Inova Fairfax Medical Campus
Internal Medicine Residency Program
Inpatient Ward Rotation
Competency Based Curriculum, Goals and Objectives

I. Educational Purpose and Goals

a. This rotation allows residents to refine history taking, physical examination skills, differential diagnosis, and treatment strategies. Residents will learn to become competent in diagnostic testing and management of common and complex acute medical problems, using evidence based practice. Residents will also get exposure to uncommon medical conditions and will interact with subspecialty consultants as part of ongoing care of their patients. Residents will learn how to prioritize management of chronic problems in hospitalized patients. Residents will become comfortable with managing transitions of care, both within the hospital and also out of the hospital. Residents will learn to initiate discharge care plans based on patients' medical problems, social situation, and economic status and collaborate with other members of the health care team.

II. Principal Teaching Methods

a. Supervised direct patient care: Resident teams will participate in daily bedside combined teaching and management rounds with their teams. Teams will consist of one senior resident, one to two interns, one to two acting interns, and up to three third year medical students. Rounds will be led by an attending faculty, who will be responsible for both didactic teaching and clinical care of patients. Morning rounds will last two to three hours daily. Residents will assume primary care for the management and coordination of care for their patients, including performance of any necessary procedures under direct supervision of their attending faculty, all of who are board certified Internal Medicine and/or subspecialty certified physicians. Residents are expected to be first point of contact for all matters related to patient care and should be placing all orders on their patients unless there are specialty specific needs (ex. Chemotherapy, Dialysis orders).

b. Didactics and small group sessions: Residents are expected to attend all noon conference didactic sessions unless there is an intervening emergency in patient care. Noon conferences included but are not limited to the following sessions: Journal club, Resident Report/Evidence Based Practice Case presentation, Internal Medicine Grand Rounds, Educational Grand Rounds, attending lecture series, Residents as teachers/Faculty Development sessions, Medicine-Pathology-Radiology conference, Morbidity and Mortality Conference, Cost-conscious curriculum, rapid response curriculum and administrative morning reports.

- **i. Resident Report**: Supervised by the chief medical resident. Clinical cases are presented by residents. Program director, attending faculty and subspecialists are in attendance. Cases are presented as unknown and focus is on clinical reasoning and creation of differential diagnosis. Residents are

expected to utilize evidence-based literature as appropriate in preparation for their case presentaitons.

ii. **Journal Club:** Supervised by the chief medical resident with assistance from core faculty, program director, EBM champions from dept. of medicine. Article is chosen based on a clinical question from their ward experience at IFH, and then article is reviewed using the McMaster criteria. Occurs once a month. Staff epidemiologist as well as reference librarian are also present.

iii. **Simulation Modules:** Small group or individualized simulation modules will be set up for all residents monthly throughout the year.

iv. **Medicine-Pathology-Radiology conference –** Occurs once a month. Presented by the chief resident with program director, associate program director and teaching faculty in attendance. One representative physician from pathology and radiology are present. Pertinent subspecialists as related to the case are invited and participate in the discussion. A case from the medicine teaching service is reviewed, followed by pertinent radiology and microscopic pathology. Subspecialists assist with questions related to specialty specific management.

v. **Internal Medicine Grand Rounds:** Hospital-wide lecture on an internal medicine topic, usually describing new therapies or paradigms, given by local or national experts. Once a week.

vi. **Educational Grand Rounds:** Hospital-wide lecture given once a month on topics applicable to all residents across all residency programs and all teaching faculty. Attendance is required of both faculty and residents. Examples include fatigue/sleep deprivation, effective teaching, cultural competence, and documentation.

vii. **Internal Medicine Noon Conference Lecture Series:** Given by internists and subspecialists. Interactive case based lectures on core topics in medicine. Includes an emergency lecture series, topics in palliative care, and a monthly ethics conference.

viii. **Patient Safety (Morbidity and Mortality) Conference:** Occurs on a monthly basis, presented by the chief resident. Program director, associate program director, hospitalists, critical care faculty and subspecialists are present. A case which presents opportunities for practice based learning is reviewed. Residents and teaching faculty interact to determine what the salient learning points would be for similar cases in the future. Pathology and autopsy information is reviewed when possible. Representatives from other departments such as pathology, surgery, radiology are also in attendance when applicable to the case.

ix. **Didactic/Teaching attending rounds:** Done daily by the designated teaching faculty for the team. Will be in addition to patient management rounds and may include bedside teaching, lectures, or detailed discussions about specific patients on the service. Teaching attendings and teams may also utilize this time perform mini-CEX, multidisciplinary rounds, perform discharge appointments, give feedback, and review documentation and residents' teaching abilities.

x. **High-Value Care/Cost-Conscious Curriculum:** Occurs once to twice per year and is moderated by MSL vice chair for business activities. May be

attended by program director and physician advisor for case management. every other month, moderated by chief resident, program director and physician advisor for case management. Applicable charges, finances related to active cases are discussed and utility of diagnostic testing and cost of care are reviewed.

xi. **Rapid response curriculum:** Run by chief resident in the simulation lab one to twice per month. Covers management of unstable rhythms, hypotension, and adult code scenarios. In first half of year, will also have didactic sessions run by RRT resident who will discuss management of cases from their rotation.

xii. **Administrative morning report/Monthly Meeting:**

1. **Administrative morning report:** Run by chief resident. Occurs monthly. Residents review duty hours, patient care pitfalls or system problems encountered during patient care, and transitions of care. Focus is on finding solution, self-reflection, and quality improvement ideas and is non-punitive in nature. Forum is open only to residents, however, suggestions and ideas from the session are discussed with the program director and academic committee by chief residents.
2. **Monthly Meeting**: Run by program director, associate program directors and program academic coordinator. This meeting will have a formal agenda and will be time for program, department and system updates as well as opportunity to discuss open issues from administrative report.

c. Self-Study: Residents are expected to perform directed reading based on their patient's problems and disease states**.** Access to articles and electronic resources will be made available to residents from any computer with an internet access, both inside and outside the hospital.

III. Educational Content

a. Disease mix: Patients with a wide variety of medical illnesses will be seen by residents on the internal medicine service.

b. Patient characteristics: Inpatients at Inova Fairfax Hospital of 18 years of age or older provide an ethnically diverse patient population with a broad array of common and rare diseases. Patients will primarily be admitted through the Inova Fairfax Medical Campus Emergency Department or as direct admissions from surrounding health care facilities.

c. Learning Venues: Inova Fairfax Hospital

d. **Structure:**

i. The rotation is a two- or four-week block with all clinical time spent in the hospital. Admitting is included in overall ward time but is a separate rotation (goals and objectives provided separately) The rounding team will consist of a teaching attending, one lead resident, one to two interns, one to two acting interns, and up to three third year medical students. An attending physician is always available for questions and support. In the event that the dedicated ward attending is not available, a hospitalist provider may always be reached at the general hospitalist pager (pager #84677)

1. A one intern team will have a cap of 12 patients
2. A two intern team will have a cap of 16 patients

ii. New patients will be assigned to teams prior to 5:00AM each day. Patients are those that have been admitted by the resident admitting team in the preceding 24-hours. No more than four admissions will be assigned to each team daily.

iii. Residents will not take overnight cross-cover call during this rotation and will sign out patients to the dedicated cross-cover resident daily at 5:30PM.

iv. Daily work rounds at the bedside will occur between ~8:00AM and 12:00PM.

v. Residents will continue to attend their continuity clinic during this rotation for one half-day per week in the afternoon. Residents are not expected to continue to care for ward patients when they are away at clinic. Patients will be signed-out to and covered by team members remaining in hospital (resident or co-intern).

vi. The chief resident will orient the resident to the rotation at the beginning of the block and will review the specific schedule at that time. Residents will always have four days off in a month, will not work more than 80 hours on average per week and will not work more than 28 hours (24+4) consecutively. All level residents will have 10 hours free of clinical duty between working shifts. Interns will not work more than 16 hours consecutively.

vii. Residents and sometimes interns will rotate through admitter shifts and chief residents will update and instruct about shift times and admitting policies prior to each block.

viii. From 8A – 7P on weekdays, a dedicated RRT resident will carry the house MD phone to respond to rapid responses. This person will respond to acute emergencies and rapid response calls on patients in the hospital, but does not absolve the ward teams from attending when a patient on the ward team is experiencing an emergency.

IV. Principal Educational Materials

a. Educational materials and expectations will be available electronically through MedHub.

b. Residents will have 24/7 electronic access to journals, uptodate and other library materials both at the hospital and at home through remote access applications (citrix)

V. Methods of Evaluation

a. Feedback will be given to the resident throughout the rotation as appropriate. At the end of the rotation, the attending teaching faculty will complete a web-based evaluation (MedHub) of each team member and review it with the team members.

b. The residents will also evaluate faculty and the rotation in an anonymous fashion (summarized annually in a composite form).

c. In-training examination aggregate results as well as Internal Medicine Board examination results for the program.

d. 360 degree evaluations will be collected as appropriate from patients and nursing staff on an annual basis

e. All written feedback will be reviewed with program director twice yearly during semi-annual meetings.

VI. Resource List

a. Harrison's Principles of Internal Medicine
b. Core journals in internal medicine and it's subspecialties
c. Up-to-Date
d. Reading list:

Acute Abdominal Pain in Adults – http://www.aafp.org/afp/2008/0401/p971.html

***Updated Guideline on Diagnosis and Treatment of Intra-abdominal Infections Am Fam Physician.* 2010 Sep 15;82(6):694-709**

Mesenteric Ischemia - N Engl J Med 2016; 374:959-968

ACP - In the Clinic: Hypertension - Ann Intern Med. 2014;161(11):ITC1. doi:10.7326/0003-4819-161-11-201412020-01006
American College of Cardiology Clinical Guideline Smartphone App

Diagnosis of Acute Coronary Syndrome:
http://www.aafp.org/afp/2005/0701/p119.html

Acute Coronary Syndrome: Diagnosis and Management -
http://www.mayoclinicproceedings.com/content/84/10/917.full

Acute Coronary Syndrome: Diagnosis and Management Part II -
http://www.mayoclinicproceedings.com/content/84/11/1021.full

Acute Dyspnea- http://www.aafp.org/afp/2003/1101/p1803.html

Chronic Dyspnea - http://www.aafp.org/afp/2005/0415/p1529.html

The Asthma–COPD Overlap Syndrome - N Engl J Med 2015; 373:1241-124

Acute Renal Failure - http://www.aafp.org/afp/2005/1101/p1739.html

Iron Physiology - http://www.wjgnet.com/1007-9327/15/4617.pdf

Iron Deficiency Anemia - http://www.aafp.org/afp/2007/0301/p671.html

Evaluation of Chest Pain - http://www.aafp.org/afp/2005/1115/p2012.html

Detection and Evaluation of Chronic Kidney Disease -
http://www.aafp.org/afp/2005/1101/p1723.html

Diagnosis and Management of Chronic Kidney Disease -
http://www.mayoclinicproceedings.com/content/83/9/1064.full

Management of Acute COPD exacerbation: A systematic Review and Metanalysis -
http://chestjournal.chestpubs.org/content/133/3/756.full.pdf+html

Management of COPD exacerbation -
http://www.aafp.org/afp/2010/0301/p607.html

Delirium in Hospitalized Patient - http://www.aafp.org/afp/2008/1201/p1265.html

Acute Lower Back Pain
http://www.aafp.org/afp/2007/0415/p1181.html , http://www.ccjm.org/content/76/7/393.full.pdf

Evaluation of Chronic cough - http://www.aafp.org/afp/2004/0501/p2159.html

Fever in Returning traveler- http://www.aafp.org/afp/2003/1001/p1343.html

Upper GI Bleeding- http://www.ccjm.org/content/77/2/131.full

Upper Gastrointestinal Bleeding Due to a Peptic Ulcer - N Engl J Med 2016; 374:2367-2376

Evaluation of Hypercalcemia- http://www.aafp.org/afp/2003/0501/p1959.html

Acid–Base Problems in Diabetic Ketoacidosis - N Engl J Med 2015; 372:546-554

Hyperkalemia- http://www.aafp.org/afp/2006/0115/p283.html

Hyponatremia- http://www.ccjm.org/content/77/10/715.full.pdf+html

Hypernatremia- http://www.aafp.org/afp/20000615/3623.html

Neutropenic Fever Evaluation and Management-
http://cid.oxfordjournals.org/content/34/6/730.full.pdf+html

Neutropenic Fever 2011 Update
- http://cid.oxfordjournals.org/content/52/4/e56.full.pdf+html

Knee Pain Evaluation - http://www.aafp.org/afp/2003/0901/p907.html

Knee Pain Differential Diagnosis - http://www.aafp.org/afp/2003/0901/p917.html

Lower GI Bleeding - http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2005.02485.x/pdf

Hyperglycemia in Hospital Setting –
http://www.ccjm.org/content/74/2/111.full.pdf+html?sid=d88720aa-e07c-49fa-b018-93306e399279

Diagnosis and Management of Diabetes: Synopsis of the 2016 American Diabetes Association Standards of Medical Care in Diabetes - Ann Intern Med. 2016;164(8):542-552. doi:10.7326/M15-3016

Rashes 1- http://www.aafp.org/afp/2010/0315/p726.html

Rashes 2- http://www.aafp.org/afp/2010/0315/p735.html

Sepsis Early Goal Directed Therapy -
http://www.nejm.org/doi/pdf/10.1056/NEJMoa010307

Severe Sepsis and Septic Shock - N Engl J Med 2013; 369:840-851 DOI: 10.1056/NEJMra1208623

Synovial Fluid Analysis- http://www.aafp.org/afp/2003/0701/p83.html

Heart Failure- http://content.onlinejacc.org/cgi/reprint/53/15/1343.pdf

HIV evaluation and management guidelines-
http://www.aidsinfo.nih.gov/contentfiles/adultandadolescentgl.pdf

Heparin-Induced Thrombocytopenia - N Engl J Med 2015; 373:252-261. DOI: 10.1056/NEJMcp1411910

Deep-Vein Thrombosis of the Upper Extremities - N Engl J Med 2011; 364:861-869. DOI: 10.1056/NEJMcp1008740

Acute Pulmonary Embolism - N Engl J Med 2010; 363:266-274. DOI: 10.1056/NEJMra0907731

Venous Thromboembolism Prevention-
http://www.ccjm.org/content/75/Suppl_3/S7.full.pdf
http://onlinelibrary.wiley.com/o/cochrane/clsysrev/articles/CD005258/pdf_abstract_fs.html

Venous Thromboembolism Treatment Guidelines-
http://chestjournal.chestpubs.org/content/133/6_suppl/454S.full.pdf+html

Soft Tissue Infections- http://cid.oxfordjournals.org/content/41/10/1373.full.pdf

Community Acquired Pneumonia-
http://cid.oxfordjournals.org/content/44/Supplement_2/S27.full.pdf
ACP - In the Clinic: Community-Acquired Pneumonia – Ann Intern Med. 2015;163(7):ITC1. doi:10.7326/AITC201510060

Asymptomatic Bacteriuria
- http://cid.oxfordjournals.org/content/40/5/643.full.pdf+html

Catheter Associated UTI prevention and management-
http://cid.oxfordjournals.org/content/50/5/625.full.pdf+html

MRSA Treatment guidelines-
http://cid.oxfordjournals.org/content/early/2011/01/04/cid.ciq146.full.pdf+html

Catheter Related Infection: Diagnosis and Management-
http://cid.oxfordjournals.org/content/49/1/1.full.pdf+html

***ACP - In the Clinic: Lyme Disease – Ann Intern Med.* 2016;164(9):ITC65-ITC80. doi:10.7326/AITC201605030**

Learning Venues

1. Direct Patient Care
2. Didactics and Small Group Sessions
3. Sel- Study
4. Lectures
5. Simulation

Evaluation Methods

A. Global evaluation by teaching faculty
B. Global evaluation by peer
C. Procedure log or attendance log
D. Mini-CEX
E. Patient and 360 evaluation

Goals - PGY 1 level

Competency: Patient Care	**Learning Venue**	**Evaluation Method**
Demonstrate the ability to interview a patient, gaining pertinent facts in an efficient and complete manner	1	A,B,D
Perform a complete and accurate History and Physical Exam	1	A,B,D
Know the indications, contraindications, and risks of central venous catheter, thoracentesis, lumbar puncture, paracentesis and arthrocentesis and be able to assist in bedside procedures	1-5	A,B,C
Be able to judiciously order and rationally interpret diagnostic tests	1-4	A,B,D
Approach patient management with compassion.	1-3	A, B, D, E
Competency: Medical Knowledge	**Learning Venue**	**Evaluation Method**
Articulate the pathophysiology, evaluation, diagnostic work up and treatment of common medical problems	1-5	A,B,D
Rationally approach differential diagnosis and management	1-5	A,B,D

Competency: Interpersonal and Communication Skills	**Learning Venue**	**Evaluation Method**
Understand the role of different members of the health care team	1-4	A,B,D,E
Show understanding of cultural and gender differences as they relate to patient preferences of treatment and evaluation	1-4	A,B,D,E
Interact in an effective way with members of the health care team	1-5	A,B,D,E
Concisely present a case on rounds	1	A,D
Competency: Professionalism	**Learning Venue**	**Evaluation Method**
Actively participate in rounds and at morning report with the team	1	A
Be timely to conferences and rounds	1,2,4,5	A,C
Consistently update team contact information in Epic	1	A
Treat team members with respect	1	A,B
Treat all patients with respect and altruism	1	A,B,E
Understand the problem with/avoiding arrogance toward colleagues and patients	1	A,B,E
Show honesty, integrity and compassion toward colleagues and patients	1	A,B,E
Attend conferences regularly	2,4,5	A,C
Demonstrate acceptance of the responsibilities of your role on the team and toward your peers	1	A,B
Abide by the Code of Conduct which is reviewed at orientation	1,2,3,4,5	A,B,D,E
Competency: Practice-Based Learning	**Learning Venue**	**Evaluation Method**
Acknowledge the "gaps" in medical knowledge	1,2,3,4,5	A,B
Identify errors in medical care and utilize medical literature, information systems, and teachers to address those errors	1,2,4,5	A,B
Understand and utilize the information technology available to you at the hospital	1,2,5	A,B,D
Use an evidenced based approach to patient care	1,2,3,4,5	A,B
Accept feedback and work to improve deficiencies	1,2,3,4,5	A,B,C,D,E
Competency: Systems Based Practice	**Learning Venue**	**Evaluation Method**
Understand and acknowledge the barriers to health care and adherence in your patients	1,2,3,4	A,B
Use evidence based, cost conscious strategies in the care of medical patients	1,2,3,4	A,B
Utilize the resources available to you to optimize medical care of your patient	1,2,3,4	A,B

Goals - PGY 2 and 3 levels

Supervising residents, PGY 2 and PGY 3 level team members are expected to achieve all the goals as listed above for PGY 1 level during their inpatient wards rotation. In addition to those listed above, following are specific to PGY 2 and PGY 3 levels.

Competency: Patient Care	**Learning Venue**	**Evaluation Method**
Teach team members how to perform a complete, sensitive, and accurate physical exam	1,2	A,B
Be able to perform bedside procedures under the supervision of an attending physician	1	AB
Be able to teach the indications, contraindications, and risks of bedside procedures such as central venous catheters, paracentesis, arthrocentesis, thoracentesis and lumbar puncture	1-5	ABC
Be able to manage multiple concurrent admissions within your team by triaging acute and non-acute issues	1	A,B
Successfully manage rapid response team calls as well as MSETs, using ACLS protocols when indicated	1	A,B
Succinctly and accurately summarize a case when calling an attending physician	1	A
Teach the indications and interpretation of diagnostic tests to various levels of learners on the team	1,2	A,B
Competency: Medical Knowledge	**Learning Venue**	**Evaluation Method**
Be able to teach the pathophysiology, evaluation, diagnostic work up and treatment of common medical problems to the junior members of the team	1-4	A,B
Rationally approach, teach and provide feedback on differential diagnosis and management during a case presentation or rounds to junior team members	1-4	A,B
Competency: Interpersonal and Communication Skills	**Learning Venue**	**Evaluation Method**
Demonstrate leadership skills during work and teaching rounds	1,2	A,B
Concisely and accurately present case at morning report and lead discussion	2,3	A,B
Competency: Professionalism	**Learning Venue**	**Evaluation Method**
Be a role model to the team in interactions with peers, faculty and patients	1	A,B,E
Be able to perform and teach team members consistently courteous and professional interactions even with “difficult” patients	1	A,B, D,E
Competency: Practice-Based Learning	**Learning Venue**	**Evaluation Method**

Utilize and teach team junior team members about the information technology available to you at the hospital	1,2	A,B
Take lead during discussions on use of evidence with regards to patient care	1,2	A,B
Competency: Systems Based Practice	**Learning Venue**	**Evaluation Method**
Be able to understand and work with barriers to health care and adherence in your patients and educate junior members of these limitations	1	A,B

Lead your team's evaluation of the psychological and social barriers to obtaining adequate health care as your patient transitions from the inpatient to outpatient healthcare system	1	A,B
Analyze and teach evidence based, cost-conscious strategies in the care of medical patients	1,2	A,B