# Curriculum for Internal Medicine Goals and Objectives

The curriculum outlined here is intended to ensure that you have a clear understanding of the overall learning goals of an Internal Medicine residency. Medical care of adults occurs across a continuum from preventive care of healthy adults to care for the dying. The core competencies that internists must develop during training are outlined below:

Patient Care: Residents are expected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, and treatment of disease.

**Medical Knowledge:** Residents are expected to demonstrate knowledge of biomedical, clinical and social sciences and to be able to apply their knowledge to patient care and the education of others.

**Practice-Based Performance Improvement:** Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.

**Interpersonal and Communication Skills:** Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.

**Professionalism:** Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society.

**Systems-Based Practice:** Residents are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize health care.

The curriculum describes both required and elective rotations - the educational goals and objectives of the rotation or activity as well as the teaching formats and suggested educational content. The topics listed under "educational content" are generally disease entities that we think you should read about during your rotation in that particular site, regardless of whether you have a patient with that problem or not. We have developed this curriculum to provide some guidelines for your studying as well as to make clear the specific goals and objectives of each rotation. You should be aware of the learning objectives in each rotation and attempt to reach them.

In addition to these rotation-specific expectations, there are general requirements in each year related to milestones in each of the core competencies:

### <u> PGY-1:</u>

### Patient care:

- 1. Satisfactorily complete mini-CEX exercises
- 2. Achieve satisfactory monthly evaluations on this competency in the second half of the year (if not throughout)

### Medical knowledge:

- 1. Attend 60% of required conferences
- 2. Take the monthly test during floor rotations
- 3. Complete NETMA mailings
- 4. Achieve an improvement in score from pre to post-test in palliative care
- 5. Complete required tutorials on urinalysis, Gram stain (during PRIME)

### PBPI/SBP:

- 1. Participate satisfactorily in evidence-based medicine seminars at VA
- 2. Analyze your own performance by completion of semi-annual self-assessment forms
- 3. Demonstrate understanding of departmental performance improvement projects
- 4. Achieve satisfactory monthly evaluations on these competencies in the second half of the year (if not throughout)

### Communication skills:

- 1. Satisfactorily complete mini-CEX exercises
- 2. Complete the scientific writing assignment (during PRIME)
- 3. Achieve satisfactory monthly evaluations on this competency in the second half of the year (if not throughout)
- 4. Achieve satisfactory feedback on this competency from medical student team members

### Professionalism:

- 1. Consistently demonstrate respect for patients and staff
- 2. Achieve satisfactory feedback on this competency from medical student team members
- 3. Demonstrate understanding of principles pertaining to patient confidentiality, proper use of identifiable health information, informed consent, and advance directives
- 4. Demonstrate understanding of the management of physician impairment

### Reaching these goals/milestones is required for promotion to PGY2 status.

### <u> PGY-2:</u>

### Patient care:

- 1. Satisfactorily complete the chart-stimulated recall exercise during the UHB floor rotation
- 2. Achieve satisfactory evaluations on this competency at UHB and VA

### Medical Knowledge:

- 1. Attend 60% of required conferences during floor rotations
- 2. Complete all assigned internet-based learning modules
- 3. Pass the monthly exam in each subspecialty (55%)
- 4. Pass the hospital medicine test (55%)
- 5. Complete all Hopkins teaching modules by May 31.
- 6. Take the palliative care re-test

### PBPI/SBP:

- 1. Participate satisfactorily in evidence-based medicine seminars during the ambulatory block
- 2. Analyze your own performance by completion of semi-annual self-assessment forms
- 3. Demonstrate understanding of departmental performance improvement projects
- 4. Demonstrate understanding of processes that lead to physician error and procedures used to minimize error

### Communication skills:

- 1. Submit a case report, suitable for submission to a conference or journal, with full history, physical exam, and lab data, as well as an original discussion, correctly referenced. Case reports are due on April 30.
- 2. Achieve satisfactory feedback on this competency from medical students, PGY1 team members, and nurses during floor rotations

### Professionalism:

- 5. Consistently demonstrate respect for patients and staff
- 6. Achieve satisfactory feedback on this competency from medical student, PGY1 team members, and nurses during floor rotations
- 7. Demonstrate understanding of the management of physician impairment

### Reaching these goals/milestones is a requirement for promotion to PGY3 status

### <u>PGY-3</u>:

### Patient care:

1. Achieve a satisfactory evaluation of this competency in each site: floor, critical care unit, clinic, consultation, senior in emergency room

### Medical Knowledge:

- 1. Attend 60% of required conferences during floor rotations
- 2. Pass (66%) the monthly exam in each subspecialty
- 3. Complete all Hopkins teaching modules by May 31.

### PBPI/SBP:

- 1. Participate satisfactorily in evidence-based medicine seminars during the ambulatory block
- 2. Analyze your own performance by completion of semi-annual self-assessment forms and experience logs
- 3. Demonstrate understanding of departmental performance improvement projects
- 4. Demonstrate understanding of methods of performance improvement

### Communication skills:

- 1. Submit re-written case report after editing session
- 2. Participate satisfactorily in morning report during floor rotations at KCHC
- Achieve satisfactory feedback on this competency from medical students, PGY1 or PGY2 team members, and nurses during floor and unit rotations
- 4. Achieve a satisfactory evaluation of this competency during the medical consultation block and in clinic

### Professionalism

- 1. Consistently demonstrate respect for patients and staff
- 2. Achieve satisfactory feedback on this competency from medical students, PGY1 or PGY2 team members, and nurses during floor and unit rotations
- 3. Demonstrate the ability to discuss the issues surrounding disclosure of errors to patients and families

# Reaching these goals/milestones is a requirement for satisfactory completion of residency, graduation, and Board-eligibility.

# **UHB FLOOR ROTATIONS - LEVEL I**

#### **Goals and Objectives:**

#### Patient care

- Demonstrate the ability to perform a comprehensive history and physical as well as the ability to focus and adjust the history and physical based on each patient's severity of illness, level of comfort, and ability to communicate
- Know the approach to commonly observed in-patient problems, e.g. pain, acute shortness of breath, fever, palpitations, chest pain, hypotension, falls, acute changes in mental status
- Demonstrate proficiency in use and interpretation of standard laboratory tests and x-rays
- Implement the management of common diseases seen in in-patients
- Perform common invasive procedures skillfully and safely

#### Medical knowledge

- Know the differential diagnosis and treatment of commonly encountered disease entities in medicine
- Know the indications, contraindications, risks, benefits, and alternatives to commonly performed invasive procedures

#### PBPI/SBP

- Know how to use information technology to supplement your medical knowledge
- Understand the departmental and institutional performance improvement projects and patient safety goals
- Consistently utilize infection control strategies, e.g. hand hygiene, and safe use of needles and other sharps
- Understand the role of each member of the patient care team
- Demonstrate ability to obtain needed services for patients and to implement appropriate discharge plans

#### Interpersonal and communication skills

- Write notes that accurately and completely reflect the patient's condition
- Effectively communicate patient information to colleagues, consultants, and other members of the health care team
- Establish rapport with patients of different cultural backgrounds
- Educate patients and families appropriately about medical conditions, diagnostic and therapeutic plans, and discharge plans
- Obtain informed consent for invasive procedures with full discussion of risks, benefits, and alternatives to the procedure
- Learn the steps involved in delivering bad news to patients

#### Professionalism

- Consistently demonstrate respect for patients and staff members
- Consistently put the patients' interests ahead of any other considerations
- Understand the ethical principles involved in obtaining advance directives and informed consent
- Maintain the confidentiality of personally identifiable patient information

#### **Teaching methods:**

Formal didactic sessions during the month include attending rounds, interns' morning report, noon lectures/case conferences, Grand Rounds, Professor's Rounds, Morbidity/mortality conference, ethics rounds. 60% conference attendance is required overall.

Noon conference time is completely protected at UHB – no beepers or cell phones are to be operated in the conference room and no interruptions are to occur once conference has begun. These conferences are mandatory events – 100% attendance is expected.

There is a multiple choice test during each month – PGY1 residents are required to take the test and the results are tabulated, but there is no "passing" score for PGY1's.

Each week you will receive a "NETMA" mailing consisting of a multiple choice question with or without supporting material to read for the answer. PGY1's are required to respond to these emails weekly during UHB floor months. Twice during the month, interns will participate in a so-called "mini-CEX" – a brief, structured observation of a portion of history or physical exam done on one of their patients.

#### **Clinical responsibilities:**

The PGY1's function as the primary physician for 8-12 patients on the general Medical wards. Each PGY1 is supervised by a PGY2 or PGY3 resident and an attending physician. Rounds are made with the supervising resident then with the supervising/teaching attending. For each patient admitted, the PGY1 is expected to complete a full history and physical examination, formulate an assessment and plan with the supervising resident, fill out the admission data base, present the case to the supervising attending the day following admission, write all orders on the patent, write daily progress notes, coordinate the patient's care, and write a discharge summary at the end of hospitalization. The lines of responsibility for the floor rotation at each hospital are part of the hospital policies given out at the beginning of each month.

#### **Educational content:**

Patients taken care of by the house staff over the course of residency cover the full spectrum of diseases seen in Internal Medicine. On some services, however, there will be a specific emphasis during the month. At University Hospital you will see patients with a wide spectrum of diseases under the supervision of an attending hospitalist. You should focus particularly on pulmonary disease, nephrology, and gastroenterology/hepatology. In addition, you should begin to become familiar with the issues of cost-effectiveness in care of in-patients, admission and continued stay criteria, the DRG system, the relationship of chart documentation to billing, and the implications to patients of different insurance plans.

Finally, the core conference schedule will consist of lectures on a specific subspecialty of medicine for each 4-week period that may or may not include topics relevant to your own particular patients. The NETMA mailings will reinforce points pertinent to the subspecialty material from conference as well as material in palliative care.

Core conferences include the following:

#### Introductory concepts

Hyper/hypokalemia Hypoxemia Evaluation of anemia Metabolic acidosis Respiratory acidosis and alkalosis Hyponatremia Azotemia Dosing of aminoglycosides Dietary requirements and prescriptions Intravenous fluid therapy Approach to the patient with: Fever Shortness of breath Hypertension GI Bleeding Altered mental status Pneumonia Shook Abdominal pain AIDS Seizures

Oncologic emergencies Arrhythmias Asthma Hemostatic disorders Chest pain Respirator management Psychiatric emergencies Use of microbiological stains Interpretation of chest x-rays

#### Cardiology

Lecture/case conference topics as in Level 2 and 3: EKG interpretation Congestive heart failure Angina Acute myocardial infarction Hypertrophic cardiomyopathy Pericardial effusion Endocarditis Syncope Valvular heart disease

#### **Infectious Diseases**

Lecture/case conference topics as in Level 2 and 3: Bacterial endocarditis AIDS Sepsis Infectious diarrhea Sexually transmitted diseases Meningitis Dermatologic manifestations of infectious diseases Use of antibiotics

#### Endocrinology

Lecture/case conference topics as in Level 2 and 3: Insulin dependent diabetes mellitus Non-Insulin dependent diabetes mellitus Thyroid disease Adrenal function and dysfunction Disorders of the hypothalamus and pituitary Female gonadal disorders Male gonadal disorders Calcium metabolism Lipid disorders

#### Pulmonary Disease

Lecture/case conference topics as in Level 2 and 3: Pulmonary function testing Sleep related respiratory diseases Asthma Chronic obstructive pulmonary disease Respiratory failure Pneumonia Tuberculosis Interstitial lung disease Pulmonary embolism and venous thrombosis Lung cancer Pulmonary disease in immunocompromised patients Pleural diseases

#### Gastroenterology

Lecture/case conference topics as in Level 2 and 3:

Upper gastrointestinal tract bleeding Lower gastrointestinal tract bleeding Diarrhea Inflammatory bowel diseases Cancer of the digestive organs Acute and chronic pancreatitis Acute hepatitis Chronic hepatitis and cirrhosis Treatment of chronic liver disease

#### **Rheumatology**

Lecture/case conference topics as in Level 2 and 3: Rheumatoid arthritis Spondyloarthropathies and reactive arthritis Crystal arthropathies Systemic lupus erythematosus Lupus nephritis Myositis and polymyalgia rheumatica Septic arthritis Scleroderma and mixed connective tissue diseases Osteoarthritis and soft tissue rheumatism Vasculitis

### Nephrology

Lecture/case conference topics as in Level 2 and 3: Approach to differential diagnosis Diabetic nephropathy Systemic diseases and the kidney Kidney stones Renal osteodystrophy Hypertension Glomerular disease Interstitial renal disease Role of radiology and kidney biopsy Disorders of sodium and potassium Progression of renal disease Drug effects on the kidney Complications of renal failure and dialysis

#### Hematology/Oncology

Lecture/case conference topics as in Level 2 and 3: Disorders of hemostasis Physiologic adjustments to anemia Hemolytic anemias Hemoglobinopathies Myeloproliferative disorders Plasma cell dyscrasias Hodgkin's and non-Hodgkin's lymphoma Carcinoma of the lung and colon Carcinoma of the breast and prostate Oncologic emergencies Selection and interpretation of diagnostic procedures in cancer Introduction to molecular genetics

### Allergy and Immunology

Lecture/case conference topics as in Level 2 and 3: Types of immunological reactions Immune response and interleukins Immunodeficiency states Complement in health and disease Food allergy and anaphylaxis Urticaria and angioedema Eosinophilia Asthma Rhinitis, sinusitis, and asthma Drug allergy

#### **Pathophysiology**

Lecture/case conference topics as Level 2 and 3:

Hyponatremia Edema in pulmonary disease Hepatorenal syndrome Lactic acidosis Hyperkalemia Adrenal dysfunction and AIDS Polyuria Diabetic ketoacidosis Metabolic alkalosis in heart failure Mixed acid base disturbances Bartter's syndrome Hyporeninemic hypoaldosteronism Metabolic acidosis due to ingestion of ethylene glycol Hyperosmolar non-ketotic coma Electrolyte abnormalities in alcoholics Hypercalcemia in cancer

#### Method of assessment:

For satisfactory completion of the month interns must:

- Receive a satisfactory end-of-the month evaluation from the supervising attending based on the six core competencies
- Attend the required number of conferences
- Respond to the weekly NETMA mailings
- Take the monthly test
- Participate satisfactorily in the mini-CEX exercise

# KCH Blue Team FLOOR ROTATIONS - LEVEL I

#### Goals and Objectives:

#### Patient care

- Demonstrate the ability to perform a comprehensive history and physical as well as the ability to focus and adjust the history and physical based on each patient's severity of illness, level of comfort, and ability to communicate
- Know the approach to commonly observed in-patient problems, e.g. pain, acute shortness of breath, fever, palpitations, chest pain, hypotension, falls, acute changes in mental status
- Demonstrate proficiency in use and interpretation of standard laboratory tests and x-rays
- Implement the management of common diseases seen in in-patients
- Perform common invasive procedures skillfully and safely

#### Medical knowledge

- Know the differential diagnosis and treatment of commonly encountered disease entities in medicine
- Know the indications, contraindications, risks, benefits, and alternatives to commonly performed invasive procedures

#### PBPI/SBP

• Know how to use information technology to supplement your medical knowledge

- Understand the departmental and institutional performance improvement projects and patient safety goals
- Consistently utilize infection control strategies, e.g. hand hygiene, and safe use of needles and other sharps
- Understand the role of each member of the patient care team
- Demonstrate ability to obtain needed services for patients and to implement appropriate discharge plans

#### Interpersonal and communication skills

- Write notes that accurately and completely reflect the patient's condition
- Effectively communicate patient information to colleagues, consultants, and other members of the health care team
- Establish rapport with patients of different cultural backgrounds
- Educate patients and families appropriately about medical conditions, diagnostic and therapeutic plans, and discharge plans
- Obtain informed consent for invasive procedures with full discussion of risks, benefits, and alternatives to the procedure
- Learn the steps involved in delivering bad news to patients

#### Professionalism

- Consistently demonstrate respect for patients and staff members
- Consistently put the patients' interests ahead of any other considerations
- Understand the ethical principles involved in obtaining advance directives and informed consent
- Maintain the confidentiality of personally identifiable patient information

#### Teaching methods:

Formal didactic sessions during the month include attending rounds, interns' morning report, noon lectures/case conferences, Grand Rounds, Professor's Rounds, Morbidity/mortality conference. 60% conference attendance is required overall.

There is a multiple choice test during each month – PGY1 residents are required to take the test and the results are tabulated, but there is no "passing" score for PGY1's.

Each week you will receive a "NETMA" mailing consisting of a multiple choice question with or without supporting material to read for the answer. PGY1's are required to respond to these emails weekly during KCH floor months.

#### Clinical responsibilities:

The PGY1's function as the primary physician for 8-12 patients on the general Medical wards. Each PGY1 is supervised by a PGY2 or PGY3 resident and an attending physician. Rounds are made with the supervising resident then with the supervising/teaching attending. For each patient admitted, the PGY1 is expected to complete a full history and physical examination, formulate an assessment and plan with the supervising resident, fill out the admission data base, present the case to the supervising attending the day following admission, write all orders on the patent, write daily progress notes, coordinate the patient's care, and write a discharge summary at the end of hospitalization. The lines of responsibility for the floor rotation at each hospital are part of the hospital policies given out at the beginning of each month.

#### **Educational content:**

Patients taken care of by the house staff over the course of their training cover the full spectrum of diseases seen in Internal Medicine. On each service, however, there will be a specific emphasis during the month. On Kings County blue teams you will take care of patients with a wide spectrum of presentations. During this month you should focus on infectious diseases and the management and complications of diabetes.

In addition, the core conference schedule will consist of lectures on a specific subspecialty of medicine for each 4-week period that may or may not include topics relevant to your own particular patients. The NETMA mailings will reinforce points pertinent to the subspecialty material from conference as well as material in palliative care.

#### Core conferences topics include the following:

Introductory concepts Hyper/hypokalemia Hypoxemia Evaluation of anemia Metabolic acidosis Respiratory acidosis and alkalosis Hyponatremia Azotemia Dosing of aminoglycosides Dietary requirements and prescriptions Intravenous fluid therapy Approach to the patient with: Fever Shortness of breath Hypertension GI Bleedina Altered mental status Pneumonia Shook Abdominal pain AIDS Seizures Oncologic emergencies Arrhythmias Asthma Hemostatic disorders Chest pain Respirator management Psychiatric emergencies Use of microbiological stains Interpretation of chest x-rays

#### Cardiology

Lecture/case conference topics as in Level 2 and 3: EKG interpretation Congestive heart failure Angina Acute myocardial infarction Hypertrophic cardiomyopathy Pericardial effusion Endocarditis Syncope Valvular heart disease

#### Infectious Diseases

Lecture/case conference topics as in Level 2 and 3: Bacterial endocarditis AIDS Sepsis Infectious diarrhea Sexually transmitted diseases Meningitis Dermatologic manifestations of infectious diseases Use of antibiotics

#### Endocrinology

Lecture/case conference topics as in Level 2 and 3: Insulin dependent diabetes mellitus Non-Insulin dependent diabetes mellitus Thyroid disease Adrenal function and dysfunction Disorders of the hypothalamus and pituitary Female gonadal disorders Male gonadal disorders Calcium metabolism Lipid disorders

#### **Pulmonary Disease**

Lecture/case conference topics as in Level 2 and 3: Pulmonary function testing Sleep related respiratory diseases Asthma Chronic obstructive pulmonary disease Respiratory failure Pneumonia Tuberculosis Interstitial lung disease Pulmonary embolism and venous thrombosis Lung cancer Pulmonary disease in immunocompromised patients Pleural diseases

#### Gastroenterology

Lecture/case conference topics as in Level 2 and 3:

Upper gastrointestinal tract bleeding Lower gastrointestinal tract bleeding Diarrhea Inflammatory bowel diseases Cancer of the digestive organs Acute and chronic pancreatitis Acute hepatitis Chronic hepatitis and cirrhosis Treatment of chronic liver disease

#### Rheumatology

Lecture/case conference topics as in Level 2 and 3: Rheumatoid arthritis Spondyloarthropathies and reactive arthritis Crystal arthropathies Systemic lupus erythematosus Lupus nephritis Myositis and polymyalgia rheumatica Septic arthritis Scleroderma and mixed connective tissue diseases Osteoarthritis and soft tissue rheumatism

Vasculitis

#### **Nephrology**

Lecture/case conference topics as in Level 2 and 3: Approach to differential diagnosis Diabetic nephropathy Systemic diseases and the kidney Kidney stones Renal osteodystrophy Hypertension Glomerular disease Interstitial renal disease Role of radiology and kidney biopsy Disorders of sodium and potassium Progression of renal disease Drug effects on the kidney Complications of renal failure and dialysis

#### Hematology/Oncology

Lecture/case conference topics as in Level 2 and 3:

Disorders of hemostasis Physiologic adjustments to anemia Hemolytic anemias Hemoglobinopathies Myeloproliferative disorders Plasma cell dyscrasias Hodgkin's and non-Hodgkin's lymphoma Carcinoma of the lung and colon Carcinoma of the breast and prostate Oncologic emergencies Selection and interpretation of diagnostic procedures in cancer Introduction to molecular genetics

#### Allergy and Immunology

Lecture/case conference topics as in Level 2 and 3: Types of immunological reactions Immune response and interleukins Immunodeficiency states Complement in health and disease Food allergy and anaphylaxis Urticaria and angioedema Eosinophilia Asthma Rhinitis, sinusitis, and asthma Drug allergy

#### Pathophysiology

Lecture/case conference topics as Level 2 and 3: Hyponatremia Edema in pulmonary disease Hepatorenal syndrome Lactic acidosis Hyperkalemia Adrenal dysfunction and AIDS Polvuria Diabetic ketoacidosis Metabolic alkalosis in heart failure Mixed acid base disturbances Bartter's syndrome Hyporeninemic hypoaldosteronism Metabolic acidosis due to ingestion of ethylene glycol Hyperosmolar non-ketotic coma Electrolyte abnormalities in alcoholics Hypercalcemia in cancer

#### Method of assessment:

For satisfactory completion of the month interns must:

- Receive a satisfactory end-of-the month evaluation from the supervising attending based on the six core competencies
- Attend the required number of conferences
- Respond to the weekly NETMA mailings
- Take the monthly test

# KCH Red Team FLOOR ROTATIONS - LEVEL I

#### **Goals and Objectives:**

#### Patient care

- Demonstrate the ability to perform a comprehensive history and physical as well as the ability to focus and adjust the history and physical based on each patient's severity of illness, level of comfort, and ability to communicate
- Know the approach to commonly observed in-patient problems, e.g. pain, acute shortness of breath, fever, palpitations, chest pain, hypotension, falls, acute changes in mental status
- Demonstrate proficiency in use and interpretation of standard laboratory tests and x-rays
- Implement the management of common diseases seen in in-patients
- Perform common invasive procedures skillfully and safely

#### Medical knowledge

- Know the differential diagnosis and treatment of commonly encountered disease entities in medicine
- Know the indications, contraindications, risks, benefits, and alternatives to commonly performed invasive procedures

#### PBPI/SBP

- Know how to use information technology to supplement your medical knowledge
- Understand the departmental and institutional performance improvement projects and patient safety goals
- Consistently utilize infection control strategies, e.g. hand hygiene, and safe use of needles and other sharps
- Understand the role of each member of the patient care team
- Demonstrate ability to obtain needed services for patients and to implement appropriate discharge plans

#### Interpersonal and communication skills

- Write notes that accurately and completely reflect the patient's condition
- Effectively communicate patient information to colleagues, consultants, and other members of the health care team
- Establish rapport with patients of different cultural backgrounds
- Educate patients and families appropriately about medical conditions, diagnostic and therapeutic plans, and discharge plans
- Obtain informed consent for invasive procedures with full discussion of risks, benefits, and alternatives to the procedure
- Learn the steps involved in delivering bad news to patients

#### Professionalism

- Consistently demonstrate respect for patients and staff members
- Consistently put the patients' interests ahead of any other considerations
- Understand the ethical principles involved in obtaining advance directives and informed consent
- Maintain the confidentiality of personally identifiable patient information

#### **Teaching methods:**

Formal didactic sessions during the month include attending rounds, interns' morning report, noon lectures/case conferences, Grand Rounds, Professor's Rounds, Morbidity/mortality conference. 60% conference attendance is required overall.

There is a multiple choice test during each month – PGY1 residents are required to take the test and the results are tabulated, but there is no "passing" score for PGY1's.

Each week you will receive a "NETMA" mailing consisting of a multiple choice question with or without supporting material to read for the answer. PGY1's are required to respond to these emails weekly during KCH floor months.

#### **Clinical responsibilities:**

The PGY1's function as the primary physician for 8-12 patients on the general Medical wards. Each PGY1 is supervised by a PGY2 or PGY3 resident and an attending physician. Rounds are made with the supervising resident then with the supervising/teaching attending. For each patient admitted, the PGY1 is expected to complete a full history and physical examination, formulate an assessment and plan with the supervising resident, fill out the admission data base, present the case to the supervising attending the day following admission, write all orders on the patent, write daily progress notes, coordinate the patient's care, and write a discharge summary at the end of hospitalization. The lines of responsibility for the floor rotation at each hospital are part of the hospital policies given out at the beginning of each month.

#### **Educational content:**

Patients taken care of by the house staff over the course of residency cover the full spectrum of diseases seen in Internal Medicine. On some services, however, there will be a specific emphasis during the month. On Kings County red teams you will encounter large numbers of patients with chest pain of cardiac and non-cardiac origin, acute shortness of breath, and syncope of various etiologies including arrhythmias and pacemaker malfunction. You should be well-versed in all aspects of these presentations by the end of the month and should review the management of acute coronary syndromes. You should also become knowledgeable about anti-coagulation – both for prophylactic as well as therapeutic indications – and the management of its complications.

Finally, the core conference schedule will consist of lectures on a specific subspecialty of medicine for each 4-week period that may or may not include topics relevant to your own particular patients. The NETMA mailings will reinforce points pertinent to the subspecialty material from conference as well as material in palliative care.

#### Core conferences include the following:

#### Introductory concepts

Hyper/hypokalemia Hypoxemia Evaluation of anemia Metabolic acidosis Respiratory acidosis and alkalosis Hyponatremia Azotemia Dosing of aminoglycosides Dietary requirements and prescriptions Intravenous fluid therapy Approach to the patient with: Fever Shortness of breath Hypertension GI Bleeding Altered mental status Pneumonia Shook Abdominal pain AIDS Seizures Oncologic emergencies Arrhythmias Asthma Hemostatic disorders Chest pain

Respirator management Psychiatric emergencies Use of microbiological stains Interpretation of chest x-rays

#### **Cardiology**

Lecture/case conference topics as in Level 2 and 3: EKG interpretation Congestive heart failure Angina Acute myocardial infarction Hypertrophic cardiomyopathy Pericardial effusion Endocarditis Syncope Valvular heart disease

#### Infectious Diseases

Lecture/case conference topics as in Level 2 and 3: Bacterial endocarditis AIDS Sepsis Infectious diarrhea Sexually transmitted diseases Meningitis Dermatologic manifestations of infectious diseases Use of antibiotics

#### Endocrinology

Lecture/case conference topics as in Level 2 and 3: Insulin dependent diabetes mellitus Non-Insulin dependent diabetes mellitus Thyroid disease Adrenal function and dysfunction Disorders of the hypothalamus and pituitary Female gonadal disorders Male gonadal disorders Calcium metabolism Lipid disorders

#### Pulmonary Disease

Lecture/case conference topics as in Level 2 and 3: Pulmonary function testing Sleep related respiratory diseases Asthma Chronic obstructive pulmonary disease Respiratory failure Pneumonia Tuberculosis Interstitial lung disease Pulmonary embolism and venous thrombosis Lung cancer Pulmonary disease in immunocompromised patients Pleural diseases

#### Gastroenterology

Lecture/case conference topics as in Level 2 and 3: Upper gastrointestinal tract bleeding Lower gastrointestinal tract bleeding Diarrhea Inflammatory bowel diseases Cancer of the digestive organs Acute and chronic pancreatitis Acute hepatitis Chronic hepatitis and cirrhosis Treatment of chronic liver disease

#### **Rheumatology**

Lecture/case conference topics as in Level 2 and 3:

Rheumatoid arthritis Spondyloarthropathies and reactive arthritis Crystal arthropathies Systemic lupus erythematosus Lupus nephritis Myositis and polymyalgia rheumatica Septic arthritis Scleroderma and mixed connective tissue diseases Osteoarthritis and soft tissue rheumatism Vasculitis

#### **Nephrology**

Lecture/case conference topics as in Level 2 and 3: Approach to differential diagnosis Diabetic nephropathy Systemic diseases and the kidney Kidney stones Renal osteodystrophy Hypertension Glomerular disease Interstitial renal disease Role of radiology and kidney biopsy Disorders of sodium and potassium Progression of renal disease Drug effects on the kidney Complications of renal failure and dialysis

#### Hematology/Oncology

Lecture/case conference topics as in Level 2 and 3: Disorders of hemostasis Physiologic adjustments to anemia Hemolytic anemias Hemoglobinopathies Myeloproliferative disorders Plasma cell dyscrasias Hodgkin's and non-Hodgkin's lymphoma Carcinoma of the lung and colon Carcinoma of the breast and prostate Oncologic emergencies Selection and interpretation of diagnostic procedures in cancer Introduction to molecular genetics

#### Allergy and Immunology

Lecture/case conference topics as in Level 2 and 3: Types of immunological reactions Immune response and interleukins Immunodeficiency states Complement in health and disease Food allergy and anaphylaxis Urticaria and angioedema Eosinophilia Asthma Rhinitis, sinusitis, and asthma Drug allergy

#### Pathophysiology

Lecture/case conference topics as Level 2 and 3: Hyponatremia Edema in pulmonary disease Hepatorenal syndrome Lactic acidosis Hyperkalemia Adrenal dysfunction and AIDS Polvuria Diabetic ketoacidosis Metabolic alkalosis in heart failure Mixed acid base disturbances Bartter's syndrome Hyporeninemic hypoaldosteronism Metabolic acidosis due to ingestion of ethylene glycol Hyperosmolar non-ketotic coma Electrolyte abnormalities in alcoholics Hypercalcemia in cancer

#### Method of assessment:

For satisfactory completion of the month interns must:

- Receive a satisfactory end-of-the month evaluation from the supervising attending based on the six core competencies
- Attend the required number of conferences
- Respond to the weekly NETMA mailings
- Take the monthly test

# **VA FLOOR ROTATIONS - LEVEL I**

#### **Goals and Objectives:**

#### Patient care

- Demonstrate the ability to perform a comprehensive history and physical as well as the ability to focus and adjust the history and physical based on each patient's severity of illness, level of comfort, and ability to communicate
- Know the approach to commonly observed in-patient problems, e.g. pain, acute shortness of breath, fever, palpitations, chest pain, hypotension, falls, acute changes in mental status
- Demonstrate proficiency in use and interpretation of standard laboratory tests and x-rays
- Implement the management of common diseases seen in in-patients
- Perform common invasive procedures skillfully and safely

#### Medical knowledge

- Know the differential diagnosis and treatment of commonly encountered disease entities in medicine
- Know the indications, contraindications, risks, benefits, and alternatives to commonly performed invasive procedures

#### PBPI/SBP

- Know how to use information technology to supplement your medical knowledge
- Understand the departmental and institutional performance improvement projects and patient safety goals
- Consistently utilize infection control strategies, e.g. hand hygiene, and safe use of needles and other sharps
- Understand the role of each member of the patient care team

• Demonstrate ability to obtain needed services for patients and to implement appropriate discharge plans

#### Interpersonal and communication skills

- Write notes that accurately and completely reflect the patient's condition
- Effectively communicate patient information to colleagues, consultants, and other members of the health care team
- Establish rapport with patients of different cultural backgrounds
- Educate patients and families appropriately about medical conditions, diagnostic and therapeutic plans, and discharge plans
- Obtain informed consent for invasive procedures with full discussion of risks, benefits, and alternatives to the procedure
- Learn the steps involved in delivering bad news to patients

#### Professionalism

- Consistently demonstrate respect for patients and staff members
- Consistently put the patients' interests ahead of any other considerations
- Understand the ethical principles involved in obtaining advance directives and informed consent
- Maintain the confidentiality of personally identifiable patient information

#### **Teaching methods:**

Formal didactic sessions during the month include:

Daily attending rounds, core lectures/case conferences

Weekly Grand Rounds, radiology conference (cases chosen from medicine service and discussed by attending radiologist), EBM sessions (critical appraisal of a chosen article)

Monthly Professor's Rounds, morbidity/mortality conference, and Schwartz rounds (multidisciplinary discussion of ethical issues around a patient chosen from house staff service) 60% conference attendance is required overall.

There is a multiple choice test during each month – PGY1 residents are required to take the test and the results are tabulated, but there is no "passing" score for PGY1's.

Each week you will receive a "NETMA" mailing consisting of a multiple choice question with or without supporting material to read for the answer. PGY1's are required to respond to these emails weekly during VA floor months.

#### **Clinical responsibilities:**

The PGY1's function as the primary physician for 8-12 patients on the general Medical wards. Each PGY1 is supervised by a PGY2 or PGY3 resident and an attending physician. Rounds are made with the supervising resident then with the supervising/teaching attending. For each patient admitted, the PGY1 is expected to complete a full history and physical examination, formulate an assessment and plan with the supervising resident, fill out the admission data base, present the case to the supervising attending the day following admission, write all orders on the patent, write daily progress notes, coordinate the patient's care, and write a discharge summary at the end of hospitalization. The lines of responsibility for the floor rotation at each hospital are part of the hospital policies given out at the beginning of each month.

#### **Educational content:**

Patients taken care of by the house staff over the course of residency cover the full spectrum of diseases seen in Internal Medicine. On some services, however, there will be a specific emphasis during the month. At the VA, you will

be expected to become very proficient in the diagnosis and management of heart failure, chronic obstructive pulmonary disease, osteomyelitis, and diseases common in the elderly. Heart failure and COPD will be systematically reviewed with the aid of a patient simulator.

You will also be expected to develop proficiency (on the patient simulator) in performing the following procedures: arterial puncture, lumbar puncture, thoracentesis, arthrocentesis, and paracentesis and to know the indications, contraindications, risks, benefits, and alternatives to these procedures.

Finally, the core conference schedule will consist of lectures on a specific subspecialty of medicine for each 4-week period that may or may not include topics relevant to your own particular patients. The NETMA mailings will reinforce points pertinent to the subspecialty material from conference as well as material in palliative care.

#### Core conferences include the following:

#### Introductory concepts

Hyper/hypokalemia Hypoxemia Evaluation of anemia Metabolic acidosis Respiratory acidosis and alkalosis Hyponatremia Azotemia Dosing of aminoglycosides Dietary requirements and prescriptions Intravenous fluid therapy Approach to the patient with: Fever Shortness of breath Hypertension GI Bleedina Altered mental status Pneumonia Shook Abdominal pain AIDS Seizures Oncologic emergencies Arrhythmias Asthma Hemostatic disorders Chest pain Respirator management Psychiatric emergencies Use of microbiological stains Interpretation of chest x-rays

#### **Cardiology**

Lecture/case conference topics as in Level 2 and 3: EKG interpretation Congestive heart failure Angina Acute myocardial infarction Hypertrophic cardiomyopathy Pericardial effusion Endocarditis Syncope Valvular heart disease

#### **Infectious Diseases**

Lecture/case conference topics as in Level 2 and 3: Bacterial endocarditis AIDS Sepsis Infectious diarrhea Sexually transmitted diseases Meningitis Dermatologic manifestations of infectious diseases Use of antibiotics

#### Endocrinology

Lecture/case conference topics as in Level 2 and 3: Insulin dependent diabetes mellitus Non-Insulin dependent diabetes mellitus Thyroid disease Adrenal function and dysfunction Disorders of the hypothalamus and pituitary Female gonadal disorders Male gonadal disorders Calcium metabolism Lipid disorders

#### **Pulmonary Disease**

Lecture/case conference topics as in Level 2 and 3: Pulmonary function testing Sleep related respiratory diseases Asthma Chronic obstructive pulmonary disease Respiratory failure Pneumonia Tuberculosis Interstitial lung disease Pulmonary embolism and venous thrombosis Lung cancer Pulmonary disease in immunocompromised patients Pleural diseases

#### Gastroenterology

Lecture/case conference topics as in Level 2 and 3: Upper gastrointestinal tract bleeding Lower gastrointestinal tract bleeding Diarrhea Inflammatory bowel diseases Cancer of the digestive organs Acute and chronic pancreatitis Acute hepatitis Chronic hepatitis and cirrhosis Treatment of chronic liver disease

#### **Rheumatology**

Lecture/case conference topics as in Level 2 and 3: Rheumatoid arthritis Spondyloarthropathies and reactive arthritis Crystal arthropathies Systemic lupus erythematosus Lupus nephritis Myositis and polymyalgia rheumatica Septic arthritis Scleroderma and mixed connective tissue diseases Osteoarthritis and soft tissue rheumatism Vasculitis

#### **Nephrology**

Lecture/case conference topics as in Level 2 and 3: Approach to differential diagnosis Diabetic nephropathy Systemic diseases and the kidney Kidney stones Renal osteodystrophy Hypertension Glomerular disease Interstitial renal disease Role of radiology and kidney biopsy Disorders of sodium and potassium Progression of renal disease Drug effects on the kidney Complications of renal failure and dialysis

#### Hematology/Oncology

Lecture/case conference topics as in Level 2 and 3: Disorders of hemostasis Physiologic adjustments to anemia Hemolytic anemias Hemoglobinopathies Myeloproliferative disorders Plasma cell dyscrasias Hodgkin's and non-Hodgkin's lymphoma Carcinoma of the lung and colon Carcinoma of the breast and prostate Oncologic emergencies Selection and interpretation of diagnostic procedures in cancer Introduction to molecular genetics

#### Allergy and Immunology

Lecture/case conference topics as in Level 2 and 3: Types of immunological reactions Immune response and interleukins Immunodeficiency states Complement in health and disease Food allergy and anaphylaxis Urticaria and angioedema

Eosinophilia Asthma Rhinitis, sinusitis, and asthma Drug allergy

#### **Pathophysiology**

Lecture/case conference topics as in Level 2 and 3: Hyponatremia Edema in pulmonary disease Hepatorenal syndrome Lactic acidosis Hyperkalemia Adrenal dysfunction and AIDS Polvuria Diabetic ketoacidosis Metabolic alkalosis in heart failure Mixed acid base disturbances Bartter's syndrome Hyporeninemic hypoaldosteronism Metabolic acidosis due to ingestion of ethylene glycol Hyperosmolar non-ketotic coma Electrolyte abnormalities in alcoholics Hypercalcemia in cancer

#### Method of assessment:

For satisfactory completion of the month interns must:

Receive a satisfactory end-of-the month evaluation from the supervising attending based on

the six core competencies

- Attend the required number of conferences
- Respond to the weekly NETMA mailings
- Take the monthly test

### HEMATOLOGY / ONCOLOGY FLOOR - Level 1 Brooklyn VA Medical Center

Contact Person: Dr. Carol Luhrs (718) 630-3691

The Oncology Ward at the Brooklyn VA Hospital is located on 8 West and is the inpatient component of the Cancer Program. Residents on the service will have an intensive and focused experience in the medical care of patients with hematologic and oncologic problems. During the month, the resident will become part of the interdisciplinary team of nurses, social workers, psychologists, dietitians, and clinical pharmacists of the Cancer Program who provide the care for both inpatients and outpatients. In this way, the resident will begin to develop an understanding of the interdisciplinary management of the complex needs of these patients.

The resident will be exposed to the palliative care of cancer patients which includes skill in the management of pain and other symptoms and training in end of life care of patients who are terminally ill.

The resident will have the opportunity to discuss the evaluation of disorders of hemostasis and thrombotic states, flow cytometric analysis of lymphomas and leukemias, hemoglobin electrophoresis, serum and urine protein electrophoresis, processing of bone marrow aspirates, and the evaluation of hemolytic anemias.

#### **Goals and Objectives**

#### Patient care

- Demonstrate the ability to perform a comprehensive history and physical as well as the ability to focus and adjust the history and physical based on each patient's type of cancer, severity of illness, level of comfort, and ability to communicate
- Know the approach to commonly observed in-patient problems of oncology patients, e.g. pain, acute shortness of breath, fever, acute changes in mental status
- Demonstrate proficiency in use and interpretation of common laboratory tests and imaging studies in oncology patients
- Implement the common therapeutic protocols in oncology patients
- Perform common invasive procedures skillfully and safely

#### Medical knowledge

- Know the treatment and prognosis of commonly encountered cancers
- Know the indications, contraindications, risks, benefits, and alternatives to commonly performed invasive procedures
- Know the principles of pain management with particular attention to the management of chronic pain in cancer patients
- Understand the management of non-pain symptoms in end of life care

#### PBPI/SBP

- Know how to use information technology to supplement your medical knowledge
- Consistently utilize infection control strategies, e.g. hand hygiene, and safe use of needles and other sharps
- Understand the role of each member of the patient care team
- Demonstrate ability to obtain needed services for patients and to implement appropriate discharge plans
- Understand the role of hospice care entry requirements and benefits

#### Interpersonal and communication skills

- Write notes that accurately and completely reflect the patient's condition
- Effectively communicate patient information to colleagues, consultants, and other members of the health care team
- Establish rapport with patients of different cultural backgrounds
- Educate patients and families appropriately about medical conditions, prognosis, diagnostic and therapeutic plans, and discharge plans
- Obtain informed consent for invasive procedures with full discussion of risks, benefits, and alternatives to the procedure
- · Learn the steps involved in delivering bad news to patients
- Learn how to approach the common discussions in end of life care, i.e. advance directives, switching from
  aggressive to palliative or hospice care

#### Professionalism

- Consistently demonstrate respect for patients and staff members
- Consistently put the patients' interests ahead of any other considerations
- Understand the ethical issues involved in end of life care
- Maintain the confidentiality of personally identifiable patient information

#### Teaching Methods:

- 1. The resident will become part of a team of providers, taking care of patients on the Oncology ward, under the supervision of an attending of the Hematology/Oncology section.
- 2. The resident will have the opportunity to participate in and present cases at the General Tumor Board, Pulmonary Tumor Board, and interdisciplinary management conferences with Radiation Oncology during the month.
- The Hematology and Oncology fellows meet with the residents on a daily basis to discuss new admissions, to answer questions and to informally discuss the natural history and treatment of various hematologic and oncologic disorders.

#### Formal didactic sessions:

- 1. Weekly conferences with the Director of Palliative Care to discuss pain and symptom management and end of life care of cancer patients.
- 2. Weekly microscopy session to discuss common hematologic diagnoses.

#### **Reading Materials:**

The resident will be given a reading list of selected sections from textbooks and journal articles. Textbooks are available for the use of the resident in the Hematology/Oncology office and on the Oncology ward.

#### **Educational content**

Colorectal cancer screening Epidemiology, diagnosis, and management of colorectal cancer Epidemiology, diagnosis, and management of esophageal cancer Epidemiology, diagnosis, and management of gastric cancer Epidemiology, diagnosis, and management of pancreatic cancer

Management of osteogenic and soft tissue sarcomas

Epidemiology, diagnosis, and management of mesothelioma

Prostate cancer screening Epidemiology of prostate cancer Diagnosis, workup and staging of prostate cancer Treatment options for prostate cancer Epidemiology, diagnosis, and management of bladder cancer

Epidemiology, diagnosis, and management of head and neck cancer Chemoprevention in head and neck cancer

Evaluation and management of cancer of unknown primary site

Pain and palliative care issues in the cancer patient

Neutropenic fever and other infectious complications of malignancies Diagnosis and management of small bowel obstruction Diagnosis and management of malignant ascites Metabolic complications in the cancer patient Neurologic complications in the cancer patient

#### Method of assessment:

The first year residents are evaluated at the end of the month by their supervising attending based on their progress toward the goals of the rotation.

There is a test on palliative care at the end of the month. First year residents are required to demonstrate an improvement in score over their pre-test score at orientation. Second year residents are re-tested in the second half of the PGY2 year.

## AMBULATORY CARE BLOCK ROTATION, VA PRIME

#### 1. Overview

The PRIME program represents a VA Central Office funded initiative to develop a comprehensive interdisciplinary training program in Primary Care at participating Veterans Affairs Medical Centers. The VA NY Harbor Healthcare System – Brooklyn Campus' PRIME initiative was inaugurated in 1995; funding is allocated on an annual basis. It has been utilized to create and sustain a one-month, on-site, ambulatory care rotation for the PGY 1 residents referred to as PRIME.

#### 2. Program philosophy

The following principles underlie the implementation of the PRIME Program at the Brooklyn Campus:

- a) Provision of initial training in the broad range of skills required for a primary care clinician beyond those generally included in the professional training of house staff on their inpatient rotations.
- b) Interdisciplinary team training in the delivery of primary care.

#### 3. Specific PRIME Goals

Patient care: Gain a broad range of skills required for a primary care provider. To that end, a PRIME curriculum has been developed with emphasis on the special needs and interests of the PGY 1 house officers in medicine. It highlights diagnostic testing for cardiac and pulmonary diseases, mental health issues, and exposure to non-medical fields. It allows first hand participation in treatment programs available at the VA including substance abuse, smoking cessation, and palliative care. The curriculum also ensures that house officers acquire competence in interpretation of gram staining of sputum and urinalysis by completing required internet tutorials and, finally, provides an opportunity to learn the technique of arthrocentesis of the knee and other joints through direct instruction with a

simulator.

Medical knowledge: Expand knowledge of multiple aspects of primary care medicine through didactic sessions outlined below and self-study. Time is also provided for working on the Johns Hopkins ambulatory care teaching modules.

**Communication skills**: Expand and reinforce research, writing, and public speaking skills by participating in resident - run morning seminars on topics in primary care and completing a 1-2 page writing assignment. Communications skills are also honed in a work-shop created solely for the PRIME interns.

Practice-based performance improvement: Expand and reinforce research and critical thinking skills by participation in a library based computer search skills class, Journal Club, as well as a weekly Evidence Based Medicine seminar. PRIME is also intended to improve utilization of consultant services by affording house staff the opportunity to observe first hand how consults are completed by receiving services.

### **PROGRAM DESCRIPTION:**

### 1. Managed-care clinic assignments:

Each PRIME resident will be assigned to a minimum of one primary care and one specialty care clinic per week. Under designated supervision, residents will be responsible for assessing new patients assigned to the clinic.

House officers will also rotate through the facility's Urgi-Care Center where diagnosis and treatment of medical problems, which do not require hospital admission, will be stressed.

#### 2. Other Clinical training assignments for the PRIME Selective

- a) Palliative Care on a rotating basis, interns will attend the palliative care clinic to learn about strategies for treating chronic pain, explore psychosocial issues including advance directives related to the care of the terminally ill.
- b) Noninvasive Cardiology on a rotating basis, interns will be exposed to echocardiography, chemical and exercise stress testing to become familiar with the appearance of the heart on echo, to learn how to interpret echo reports, and understand role of these studies in diagnosis and management of coronary disease.
- c) PFT Lab on a rotating basis, interns will become familiar with the PFT exam, learn how to interpret flow volume loops, spirometry and ABG's, and understand the role of this testing in treatment of obstructive and restrictive lung disease.
- d) Smoking Cessation on a rotating basis, interns will observe actual smoking cessation classes and learn strategies to motivate people to quit smoking as well as behavioral and pharmacological therapies available to facilitate and maintain cessation.
- e) Diabetes Diet Class on a rotating basis, interns will observe actual classes and learn about strategies used to motivate people to change eating habits as well as components of a successful ADA diet.
- f) Acupuncture on a rotating basis, residents attend acupuncture clinic. Appropriate selection of patients for a complementary approach is stressed.
- g) Rehab on a rotating basis, house officers attend rehab screening clinic where review of the physiatric history and exam will be stressed. Attendance in OT/PT clinic and EMG clinic is also included in this component.
- h) Mental Hygiene on a rotating basis, residents will attend and observe recovery

programs for alcoholics with emphasis on improving interviewing and assessment skills. Exposure to other substance abuse programs is also included in this component.

- Podiatry Clinic on a rotating basis, residents will attend both general podiatry, diabetic foot, and wound clinics. Working with PRIME Podiatry residents, residents review the appropriate examination of the foot, injection and wound care techniques.
- j) Rheumatology on a rotating basis, house officers will attend rheumatology clinic where review of joint examination, arthrocentesis and joint injection are emphasized
- k) Pain Management on a rotating basis, house officers will attend pain management clinic to learn more about treatment strategies for chronic (non-cancer related) pain.

#### 3. Didactic sessions:

The following didactic sessions will be held during each month's rotation for all PRIME residents:

- a. Dermatology
- b. Optometry
- c. Neurology
- d. PubMed Tutorial
- e. Rheumatology
- f. Joint aspiration and injection
- g. Substance Abuse
- h. Topics in Psychology/Psychiatry (including PTSD; counseling for change)
- i. Palliative Care/end-of-life-care
- j. Impotence and Incontinence
- k. Screening Guidelines
- I. CHF
- m. Diabetes
- n. Hypertension
- o. Falls in the Elderly
- p. Coagulation
- q. Ethics issues
- r. Obesity

Each house officer is required to research and lead a discussion on four topics selected from a list of core ambulatory topics. The focus of these presentations is on diagnosis and treatment of medical problems commonly seen in the outpatient setting. While housestaff are given flexibility insofar as the format of their presentations, the case-based learning technique is frequently utilized.

Each house officer is also required to complete a writing assignment: a 2-3 page (triple-spaced) discussion of one of the topics above with appropriate references. These writing assignments will be reviewed in individual sessions with a professional editor.

Library time is provided for required reading and completion of internet tutorials and Johns Hopkins ambulatory care teaching modules. A package of required reading is handed out at orientation.

#### **Educational requirements:**

- 1. Attendance at seminars and clinics
- 2. Completion of four presentations
- 3. Completion of internet tutorials
- 4. Certification of satisfactory technical skills in arthrocentesis
- 5. Completion of the writing assignment

#### **Evaluation:**

The director of the rotation will complete an evaluation of each resident's performance based on attendance, completion of required elements, and quality of participation in the didactic sessions.

Each resident will complete an evaluation of the rotation with an assessment of the participating faculty as well as the educational structure of the rotation.

# Medical Intensive Care Unit – Level 1

### **Housestaff Curriculum**

Welcome to your rotation through the Medical Intensive Care Unit (MICU) at Kings County Hospital. The Medical Intensive Care Unit (MICU) is a ten-bed special care unit to which patients are admitted from the Medical, Neurology & Obstetric Services. The most frequent diagnoses are sepsis and respiratory failure. Generally, the daily census runs between 10 to 15 patients. You will be working under the supervision of attending physicians and fellows from the Division of Pulmonary & Critical Care Medicine.

### Goals

- Become competent in the initial evaluation and comprehensive care of critically ill patients.
- Understand indications for admission to the ICU.
- Formulate and understand the differential diagnosis, diagnostic approach and treatment plan of specific conditions pertaining to critically ill patients.
- Set initial ventilator settings for patients with acute respiratory failure, indications for tracheal intubation and non-invasive ventilation.
- Understand and apply principles of resuscitation and stabilization of critically ill patients.
- Function as a member of a multidisciplinary team caring for critically ill patients. Become an effective communicator with family members and to learn how to address end of life issues with patients and family.

# **Specific Learning Objectives**

### Patient care:

- Demonstrate competency in medical interviewing, physical diagnosis and data collection of critically ill patients.
- Formulate a differential diagnosis and outline a thorough, comprehensive and organized plan.
- Demonstrate organizational skills necessary for the care of critically ill patients, including prioritization of patient problems and the use of information technology.

### Medical knowledge:

- Efficiently and effectively record daily progress and events in the medical record. Know the indications for invasive and non-invasive forms of ventilation. Understand the basic principles of mechanical ventilation, modes of ventilation, ventilatory parameters; approach to reducing ventilatory support; complications of mechanical ventilation; approach to patient dysynchrony, distress or alarms; and indications for tracheostomy.
- Understand the principles and methods of fluid resuscitation for various shock states, the use of crystalloids or colloids, assessing perfusion at the bedside and the endpoints of resuscitation.
- Understand the approach to a patient with fever in the ICU, including diagnosis and treatment of hospital acquired infections as well as noninfectious causes of fever.
- Interpret simple and mixed acid-base disorders. Understand the clinical manifestations, pathophysiology and treatment of common electrolyte disturbances.

- Understand the pathophysiology and management of diabetic ketoacidosis.
- Understand and address the basic nutritional requirements of critically ill patients.
- Understand the diagnosis and treatment of anxiety, agitation, pain and delirium in the ICU, including the appropriate use of sedatives with paralytics and identification of drug/alcohol withdrawal syndromes.
- Understand the evaluation, approach and treatment of seizures (status epilepticus), CVA, coma and the basic approach to diagnosis of brain death.
- Understand the indications/contraindications for DVT and stress ulcer prophylaxis.
- Understand the indications/contraindications for, risks of, and be able to perform: venipuncture, arterial puncture, arterial catheterization, central venous access, lumbar puncture & nasogastric tube placement.
- Participate in family meetings and be able to discuss general condition of a patient with immediate family members.

# **Communication skills**

- Participate in family meetings and be able to discuss general condition of a patient with immediate family members.
- Demonstrate an ability to obtain informed consent for procedures and imaging studies
- Learn the process of death notification

## **PBPI/SBP**

- Understand and implement procedures used to promote patient safety and minimize errors
- Understand and adhere to infection control practices

### Professionalism

• Consistently demonstrate respect for patients and staff and place patients' interests above all other considerations

# **Daily Schedules & Rounds**

Generally, eight house officers are assigned to the MICU each month. This team is responsible for the provision of care to all patients in the MICU. The day interns are responsible for the care of their assigned patients, although they, as well as senior residents, should be familiar with all of the patients in the MICU. Before morning rounds begin the day interns should have examined each of their patients, reviewed the current data (laboratory studies and cultures) & formulated an organized, systematic plan for each component of the patient's problem list. In general presentations of existing patients on rounds should consist of:

- 1. Overnight events.
- Vital data Temp max, pulse range, BP range, respiratory rate, ventilator settings (if applicable), oxygen saturation and input/output (including overall fluid balance and average hourly urine output).
- 3. Directed physical examination that is specific to that particular patient.
- 4. Review of laboratory results, including cultures (these must be reviewed daily!)
- 5. Review of the medication list, including dosages and intervals (many of our patients have fluctuating renal and hepatic function, therefore it is of paramount importance to review this information in order to identify and prevent toxicity).
- 6. Assessment this must be brief and concise.
- 7. Plan this must be organized and systems oriented! For example:

**Respiratory** – continue or change aspects of ventilation, etc.

**Infectious** – what antibiotics the patient is on and what are we trying cover, culture results, etc.

**Cardiovascular/Hemodynamic** – vasopressors in use, therapies being employed based on invasive monitoring, etc.

Hematologic – bleeding problems, anticoagulation, etc.

**Metabolic** – fingerstick monitoring, insulin requirements, electrolyte replacements, changes in renal function, etc.

Alimentary/Nutrition – assessment of patient's nutritional status, hepatic dysfunction, type of NGT feeds, rate of infusion, TPN/PPN, etc.

**Neurologic** – sedatives or paralytic drugs, etc.

**DVT Prophylaxis** – pneumatic compression devices (at the bare minimum) and LMWH if there are no bleeding issues or contraindications.

**Stress Ulcer Prophylaxis** – either an H2 blocker or a PPI. (This applies to all patients who are mechanically ventilated or NPO.)

It is important to maintain a systematic approach even if there is no problem in a particular system. This ensures that all aspects of ICU care are being addressed. Afternoon rounds will begin at 5PM to provide follow-up of the days events, new admissions and plans for the on-call residents and fellow.

### Notes & Documentation

# A PROGRESS NOTE FROM EITHER AN INTERN OR RESIDENT IS REQUIRED FOR EACH PATIENT, EVERY DAY!

A template progress note has been created in order to keep things organized and efficient. See the Sample Progress Note to give you an idea of how to ensure proper documentation.

Please make sure to fill out consultation requests completely, including date and time called, reason for consultation; print and sign your name. This is required for QA, liability and billing purposes.

Whenever a patient is being transferred to the general ward or to another service a detailed summary note, including presenting complaint and hospital course is required, in addition to the daily note.

### Patients who die in the ICU require the following:

- 1. **Death Note** a note documenting that there are no signs of life on physical examination.
- 2. **Death Summary** a note that details why the patient was admitted and a brief hospital course.
- Code Note (if applicable) a note documenting when a code was called, status of the patient on your arrival, ACLS protocol employed, duration of the code and outcome.
- 4. Notification all deaths should be reported to the Organ Donor Network (1-800-443-8469) and the Medical Examiner if death occurs <24 hours of admission or unexplained death, otherwise the nurse will contact the ME for a tracking number. Also the primary family contact and the Service Attending should also be notified.</p>

### 5. Death Certificate.

If a patient is discharged home from the ICU then a standard discharge note is required. Charts that are lacking these components are deemed incomplete and will require that the resident or intern go to Medical Records to complete deficient charts. Failure to comply with this policy will be noted by the Department of Medicine. Standard Precautions

Hand washing or use of an alcohol-based gel is mandatory before and after each patient interaction. This is the best way to reduce the spread of bacteria from patient to patient.

Stethoscopes should be cleaned between each patient contact with an alcohol pad. Resistant bacteria require masks, gowns, and gloves for ANY contact in the room. When used, dispose in proper receptacle IN the patient's room. Do not bring flow sheets or charts into isolation rooms!

Respiratory masks are required for all patients on respiratory isolation.

When doing blood cultures use only the small ChloraPrep® applicator. Holding the applicator sponge downward, squeeze the wings to release the solution. Use a back and forth motion to scrub the site with the friction pad for a full 30 seconds, then allow it to dry before inserting the needle.

### **Invasive Procedures**

The MICU fellow is responsible for supervising or performing all relevant invasive procedures. Appropriate informed consent must be obtained from the patient or a properly identified surrogate prior to the procedure. Residents must be supervised for procedures they are not certified in by either a certified fellow or attending. **Do not attempt to perform a procedure if you are not confident in your ability to do so.** 

- Central venous access site preference: jugular vs. subclavian vs. femoral. Femoral access should be obtained only for emergent access, since there is a higher risk for infection and DVT.
- Sterile technique cap, sterile gown & gloves, drapes, supervision. Please be very attentive to your field and maintenance of sterility. Remember, the technique you employ during the procedure will determine the likelihood of developing an infectious complication!
- The large ChloraPrep® applicator is used for skin preparation for central venous or arterial catheterization. Holding the applicator sponge downward, squeeze the wings to release the solution. Use a back and forth motion to scrub the site with the friction pad for a full 30 seconds, then allow it to dry before inserting the needle. A large drape with a large fenestration and adhesive site should be used to provide a large sterile field and minimize contamination.
- Antibiotic-coated central lines (blue catheters) should be changed every 10 days & arterial lines every 7 days. In addition all catheter sites should be evaluated each day for signs of infection.
- Guidewire line changes for central venous lines ONLY when a new stick can not be done or when changing a PA catheter to TLC (See Protocol)– all venous catheter tips must be cut into a sterile container and sent for semi-quantitative culture.
- Procedure forms should be filled out for ALL invasive procedures done in the ICU.
- Do not draw blood from central lines because it breaks sterility!
- The nurses will do central line and arterial line dressings.

### **Orders**

### Verbal orders do not exist in the ICU!

- Admission orders on order sheets, including admission, attending of record, patient's condition, daily labs, etc.
- All orders must be communicated verbally to the nurse in addition to computer entry. This will ensure that all members of the team know what changes are occurring for a particular patient's care and that those changes will be implemented in a timely fashion.
- Ventilator changes must be ordered in the computer and communicated directly to the respiratory therapist.
- Review medication sheets daily from the nurses' medication list.
- TPN & PPN order must be in by 12 noon.

### Labs

Review need for daily labs, EKG's and CXR's.

Respiratory therapists are certified to do radial ABGs only (and not other labs!)

## **Clinical Protocols**

Sedation is titrated to the Ramsey scale, see below. Use lorazepam (Ativan®) or midazolam (Versed®) infusion if first choice is anxiolysis/sedation, (Sublimaze®) fentanyl if first choice is pain control/sedation. If one is not enough you can combine the two. For anticipated short term intubations, we use propofol (Diprivan®). For agitated delirium, we use haloperidol (Haldol®) by intermittent dosing, rarely by infusion.

Neuromuscular blockade - preferred agent is cis-atracurium (Nimbex®), which is mostly metabolized in the blood and tissues, so it can be given in liver or renal failure. Dose is titrated to ventilator synchrony, and is monitored by the "train of four." A drug holiday should ideally be given once a day to permit a neurological exam, to see if the patient still needs to be paralyzed and if the level of sedation is adequate. Daily CK levels must be sent while the patient is on continuous neuromuscular blockade.

DVT prophylaxis - pneumatic compression boots, low dose warfarin (Coumadin®), or SQ LMWH or adjusted dose UFH. Double prophylaxis (compression boots and something else) should be given to high risk patients (sedated, paralysis, hemiplegia, femoral lines - virtually all of our patients).

GI prophylaxis - all mechanically ventilated or NPO patients must receive prophylaxis with an H2 blocker or PPI. If there is no clinical preference H2 blocker should be the default choice and whenever possible enterally.

### **Nutrition**

Although the clinical nutritionist often assesses each patient and recommends nutritional orders, housestaff are expected to understand and know the patient's nutritional regimen and requirements.

### **Boarding**

Senior members of the team usually handle boarding of patients in other ICU's. Beds cannot be "saved" for potential admissions.

### **Bedside & Transport Equipment**

You should be familiar with how to use the standard equipment, including bed controls, ambu-bags, IV pumps, monitoring equipment and inline suction catheters. For transporting patients, you should be familiar with the Lifepak/ambu-bag/oxygen mask and emergency medications, as well as what medications the patient is being transported with and which IV site can be used to administer medications in an emergency. **IF YOU DON'T KNOW HOW TO USE SOMETHING, SAY SO!!** 

### **Privacy**

Privacy should be maintained while examining a patient or doing a procedure remember to pull curtains appropriately. Also don't forget that though the patients may be sedated, they may still hear you talking about them, so use judgment when talking about prognosis, etc. If you remove restraints on a patient or put the side rails down to do a procedure, PLEASE REMEMBER TO REPLACE THE RESTRAINTS AND PUT THE RAILS BACK UP.

In order for the ICU experience to be valuable and rewarding it is important to spend as much time as possible at the patient's bedside in order to appreciate the clinical relevance of principles that are discussed on rounds, such as fluid resuscitation or changes in ventilator management. Also by working with other members of the team (nurses, nutritionists, pharmacists, physician assistants, respiratory therapists) you will maximize your knowledge base by understanding the different perspectives of caring for the critically ill. By making a therapeutic decision and following up on its effect you will better understand the practice of Critical Care Medicine.

### Department of Medicine

### Division of Pulmonary & Critical Care Medicine

### Revised May 2006

The information contained in this file is provided as an adjunct to the rotation in the Medical Intensive Care Unit. It is intended only for individual educational purposes. The original owners retain the copyrights. Additionally, the spreadsheets "Drips"

and "Nutrition Calculator" can be found on various PC's in the ICU to aid in patient management.

# **Palliative Care Curriculum**

One of our departmental performance improvement projects is to improve the teaching of palliative care. Our goals for you are straightforward.

#### Goals

By the end of the year we want you to achieve the following:

- Understand how to provide optimal care for patients whose conditions cannot be cured and those at the end of life
- Demonstrate proficiency in the use of analgesics, particularly narcotic analgesics, in the setting of chronic pain
- Know how to manage the common non-pain symptoms that arise in end of life care
- Be able to communicate effectively and empathically with patients and families in delivering bad news, and in discussing prognosis of common cancers, advance directives, DNR orders, switching from aggressive care to palliative or hospice care, and other issues in end of life care
- Understand the ethical issues involved in palliative care
- Utilize all available resources, including hospice care, to provide for patients' needs and ensure a smooth transition to outpatient care

#### **Teaching Methods**

Interns spend a month on the oncology service at the VA encountering patients who are actively being treated for cancer as well as those undergoing palliative care.

During their PRIME rotation, interns make weekly teaching rounds with the physician taking care of the palliative care patients on the oncology service.

Regardless of rotation, interns participate in a day-long seminar in March covering all aspects of palliative care.

Lectures are given on both sides of the campus throughout the year as part of the core conference schedule.

On VA rotations, residents participate in monthly Schwartz Rounds

Throughout the year, regardless of rotation, interns receive a weekly email quiz largely focused on palliative care. They are required to respond during all rotations except ICU.

#### Assessment

The in-coming interns take a pre-test of their knowledge about palliative care during orientation. At the end of their Oncology floor rotation they are required to take a post-test and achieve an improvement in score.

The palliative care seminar also has a pre-test and post-test.

Responses to the weekly email quiz, correct and incorrect, are tabulated.

Interns are evaluated by their supervising attending on the oncology floor rotation based on their progress toward the goals of the rotation.