISE In-service examination
 PL Procedure log

I. Patient Care

Goal

Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents are expected to learn the following:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Perform a comprehensive history and physical examination	DPC, OPD, AR,CS	GA, PRE	PGY-1,2,3
Formulate and carry out effective management plans	DPC, OPD, AR, EC,CS	GA, PRE	PGY-1,2,3

Clearly and succinctly document patient management in the medical record	OPD, AR, CS	GA, PRE	PGY-1,2,3
Competently perform invasive procedures (Thyroid nodule U/S and FNA)	DSP, CS	GA, PRE, PL	PGY-1,2,3

Rotation Specific Objectives and goals:

The resident should be able to:

- a. Learn the genetics and pathophysiology of type 1 and type 2 diabetes mellitus. The resident learns the definitions of diabetes mellitus, gestational diabetes mellitus, impaired glucose tolerance, and impaired fasting glucose.
- b. Understand the American Diabetes Association's (ADA's) guidelines for evaluation of a new patient with diabetes mellitus as well as the ADA's recommendations for follow-up and identification of end organ damage.
- c. Understand the principles and complications of insulin therapy (two injections per day, three injections per day, multiple insulin injections, and continuous subcutaneous insulin infusion).
- d. Learn the indications, contraindications, and complications of sulfonylureas, biguanides (metformin), thiazolidinediones (rosiglitazone, pioglitazone), alpha-glucosidase inhibitors, SGLT 2 inhibitors, GLP 1 agonist, and DDP 4 inhibitors.
- e. By completion of the rotation the resident should be able to estimate caloric requirements for growth, weight gain, weight maintenance, and weight loss.
- f. Learn the causes of hypo- and hyperthyroidism and differentiate one from another.
- g. Learn the signs and symptoms of hypo- and hyperthyroidism.
- h. Learn the principles of thyroid hormone replacement including dosage calculation (1.8 mcg/kg), appropriate test(s) for monitoring, as well as frequency of testing. The resident will learn the management hyperthyroidism including indications for surgery, thyroid blocking drugs, and I131
- i. Learn the differential diagnosis of a thyroid nodule, appropriate diagnostic testing (fine needle aspiration), and management of thyroid carcinoma (papillary and follicular). The resident will understand the principles of managing thyroid disease during pregnancy.
- j. Learn the function of each hypothalamic and pituitary hormone.

- k. Learn the pathophysiology of disorders of the anterior and posterior pituitary. The resident will learn the signs and symptoms of "functioning" (Cushing's disease, Acromegaly, TSH producing adenoma, prolactinoma) and "nonfunctioning" pituitary tumors. In addition, he/ she will learn the proper diagnostic tests used to evaluate pituitary function.
- l. Learn the pathophysiology and treatment of the primary disorders of adrenal hypo- and hyperfunction including adrenal insufficiency, Cushing's syndrome, primary aldosteronism, glucocorticoid hypertension, pheochromocytoma, and the various forms of congenital adrenal hyperplasia. The resident will learn the appropriate evaluation of the patient with an "incidental" adrenal tumor. The resident will learn to differentiate a benign from a malignant adrenal tumor. The resident will learn to manage adrenal hormone replacement therapy.
- m. Learn the pathophysiology of hypo- and hypercalcemia including abnormalities of the calcium sensing receptor and g-proteins. The resident will learn the indications for parathyroidectomy for primary hyperparathyroidism.
- n. The resident will learn the definition of osteoporosis as defined by the World Health Organization (WHO), the differential diagnosis of a low bone mineral density, and the therapeutic options for the treatment of osteoporosis including the role of calcium and vitamin D, the use of estrogens, and the use the bisphosphonates. The resident will understand the use of the FRAX risk prediction calculator: <http://www.shef.ac.uk/FRAX/>. Finally the resident will become familiar with the pathophysiology and treatment options for Paget's disease of the bone.

Since Endocrinology is a four week elective, the educational goals are the same for residents at each level of training.

II. Medical Knowledge

Goal

By the end of this rotation residents should be able to demonstrate knowledge of established and evolving fundamental endocrine disorders including Diabetes Mellitus type 1 & 2, Thyroid disorders, Adrenal insufficiency or dysfunction, Adrenal Tumors includig incidentaloma, Pituitry disorders... They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Competently manage patients with endocrine disorders	DPC, OPD, AR, EC, CS	GA, PRE	PGY-1,2,3

Accurately interpret laboratory, Thyroid ultrasound, adrenal Scan(adrenal protocol), Brain MRI for Pituitary tumors, Bone densitometry	DPC, CS, OPD, AR, EC	GA, PRE, ISE	PGY-1,2,3
Learn current endocrine literature and standard of care guidelines	OPD,CS, AR, EC	GA, PRE, ISE	PGY-1,2,3

III. Practice- Based Learning and Improvement

Goal

1. Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.
2. Residents are expected to develop skills and habits to be able to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Identify deficiencies in knowledge base and develop independent reading program to address these gaps	DPC, OPD, AR, EC, CS	GA, PRE, ISE	PGY 1,2,3
Effectively perform a literature search to answer clinical questions	OPD, AR, EC	ARD	PGY-1,2,3
Facilitate the learning of interns and other health care providers	OPD, AR, EC, CS	GA, PRE	PGY-1,2,3

IV. Systems Based Practice

Goal

1. Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents should incorporate considerations of cost awareness and risk-benefit analysis in patient care.
2. They are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Communicate accurately and compassionately with patients and their families	DPC, OPD, AR	GA, MCX	PGY-1
Clearly communicate transfer of care to other providers	DPC, OPD, CS	PRE	PGY-1
Professionally interact with entire health care team	DPC, OPD, AR, CS	GA, PRE, NE	PGY-1

V. Professionalism
Goal

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents are expected to demonstrate:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Residents will be expected to provide accurate, complete and timely documentation	DPC, OPD, CS		PGY-1,2,3
Treat all patients, health care providers & hospital employees with respect and integrity	DPC, OPD, AR, CS	GA, MCX, PRE, NE	PGY-1,2,3
Maintain patient confidentiality at all times	DPC, OPD, AR, CS	GA	PGY-1,2,3

The residents should

- In nearly all situations, put the needs of their patients ahead of their own and ensure adequate attention to their own needs, particularly those of rest, sleep, and personal relationships, to optimize their readiness to provide the highest quality care for their patients.
- Act as patient advocates.
- Manage work efficiently to allow attendance at educational conferences.
- Acknowledge errors and work to minimize them.

- Act as a role model for medical students.
- Be willing to challenge the accepted plan of care when their professional judgment differs from that of other providers.
- Recognize situations in which junior colleagues would benefit from their assistance.
- Act as a role model for interns and fellow residents.

VI. Interpersonal and Communication Skills

Goal

1. Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, their families, and professional associates.
2. Residents are expected to:

Objective	Learning Environments	Evaluation Methods	Expected Year of Proficiency
Demonstrate the ability to mobilize resources (nutritionists, consultants, etc) to optimize health delivery	OPD, AR, CS	GA	PGY-1,2,3
Demonstrate the ability to work as a member of a larger health care team	OPD, AR, CS	GA, PRE	PGY-1,2,3

Residents will:

1. Develop effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Be effective listeners in medical and professional encounters, including recognizing verbal and non-verbal cues from the people with whom they interact.
3. Write legibly in all situations.
5. Remain quickly, reliably, and easily accessible by beeper when on duty.
6. Provide effective and detailed sign-out to allow covering physicians to continue patient care.
7. Continually communicate to their patients in understandable terms the nature of their care, including diagnoses, the level of certainty regarding those diagnoses, the diagnostic and therapeutic plan, indications for and adverse effects of prescribed medications, and follow-up after hospitalization.

8. Develop skills for dealing with difficult patients and stressful situations.
9. Develop skills for handling situations of unprofessional behavior by other health care professionals.

PGY-2 residents will:

1. Model effective and respectful relationships with patients, students, peers, supervisors, and other medical and administrative workers.
2. Model skills for dealing with difficult patients and stressful situations.
3. Model skills for handling situations of unprofessional behavior by other health care professionals.
4. Be able to direct sensitive or difficult interactions with patients or their representatives, including the delivery of bad news or initiation of end-of-life discussions.

Authors:

Pierre BouKhalil, MD (Program Director)

Nisrine Ghazal, MD (Medical Chief Resident)

Marie-Noel Rahhal, MD (Medical Chief Resident)

Revision History:

Year	Chief Residents	Program Director
2015	Romy Kallas Yasmin Abi Aad	Pierre BouKhalil
2016	Hassan Chami Nathalie Ziade	Pierre BouKhalil
2017	Renee Horanieh Roni Aoun	Pierre BouKhalil
2018	Firas Kreidieh Vanessa Akiki	Pierre BouKhalil
2019	Ahmad Berjawi Jad Mhanna Sarah Abi Doumeth	Pierre BouKhalil