2018-2019

West Virginia University

Pulmonary/Critical Care Medicine Fellowship

Fellowship Manual

Goals & Objectives
Policies & Procedures

Academic Discipline and Dismissal Policy:

Each Program shall develop a disciplinary system to ensure resident physicians are competent, professional and ethical within the standards of care. Programs shall have a written procedure for implementation of the system and institution of corrective or disciplinary actions. The procedures shall be revised periodically and be in accordance with WVU School of Medicine GME and ACGME policies.

Programs may take corrective or disciplinary action including dismissal for cause, including but not limited to:

- Unsatisfactory academic or clinical performance
- Failure to comply with the policies, rules, and regulations of the resident physician program, the School of Medicine or other facilities where the resident physician is trained
- Revocation or suspension of license
- Violation of federal and/or state laws, regulations, or ordinances
- Acts of moral turpitude
- Insubordination
- Conduct that is detrimental to patient care
- Unprofessional conduct
- Failure of USMLE Step 3.

Corrective or disciplinary actions may include but not limited to:

- issue a warning or reprimand
- impose terms of remediation or a requirement for additional training, consultation or treatment
- institute, continue, or modify an existing summary suspension of a resident physician's appointment
- terminate, limit or suspend a resident physician's appointment or privileges
- Non-renewal of a resident physician's appointment
- dismiss a resident physician from the Program; or
- Any other action that the Program or sponsoring institution deems is appropriate under the circumstances.

A. Level I Intervention:

Oral and/or Written counseling or other adverse action:
Minor academic deficiencies that may be corrected at Level I include i) unsatisfactory academic or clinical performance or ii) failure to comply with the policies, rules, and regulations of the Program or University or other facilities where the resident physician is trained. Corrective action for minor academic deficiencies or disciplinary offenses which do not warrant probation with remediation as defined in the Level II intervention, shall be determined and administered by each program. Corrective action may include oral or written counseling or any other action deemed appropriate by the program under the circumstances. Corrective action for such minor academic deficiencies and/or offenses are not subject to appeal.

B. Level II Intervention:

Probation/Remediation Plan or other Adverse Action

Serious academic or professional deficiencies may lead to placement of a resident physician on probation. An academic or professionalism deficiency that is not successfully addressed while on probation, may lead to non-reappointment or other disciplinary action. The Program Director shall notify the resident physician in writing that they have been placed on probation and the length of probation. A corrective and/or disciplinary plan will be developed that outlines the terms and duration of probation and the deficiencies for which probation was implemented.
Failure of the resident physician to comply with the terms of the plan may result in termination or non-renewal of the resident physician's appointment.

C. Level III intervention:

Dismissal and/or Non-reappointment
Any of the following may be cause for dismissal or non-reappointment including failure to comply or address the deficiencies within the corrective and disciplinary plan as outlined in the Level II intervention:

A. Demonstrated incompetence or dishonesty in the performance of professional duties, including but not limited to research misconduct.

B. Conduct which directly and substantially impairs the individual's fulfillment of institutional responsibilities, including but not limited to verified instances of sexual harassment, or of racial, gender-related, or other discriminatory practices.

C. Insubordination by refusal to abide by legitimate reasonable directions of administrators or of the WVU Board of Governors.

D. Physical or mental disability for which no reasonable accommodation can be made, and which makes the resident unable, within a reasonable degree of medical certainty and by reasonably determined medical opinion, to perform assigned duties.

E. Substantial and manifest neglect of duty.

F. Failure to return at the end of a leave of absence.

G. Failure to comply with all policies of WVU Hospitals, Inc.

A resident who is dissatisfied with a Level II or Level III intervention, may appear that decision by following the Academic Grievance Policy and Procedure in Section XI

Grievance, Due Process, and Appeals

XI. Academic Grievance Policy and Procedure

A. The purpose of this policy is to provide a mechanism for resolving disagreements, disputes and complaints which may arise between postgraduate residents and fellows and their Program Director or other faculty member.

B. Policy

Postgraduate residents or fellows may appeal disagreements, disputes, or conflicts with the decisions and recommendations of their program regarding academic related issues using the procedure outlined in this section. This grievance procedure does not cover issues arising out of (1) termination of a resident/fellow during an annual contract period; (2) alleged discrimination; (3) sexual harassment; (4) salary or benefit issues. These grievances are covered under the employment grievance procedures for employees of West Virginia University as outlined in section XXV of these bylaws.

C. Definitions

Grievance: any unresolved disagreement, dispute or complaint a resident or fellow has with the academic policies or procedures of the Residency Training Program or any unresolved dispute or complaint with his or her Program Director or other faculty member. These include but are not limited to issues of suspension, probation, retention at current level of training, and refusal to issue a certificate of completion of training.

D. Procedure

1. Level 1 Resolution

A good faith effort will be made by an aggrieved resident/fellow and the Program Director to resolve a grievance, which will begin with the aggrieved resident/fellow notifying the Program Director, in writing, of the grievance within 10 working days of the date of receipt of the dispute or complaint.

This notification should include all pertinent information and evidence which supports the grievance. Within ten (10) working days after notice of the grievance is received by the Program Director, the resident/fellow and the Program Director will set a mutually convenient time to discuss the complaint and attempt to reach a solution. Level I of the grievance procedure will be deemed complete when the Program Director informs the aggrieved resident/fellow in writing of the final decision. This should occur within 5 working days after the meeting between the resident/fellow and Program Director. A copy of the Program Director's final decision will be sent to the Department Chair and to the Designated Institutional Official for GME (DIO). The resident/fellow is not entitled to legal representation during the Level 1 meeting.

2. Level 2 Resolution

If the Program Director's final written decision is not acceptable to the aggrieved resident/fellow, the resident/fellow may choose to proceed to a Level 2 resolution, which will begin with the aggrieved resident/fellow notifying the appropriate Department Chair of the grievance in writing. Such notification must occur within 10 working days of receipt of the Program Director's final decision. If the Department Chair is also functioning as the Program Director, then the Level 2 resolution will be handled by the DIO. The resident's/fellow's notification should include all pertinent information, including a copy of the Program Director's final written decision, and evidence which supports the grievance. Within ten (10) working days of receipt of the grievance, the resident/fellow and the Department will set a mutually convenient time to discuss the complaint and attempt to reach a solution.

Level II of this grievance procedure will be deemed complete when the Department Chair (or DIO) informs the aggrieved resident/fellow in writing of the final decision. This should occur within 5 working days of the meeting with the resident/fellow and the Chair. Copies of this decision will be kept on file with the Program Director, in the Chairman's office and sent to the DIO. The resident/fellow is not entitled to legal representation during the Level 2 meeting.

3. Level 3 Resolution

If the resident/fellow disagrees with the Department Chair's final decision, he or she may pursue a Level 3 resolution of the grievance. The aggrieved resident/fellow must initiate this process by presenting their grievance, in writing, along with copies of the final written decisions from the Program Director and Department Chair, and any other pertinent information, to the office of Graduate Medical Education within 5 working days of receipt of the Department Chair's final written decision. Failure to submit the grievance in the 5 working day time frame will result in the resident/fellow waiving his or her right to proceed further with this procedure. In this situation, the decision at Level II will be final.

Upon timely receipt of the written grievance, the DIO will appoint a Grievance Committee and will contact the aggrieved resident/fellow to set a mutually convenient time to meet with them. The Grievance Committee will review and carefully consider all material presented by the resident/fellow and his or her Program Director or the grieveable party at the scheduled meeting, following the protocol outlined in Section XI.F.

The Grievance Committee will provide the aggrieved resident/fellow with a written decision within five working days of the meeting and a copy will be placed on file in the Office of Graduate Medical Education, and with the Program Director and Department Chair.

The decision of the Grievance Committee will be final.

E. The Grievance Committee

Upon request for a formal resolution at Level III, the DIO will form a Grievance Committee composed of at least two residents/fellows, and three Program Directors. No members of this

committee will be from the aggrieved resident's/fellow's own department. The DIO will choose a faculty member appointed to the Grievance Committee to be the chair of the committee. The Grievance Committee hearing should occur within 20 working days from receipt of the Level III grievance.

F. Grievance Committee Procedure

1. Attendance: All committee members should be present throughout the hearing. The aggrieved resident/fellow must personally appear at the Grievance Committee meeting.

2. Conduct of Hearing: The chair will preside over the hearing, determine procedure, assure there is reasonable opportunity to present relevant oral or written information, and maintain decorum. The Chair will determine if information is relevant to the hearing and should be presented or excluded. The aggrieved Resident may present any relevant information or testimony from any colleague or faculty member. The resident/fellow is NOT entitled to legal representation during the grievance committee hearing. The Program Director and Department Chair may be requested by the Committee to also be present for oral testimony. The committee chair is authorized to exclude or remove any person who is determined to be disruptive.

3. Recesses and Adjournment: The committee chair may recess and reconvene the hearing by invoking the right for executive session. Upon conclusion of the presentation of oral and written information, the hearing record is closed. The Grievance Committee will deliberate in executive session outside the presence of the involved parties.

4. Decisions: Decisions are to be determined by vote of a majority of members of the Committee and are final. After deliberation, the Chair will prepare a written decision to be reviewed and signed by all of the Committee members. The aggrieved resident/fellow should be notified within 5 working days of the hearing.

5. Meeting Record: A secretary/transcriptionist may be present for the purpose of recording the meeting minutes. Minutes and the final written decision of the Committee will be placed on file in the GME Office. The program will post the final decision in the resident's or fellow's academic file.

G. Confidentiality

All participants in the grievance are expected to maintain confidentiality of the grievance process by not discussing the matter under review with any third party except as may be required for purposes of the grievance procedures.

ADDITIONAL POLICIES AND STANDARDS FOR FELLOWS IN PULMONARY AND CRITICAL CARE MEDICINE

Call schedules as follows: Night float fellow will cover the MICU and pulmonary consult service from 7pm till 7am. Weekend will be covered by other fellows not on night float. Weekend calls will be out of the house call. Fellows not on night float are expected to have 2-4 night calls per month.

Clinic schedule will be as follows: On average during the first six months, the fellow will be scheduled to see one to two new patients and five-six return visits. During the rest of the training years, the fellow will see two new patients and five-six return visits.

All attempts will be made to distribute equally among the fellows calls which fall on holidays. This will be on a rotational basis as a norm.

During the Christmas/New Year holidays, the fellows will be divided into two groups; the first group will cover the Christmas week, and the second group will cover the New Year Week.

The Program Administrator will prepare the conference schedule for the month under the supervision of the Program Director. These conferences will adjust to the format of the program requirements.

The consult fellow is in charge of presenting cases for the 4:00 p.m. Case conferences on Tuesdays.

Fellows are responsible for presenting at least one (1) journal article in the Pulmonary Journal Club held each Monday of the month from 12:00 to 1:00 p.m.

Fellows are responsible for completion of medical records in Ruby Memorial Hospital in a timely manner. Records must be completed within one week for clinic patients and must be completed within the same day when a fellow sees someone as an inpatient.

By the end of the first fellowship year, each fellow is expected to have developed a research project in conjunction with his/her mentor.

In conjunction with the MICU attending, the MICU fellow will be responsible for the Mortality & Morbidity report for the month.

Fellows must refrain not to take vacation time during their ICU, Consult, and VA rotations.

When an Intern is on call in the ICU by themselves, the fellow is expected to stay in-house until 8:00 p.m. and supervise the Intern. The Department of Medicine is expected

to provide senior residents in-house backup from 8:00 p.m. to 8:00 a.m. (The fellow is to follow the duty hour guidelines) see Duty Hour Policy. While in the ICU, the fellow will not have out-patient clinic duties.

Any pulmonary consult coming from the CCU, CTU, and PICU which requires positive pressure ventilation (mechanical ventilation or noninvasive positive pressure ventilation) will be taken care of by the MICU fellow.

Any Fellow who would do an elective will identify a Preceptor who will be in charge of evaluating the rotation and notify the fellowship administrator so that an evaluation form can be sent to the Preceptor. This includes research month. Also, a fellow must inform the Fellowship Program Administrator as far as in advance as possible if they wish to complete an elective outside of Pulmonary/CCM. This allows other sections advance time in planning and being able to accommodate our Fellows on their service.

Fellows who request time off should arrange for their own coverage (duties, clinics, and rotations) and get the approval of the Program Director. **Clinics must be cancelled three (3) months in advance – therefore, plan ahead**. The fellowship administrator must also be notified of any time off in advance.

The Pulmonary Ambulatory Clinic Service fellow is assigned to do Sleep Clinic on Thursday mornings in Medical Specialties, & Cancer Center Clinic on Tuesday morning in addition to their own continuity clinic.

Each fellow is expected to come to the office **at least once a week** (or more often) to check their main or to call the Fellowship Program Administrator on a daily basis during office hours to get messages if your rotation prevents you from coming to the office in a timely manner. <u>Your mailbox is not a storage box!</u>

The VA fellow will share one weekend call at Ruby Memorial Hospital during his VA rotation month.

If a fellow becomes ill and unable to perform his clinical duties, he/she will have to notify the Program Director, Program Administrator and Chief Fellow. The Chief Fellow will make proper arrangements with the approval of the Program Director for one of the rotation fellows to cover the service.

West Virginia University
Department of Medicine-Section of Pulmonary/Critical Care Medicine
Fellowship Manual

Welcome to your Anesthesia Rotation! We are happy to have you join us. In order to help your rotation run smoothly, I am providing you with a list of expectations. It will take you a few days to get into the flow of things, so expect to feel a little lost at first (that is normal). Please feel free to ask questions!

- You will be assigned to an operating room at the start of each day. You will find your assignment on the posted schedule in either the anesthesia offices or the 5N anesthesia lounge. The schedule should be completed by 4pm on previous day. You may check your assignment the evening it is completed or in the morning before you head to the OR.
- You are expected to have gone over the medical history of your first patient prior to showing up in the OR in the morning.
- You are expected to be in the hospital, dressed in scrubs, and to have looked up your assigned patients by 6:40am. The OR start time is 7:00am. (P.S. I know that is early, but that is what time the OR's start, so that is what time you have to be here.)
- Between 6:40 and 7:00am, please introduce yourself to the CRNA or resident with whom you will be working. You should also help them set up the OR for the day. If they are not in the OR, please page them or meet them at the patient's bedside. During this time, you will also introduce yourself to the patient in the preoperative area and perform an airway exam.
- You are encouraged to remain in your assigned OR for a reasonable period of time. Hanging out in the OR will allow you to learn more about the pharmacology and physiology of IV anesthetics, neuromuscular blocking drugs, opioids, vasopressors, inotropes, and vasodilators (drugs used by all specialties). This is also the time to learn about ventilator management and become familiar with airway equipment. You are encouraged to ask questions about these topics. We are happy to teach!
- I understand that you are here to improve your airway management skills. If you decide to float between OR's to get intubations, you are still expected to introduce yourself to the CRNA/resident assigned to the OR that you would like to go into. You are also expected to review the patient's medical history in Epic, introduce yourself to the patient, and perform an airway exam prior to entering the operating room. When you leave your assigned OR, it will then become your responsibility to find new cases to go into. You will be provided with a list of the types of cases that frequently require intubations.
- One day per week, you will be seeing consults with an anesthesiology resident from 10am-3pm. You will meet them in the anesthesia resident library at 10am on your assigned day. If the consult service is slow, you are encouraged to help with labor epidurals, emergency intubations, and epidural blood patches. You may also choose to spend time with the regional anesthesia service to learn about local anesthetics, ultrasound anatomy, and peripheral nerve blocks.
- You are welcome to spend time in the cardiac anesthesia rooms. Cardiac patients all receive arterial lines, central venous lines, Swan-Ganz catheters, and transesophageal ECHOs. These patients are critically ill, so permission to perform these procedures will be based on your current skill level.

If you have any questions or problems during your rotation, please contact Dr. Kristen Dragan, Director, Off-Service Resident Education. Pager #0177, Email: dragank@wvumedicine.org, Radio Phone #75044

West Virginia University School of Medicine
Graduate Medical Education
FIT FOR DUTY POLICY:

Fitness for Duty refers to the ability of a resident physician to perform the essential functions of his or her job without an impairment that may pose a potential risk to patients, a direct threat to the safety of others in the workplace, and/or interfere with the performance of his or her necessary duties, with or without a reasonable accommodation.

There are at least four categories of *impairment* associated with Fitness for Duty:

(1) Impairment associated with the misuse or the suspicion of misuse of prescription medications, alcohol or illegal drugs;

(2) Impairment associated with behavior that may pose a direct threat to the employee, patients or to others in the workplace;

(3) Impairment caused by a medical condition, including mental health, and/or the use of medication for that condition; and

(4) Impairment associated with fatigue/sleep deprivation

The supervisor who receives reliable information that an individual may be unfit for duty, or through personal observation believes an individual to be unfit for duty, will validate and document the information or observations as soon as is practicable. Actions that may trigger the need to evaluate an employee's fitness for duty include, but are not limited to, problems with dexterity, coordination, concentration, memory, alertness, vision, speech, inappropriate interactions with coworkers or supervisors, inappropriate reactions to criticism, or suicidal or threatening statements.

In the spirit of a just culture of safety and well being, any person may report suspicion of impairment to the employee's supervisor or to the compliance hotline. There shall be no retaliation or repercussions towards individuals who have reported such concerns.

Residents and any others are urged to report any concern regarding duty hours, fatigue and other issues to the compliance hotline of the WVUH, the primary teaching hospital at 1-877-298-4376. These concerns will be reported to the GME office.

As a result of impairment the employee may be suspended until fitness for duty is established. Involvement of the Human Resources department, the Employee Assistance Program, and the hospital Practitioner Health Committee is expected.

Approved by the GMEC Taskforce: June 2011
Adopted by the GMEC: July 9, 2011

XXII. Policies of WVUH Practitioner Health Committee:

Appendix I POLICIES OF THE WVUH PRACTITIONER HEALTH COMMITTEE

Purpose

The West Virginia University Hospitals, Inc. (WVUH) Practitioner Health Committee serves as the primary resource in the management of impaired Practitioners. Impairment includes any physical, mental, behavioral or emotional illness that may interfere with the Practitioners ability to function appropriately and provide safe patient care. The purpose of impaired Practitioner assistance is to maximize support for Practitioners through appropriate interventions. This process relates specifically to mental, physical or behavioral impairment and does not include performance management or disciplinary actions.

Policy

In order to assure the safety of patients, co-workers and trainees WVUH will address all reports of impaired or possibly impaired performance of Practitioners. WVUH will also strive to maintain the confidentiality of any and all individuals who may report any observed impairment or possible impaired performance of any practitioner(s) affiliated with the hospital. Impairment may be due, but not limited to physical, and/or mental/behavioral problems, including drug and alcohol use, misuse and/or abuse. All assessments, evaluations and treatment recommendations received by the Practitioner Health Committee shall be confidentially maintained under the peer review privilege, except as limited by regulation, ethical obligation, Medical Staff Manuals, and/or threat to patient safety. Practitioners referred to in this policy include, but are not limited to, faculty credentialed by WVUH, fellows, residents, interns and all allied health professionals.

Procedure

A. EDUCATION

1. WVUH will provide education on Practitioner health and impairment to the Medical, Dental, Allied Health Staff, and WVU Residents.

2. Hospital administrative leadership will assure that policies and procedures related to impairment and recognition issues specific to impairment are widely disseminated to appropriate hospital staff on an annual basis. WVUH encourages self-referral of any Practitioner in seeking help for health or impairment problem to the Practitioner Health Committee. Practitioners may voluntarily seek assistance from the WVU Faculty and Staff Assistance Program (FSAP) at any time with or without referral from either the Practitioner Health Committee or other administrative personnel.

B. NEW PRACTITIONER

1. Any Practitioner who requests to practice at WVUH whose ability to practice medicine may be affected, is undergoing treatment for substance abuse, any other physical or mental health problems, or who otherwise is reasonably believed to suffer from a substance abuse problem or any other physical or mental health problem must be referred by the Vice President of Medical Affairs to the Practitioner

Health Committee. It is the responsibility of the department chair to notify the Vice President of Medical Affairs and supply in writing the nature of the referral.
2. The Practitioner Health Committee will make their recommendations to the Vice President of Medical Affairs. If determined by the Vice President of Medical Affairs that the Practitioner should seek further evaluation from a specialized counselor for his/her specialized need, at that time an Agreement of Understanding, on behalf of WVUH, as well as a written consent and release, on behalf of WVUH, will be presented to the Practitioner and shall be signed if he/she continues to seek privileges at WVUH. Such information being released includes, urine and blood screening times, results, appointment times, and any referrals to other entities/providers.

3. If further evaluation is required, following receipt of the evaluation, the Practitioner Health Committee will provide a recommendation to the Vice President of Medical Affairs on each of the following:

Advisability of appointment to the Medical, Dental or Allied Health Staff at WVUH, as applicable
Need for any additional monitoring and treatment
Need for limitations or conditions on privileges.

4. After discussing the Practitioner Health Committees recommendations with the department chair, the Vice President of Medical Affairs will determine the final recommendation regarding the applicant's ability to practice, which will be presented, to the WVUH Board of Directors, through the Joint Conference Committee. The Vice President of Medical Affairs may grant temporary privileges or allow a Practitioner to begin to treat patients at WVUH; however, the WVUH Board of Directors through the Joint Conference Committee has the final decision as to whether a Practitioner may practice at WVUH and under what conditions.

5. The Vice President of Medical Affairs will communicate the final recommendations to the Residency Program Director, the Designated Institutional Official (for residents only) and the department chair.

6. When the appointment is contingent upon rehabilitation, counseling or other conditions of appointment or practice, the Practitioner will be referred to WVU FSAP or an agreed upon external provider. The Vice President of Medical Affairs will ensure that the executed "Agreement of Understanding" specifies treatment recommendations and conditions of appointment and/or clinical privileges must be signed in writing, at the minimum, by the Vice President of Medical Affairs and the Practitioner. Such conditions may include, but are not limited to, random drug screens, continued counseling and meeting with the Practitioner Health Committee.

7. All further decisions as to what actions, if any, need to be taken, remain with the Vice President of Medical Affairs.

C. PROCEDURES FOR CURRENT PRACTITIONERS

1. Observed Impaired Behavior

a. It is the responsibility of all medical, dental, allied health staff, and residents to immediately report any observed behavior which establishes a reasonable belief that a Practitioner is impaired or exhibiting

inappropriate behavior (physical, emotional or psychological) or evidence of substance abuse problems that could impact on professional/clinical performance in the Hospital (evidence other than or in addition to observation of personal behavior includes, but is not limited to, improperly disposed-of syringes and missing or improperly accounted for drugs) to the Vice President of Medical Affairs and/or the department chair. During off-shift hours, the individual reporting should notify the Administrator-OnCall (AOC).

b. Hospital Staff should notify the Administrator-On-Call (AOC) or the Vice President of Medical Affairs (if during regular business hours) of any inappropriate behavior or suspected substance abuse. In the event that the Administrator-On-Call is notified, he/she will notify the Vice President of Medical Affairs and the Vice President of Medical Affairs will notify the department chair.

c. The department chair, the Vice President of Medical Affairs or the Administrator-On-Call (AOC) during off-shift hours will investigate and verify the credibility of the allegation in C.1.a or C.2.b to ascertain the credibility of the complaint, concern or allegation. The Practitioner will not be told who filed the initial report. If the alleged impairment is deemed credible by the Vice President of Medical Affairs, department chair or the Administrator-On-Call (AOC) during off-shift hours, immediate drug testing may be requested. During business hours, the Practitioner may be referred to Employee Health. After hours, the Practitioner will be referred to the Emergency Department. Refusal to cooperate with testing is grounds for dismissal from WVUH and removal of residents from providing any patient care within the Hospital. Employee Health is the designated department to administer the drug testing as well as provide the results to the Vice President of Medical Affairs and/or the Practitioner Health Committee. Employee Health is not required and will not keep any file for individuals including but not limited to any test results and/or appointment times. If the impairment poses an immediate risk to patient safety, the Practitioner must be immediately removed from patient care and patient contact and an immediate precautionary suspension will occur. (For further information regarding precautionary suspension refer to Article IV, Section 4.3 in the case of credentialed Practitioners, and Appendix O in the case of residents.) If the impairment does not pose an immediate risk to patient safety, the Practitioner may continue with his/her patient care duties. The Vice President of Medical Affairs will then refer the Practitioner to the Practitioner Health Committee.

2. Self-Referral

a. All Practitioners are required to self refer to his/her department chair or the Vice President of Medical Affairs in the event that he/she experiences any substance abuse/health problem that could impact on professional/clinical performance in the Hospital. When reported to the department chair, the chair shall report to the Vice President of Medical Affairs. The Vice President of Medical Affairs will then refer the Practitioner to the Practitioner Health Committee.

b. A Practitioner who seeks assistance with WVU FSAP is required to inform the Vice President of Medical Affairs of this evaluation. The Vice President of Medical Affairs will then refer the Practitioner to the Practitioner Health Committee.

3. Procedures of the Practitioner Health Committee

a. Upon referral to the Practitioner Health Committee, the Practitioner is required to sign a consent and release, on behalf of WVUH, allowing information regarding their treatment to be released to the Vice President of Medical Affairs and/or the Practitioner Health Committee by both the WVU FSAP and any treatment provider. Such information being released is, but not limited to, urine and blood screening times, results, appointment times, and any referrals to other entities/providers. In the event that he/she refuses to sign the consent and release, on behalf of WVUH, he/she will be precautionary suspending from duty, until the mental health assessment and the signing of the consent and release, on behalf of WVUH, is resolved. Refer to Article IV, Section 4.3 Precautionary Suspension or Appendix O, as applicable. All such reported information shall be kept confidential except as limited by law, ethical violation, or when patient safety is threatened.

b. Following a referral from the Vice President of Medical Affairs and the receipt of any investigations and evaluations or results of drug testing, the Practitioner Health Committee will recommend to the Vice President of Medical Affairs on each of the following:

Advisability of continued appointment to WVUH
Need for any additional monitoring and treatment, continued or privileged, as applicable
Need for limitations or conditions on privileges

c. After discussing the Practitioner Health Committees recommendations with the department chair, the Vice President of Medical Affairs will determine the final recommendation regarding the practitioner's ability to practice, which will be presented to the WVUH Board of Directors, through the Joint Conference Committee.

d. The Vice President of Medical Affairs will communicate the final recommendations to the Designated Institutional Official (for residents only) and the department chair (residents and faculty).

e. When the continued appointment is contingent upon rehabilitation, counseling or other conditions of appointment or practice, the Practitioner will be referred to WVU FSAP or an agreed upon external provider. The Vice President of Medical Affairs will develop an "Agreement of Understanding" with the Practitioner, which specifies treatment recommendations and conditions of appointment and must be signed in writing, at the minimum, by the Vice President of Medical Affairs and the Practitioner. Such conditions may include, but are not limited to, random drug screens, continued counseling and meeting with the Practitioner Health Committee.

f. All further decisions as to what actions, if any, need to be taken remain with the Vice President of Medical Affairs.

g. If at any time the Practitioner fails to comply with the indicated terms and conditions, the Practitioner Health Committee will immediately report this information to the Vice President of Medical Affairs, which will report to the department chair. The Vice President of Medical Affairs has the authority to do one or more of the following:

Terminate immediately
Demand compliance or be terminated
Precautionary suspend until in compliance

D. CONFIDENTIALITY

a. The Practitioner Health Committee shall handle all communications and discussions in a confidential manner, including the identity of anyone making a report, consistent with applicable legal requirements and patient safety considerations.

ACGME Core Competencies IV A. 5.

Patient Care

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

Medical Knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care.

Practice Based Learning and Improvement

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

1. Identify strengths, deficiencies, and limits in one's knowledge and expertise;
2. Set learning and improvement goals;
3. Identify and perform appropriate learning activities;
4. Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;
5. Incorporate formative evaluation feedback into daily practice;
6. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;
7. Use information technology to optimize learning; and ,
8. Participate in the education of patients, families, students, residents and other health professionals.

Interpersonal and Communication Skills

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

1. Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
2. Communicate effectively with physicians, other health professionals, and health related agencies;
3. Work effectively as a member or leader of a health care team or other professional group;
4. Act in a consultative role to other physicians and health professionals; and,
5. Maintain comprehensive, timely, and legible medical records, if applicable.

Professionalism

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

1. Compassion, integrity, and respect for others;
2. Responsiveness to patient needs that supersedes self-interest;
3. Respect for patient privacy and autonomy;
4. Accountability to patients, society and the profession; and,
5. Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

Systems Based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents are expected to:

1. Work effectively in various health care delivery settings and systems relevant to their clinical specialty;
2. Coordinate patient care within the health care system relevant to their clinical specialty;
3. Incorporate considerations of cost awareness and risk benefit analysis in patient and/or population based care as appropriate;
4. Advocate for quality patient care and optimal patient care systems;
5. Work in inter professional teams to enhance patient safety and improve patient care quality; and,
6. Participate in identifying system errors and implementing potential systems solutions.

Criteria for Eligibility and Selection of Candidates Policy

For Graduate Medical Education at the West Virginia University School of Medicine:

The primary source of candidates for entry into graduate medical education programs will be graduates of Liaison Committee for Medical Education (LCME)-accredited medical schools. All programs participate in an organized matching program. **WVU School of Medicine only accepts J-1Visa Status for Resident Physician positions**. In addition, to be eligible for consideration a candidate must be a:

A. Graduate of a medical school in the United States and Canada accredited by the Liaison Committee on Medical Education (LCME).
B. Graduate of a college of osteopathic medicine in the United States accredited by the American Osteopathic Association (AOA).
C. Graduate of a medical school outside the United States and Canada who meet at least one of the following qualifications:
   a. Have received a currently valid certification from the Educational Commission for Foreign Medical Graduates (ECFMG) or
   b. Have a full and unrestricted license to practice medicine in a U.S. licensing jurisdiction.
D. Graduate of medical school outside the United States who has completed a Fifth Pathway program provided by an LCME-accredited medical school. A Fifth Pathway program is an academic year of supervised clinical education provided by an LCME-accredited medical school to students who
   a. Have completed, in an accredited U.S. college or university, undergraduate premedical education of the quality acceptable for matriculation in an accredited United States medical school;
   b. Have studied at a medical school outside the United States and Canada but listed in the World Health Directory of Medical schools;
   c. Have completed all of the formal requirements of the foreign medical school except internship and/or social service;
   d. Have attained a score satisfactory to the sponsoring medical school on a screening examination; and
   e. Have passed either the Foreign Medical Graduated Examination in the Medical Sciences, Parts I and II of the examination of the National Board of Medical Examiners, or Steps 1 and 2 of the United States Medical Licensing Examination (USMLE).
E. Candidates must meet all federal standards as may be required by Centers for Medicare & Medicaid Services (CMS) or other federal and state regulatory agencies. Applicants that are designated by CMS as “excluded providers” shall not be eligible to appointment as a resident
F. To have completed specialty training in an ACGME-accredited program in Internal Medicine in the US.

Residents selected outside the normal matching process, whether that is through the match ‘scramble’ or during the ‘off-cycle’ must be reviewed and approved by the Designated Institutional Official (DIO).

Program directors should base their selection on the eligible candidate’s ability, aptitude, and preparedness as evidenced by their academic credentials including but not limited to class rank, course evaluations, and standardized licensure qualifying examination scores, communication skill both written and verbal, and letters of recommendation from faculty and the Dean of their school verifying their ability, aptitude, and preparedness as well as their motivation and integrity. There must not be any discrimination in the selection process with regard to gender, race, age, religious affiliation, color, national origin, disability or veteran status.

Approved by GMEC Taskforce 5/1/08
Approved by GMEC 5/9/08

ACGME Institutional Requirements
II.A.1 and 2

The Internal Medicine Subspecialty Milestones Project

A Joint Initiative of

The Accreditation Council for Graduate Medical Education
and
The American Board of Internal Medicine

In Collaboration with

July 2015

Milestone Reporting

This document presents milestones designed for programs to use in semi-annual review of fellow performance and reporting to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies that describe the development of competence from an early subspecialty learner up to and beyond that expected for unsupervised practice. In the initial years of implementation, the Review Committee will examine Milestone performance data for each program's fellows as one element in the Next Accreditation System (NAS) to determine whether fellows overall are progressing.

The Subspecialty Milestones are arranged in columns of progressive stages of competence that do not correspond with post-graduate year of education. For each reporting period, programs will need to review the Milestones, identify those that best describe a fellow's current performance, and ultimately select a box that best represents the summary performance for that sub-competency (see the figure on page v). Selecting a response box in the middle of a column implies that the fellow has substantially demonstrated those milestones, as well as those in previous columns. Selecting a response box on a line in between columns indicates that milestones in the lower columns have been substantially demonstrated, as well as some milestones in the higher column.

A general interpretation of each column for subspecialty medicine is as follows:

Not Yet Assessable: This option should be used only when a fellow has not yet had a learning experience in the sub-competency.

Critical Deficiencies: These learner behaviors are not within the spectrum of developing competence. Instead they indicate significant deficiencies in a fellow's performance.

Column 2: Describes behaviors of an early learner.

Column 3: Describes behaviors of a fellow who is advancing and demonstrating improvement in performance related to milestones.

Ready for Unsupervised Practice: Describes behaviors of a fellow who substantially demonstrates the milestones identified for a physician who is ready for unsupervised practice. This column is designed as the graduation target, but the fellow may display these milestones at any point during fellowship.

Aspirational: Describes behaviors of a fellow who has advanced beyond those milestones that describe unsupervised practice. These milestones reflect the competence of an expert or role model and can be used by programs to facilitate further professional growth. It is expected that only a few exceptional fellows will demonstrate these milestones behaviors.

For each ACGME competency domain, programs will also be asked to provide a summative evaluation of each fellow's learning trajectory.

Additional Notes

The "Ready for Unsupervised Practice" milestones are designed as the graduation *target* but *do not* represent a graduation *requirement*. Making decisions about readiness for graduation is the purview of the residency program director (See the Milestones FAQ for further discussion of this issue: "Can a resident/fellow graduate if he or she does not reach every milestone?"). Study of Milestone performance data will be required before the ACGME and its partners will be able to determine whether the "Ready for Unsupervised Practice" milestones and all other milestones are in the appropriate stage within the developmental framework, and whether Milestone data are of sufficient quality to be used for high stakes decisions.

Answers to Frequently Asked Questions about Milestones are available on the Milestones web page: http://www.acgme.org/acgmeweb/Portals/0/MilestonesFAQ.pdf.

Listed below are the societies and members who have participated in the development of the Internal Medicine Subspecialty Reporting Milestones.

Chairs: Scott Gitlin, MD and John Flaherty, MD

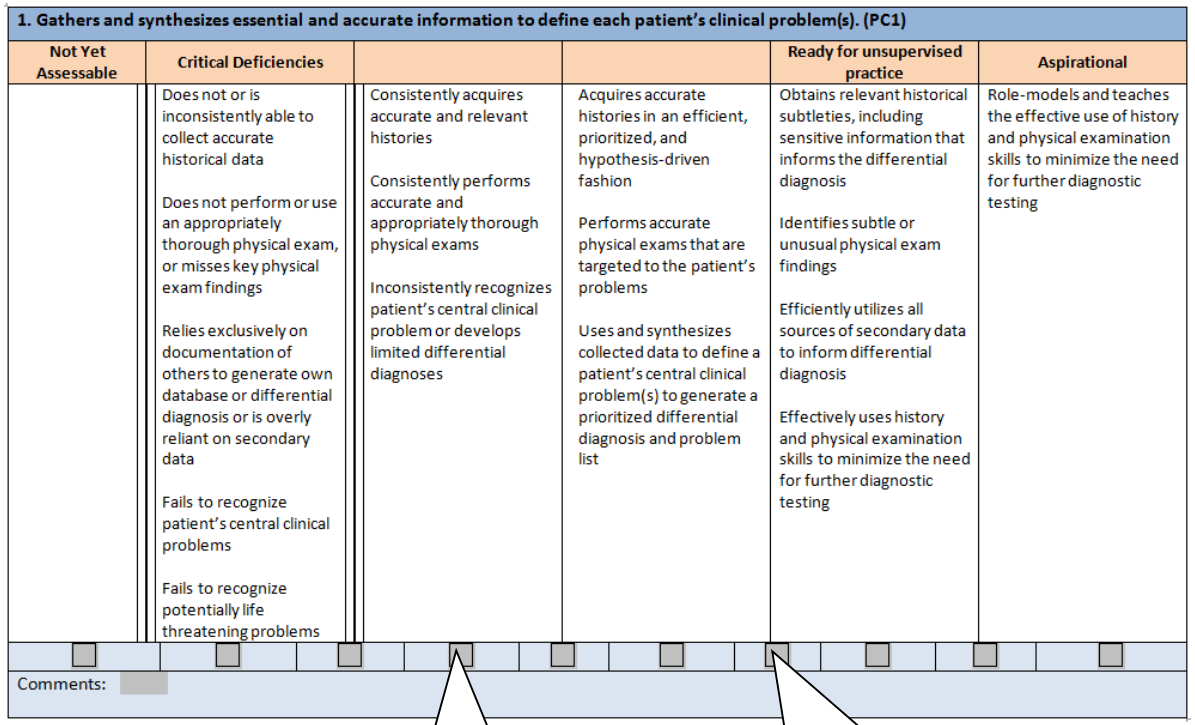
Accreditation Council of Graduate Medical Education: James Arrighi, MD; Susan Swing, PhD; Jerry Vasilias, PhD
Alliance for Academic Internal Medicine: D. Craig Brater, MD; Margaret Breida; Kelly Caverzagie, MD; Gregory C. Kane, MD; Consuelo Nelson Grier; Polly Parsons, MD; Bergitta Smith
American Academy of Hospice and Palliative Care Medicine: Laura Morrison, MD; Steven Radwany, MD; Timothy Quill, MD
American Academy of Sleep Medicine: Vishesh Kapur, MD; Becky Roberts; Michael Silber, MB ChB
American Association for the Study of Liver Diseases: Adrian Di Bisceglie, MD; Oren Fix, MD; Ayman Koteish, MD
American Association of Clinical Endocrinologists: Pasquale Palumbo, MD; Dace Trence, MD
American Board of Internal Medicine: Lee Berkowitz, MD; Eric Holmboe, MD; Sarah Hood; William Iobst, MD; Sharon Levin, MD; Sandra Yaich
American College of Cardiology: Jill Foster; Marcia Jackson, PhD; Jeff Kuvin, MD; Eric Williams, MD
American College of Chest Physicians: Doreen Addrizzo-Harris, MD; John Buckley, MD; Paul Markowski, CAE; Curtis Sessler, MD; Kenneth Torrington, MD
American College of Gastroenterology: Seth Richter, MD; Ronald Szyjkowski, MD
American College of Physicians: Patrick Alguire, MD; Molly Cooke, MD
American College of Rheumatology: Marcy Bolster, MD; Calvin Brown, MD
American Gastroenterological Association: Tamara Jones; Lori Marks, PhD; Darrell Pardi, MD; Suzanne Rose, MD; Brijen Shah, MD
American Geriatrics Society: Jan Busby-Whitehead, MD; Lisa Granville, MD; Rosanne Leipzig, MD
American Society of Clinical Oncology: Frances Collichio, MD; Marilyn Raymond, MD; Jamie Von Roenn, MD
American Society of Gastrointestinal Endoscopy: Diane Alberson; Walter Coyle, MD; Robert Sedlack, MD
American Society of Hematology: Linda Burns, MD; Charles Clayton; Karen Kayoumi; Elaine Muchmore, MD
American Society of Nephrology: Nancy Adams, MD; Raymond Harris, MD; Tod Ibrahim; Ryan Russell
American Society of Nuclear Cardiology: Brian Abbott, MD; James Arrighi, MD
American Thoracic Society: Henry Fessler, MD
Association of Program Directors in Endocrinology, Diabetes and Metabolism: Ashok Balasubramanyan, MD; Ann Danoff, MD; Geetha Gopalakrishnan, MD
Association of Pulmonary and Critical Care Medicine Program Directors: Craig Piquette, MD; David Schulman, MD
Association of Specialty Professors: John Flaherty, MD; Mark Geraci, MD; Scott Gitlin, MD; Don Rockey, MD; Joshua Safer, MD
Infectious Diseases Society of America: Wendy Armstrong, MD; Daniel Havlichek, Jr, MD
Society of Cardiac Angiography and Interventions: Tarek Helmy, MD; Daniel Kolansky, MD
Society of Critical Care Medicine: Stephen Pastores, MD; Antoinette Spevetz, MD
The Endocrine Society: Beverly Biller, MD; Ailene Cantelmi

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a fellow's performance on the milestones for each sub-competency will be indicated by:

- selecting the column of milestones that best describes that fellow's performance

or,

- selecting the "Critical Deficiencies" response box



1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Does not or is inconsistently able to collect accurate historical data Does not perform or use an appropriately thorough physical exam, or misses key physical exam findings Relies exclusively on documentation of others to generate own database or differential diagnosis or is overly reliant on secondary data Fails to recognize patient's central clinical problems Fails to recognize potentially life threatening problems	Consistently acquires accurate and relevant histories Consistently performs accurate and appropriately thorough physical exams Inconsistently recognizes patient's central clinical problem or develops limited differential diagnoses	Acquires accurate histories in an efficient, prioritized, and hypothesis-driven fashion Performs accurate physical exams that are targeted to the patient's problems Uses and synthesizes collected data to define a patient's central clinical problem(s) to generate a prioritized differential diagnosis and problem list	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis Identifies subtle or unusual physical exam findings Efficiently utilizes all sources of secondary data to inform differential diagnosis Effectively uses history and physical examination skills to minimize the need for further diagnostic testing	Role-models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing
☐	☐	☐	☐	☐	☐
Comments:					

Selecting a response box in the middle of a column implies milestones in that column as well as those in previous columns have been substantially demonstrated. The fellow is in transition to the next level of development.

Selecting a response box on the line inbetween columns indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher columns(s).

1. Gathers and synthesizes essential and accurate information to define each patient's clinical problem(s). (PC1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Does not or is inconsistently able to collect accurate historical data Does not perform or use an appropriately thorough physical exam, or misses key physical exam findings Relies exclusively on documentation of others to generate own database or differential diagnosis or is overly reliant on secondary data Fails to recognize patient's central clinical problems Fails to recognize potentially life threatening problems	Consistently acquires accurate and relevant histories Consistently performs accurate and appropriately thorough physical exams Inconsistently recognizes patient's central clinical problem or develops limited differential diagnoses	Acquires accurate histories in an efficient, prioritized, and hypothesis-driven fashion Performs accurate physical exams that are targeted to the patient's problems Uses and synthesizes collected data to define a patient's central clinical problem(s) to generate a prioritized differential diagnosis and problem list	Obtains relevant historical subtleties, including sensitive information that informs the differential diagnosis Identifies subtle or unusual physical exam findings Efficiently utilizes all sources of secondary data to inform differential diagnosis Effectively uses history and physical examination skills to minimize the need for further diagnostic testing	Role-models and teaches the effective use of history and physical examination skills to minimize the need for further diagnostic testing
☐	☐	☐	☐	☐	☐
Comments:					

2. Develops and achieves comprehensive management plan for each patient. (PC2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Care plans are consistently inappropriate or inaccurate Does not react to situations that require urgent or emergency care Does not seek additional guidance when needed	Inconsistently develops an appropriate care plan Inconsistently seeks additional guidance when needed	Consistently develops appropriate care plan Recognizes situations requiring urgent or emergency care Seeks additional guidance and/or consultation as appropriate	Appropriately modifies care plans based on patient's clinical course, additional data, patient preferences, and cost-effectiveness principles Recognizes disease presentations that deviate from common patterns and require complex decision-making, incorporating diagnostic uncertainty Manages complex acute and chronic conditions	Role-models and teaches complex and patient-centered care Develops customized, prioritized care plans for the most complex patients, incorporating diagnostic uncertainty and cost-effectiveness principles
☐	☐	☐	☐	☐	☐
Comments:					

3. Manages patients with progressive responsibility and independence. (PC3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Cannot advance beyond the need for direct supervision in the delivery of patient care Cannot manage patients who require urgent or emergency care Does not assume responsibility for patient management decisions	Requires direct supervision to ensure patient safety and quality care Requires direct supervision to manage problems or common chronic diseases in all appropriate clinical settings Inconsistently provides preventive care in all appropriate clinical settings Requires direct supervision to manage patients with straightforward diagnoses in all appropriate clinical settings Unable to manage complex inpatients or patients requiring intensive care Cannot independently supervise care provided by other members of the physician-led team	Requires indirect supervision to ensure patient safety and quality care Provides appropriate preventive care and chronic disease management in all appropriate clinical settings Provides comprehensive care for single or multiple diagnoses in all appropriate clinical settings Under supervision, provides appropriate care in the intensive care unit Initiates management plans for urgent or emergency care	Independently manages patients across applicable inpatient, outpatient, and ambulatory clinical settings who have a broad spectrum of clinical disorders, including undifferentiated syndromes Seeks additional guidance and/or consultation as appropriate Appropriately manages situations requiring urgent or emergency care Effectively supervises the management decisions of the team in all appropriate clinical settings	Effectively manages unusual, rare, or complex disorders in all appropriate clinical settings
☐	☐	☐	☐	☐	☐
Comments:					

4a. Demonstrates skill in performing and interpreting invasive procedures. (PC4a)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Attempts to perform invasive procedures without sufficient technical skill or supervision Fails to recognize cases in which invasive procedures are unwarranted or unsafe Does not recognize the need to discuss procedure indications, processes, or potential risks with patients Fails to engage the patient in the informed consent process, and/or does not effectively describe risks and benefits of procedures	Possesses insufficient technical skill for safe completion of common invasive procedures with appropriate supervision Inattentive to patient safety and comfort when performing invasive procedures Applies the ethical principles of informed consent Recognizes the need to obtain informed consent for procedures, but ineffectively obtains it Understands and communicates ethical principles of informed consent	Possesses basic technical skill for the completion and interpretation of some common invasive procedures with appropriate supervision Inconsistently manages patient safety and comfort when performing invasive procedures Inconsistently recognizes appropriate patients, indications, and associated risks in the performance of invasive procedures Obtains and documents informed consent	Consistently demonstrates technical skill to successfully and safely perform and interpret invasive procedures Maximizes patient comfort and safety when performing invasive procedures Consistently recognizes appropriate patients, indications, and associated risks in the performance of invasive procedures Effectively obtains and documents informed consent in challenging circumstances (e.g., language or cultural barriers) Quantifies evidence for risk-benefit analysis during obtainment of informed consent for complex procedures or therapies	Demonstrates skill to independently perform and interpret complex invasive procedures that are anticipated for future practice Demonstrates expertise to teach and supervise others in the performance of invasive procedures Designs consent instrument for a human subject research study; files an Institution Review Board (IRB) application
☐	☐	☐	☐	☐	☐
Comments: ☐ Not Applicable					

4b. Demonstrates skill in performing and interpreting non-invasive procedures and/or testing. (PC4b)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Does not recognize patients for whom non-invasive procedures and/or testing is not warranted or is unsafe Attempts to perform or interpret non-invasive procedures and/or testing without sufficient skill or supervision Does not recognize the need to discuss procedure indications, processes, or potential risks with patients Fails to engage the patient in the informed consent process and/or does not effectively describe risks and benefits of procedures	Possesses insufficient skill to safely perform and interpret non-invasive procedures and/or testing with appropriate supervision Inattentive to patient safety and comfort when performing non-invasive procedures and/or testing procedures Applies the ethical principles of informed consent Recognizes need to obtain informed consent for procedures but ineffectively obtains it Understands and communicates ethical principles of informed consent	Inconsistently recognizes appropriate patients, indications, and associated risks in the utilization of non-invasive procedures and/or testing Inconsistently integrates procedures and/or testing results with clinical features in the evaluation and management of patients Can safely perform and interpret selected non-invasive procedures and/or testing procedures with minimal supervision Inconsistently recognizes high-risk findings and artifacts/normal variants Obtains and documents informed consent	Consistently recognizes appropriate patients, indications, limitations, and associated risks in utilization of non-invasive procedures and/or testing Integrates procedures and/or testing results with clinical findings in the evaluation and management of patients Recognizes procedures and/or testing results that indicate high-risk state or adverse prognosis Recognizes artifacts and normal variants Consistently performs and interprets non-invasive procedures and/or testing in a safe and effective manner Effectively obtains and documents informed consent in challenging circumstances (e.g., language or cultural barriers)	Demonstrates skill to independently perform and interpret complex non-invasive procedures and/or testing Demonstrates expertise to teach and supervise others in the performance of advanced non-invasive procedures and/or testing Designs consent instrument for a human subject research study; files an Institution Review Board (IRB) application

						Quantifies evidence for risk-benefit analysis during obtainment of informed consent for complex procedures and/or tests				
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Comments: ☐ Not Applicable										

5. Requests and provides consultative care. (PC5)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Is unresponsive to questions or concerns of others when acting as a consultant or utilizing consultant services Unwilling to utilize consultant services when appropriate for patient care	Inconsistently manages patients as a consultant to other physicians/health care teams Inconsistently applies risk assessment principles to patients while acting as a consultant Inconsistently formulates a clinical question for a consultant to address	Provides consultation services for patients with clinical problems requiring basic risk assessment Asks meaningful clinical questions that guide the input of consultants	Provides consultation services for patients with basic and complex clinical problems requiring detailed risk assessment Appropriately integrates recommendations from other consultants in order to effectively manage patient care	Provides consultation services for patients with very complex clinical problems requiring extensive risk assessment Models management of discordant recommendations from multiple consultants
☐	☐	☐	☐	☐	☐
Comments:					

Patient Care

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

6. Possesses Clinical knowledge (MK1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Lacks the scientific, socioeconomic, or behavioral knowledge required to provide patient care	Possesses insufficient scientific, socioeconomic, and behavioral knowledge required to provide care for common medical conditions and basic preventive care	Possesses the scientific, socioeconomic, and behavioral knowledge required to provide care for common medical conditions and basic preventive care	Possesses the scientific, socioeconomic, and behavioral knowledge required to provide care for complex medical conditions and comprehensive preventive care	Possesses the scientific, socioeconomic, and behavioral knowledge required to successfully diagnose and treat medically uncommon, ambiguous, and complex conditions
☐	☐	☐	☐	☐	☐
Comments:					

7. Knowledge of diagnostic testing and procedures. (MK2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Lacks foundational knowledge to apply diagnostic testing and procedures to patient care	Inconsistently interprets basic diagnostic tests accurately Does not understand the concepts of pre-test probability and test performance characteristics Minimally understands the rationale and risks associated with common procedures	Consistently interprets basic diagnostic tests accurately Needs assistance to understand the concepts of pre-test probability and test performance characteristics Fully understands the rationale and risks associated with common procedures	Interprets complex diagnostic tests accurately while accounting for limitations and biases Knows the indications for, and limitations of, diagnostic testing and procedures Understands the concepts of pre-test probability and test performance characteristics Teaches the rationale and risks associated with common procedures and anticipates potential complications of procedures	Anticipates and accounts for subtle nuances of interpreting diagnostic tests and procedures Pursues knowledge of new and emerging diagnostic tests and procedures
☐	☐	☐	☐	☐	☐
Comments:					

8. Scholarship. (MK3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Foundation Unaware of or uninterested in scientific inquiry or scholarly productivity	Interested in scholarly activity, but does not initiate or follow through	Identifies areas worthy of scholarly investigation and formulates a plan under supervision of a mentor	Formulates ideas worthy of scholarly investigation	Independently formulates novel and important ideas worthy of scholarly investigation
	Investigation Unwilling to perform scholarly investigation in the specialty	Performs a literature search using relevant scholarly sources to identify pertinent articles	Critically reads scientific literature and identifies major methodological flaws and inconsistencies within or between publications	Collaborates with other investigators to design and complete a project related to clinical practice, quality improvement, patient safety, education, or research	Leads a scholarly project advancing clinical practice, quality improvement, patient safety, education, or research Obtains independent research funding
	Analysis Fails to engage in critical thinking regarding clinical practice, quality improvement, patient safety, education, or research	Aware of basic statistical concepts, but has incomplete understanding of their application; inconsistently identifies methodological flaws	Understands and is able to apply basic statistical concepts, and can identify potential analytic methods for data or problem assessment	Critiques specialized scientific literature effectively Dissects a problem into its many component parts and identifies strategies for solving Uses analytical methods of the field effectively	Critiques specialized scientific literature at a level consistent with participation in peer review Employs optimal statistical techniques Teaches analytic methods in chosen field to peers and others
	Dissemination Unable or unwilling to effectively communicate and/or disseminate knowledge	Communicates rudimentary details of scientific work, including his or her own scholarly work; needs to improve	Effectively presents at journal club, quality improvement meetings, clinical conferences, and/or is able to	Presents scholarly activity at local or regional meetings, and/or submits an abstract summarizing scholarly work to	Effectively presents scholarly work at national and international meetings

		ability to present in small groups	effectively describe and discuss his or her own scholarly work or research	regional/state/ national meetings, and/or publishes non-peer-reviewed manuscript(s) (reviews, book chapters)	Publishes peer-reviewed manuscript(s) containing scholarly work (clinical practice, quality improvement, patient safety, education, or research)	
☐	☐	☐	☐	☐	☐	☐
Comments:						

Medical Knowledge

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

9. Works effectively within an interprofessional team (e.g., with peers, consultants, nursing, ancillary professionals, and other support personnel). (SBP1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Refuses to recognize the contributions of other interprofessional team members Frustrates team members with inefficiency and errors Frequently requires reminders from team to complete physician responsibilities (e.g., talk to family, enter orders)	Identifies roles of other team members, but does not recognize how/when to utilize them as resources Participates in team discussions when required, but does not actively seek input from other team members	Understands the roles and responsibilities of all team members, but uses them ineffectively Actively engages in team meetings and collaborative decision-making	Understands the roles and responsibilities of, and effectively partners with, all members of the team Efficiently coordinates activities of other team members to optimize care	Develops, trains, and inspires the team regarding unexpected events or new patient management strategies Viewed by other team members as a leader in the delivery of high-quality care
☐	☐	☐	☐	☐	☐
Comments:					

10. Recognizes system error and advocates for system improvement. (SBP2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Ignores a risk for error within the system that may affect the care of a patient Ignores feedback and is unwilling to change behavior in order to reduce the risk for error	Does not recognize the potential for system error Makes decisions that could lead to errors that are otherwise corrected by the system or supervision Resistant to feedback about decisions that may lead to error or otherwise cause harm	Recognizes the potential for error within the system Identifies obvious or critical causes of error and notifies supervisor accordingly Recognizes the potential risk for error in the immediate system and takes necessary steps to mitigate that risk Willing to receive feedback about decisions that may lead to error or otherwise cause harm	Identifies systemic causes of medical error and navigates them to provide safe patient care Advocates for safe patient care and optimal patient care systems Activates formal system resources to investigate and mitigate real or potential medical error Reflects upon and learns from own critical incidents that may lead to medical error	Advocates for system leadership to formally engage in quality assurance and quality improvement activities Viewed as a leader in identifying and advocating for the prevention of medical error Teaches others regarding the importance of recognizing and mitigating system error
☐	☐	☐	☐	☐	☐
Comments:					

11. Identifies forces that impact the cost of health care, and advocates for and practices cost-effective care. (SBP3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Ignores cost issues in the provision of care Demonstrates no effort to overcome barriers to cost-effective care	Lacks awareness of external factors (e.g., socio-economic, cultural, literacy, insurance status) that impact the cost of health care, and the role that external stakeholders (e.g., providers, suppliers, financers, purchasers) have on the cost of care Does not consider limited health care resources when ordering diagnostic or therapeutic interventions	Recognizes that external factors influence a patient's utilization of health care and may act as barriers to cost-effective care Minimizes unnecessary diagnostic and therapeutic tests Possesses an incomplete understanding of cost-awareness principles for a population of patients (e.g., use of screening tests)	Consistently works to address patient-specific barriers to cost-effective care Advocates for cost-conscious utilization of resources such as emergency department visits and hospital readmissions Incorporates cost-awareness principles into standard clinical judgments and decision-making, including use of screening tests	Teaches patients and health care team members to recognize and address common barriers to cost-effective care and appropriate utilization of resources Actively participates in initiatives and care delivery models designed to overcome or mitigate barriers to cost-effective, high-quality care
☐	☐	☐	☐	☐	☐
Comments:					

12. Transitions patients effectively within and across health delivery systems. (SBP4)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Disregards need for communication at time of transition Does not respond to requests of caregivers in other delivery systems Written and verbal care plans during times of transition are absent	Inconsistently utilizes available resources to coordinate and ensure safe and effective patient care within and across delivery systems Provides incomplete written and verbal care plans during times of transition Provides inefficient transitions of care that lead to unnecessary expense or risk to a patient (e.g., duplication of tests, readmission)	Recognizes the importance of communication during times of transition Communicates with future caregivers, but demonstrates lapses in provision of pertinent or timely information	Appropriately utilizes available resources to coordinate care and manage conflicts to ensure safe and effective patient care within and across delivery systems Actively communicates with past and future caregivers to ensure continuity of care Anticipates needs of patient, caregivers, and future care providers and takes appropriate steps to address those needs	Coordinates care within and across health delivery systems to optimize patient safety, increase efficiency, and ensure high-quality patient outcomes Role-models and teaches effective transitions of care
☐	☐	☐	☐	☐	☐
Comments:					

Systems-based Practice

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

13. Monitors practice with a goal for improvement. (PBLI1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Unwilling to self-reflect upon one's practice or performance Not concerned with opportunities for learning and self-improvement	Unable to self-reflect upon practice or performance Misses opportunities for learning and self-improvement	Inconsistently self-reflects upon practice or performance, and inconsistently acts upon those reflections Inconsistently acts upon opportunities for learning and self-improvement	Regularly self-reflects upon one's practice or performance, and consistently acts upon those reflections to improve practice Recognizes sub-optimal practice or performance as an opportunity for learning and self-improvement	Regularly seeks external validation regarding self-reflection to maximize practice improvement Actively and independently engages in self-improvement efforts and reflects upon the experience
☐	☐	☐	☐	☐	☐
Comments:					

14. Learns and improves via performance audit. (PBLI2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Disregards own clinical performance data Demonstrates no inclination to participate in or even consider the results of quality-improvement efforts Not familiar with the principles, techniques, or importance of quality improvement	Limited ability to analyze own clinical performance data Nominally engaged in opportunities to achieve focused education and performance improvement	Analyzes own clinical performance gaps and identifies opportunities for improvement Participates in opportunities to achieve focused education and performance improvement Understands common principles and techniques of quality improvement and appreciates the responsibility to assess and improve care for a panel of patients	Analyzes own clinical performance data and actively works to improve performance Actively engages in opportunities to achieve focused education and performance improvement Demonstrates the ability to apply common principles and techniques of quality improvement to improve care for a panel of patients	Actively monitors clinical performance through various data sources Able to lead projects aimed at education and performance improvement Utilizes common principles and techniques of quality improvement to continuously improve care for a panel of patients
☐	☐	☐	☐	☐	☐
Comments:					

15. Learns and improves via feedback. (PBLI3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Never solicits feedback Actively resists feedback from others	Rarely seeks and does not incorporate feedback Responds to unsolicited feedback in a defensive fashion Temporarily or superficially adjusts performance based on feedback	Solicits feedback only from supervisors and inconsistently incorporates feedback Is open to unsolicited feedback Inconsistently incorporates feedback	Solicits feedback from all members of the interprofessional team and patients Welcomes unsolicited feedback Consistently incorporates feedback Able to reconcile disparate or conflicting feedback	Performance continuously reflects incorporation of solicited and unsolicited feedback Role-models ability to reconcile disparate or conflicting feedback
☐	☐	☐	☐	☐	☐
Comments:					

16. Learns and improves at the point of care. (PBLI4)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Fails to acknowledge uncertainty and reverts to a reflexive patterned response even when inaccurate Fails to seek or apply evidence when necessary	Rarely reconsiders an approach to a problem, asks for help, or seeks new information Can translate medical information needs into well-formed clinical questions with assistance Unfamiliar with strengths and weaknesses of the medical literature Has limited awareness of, or ability to use, information technology or decision support tools and guidelines Accepts the findings of clinical research studies without critical appraisal	Inconsistently reconsiders an approach to a problem, asks for help, or seeks new information Can translate medical information needs into well-formed clinical questions independently Aware of the strengths and weaknesses of medical information resources, but utilizes information technology without sophistication With assistance, appraises clinical research reports based on accepted criteria	Routinely reconsiders an approach to a problem, asks for help, or seeks new information Routinely translates new medical information needs into well-formed clinical questions Guided by the characteristics of clinical questions, efficiently searches medical information resources, including decision support tools and guidelines Independently appraises clinical research reports based on accepted criteria	Role-models how to appraise clinical research reports based on accepted criteria Has a systematic approach to track and pursue emerging clinical questions
☐	☐	☐	☐	☐	☐
Comments:					

Practice-Based Learning and Improvement

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

17. Has professional and respectful interactions with patients, caregivers, and members of the interprofessional team (e.g., peers, consultants, nursing, ancillary professionals, and support personnel). (PROF1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Disrespectful in interactions with patients, caregivers, and members of the interprofessional team Sacrifices patient needs in favor of self-interest Does not demonstrate empathy, compassion, and respect for patients and caregivers Does not demonstrate responsiveness to patients' and caregivers' needs in an appropriate fashion Does not consider patient privacy and autonomy Unaware of physician and colleague self-care and wellness	Inconsistently demonstrates empathy, compassion, and respect for patients and caregivers Inconsistently demonstrates responsiveness to patients' and caregivers' needs in an appropriate fashion Inconsistently considers patient privacy and autonomy Inconsistently aware of physician and colleague self-care and wellness	Consistently respectful in interactions with patients, caregivers, and members of the interprofessional team, even in challenging situations Is available and responsive to needs and concerns of patients, caregivers, and members of the interprofessional team to ensure safe and effective patient care Emphasizes patient privacy and autonomy in all interactions Consistently aware of physician and colleague self-care and wellness	Demonstrates empathy, compassion, and respect to patients and caregivers in all situations Anticipates, advocates for, and actively works to meet the needs of patients and caregivers Demonstrates a responsiveness to patient needs that supersedes self-interest Positively acknowledges input of members of the interprofessional team and incorporates that input into plan of care, as appropriate Regularly reflects on, assesses, and recommends physician and colleague self-care and wellness	Role-models compassion, empathy, and respect for patients and caregivers Role-models appropriate anticipation and advocacy for patient and caregiver needs Fosters collegiality that promotes a high-functioning interprofessional team Teaches others regarding maintaining patient privacy and respecting patient autonomy Role-models personal self-care practice for others and promotes programs for colleague wellness
☐	☐	☐	☐	☐	☐
Comments:					

18. Accepts responsibility and follows through on tasks. (PROF2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Is consistently unreliable in completing patient care responsibilities or assigned administrative tasks Shuns responsibilities expected of a physician professional	Completes most assigned tasks in a timely manner but may need reminders or other support Accepts professional responsibility only when assigned or mandatory	Completes administrative and patient care tasks in a timely manner in accordance with local practice and/or policy Completes assigned professional responsibilities without questioning or the need for reminders	Prioritizes multiple competing demands in order to complete tasks and responsibilities in a timely and effective manner Willingly assumes professional responsibility regardless of the situation	Role-models prioritizing many competing demands in order to complete tasks and responsibilities in a timely and effective manner Assists others to improve their ability to prioritize many competing tasks
☐	☐	☐	☐	☐	☐
Comments:					

19. Responds to each patient's unique characteristics and needs. (PROF3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Is insensitive to differences related to personal characteristics and needs in the patient/caregiver encounter Is unwilling to modify care plan to account for a patient's unique characteristics and needs	Is sensitive to and has basic awareness of differences related to personal characteristics and needs in the patient/caregiver encounter Requires assistance to modify care plan to account for a patient's unique characteristics and needs	Seeks to fully understand each patient's personal characteristics and needs Modifies care plan to account for a patient's unique characteristics and needs with partial success	Recognizes and accounts for the personal characteristics and needs of each patient Appropriately modifies care plan to account for a patient's unique characteristics and needs	Role-models professional interactions to navigate and negotiate differences related to a patient's unique characteristics or needs Role-models consistent respect for patient's unique characteristics and needs
☐	☐	☐	☐	☐	☐
Comments:					

20. Exhibits integrity and ethical behavior in professional conduct. (PROF4)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Dishonest in clinical interactions, documentation, research, or scholarly activity Refuses to be accountable for personal actions Does not adhere to basic ethical principles Blatantly disregards formal policies or procedures Fails to recognize conflicts of interest	Honest in clinical interactions, documentation, research, and scholarly activity Requires oversight for professional actions related to the subspecialty Has a basic understanding of ethical principles, formal policies, and procedures and does not intentionally disregard them Recognizes potential conflicts of interest	Honest and forthright in clinical interactions, documentation, research, and scholarly activity Demonstrates accountability for the care of patients Adheres to ethical principles for documentation, follows formal policies and procedures, acknowledges and limits conflict of interest, and upholds ethical expectations of research and scholarly activity Consistently attempts to recognize and manage conflicts of interest	Demonstrates integrity, honesty, and accountability to patients, society, and the profession Actively manages challenging ethical dilemmas and conflicts of interest Identifies and responds appropriately to lapses of professional conduct among peer group Regularly reflects on personal professional conduct Identifies and manages conflicts of interest	Assists others in adhering to ethical principles and behaviors, including integrity, honesty, and professional responsibility Role-models integrity, honesty, accountability, and professional conduct in all aspects of professional life Identifies and responds appropriately to lapses of professional conduct within the system in which he or she works
☐	☐	☐	☐	☐	☐
Comments:					

Professionalism

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the trainingprogram. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

21. Communicates effectively with patients and caregivers. (ICS1)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Ignores patient preferences for plan of care Makes no attempt to engage patient in shared decision-making Routinely engages in antagonistic or counter-therapeutic relationships with patients and caregivers	Engages patients in discussions of care plans and respects patient preferences when offered by the patient, but does not actively solicit preferences Attempts to develop therapeutic relationships with patients and caregivers but is inconsistently successful Defers difficult or ambiguous conversations to others	Engages patients in shared decision-making in uncomplicated conversations Requires assistance facilitating discussions in difficult or ambiguous conversations Requires guidance or assistance to engage in communication with persons of different socioeconomic and cultural backgrounds	Identifies and incorporates patient preference in shared decision-making in complex patient care conversations and the plan of care Quickly establishes a therapeutic relationship with patients and caregivers, including persons of different socioeconomic and cultural backgrounds	Role-models effective communication and development of therapeutic relationships in both routine and challenging situations Models cross-cultural communication and establishes therapeutic relationships with persons of diverse socioeconomic and cultural backgrounds Assists others with effective communication and development of therapeutic relationships
☐	☐	☐	☐	☐	☐
Comments:					

22. Communicates effectively in interprofessional teams (e.g., with peers, consultants, nursing, ancillary professionals, and other support personnel). (ICS2)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Utilizes communication strategies that hamper collaboration and teamwork Verbal and/or non-verbal behaviors disrupt effective collaboration with team members	Uses unidirectional communication that fails to utilize the wisdom of team members Resists offers of collaborative input	Inconsistently engages in collaborative communication with appropriate members of the team Inconsistently employs verbal, non-verbal, and written communication strategies that facilitate collaborative care	Consistently and actively engages in collaborative communication with all members of the team Verbal, non-verbal, and written communication consistently acts to facilitate collaboration with team members to enhance patient care	Role models and teaches collaborative communication with the team to enhance patient care, even in challenging settings and with conflicting team member opinions
☐	☐	☐	☐	☐	☐
Comments:					

23. Appropriate utilization and completion of health records. (ICS3)					
Not Yet Assessable	**Critical Deficiencies**			**Ready for unsupervised practice**	**Aspirational**
	Provides health records that are missing significant portions of important clinical data Does not enter medical information and test results/interpretations into health record	Health records are disorganized and inaccurate Inconsistently enters medical information and test results/ interpretations into health record	Health records are organized and accurate, but are superficial and miss key data or fail to communicate clinical reasoning Consistently enters medical information and test results/ interpretations into health records	Patient-specific health records are organized, timely, accurate, comprehensive, and effectively communicate clinical reasoning Provides effective and prompt medical information and test results/ interpretations to physicians and patients	Role-models and teaches importance of organized, accurate, and comprehensive health records that are succinct and patient-specific
☐	☐	☐	☐	☐	☐
Comments:					

Interpersonal and Communications Skills

The fellow is demonstrating satisfactory development of the knowledge, skill, and attitudes/behaviors needed to advance in the training program. He or she is demonstrating a learning trajectory that anticipates the achievement of competency for unsupervised practice that includes the delivery of safe, effective, patient-centered, timely, efficient, and equitable care.

_____ Yes _____ No _____ Conditional on Improvement

Overall Clinical Competence

This rating represents the assessment of the fellow's development of overall clinical competence during this year of training:

____ Superior: Far exceeds the expected level of development for this year of training

____ Satisfactory: Always meets and occasionally exceeds the expected level of development for this year of training

____ Conditional on Improvement: Meets some developmental milestones but occasionally falls short of the expected level of development for this year of training. An improvement plan is in place to facilitate achievement of competence appropriate to the level of training.

____ Unsatisfactory: Consistently falls short of the expected level of development for this year of training.

PULMONARY AND CRITICAL CARE MEDICINE
POLICY FOR RECRUITMENT AND SELECTION

The aim for selection/recruitment of Pulmonary and Critical Care Medicine is to encourage physicians whose goal it is to be trained in a university-based education-driven training. The selection of the Pulmonary and Critical Care Medicine fellow is done by the Program Director in conjunction with the section faculty.

Selection criteria for eligibility of candidates will be done in accordance with the GME policies of our institution. Eligibility for applicants must include having completed residency training in an ACGME approved Internal Medicine Program as well as meet all GME requirements.

Applications are received through the Electronic Residency Application Service (ERAS). The applications are screened by the Program Director, and discussed with the section faculty and fellows. Interviews are offered through an email from the Program Director.

On the day of the interview, the candidate meets with the Program Director, thereafter, the candidate will go through an interview process with different faculty members and fellows. During his/her visit the candidate will take a tour of the facilities, and will attend our noon conference.

The faculty and fellows who have met with the applicants fill out an evaluation form. The forms are then collected by the Fellowship Coordinator, and the candidate file is completed. Interviews are usually scheduled during the months of September-mid-November. At the end of the interview process, each candidate's score is averaged. The Program Director obtains direct input from the faculty and fellows will rank the candidates in order to complete our NRMP list.

CURRICULUM
PULMONARY AND CRITICAL CARE MEDICINE TEACHING PROGRAM
DESCRIPTION, GOALS, CLINICAL ROTATIONS, AND ELECTIVES

The goals of the combined training program in Pulmonary and Critical Care Medicine is to educate our fellows in the diagnosis and management of acute and chronic diseases of the respiratory system & those with critical illness. Our fellows will be trained through:

1) **Conferences:**
   Lectures in Basic Physiopathology
   Research Conferences
   Pathology Conferences
   Pulmonary and Critical Care Medicine Journal Club
   Pulmonary Case Presentations
   Pulmonary Core Conferences
   Medicine Grand Rounds
   Critical Care Medicine Conferences
   Chest Radiology Conference
   Bioethics/End-Of-Life Conference
   Board Review Questions.
   Department of Medicine Internal Medicine Noon Conference
   West Virginia Chapter of the American College of Physicians

   National Conferences:
   CHEST Conference
   ATS
   SCCM Conference

2) **Supervised patient management in the intensive care unit:**
   Daily patient rounds and bed side teaching
   Evaluation of critical care medicine radiographic procedures
   Supervised ventilator management, and critical care invasive procedures; guidance in ethical and end of life decisions
   Guidance in health care resource utilization
   Evaluation of potential transfer to the ICU, and discharges.
   Familiarization with SICU, CCU, CTU, and Neuro ICU

3) **Pulmonary Consultation**
   Bedside teaching and supervised management of:
      Pulmonary consultations
      Procedures in the pulmonary laboratory (including invasive bronchoscopy and biopsies)
      Supervised interpretation of pulmonary functions and exercise tests; evaluation of all pulmonary radiographic studies
      Supervised learning of the art of pulmonary consultation.

4) **Supervised management of:**

Pulmonary rehabilitation patients
Management of ventilator dependent patients
Weaning from mechanical ventilation
tracheostomy decannulation procedures.

5) **Ambulatory Clinics:**

Pulmonary Clinic
Lung Cancer Clinic
Sleep Clinic
ALS
Cystic Fibrosis Clinic

6) **Pulmonary Resources**

Reading of provided material in Pulmonary/CCM
Attending national scientific meetings
Utilization of our Pulmonary Fellows Library
Access to educational programs (Up-To-Date, Medline, etc.)

SKILLS

The trainee is expected to become proficient in all pulmonary and critical care procedures including:

1) Management, application and understanding of mechanical ventilators
2) Airway management
3) Insertion and calibration of central venous catheters
4) Insertion and calibration of pulmonary artery catheters; interpretation of hemodynamic profiles
5) Insertion and calibration of arterial lines
6) Fiberoptic bronchoscopy with, BAL, protected specimen brushing, endobronchial and transbronchial lung biopsy, transbronchial needle aspiration via endobronchial ultrasound
7) Bronchoscopic placement of stents, bronchoscopic laser therapy, and brachytherapy catheters
8) Thoracentesis and pleural fluid analysis
9) Insertion and management of chest tubes for treatment of malignant pleural effusions, pneumothorax, and complicated parapneumonic effusions.
10) Bronchoscopic, video assisted, percutaneous tracheotomy
11) Administration and interpretation of pulmonary function studies including spirometry with bronchodilators, lung volumes by helium dilution, body plethesmography and diffusing capacity. Proficiency will be expected in the administration and interpretation of methacholine challenge test.

12) To perform and interpret cardiopulmonary exercise tests
13) Interpretation of sleep studies
14) Management of pulmonary rehabilitation

WV STEPS is the primary simulation center for the West Virginia University Health Sciences Center. The STEPS center provides opportunities to get hands on learning experience before clinical work.

THE PROGRAM

During the three year program, trainees will complete all required ACGME credits for Pulmonary and Critical Care accreditation (6 months in the MICU, 3 months in other intensive care units, and 10 months of pulmonary diseases) In addition, the fellow will participate in electives rotations, and research. The program director will supervise the fellow's activities to ascertain that their rotations are in compliance with the ACGME norms.

2018-2019 Pulmonary Critical Care Medicine Fellowship Program Rotation Schedule

	MICU	NF	CONSULTS	VA	PACS	ELECTIVES	
1st year (4)	3 (12)	1 (4)	2 (8)	1 (4)	2 (8)	3	12
2nd year (3)	2 (6)	2 (6)	1 (3)	2 (6)	1 (3)	4	12
3rd year (2)	2 (4)	1 (2)	2 (4)	1 (2)	1 (2)	5	12
9 fellows	22 months	12 months	15 months	12 months	13 months	12 months	

Research: Fellows have the opportunity to participate in research activities. Our section maintains a close cooperative relationship with the Departments of Basic Science, the Cancer Center and NIOSH. All fellows will have the opportunity to participate in an active project from these departments.

During the three-year training program, fellows will participate in all the Section didactic activities. In addition, the trainee forms a team with the residents and medical students on the MICU and consultative services. Fellows teach or supervise these residents and medical students during their rotation. Our fellows evaluate the resident work-up and discusses the diagnostic impression and management plan with the resident, prior to the presentation of the patient to the attending physician. The trainee also provides mini lectures related to the disease process of the patient and reviews appropriate chest radiographs, CT and lung scans with the team members on a regular basis. They also help the internal medicine residents in the performance of certain pulmonary-related procedures. The trainee is available to provide guidance to the residents during the usual working hours or on-call hours.

Our goal is that by the end of the fellowship program, each trainee has developed didactic and oratory skills.

Supervision of the trainees

Patient care management and all pulmonary and critical care procedures will be directly supervised by a pulmonary and critical care faculty. Each fellow is required to keep a record of each procedure and file them in their personal folder. All procedures must also be logged within two weeks in the E-Value system. Each patient on the clinical service will be evaluated and presented to the attending physician by the trainee. The attending physician will also evaluate the patient. The laboratory results, and radiographic studies will jointly be reviewed with the trainee, and diagnosis and management will be discussed. The trainee will never give any final recommendation until the patient has been seen by the attending physician and the plans have jointly been discussed.

All trainees will have semi-annual evaluations with the Program Director which includes input from all the section faculty members.

The Program Director and section faculty members will monitor for any signs of stress related problems, drugs and/or alcohol use among the trainees. Consideration to these potential problems will be given at the faculty meetings. If any trainee is suspected of having any of the above problems, the Program Director will discuss the issue with the fellow. If necessary, the subject will be referred for confidential counseling to the Department of Psychiatry in order to be evaluated by specialized personnel. Any recommendation given to this respect will be followed. The Section will be supportive of all individuals who develop acute situational problems and will provide the necessary help.

Educational goals are focused in the six core competencies:

1. Patient Care that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health.

2. Medical Knowledge about established and evolving biomedical & clinical sciences, as well as the application of this knowledge to patient care.

3. Practice-based learning and communication skills that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.

4. Professionalism as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds.

5. Interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and other health professionals.

6. Systems-based practice as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

CLINICAL ROTATIONS:

A) Pulmonary Consult Service

The Consult Team will be formed by an attending from the Pulmonary and CCM Section and a fellow. Also, medical residents and students electing a Pulmonary Medicine rotation will also be included. During this rotation, trainees will learn all aspect of pulmonary consultative medicine. Fellows will evaluate and present the patient in detail to the pulmonary attending who also will interview and examine the patient at the bedside, and will review pertinent physical findings, PFTs, chest radiographs, and CT scans will be reviewed and discussed with the pulmonary trainee, the medical residents, and the medical student. Afterward, recommendations will be given to the patient's primary service. If necessary, the patient is evaluated on a daily basis by the trainee with daily input from the attending physician. The patient is followed until it is deemed unnecessary to continue follow-up care.

Pulmonary Consult rotation allows the fellow to observe the expertise and bedside manners of a clinician experienced in the diagnosis and management of respiratory diseases, whether the disease is primary to the lung or secondary to a systemic illness. In addition, the fellow will develop capacity to interact with members of other services at a consultant level, and learns to synthesize all information pertinent to the respiratory system. The Pulmonary Consult Service will have an attending faculty available for consultation 24 hours per day.

All bronchoscopic procedures generated during consultation, will be performed by the fellow and directly supervised by the pulmonary attending. Each fellow has to keep a signed record of each procedure performed.

Each weekday, as a part of the pulmonary consult service, the consult team, under the direct supervision of the attending faculty will read and discuss all pulmonary function tests performed by our laboratory.

The Pulmonary Consult Fellow will present selected pulmonary cases and a brief presentation at Case Conference each Tuesday at 4 PM.

B) Medical Intensive Care Unit Service

All patients admitted to our MICU service will be primarily cared for by the MICU team. Decisions on admission, diagnostic work up, consultations, and transfers will completely rest on the MICU team. After discussion with the attending physician, the MICU fellow will be responsible for accepting and discharging patients from the unit. A MICU attending physician will be available 24 hours per day to discuss any issue pertinent to the service.

The MICU team is formed by an attending physician, a fellow, 3-5 residents (usually 2-3 from medicine, and the rest from emergency medicine, family practice, and anesthesiology). There are also 1-2 medical students rotating in this service. Formal attending bedside MICU rounds start around 9 AM. Prior to attending rounds, the fellow has examined the patients, and reviewed new data, and radiographic tests before formal rounds start. Furthermore, any new patient admitted during the night, and all night time events will have already been reviewed by the fellow.

Formal attending rounds usually start by reviewing the radiographic procedures with the computer system located in our ICUs, and discussing all pertinent radiographic findings with the team. In addition to the medical personnel, nurses, pharmacists, dietitians, and respiratory therapists will also join the team for rounds. During rounds, any new admission will be presented and evaluated. Also, all patients will be examined and their problem list reviewed. The day-plan for each patient will be discussed and established. Following rounds, a progress note is written on each patient and new orders given. The MICU fellow will supervise the care of each patient and ascertain that the plan for every patient is follow through.

All required invasive MICU procedures are performed under attending supervision. The fellow will also interact with respiratory therapists in the management of ventilators, with the dietitian in the nutritional management of the patients, and with the different consultations services. The trainee will also be assisted by the pharmacist in the use of different medications related to ICU care. The trainee will also participate in discussions related to end-of-life decisions with patients and their families, and will be instructed in ethical issues. The trainee will learn to calibrate transducers used for pressure measurements.

Every weekday afternoon, around 4 p.m., the ICU team will again make rounds with the ICU attending physician and will discuss the clinical progress of each patient. They will make pertinent therapeutic modifications if needed. Also, the ICU fellow will provide information to the on-call fellow to maintain proper continuity of care.

The trainees will also have the opportunity for post discharge follow-up care of patients transferred from the ICU. These patients are followed by the consult fellow. Their progress is frequently discussed in the weekly Pulmonary Case conference.

C) Pulmonary Service at the Veteran Administration Hospital, Clarksburg, WV

Our trainees will be supervised by two of our section faculty members assigned to this hospital. Upon the completion of the rotation, the supervising physician will complete an electronic evaluation of the trainee's performance to the Program Director.

One trainee is assigned to the VA Hospital Pulmonary service for each monthly rotation. The trainee participates in patient care, and pulmonary consultative services as requested by other medical services. The trainee will evaluate patients admitted to the Pulmonary Service and present them to the attending physician who will discuss in detail the patient's history, physical examination, diagnosis and management. There are daily bedside rounds, and the attending physician is always available for the fellow. The fellow will perform bronchoscopies and read pulmonary function tests under the supervision of the attending physician. Fellows rotating in this service will continue their pulmonary continuity clinic and Cancer Center Clinic on Tuesday's.

D) Pulmonary Clinics (Ambulatory Care/Outpatient)

Each trainee spends two half days per week in the Pulmonary Clinic for the duration of training (excluding MICU/Consult Rotations) This clinic is located at the Physician's Office Center building located next to the main hospital. Trainees will have new pulmonary patients and returns scheduled in accordance to their level of training. Each patient seen in clinic by the trainee will be presented to the attending physician who will be physically present during the entire clinic hours. Each trainee will have continuity in the care of the patients assigned to them and any required invasive procedure in these patients will be performed by the trainee under the supervision of the attending physician. The ambulatory care experience will allow the fellow to obtain expertise in the management of pulmonary diseases in an outpatient setting, as well as the opportunity for one-on-one teaching.

In addition to the outpatient Pulmonary Clinic, the fellow will spend time in the outpatient Sleep Clinics, Lung Cancer Clinic & ALS.

The consult fellow and a designated section faculty will staff the Lung Cancer Clinic each Tuesday of the month, from 8:00 AM to 12 Noon.

Other Mandatory Outpatient Clinics and Rotations

1) Sleep Clinic

Trainees rotating in the Pulmonary Service will attend the Sleep Clinic located at the Physicians Office Center for a half day per week. The trainees will be under direct supervision of one of the Section attendees. Trainees will be able to learn and establish diagnosis of common sleep-breathing disorders, and other common sleep disturbances. Under direct supervision by the attending physician, the fellow will get knowledge in the treatment of these types of disorders (different types of non invasive positive pressure ventilators, as well as, medication for specific types of sleep disturbance disorders). During their three years of training, fellows are required to attend the Sleep Laboratory, located offsite to take electives in Sleep Medicine. During this rotation, they will learn the reading and interpretation of polysomnograms.

2) Lung Cancer Clinic

Fellows rotating in the Pulmonary Consult Service will attend a half day multidisciplinary lung cancer clinic at the Mary Babb Randolph Cancer Center each week. In addition to the designated pulmonary attending, this clinic is staffed by attending physicians from Cardiothoracic Surgery and Medical Oncology. Patients with suspected pulmonary malignancies, as well as those patients with already established diagnosis of a malignant pulmonary process are evaluated in conjunction with the above services. During this rotation, the trainee becomes familiar with the differential diagnosis of lung cancer, the approach to abnormal pulmonary findings, and therapeutic options. Invasive procedures (i.e.: bronchoscopic biopsies, stenting, laser therapy, and thoracentesis) required for diagnosis will be performed by the trainee under direct supervision of his pulmonary attending. Attempts to maintain continuity of care by the trainee are stressed. In addition, following the Lung Cancer Clinic hours, the Pulmonary Consult Service participates in the Lung Cancer Conference where diagnostic and treatment dilemmas are discussed by the participating services, and the member of the Radiology Department. The fellow is responsible for presenting cases and obtaining feedback during the one hour session.

3) Cystic Fibrosis Clinic

The trainee covering PACS can attend the Cystic Fibrosis Clinic twice monthly. Fellows will be under the supervision of the CF Clinic attending physician. The fellows will evaluate and participate in the treatment of patients with cystic fibrosis. The fellow will interview and examine the patient and present the findings to the attending physician. The attending physician will then interview and examine the patient too. The fellow and attending physician will formulate a diagnostic impression and a management plan. The fellow will interact with the rest of the CF team (CF nurse, respiratory therapist, physical therapist, dietitian, psychologist, and social worker) and participate in the care plan of patients seen at the clinic.

During their rotation in the Pulmonary Consult service, each trainee with participate in all consults requested for adult patients with cystic fibrosis.

4) Amyotrophic Lateral Sclerosis (ALS) Clinic

Trainees rotating in the Pulmonary Consult Service will be responsible for consultations proceeding from the Neurology Service to evaluate patients with ALS in their clinic. The fellow performance at the ALS clinic will be in accordance to their level of training following the guidelines of the pulmonary consult service. The trainee will evaluate the patient focusing in the components of the respiratory system. Under direct supervision by the attending physician, the fellow will get knowledge on the effect of neuromuscular diseases on pulmonary function. The trainee will receive understanding on the different approaches to patients with progressive respiratory insufficiency. By the end of training, the fellow will learn about the use of tussive aids and non-invasive mechanical ventilation for patients with neuromuscular impairment. Understanding of the timing for bronchoscopy, and end of life care will also be of the learning objectives of this rotation.

PULMONARY LABORATORY

1) Pulmonary Function Testing

During their rotation in the Pulmonary Consult Service, the trainee will spend time in the Pulmonary Function Laboratory learning the equipment and interpreting PFTs. The trainee will have elective time in the PFT Laboratory where they will learn about the equipment and testing procedures. The trainee will perform spirometry testing and will familiarize themselves with the body box, plasthymography, carbon monoxide diffusion, and helium dilution techniques. They will also observe and participate in airway hyperreactivity. The trainee will be expected to understand and learn the methodology and interpretation of pulmonary function testing. The trainee will learn the principles of arterial blood gas analysis and the interpretation of the results.

2) Pulmonary Exercise Testing.

The trainee, along with the technician, and supervised by the attending physician will perform all pulmonary exercise studies. The trainee will get knowledge on the indications and contraindications for Pulmonary Exercise. The trainee will review the patient's medical record and perform a brief history and physical examination on the patient prior to testing, and will be responsible for insertion of any required invasive line. During the entire study, the trainee will monitor the patient's vital signs, electrocardiogram, and other aspects of the patient’s clinical status closely. The trainee will collect all the data, and interpret the study. A preliminary report will be written which will be reviewed with the pulmonary attending physician. A final report will then be done and signed by the trainee and the attending and placed in the patient’s permanent record.

A series of lectures on Pulmonary Function Tests and Pulmonary Exercise testing with written material for all pulmonary and critical care trainees will be given during each fellows training program.

<u>Elective Rotations</u>: All elective rotations will require prior authorization of the Pulmonary and CCM Program Director.

1) Surgical Intensive Care Unit (SICU) *(Required Rotation)*
During this elective rotation, the trainee will be incorporated into the SICU team, and will be under the supervision of the SICU attending physician. As a member of the team, the fellow will participate in patient care and didactic activities of the SICU service. They will expand their level of knowledge to the care of critical care illnesses associated with surgical procedures, and trauma. The trainee has the opportunity to evaluate and manage patients who have post operative respiratory failure along with patients who develop other critical illnesses that require pulmonary and critical care expertise. Since in our institution the SICU is managed by the trauma service, our fellows rotating in the SICU service are expected to participate in the care of patient receiving traumatic injuries, as well, as patient following neurosurgical interventions. Interpretation of ICP monitoring, and management of neurosurgical trauma patient will be obtained. Upon completion of the rotation, the trainee will receive an electronic evaluation by the SICU attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

2) Coronary Care Unit/Cardiology (CCU) *(Required Rotation)*
This experience will allow the trainee to gain experience in treating patients with acute cardiac diseases. Trainees taking a CCU rotation will be under the supervision of one of the Cardiology faculty. Fellows will directly participate in the care of the CCU patients, and gain insight in the approach to acute coronary diseases, cardiac arrhythmias, and indications for cardiac invasive procedures. As a member of the CCU team, the trainee will participate in daily rounds, patient care, and all didactic activities of the CCU service. During this rotation the trainee will learn the interpretation and management of IABP and will observe echocardiographic procedures and angiographies. Upon completion of his rotation, the trainee will receive a written evaluation by CCU attending. The fellow evaluation will jointly be reviewed by the trainee and the Program Director.

For the CCU elective rotation the schedule will be as follows for fellows:

1. One week performing echocardiograms and learning to interpret them ((all day)
2. One week in cath lab with right heart catheterization (anytime one is scheduled)
    a. Minimum of five right heart catheterizations are required.
3. All four weeks rounding in ICU with cardiology team one (9-11)
4. All four weeks interpreting EKG's (8-9)
    a. Minimum of 100 EKG interpretations are required per rotation.

3) Cardiothoracic Unit (CTU) *(Required Rotation)*
Fellows rotating in the CTU service will be under the supervision of one of the cardiothoracic surgeons. During the rotation in the CTU, the trainee will directly participate in the care of CTU patients, and will learn the postoperative management of

patients undergoing cardiothoracic surgical procedures (i.e.: CABG, and lung resections) who require CTU care. Familiarization with the respiratory and fluid management of these patients, as well as identification of the potential postoperative complications encountered in this type of patients during the postoperative period. The process of weaning CTS patient from mechanical ventilation will play a very important role in this rotation. Fellows also will have the opportunity to observe videos assisted thoracoscopic procedure performed by the CT Surgery service.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the CTS attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

4) Radiology *(Required Rotation)*
Fellows rotating through radiology service will be under the supervision of the attending in the Chest Radiology Service. Fellows will participate in the daily reading of the different radiology chest procedures. By the end of the rotation, the fellow should have obtained expertise in the interpretation of the different chest radiology procedures including radiograms, computerized tomography, magnetic resonance image, and positron electron tomography. In addition, the fellows will have exposure to the invasive radiology procedures of the chest, including percutaneous fine needle aspiration, and CT-guided thoracentesis.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Radiology attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

5) Neuro ICU
Fellows are encouraged to complete a rotation in the Neuro ICU at least once during their three year fellowship. The primary focus of this rotation will be management of patients with stroke and neurosurgical emergencies. In completing this rotation, it will give fellows a better understanding and knowledge of neuro critical care medicine. Fellows will be supervised by neuro critical care faculty.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Pathology Program Director. This evaluation will jointly be reviewed by the trainee and the Pulmonary and CCM Program Director

6) Anesthesiology
Fellows electing an anesthesiology rotation will be under the supervision of one of the Anesthesiology attending. The primary focus of this rotation will be airway management and endotracheal intubations. The trainee will learn about intubation techniques in general, and the approach to patients with difficult upper airways. Also, trainees will gain familiarity with pharmacologic agents used during endotracheal intubation, and anesthesia.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Anesthesiology attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

7) Nephrology

The trainee electing a rotation in this sub-specialty will be under the supervision of the Nephrology attending. The focus of the rotation will primarily be on the prevention, diagnosis and management of renal failure. The fellow will further learn about renal physiology, different dialysis modalities, and the indications and contraindications of dialysis procedures. At the end of the rotation, the fellow should have familiarity with CVVH, and CVVHD, as well as with fluid replacement therapy. Pulmonary complications emerging in the post-renal transplant patient will also be a focus area of the rotation.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Nephrology attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

8) Pathology

Fellows rotating in the pathology service will be under the direct supervision of the Pathology Program Director. During their rotation, fellows should gain knowledge in microscopy pulmonary pathology. The fellow will participate in the diagnostic viewing of cytology and tissue pulmonary specimens. The fellow will also participate in the evaluation of pulmonary autopsy specimens in order to gain familiarity with the anatomical demarcation of the lung parenchyma and airways, as well as, the relation of the lungs to the thoracic blood vessels and lymph nodes. Learning about the different staining for lung specimens and different pathogens will also be part of the rotation curriculum.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Pathology Program Director. This evaluation will jointly be reviewed by the trainee and the Pulmonary and CCM Program Director.

9) Sleep Medicine

In addition to the attendance to the weekly Sleep Clinic, fellow may opt to take a rotation in Sleep Medicine. It is intended that fellows taking this elective will participate in the activities of the Sleep Laboratory, and Sleep Clinic. The rotation will be under the supervision of one of the attendings in the Sleep Medicine Service. The goal of the rotation is to gain familiarity with the different aspects of sleep medicine. During the rotation, the fellow will gain expertise in respiratory and non-respiratory disorders causing disturbance of sleep. The fellow will interact with the Sleep Laboratory technician, and the Sleep Medicine attending to gain insight of the different laboratory procedures, and the interpretation of sleep studies. Fellows will learn to interpret the results of sleep studies. Trainees will be able to observe a sleep studies, and gain knowledge in the sleep laboratory equipment. Fellows taking electives in Sleep Medicine, will attend the weekly outpatient Sleep Clinic, and will see patients under the

supervision of the attending. Learning about the different pharmacologic treatment and mechanical devices used in the treatment sleep disturbances is also a goal of this rotation.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Sleep Medicine attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

10) Pulmonary Function Laboratory

In addition to the regular rotation in the Pulmonary Consult Service, fellows may opt to take a rotation in the Pulmonary Function Laboratory. During this rotation, the fellow will interact with the Respiratory Therapists, and will be under the supervision of the Pulmonary Consultant. The goal of the rotation will be to gain familiarity with the pulmonary laboratory equipment; including spirometer, body box, and pulmonary exercise testing. Fellows will learn to perform spirometry, lung volumes, and diffusing capacity testing, as well as, pulmonary exercise testing. They will participate in the reading and interpretation of the results with the Pulmonary Attending.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Pulmonary Consult attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

11) Radiology *(Required Rotation)*

Fellows rotating through radiology service will be under the supervision of the attending in the Chest Radiology Service. Fellows will participate in the daily reading of the different radiology chest procedures. By the end of the rotation, the fellow should have obtained expertise in the interpretation of the different chest radiology procedures including radiograms, computerized tomography, magnetic resonance image, and positron electron tomography. In addition, the fellows will have exposure to the invasive radiology procedures of the chest, including percutaneous fine needle aspiration, and CT-guided thoracentesis.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Radiology attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

12) Infectious Diseases

Fellows electing this rotation will be under the supervision one of the Infection Diseases attending. During this rotation, the fellow will learn about the evaluation of patients with infectious processes pertinent to the Pulmonary and CCM patient. The fellow will gain knowledge in the diagnostic work up of suspected pulmonary infectious diseases, and their treatment. The indications for special staining and special laboratory testing will also be an important focus of this rotation. The fellow will also learn about antibiotic management, antibiotic resistance, and pharmacokinetics.

Upon completion of his rotation, the trainee will receive an electronic evaluation by the Infectious Diseases attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

13) Bone Marrow Transplant Unit (BMT)

During this rotation the fellow will have the opportunity to participate and the care of patients undergoing bone marrow transplant at our institution. The fellow will be under direct supervision of the BMT attending. The fellow taking this rotation will gain knowledge in the care of patients undergoing BMT procedures. They will learn what kind of patients are candidates to have BMT, the process of preparation for the procedure, chemotherapeutic and radiation regimens, post BMT surveillance, diagnostic procedure in BMT patients, and management of complications. The fellow will actively participate in patient care, and all activities of the BMT service, including rounds, diagnostic and therapeutic decisions, and academic activities of the service.

14) Other Potential Rotations

For any other pertinent rotations that the fellow could wish to take (**i.e., emergency medicine, supportive/palliative care, ENT, neurology, etc.)**, the fellow should notify the program director at least 3 months in advance in order to discuss the goals of the rotation, and for the program director to arrange for the rotation with the elected service. Fellows will be able to take rotations outside the institution if these rotations will contribute to the fellow's growth as a Pulmonary and CCM specialist. For any elective rotation outside our institution, the fellow must notify the program director for approval at least six months in advance. The institution, service, and goal of the elective have to be stated.

DESCRIPTION OF THE GOALS OF TRAINING AND EVALUATION OF THE PULMONARY AMBULATORY CLINIC SERVICE (PACS)

Each fellow will be assigned two half-days a month to the Pulmonary Ambulatory Clinic Service (PACS). Each clinic day, the Attending on Duty (AOD) assigned to that clinic will be physically present to supervise the fellows. Patients will be assigned to each fellow for continuity care during the 3 years of training. Patients will be evaluated by the fellow and presented to the attending physician. The level of supervision will change during each year of training. However, for all years of training, each patient evaluated by the fellow will have to be presented to the attending physician. The attending physician will confirm the findings and make pertinent modifications to the plans. The fellow will get guidance in accordance with evidence based medicine and resources. Pulmonary procedures generated in PACS will be scheduled and performed by the fellow under the direct supervision of the attending physician. Each fellow is expected to see, on average, one to three new patients and three to six returns patients during each ½ day session.

Educational Purpose: The goals and objectives of this rotation are to gain expertise in the evaluation, diagnosis and ambulatory management of a broad range of pulmonary illnesses. During this rotation, the fellow will learn how to approach patients with pulmonary symptoms in an outpatient setting. They will perfect their skills in obtaining a history and perform a physical examination with special attention to the pulmonary system. The fellows will learn the diagnostic approach to patients presenting with the classical pulmonary symptomatology of but not limited to dyspnea, cough, and sputum production. The fellow will develop skills in the evaluation, diagnosis and management of patients with abnormal pulmonary radiological findings. Also they will become familiar with the use and prescription of an array of pharmacological therapies; as well as the proper follow up of patients with a variety of pulmonary disease, and when hospitalization is indicated.

Teaching Methods: 1) Evaluation of the findings and presentation of the cases. 2) Interaction with patients, families, and health care personals. 3) Interpretation of the radiographic studies and pulmonary function tests. 4) Supervised direct patient care activities.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the management of a variety of pulmonary disease:

a) Obstructive lung diseases. Understanding the pathophysiology and natural history, treatment and management of obstructive lung disease. Bronchial asthma, chronic bronchitis, bronchiectasis and emphysema will be the primordial focus of this section.
b) Cough and dyspnea.
c) Pulmonary functions test
d) Bronchoscopy and bronchoscopic interventional procedures
e) Pulmonary infections including HIV related
f) Preoperative pulmonary assessment
g) Pulmonary nodules

h) Pulmonary malignancies. Diagnosis, staging, histopathology and therapeutic options.
i) Diffuse interstitial lung disease
j) Pulmonary vasculitis, pulmonary hypertension and pulmonary embolism
k) Drug induced lung disease
l) Lung injury resulting from radiation, inhalation or trauma
m) Pulmonary manifestations of systemic diseases
n) Disorders of the pleura and mediastinum

2) Patient Characteristics: Clinic patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, patients seen by our Pulmonary Consult service will be followed up as outpatients in the clinic. Patients are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance.

3) Type of clinical encounters: Each fellow will see 1-3 new patients and 5-6 returns. Continuity of care is the rule. If patients need a pulmonary invasive diagnostic procedure, the fellow will schedule the procedure with one of the attending physicians.

4) Procedures: During this rotation, fellows will review radiographic studies and pulmonary function tests with the attending physician. The work room at the outpatient clinic is equipped with computerized equipment for viewing radiological viewing. The fellow also will learn how to use and monitor his/her patients with peak flow spirometry.

Method of evaluation:

1) Fellow performance: The performance and progress of the fellows in PACS is evaluated by faculty members monthly utilizing assigned evaluations within E-Value. The result of these evaluations are reviewed by each fellow and discussed at the PD/fellow meetings. Also, fellows are evaluated by their patients. Fellows are given continuous oral feedback of their performance by the attending physician during the month.

2) Faculty and Program Performance: The fellow will complete an evaluation using E-Value commenting in the faculty and clinic service. The attending faculty receives anonymous reports of his/her evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to each particular fellow and shared by the PD.

Specific Competencies Objectives.

First Year Fellow

Patient Care: He/she will gain expertise with components of the history and physical examination of pulmonary patients. The fellow will obtain historical and perform physical examinations. He/she will review laboratory results, pulmonary function tests and radiographic films with the assistance of the pulmonary attending. Diagnostic and management plans will be developed under close supervision of the attending physicians. The fellow is expected to develop skills in getting a comprehensive data set.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. They should gain knowledge in the diagnosis and management of ambulatory pulmonary diseases. It is expected that the fellows will demonstrate that they are reading and increasing their knowledge in the field of pulmonary medicine.

Practice-Based Learning Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patients they follow in the pulmonary clinic, as well as, how they search and apply evidence based knowledge to improve the outcome of their patients. The fellow will gain familiarity with our computerized record system, as well as, with the management of the computer radiographic based data.

Interpersonal Communications Skills: The fellow's capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all pulmonary clinic members. The fellow's dictations and consultation letters may require some corrections by the attending physicians. Fellows are expected to develop competency in explaining pulmonary procedures to patients and obtaining consent.

Professionalism: The first year fellow is expected to develop good working habits. Each fellow is expected to attend his clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

System-Based Practice: The fellow is expected to become familiar with the different aspects of respiratory care. They will learn to interact with available health care system services (rehabilitation, social worker and home health support) to improve outcomes. During their first year of training, the fellow is expected to learn the process under the direct supervision of the attending physician.

Second Year Fellow

Patient Care: The second year fellow is expected to be comfortable in the evaluation and management of patients with pulmonary diseases. The fellow will continue obtaining all pertinent historical, laboratory, exam and radiographic data with more efficiency and independently than the first year fellow. Fellow presentations should be concise and their plans should require only mild modifications by the attending physician.

Medical Knowledge: The second year fellow is expected to have reached a broader knowledge of the physiology and management of obstructive and restrictive pulmonary diseases. They should demonstrate that they read publications pertinent to patients seen in the clinic.

Practice-Based Learning Practice: They will start generating a comprehensive plan of care based on a broader knowledge of the physiopathology and management of pulmonary diseases based on state of the art publications in order to improve patient care.

Interpersonal Communications Skills: By the second year of training, the fellow should be able to able to communicate with families and patients in a mature and professional way. Their dictations and consult letters will require minimal correction by the attending physicians.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Their appearance and manner should be very acceptable.

System-Based Practice: By their second year of training, the fellow should demonstrate a capacity to resolve most of the system-based problems confronted by their patients. They should be able to make plans for continuity of the patient's management and home needs. The fellow should show familiarity with oxygen therapy requirements, bronchodilators use, social services, respiratory therapists and home health services.

Third Year Fellow

Patient Care: Third year fellow's performance in the pulmonary clinic is expected to reach attending level. They should show familiarity with current treatment guidelines and be able to interpret properly pulmonary function tests and radiographic studies. They should require none or minimal prompting by the attending physician. The fellow should be able to establish an appropriate plan of care.

Medical Knowledge: By this level of training, they should demonstrate to have a good base knowledge of the different medical aspects of pulmonary diseases. The fellow should demonstrate that they are keeping abreast of recent state of the art publications related pulmonary medicine and that they are ready to take the specialty boards.

Practice Based Learning Improvement: The fellow should demonstrate that they keep abreast of recent state of the art publications related to pulmonary medicine. They should show independent capacity to collect state of the art publications and established guidelines for the management of pulmonary diseases in order to apply best of care.

Interpersonal and Communications Skills: The third year fellow is expected to be able to communicate with patients, families, pulmonary clinic teams and referral physicians at an attending level. Dictations and summary letters should have none or minimal corrections by the attending physician.

Professionalism: In addition to the qualities listed for the lower years of training, the third year fellow is expected to become a role model of manners, dedication and responsibility while attending the clinic.

System-Based Practice: By the third year of training, the fellow should have mastered the system-based patient care. They should be able to utilize the system-based available resources for social services, rehabilitation and home care. During this year, the fellow will gain insight in the management of an ambulatory pulmonary clinic.

DUTY HOUR POLICY
PULMONARY AND CRITICAL CARE MEDICINE

Duty hours are defined as clinical and academic activities related to the fellowship program including both inpatient and outpatient care, administrative responsibilities related to patient care, provision of transfer of patient care, time spent in house doing call activity, scheduled educational activity such as conferences. The hours, however, do not include reading time and time for preparation which is away from the duty site.

The duty hour standards include:

• An 80-hour weekly limit, averaged over four weeks;
• Residents should have eight hours off between scheduled clinical work and education periods;
• A 24-hour limit on continuous duty, up to four hours of additional time may be used for activities related to patient safety, such as providing effective transitions of care, and/or resident education
• One day in seven free from patient care and educational obligations, averaged over four weeks;
• In-house call no more than once every three nights, averaged over four weeks; If a fellow is on beeper call from home during the time and has to come back to the hospital this will be included in the 80 hours per week.

In-House Night Float
Night float must occur within the context of the 80-hour and one-day-off-in-seven requirements.
The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.

Duty Hour Policy - ACGME

VI.F.1. Maximum Hours of Clinical and Educational Work per Week Clinical and educational work hours must be limited to no more than 80 hours per week, averaged over a four-week period, inclusive of all in-house clinical and educational activities, clinical work done from home, and all moonlighting. (Core)

VI.F.2. Mandatory Time Free of Clinical Work and Education

VI.F.2.a) The program must design an effective program structure that is configured to provide residents with educational opportunities, as well as reasonable opportunities for rest and personal well-being. (Core)

VI.F.2.b) Residents should have eight hours off between scheduled clinical work and education periods. (Detail)

VI.F.2.b).(1) There may be circumstances when residents choose to stay to care for their patients or return to the hospital with fewer than eight hours free of clinical experience and education. This must occur within the context of the 80-hour and the one-day-off-in-seven requirements. (Detail)

VI.F.2.c) Residents must have at least 14 hours free of clinical work and education after 24 hours of in-house call. (Core)

VI.F.2.d) Residents must be scheduled for a minimum of one day in seven free of clinical work and required education (when averaged over four weeks). At-home call cannot be assigned on these free days. (Core)

VI.F.3. Maximum Clinical Work and Education Period Length

VI.F.3.a) Clinical and educational work periods for residents must not exceed 24 hours of continuous scheduled clinical assignments. (Core)

VI.F.3.a).(1) Up to four hours of additional time may be used for activities related to patient safety, such as providing effective transitions of care, and/or resident education. (Core)

VI.F.3.a).(1).(a) Additional patient care responsibilities must not be assigned to a resident during this time. (Core)

VI.F.4. Clinical and Educational Work Hour Exceptions

VI.F.4.a) In rare circumstances, after handing off all other responsibilities, a resident, on their own initiative, may elect to remain or return to the clinical site in the following circumstances:

VI.F.4.a).(1) to continue to provide care to a single severely ill or unstable patient; (Detail)

VI.F.4.a).(2) humanistic attention to the needs of a patient or family; or, (Detail)

VI.F.4.a).(3) to attend unique educational events. (Detail)

VI.F.4.b) These additional hours of care or education will be counted toward the 80-hour weekly limit. (Detail)

VI.F.4.c) A Review Committee may grant rotation-specific exceptions for up to 10 percent or a maximum of 88 clinical and educational work hours to individual programs based on a sound educational rationale.

VI.F.4.c).(1) In preparing a request for an exception, the program director must follow the clinical and educational work hour exception policy from the ACGME Manual of Policies and Procedures. (Core)

VI.F.4.c).(2) Prior to submitting the request to the Review Committee, the program director must obtain approval from the Sponsoring Institution's GMEC and DIO. (Core)

VI.F.5. Moonlighting

VI.F.5.a) Moonlighting must not interfere with the ability of the resident to achieve the goals and objectives of the educational program, and must not interfere with the resident's fitness for work nor compromise patient safety. (Core)

VI.F.5.b) Time spent by residents in internal and external moonlighting (as defined in the ACGME Glossary of Terms) must be counted toward the 80-hour maximum weekly limit. (Core)

VI.F.5.c) PGY-1 residents are not permitted to moonlight. (Core)

VI.F.6. In-House Night Float

Night float must occur within the context of the 80-hour and one-day-off-in-seven requirements. (Core)
[The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.]

VI.F.7. Maximum In-House On-Call Frequency

Residents must be scheduled for in-house call no more frequently than every third night (when averaged over a four-week period). (Core)

VI.F.8. At-Home Call

VI.F.8.a) Time spent on patient care activities by residents on at-home call must count toward the 80-hour maximum weekly limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one day in seven free of clinical work and education, when averaged over four weeks. (Core)

VI.F.8.a).(1) At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each resident. (Core)

VI.F.8.b) Residents are permitted to return to the hospital while on at-home call to provide direct care for new or established patients. These hours of inpatient patient care must be included in the 80-hour maximum weekly limit. (Detail)

****Core Requirements: Statements that define structure, resource, or process elements essential to every graduate medical educational program.

Detail Requirements: Statements that describe a specific structure, resource, or process, for achieving compliance with a Core Requirement. Programs and sponsoring institutions in substantial compliance with the Outcome Requirements may utilize alternative or innovative approaches to meet Core Requirements.

Outcome Requirements: Statements that specify expected measurable or observable attributes (knowledge, abilities, skills, or attitudes) of residents or fellows at key stages of their graduate medical education.

PULMONARY AND CRITICAL CARE MEDICINE
POLICY ON ELECTIVES

Surgical Intensive Care
Cardiothoracic Intensive Care
Coronary Intensive Care
Sleep Medicine
Research
Pulmonary Imaging (radiology/nuclear medicine)
Pulmonary Function Lab
Pathology
Anesthesiology
Neurology
Neuro ICU

Mandatory Rotations in **Bold**

For any other pertinent rotation that the fellow could wish to take *(i.e., emergency medicine, infectious diseases, bone marrow transplant unit, etc.)* the fellow should notify the program director at least 3 months in advance in order to discuss the goals of the rotation, and for the program director to arrange for the rotation with the elected service.

For any elective outside our institution, the fellow should notify the program director for approval at least six months in advance. The institution, service, and goal of the elective have to be stated. The rotation has to be arranged through the program director.

PULMONARY AND CRITICAL CARE MEDICINE
EVALUATION POLICY

1. Each fellow will be evaluated by faculty, nursing staff and/or patients after each clinical monthly rotation, elective services and rotations outside the section. Additional evaluations by peers will also occur at least annually. The evaluations assess competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communications skills, professionalism and systems-based practice.

2. Each fellow will complete an evaluation of each faculty member and of each rotation for each service via the E*value system. Confidentiality will be maintained and assured in order to make the faculty evaluations worthwhile and useful for recognizing praiseworthy teaching and identifying potential for improvement. The information contained in these evaluations is reviewed by the Program Director and shared with the faculty in annual evaluations.

3. Each fellow will self-evaluate semi-annually.

4. Each fellow and faculty member will evaluate the program as a whole annually.

5. Each fellow will meet with the Program Director semiannually to formally review progress. Core competencies, didactic attendance, licensure, scholarly activity, duty hour concerns, moonlighting and supervision will be discussed.

6. The Program Director will be available for additional discussion of a fellow's progress. Each fellow is strongly encouraged to seek the guidance of the Program Director for any perceived difficulty or problem.

7. At the conclusion of training a formal written final evaluation will be completed by the Program Director and maintained in the fellow's permanent file. This evaluation will summarize the fellow's year of training and verify that the fellow has demonstrated sufficient professional ability to proceed.

8. The fellow will have access to his academic file and evaluations.

West Virginia University
Section of Pulmonary and Critical Care Medicine
Policy for Resident Fatigue and/or Stress

Purpose

Symptoms of fatigue and/or stress are normal and expected to occur periodically with the fellow population, just as they would in other professional settings. Not unexpectedly, fellows may on occasion, experience some effects of inadequate sleep and/or stress. This policy provides Department of Medicine including Section of Pulmonary and Critical Care Medicine overall policy to address this issue.

Recognition of Fellow Excess Fatigue and/or Stress

Signs and symptoms of fellow fatigue and/or stress may include but are not limited to the following:

- Inattentiveness to details
- Forgetfulness
- Emotional ability
- Mood swings
- Increased conflicts with others
- Lack or attention to proper attire or hygiene
- Difficulty with novel tasks and multitasking
- Awareness is impaired (fall back on rote memory)

Response

The demonstration of fellow excess fatigue and/or stress may occur in patient care settings or in non-patient care settings such as lectures and conferences.

In patient care settings, patient safety, as well as the personal safety and well-being of the fellow, mandates implementation of an immediate and a proper response sequence.

In non- patient care settings, responses may vary depending on the severity of and the demeanor of the fellow's appearance and perceived condition.

The following is intended as a general guideline for those recognizing or observing excessive resident fatigue and/or stress in either setting.

Patient Care Settings

• Attending Clinician:

1. In the interest of patient and fellow safety, the recognition that a fellow is demonstrating evidence for excess fatigue and/or stress requires the Pulmonary and Critical Care Medicine attending physician to consider immediate release of the fellow from any further patient care responsibilities at the time of recognition.

2. The attending clinician should privately discuss the observation with the fellow, attempt to identify the reason for excess fatigue and/or stress, and estimate the amount of rest that will be required to alleviate the situation.

3. The attending clinician must attempt, in all circumstances without exception, to notify Pulmonary and Critical Care Medicine and Internal Medicine Program Directors of the decision to release the resident from further patient care responsibilities at that time.

4. If excess fatigue is the issue, the Pulmonary and Critical Care Medicine attending clinician must advise the resident to rest for a period that is adequate to relieve the fatigue before operating a motorized vehicle. The fellow may also be advised to consider calling someone to provide transportation home.

5. The Pulmonary and Critical Care Medicine attending physician should notify the on- call hospital administrator for further documentation of advice given to the fellow removed from duty.

6. If stress is the issue, the Pulmonary and Critical Care Medicine attending physician upon privately counseling the fellow, may opt to take immediate action to alleviate the stress. If, in the opinion of the Pulmonary and Critical Care Medicine attending physician, the fellow stress has the potential to negatively affect patient safety, the Pulmonary and Critical Care Medicine attending physician must immediately release the fellow from further patient care responsibilities at that time. In the event of a decision to release the fellow from further patient care activity; notification of program administrative personnel shall include the Pulmonary and Critical Care Medicine and Internal Medicine program directors.

7. A fellow who has been released from further immediate patient care because of excess fatigue and/or stress cannot appeal the decision to the responding Pulmonary and Critical Care Medicine attending physician.

8. A fellow who has been released from patient care cannot resume patient care duties without permission of the program director.

• **Allied Health Care Personnel**

1. Allied health care professionals in patient service areas will be encouraged to report observations of apparent resident excess fatigue and/or stress to the observer's immediate supervisor who will then be responsible for reporting the observation to the respective program director.

2. Alternatively, allied healthcare personnel may elect the Anonymous Reporting Process for reporting potential issues related to resident performance skills.

• **Residents/Fellows**

1. Fellows who perceive that they are manifesting excess fatigue and/or stress have the professional responsibility to immediately notify the Pulmonary and Critical Care Medicine attending physician, and the program director without fear of reprisal.

2. Fellows recognizing resident fatigue and/or stress in fellow residents should report their observations and concerns immediately to the Pulmonary and Critical Care Medicine attending physician and the program director.

Money is available for safe transportation home. This is provided through a voucher which can be obtained from the night supervisor in the Emergency Department. Other methods of safe travel to home include contacting hospital security who will also provide safe transportation home within a 10-mile radius. The ultimate responsibility for safe transportation home of a fatigues fellow lies with the program director. Our program director or supervising faculty are responsible for assuring that safe transportation home at all times is provided for any fatigued fellow.

• **Program Director**

1. Following removal of a resident from duty, determine the need for an immediate adjustment in duty assignments for remaining fellows in the program.

2. Subsequently, the program director will review the fellow's call schedules, duty hour reports, extent of patient care responsibilities, any known personal problems, and stresses contributing to this for the fellow.

4. In matters of resident stress, the program director will meet with the fellow personally as soon as can be arranged. If counseling by the program director is judged to be insufficient, the program director will refer the fellow to the Faculty Staff Assistance Program (FSAP) by direct contact with the FSAP director (Cheryl Riley, 293-5590).

5. If the problem is recurrent or not resolved in a timely manner, the program director will have the authority to release the resident indefinitely from patient care duties pending evaluation from the FSAP representative.

6. The program director will release the fellow to resume patient care duties only after advisement from the FSAP director and will be responsible for informing the resident as well as the attending physician of the fellow's current rotation.

7. If the FSAP director feels the fellow should undergo continued counseling, the program director will be notified and should receive periodic updates from the RAP representative.

8. Extended periods of release from duty assignments that exceed requirements for completion of training must be made up to meet RRC training guidelines.

B. Non-Patient Care Settings

If fellows are observed to show signs of fatigue and/or stress in non-patient care settings, the program director should follow the program director procedures outlined above for the patient care setting.

WVU Graduate Medical Education Policy on Alertness Management/Fatigue Mitigation

IV.A.4.a).(3)

Alertness Management/Fatigue Mitigation

The program must:
a) Educate all faculty members and residents to recognize the signs of fatigue and sleep deprivation;
b) Educate all faculty members and residents in alertness management and fatigue mitigation processes; and,

c) Adopt fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning, such as naps or back-up call schedules.

Each program must have a process to ensure continuity of patient care in the event that a resident may be unable to perform his/her patient care duties.

The sponsoring institution must provide adequate sleep facilities and/or safe transportation options for residents who may be too fatigued to safely return home. When on duty at WVUH, residents who are too fatigued to drive themselves safely home have two options: 1) Call rooms are available for napping, and/or 2) Residents may report to the registration desk in the Emergency Department for a taxi voucher.

The WVU School of Medicine Office of Graduate Medical Education has the "Fundamentals of Fatigue Prevention, Identification, and Management in Graduate Medical Education" posted to SOLE for your reference.

GMEC Approved: September 9, 2011
Revised and Approved by GMEC: January 15, 2018

West Virginia University School of Medicine Code of Professionalism

The West Virginia University School of Medicine embraces the following Code of Professionalism amongst all students, residents, faculty, and staff. This Code provides the foundation for proper lifelong professional behavior. It is the expectation that this behavior will be consistently maintained at its highest level both inside and outside of the professional training environment. This is one of the core competencies.

The nine primary areas of professionalism are defined as:

Honesty and Integrity
Accountability
Responsibility
Respectful and Nonjudgmental Behavior
Compassion and Empathy
Maturity
Skillful Communication
Confidentiality and Privacy in all patient affairs
Self-directed learning and appraisal skills

Honesty and Integrity

- Honesty in action and in words, with self and with others
- Does not lie, cheat, or steal
- Adheres sincerely to school values (love, respect, humility, creativity, faith, courage, integrity, trust)
- Avoids misrepresenting one's self or knowledge
- Admits mistakes
- Will not provide supervision or evaluation of a first degree relative

Accountability

- Reports to duty/class punctually and well prepared
- Keeps appointments
- Is receptive of constructive evaluations (by self and others)
- Completes all tasks on time
- Follows up on communications

Responsibility

- Reliable, trustworthy, and caring to all
- Prompt, prepared, and organized
- Takes ownership of assigned implicit and explicit assignments
- Seriously and diligently works toward assigned goals/tasks
- Wears appropriate protective clothing, gear as needed in patient care

Respectful and Nonjudgmental Behavior

- Consistently courteous and civil to all
- Tolerates diversity in culture, country of origin, gender, sexual orientation, religious preference, political views, age, ethnicity, and race
- Works positively to correct misunderstandings
- Listens before acting
- Considers others' feelings, background, and perspective
- Realizes the value and limitations of one's own beliefs, and perspectives
- Strives not to make assumptions

Compassion and Empathy

- Respects and is aware of others' feelings
- Attempts to understand others' feelings
- Demonstrates mindfulness and self-reflection

Maturity

- Exhibits personal growth
- Recognizes and corrects mistakes
- Shows appropriate restraint
- Tries to improve oneself
- Has the capacity to put others ahead of self
- Manages relationships and conflicts well
- Maintains personal and professional balance and boundaries
- Willfully displays professional behavior
- Makes sound decisions
- Manages time well
- Able to see the big picture
- Seeks feedback and modifies behavior accordingly
- Maintains publicly appropriate dress and appearance

Skillful Communication

- Effectively uses verbal, non-verbal, and written communication skills that are appropriate to the culture/setting
- Writes and speaks with clarity at a comprehendible level
- Seeks feedback that the information provided is understood
- Speaks clearly in a manner understood by all
- Provides clear and legible written communications
- Gives and receives constructive feedback
- Wears appropriate dress for the occasion
- Enhances conflict management skills

Confidentiality and Privacy in all patient affairs

- Maintains information in an appropriate manner
- Acts in accordance with known guidelines, policies, and regulations
- Seeks and reveals patient information only when necessary and appropriate

Self-directed learning and appraisal skills

- Demonstrates the commitment and ability to be a lifelong learner
- Accomplishes tasks without unnecessary assistance and continues to work and value the team • Completes academic and clinical work in a timely manner
- Is honest in self-evaluation of behavior, performance, skills, knowledge, strengths, weaknesses, and limitations, and suggests opportunities for improvement
- Is open to change Completes in-depth and balanced, self-evaluations on a periodic basis

LCME Standard 3: Academic and Learning Environments. A medical school ensures that its medical education program occurs in professional, respectful, and intellectually stimulating academic and clinical environments, recognizes the benefits of diversity, and promotes students' attainment of competencies required of future physicians. Applicable Element 3.5: Learning Environment/Professionalism A medical school ensures that the learning environment of its medical education program is conducive to the ongoing development of explicit and appropriate professional behaviors in its medical students, faculty, and staff at all locations and is one in which all individuals are treated with respect. The medical school and its clinical affiliates share the responsibility for periodic evaluation of the learning environment in order to identify positive and negative influences on the maintenance of professional standards, develop and conduct appropriate strategies to enhance positive and mitigate negative influences, and identify and promptly correct violations of professional standards. Updated: July 2015

Description and Evaluation of the ICU Service

All patients admitted to the MICU service will be primarily cared for by the MICU team. Decisions on admission, diagnostic work up, consultations and transfers will completely rest on the MICU team. After discussion with the attending physician, the MICU fellow will be responsible for accepting and discharging patients from the unit.
A MICU attending physician will be available 24 hours per day to discuss any issues pertinent to the service. The goals of the rotation are discussed with each fellow at the beginning of the rotation.
ICU rotations are a one-month block.
During this period the fellow is "not" allowed to take vacation time or time off, unless an emergency situation occurs and upon permission by the attending physician and PD. Fellows will have to make up for any leave of absence that must be taken during this time.

Each MICU team is comprised by an attending physician, a fellow, 3-4 residents (usually 2-3 from medicine and the rest from emergency medicine, family practice and anesthesiology). There are also 1-2 medical students rotating on this service. Formal attending bedside MICU rounds start between 8:30 AM-9 AM. Prior to attending rounds, the fellow examines the patients, reviews new data and radiographic tests. Any new patient admitted during the night, and all night time events will also be reviewed by the fellow in preparation for attending rounds.

Formal attending rounds usually start reviewing radiographic procedures in the ICUs. All pertinent radiographic findings are discussed with the team. In addition to the medical personnel; nurses, pharmacists, dietitians and respiratory therapists also join the team for rounds. During rounds, any new admission will be presented and evaluated. All patients will be examined and their problem list reviewed. The day-plan for each patient will be discussed and established. Following rounds, a progress note will be written on each patient and new orders given.
The MICU fellow will supervise the care of each patient and ascertain that the plan for every patient is carried out.

During the MICU rotation the trainee will perform, under the attending's supervision, all the required invasive MICU procedures listed below. The fellow will also interact with respiratory therapists in the management of ventilators, with the dietitian in the nutritional management of the patients and with the different consultation services. The fellow will also be assisted by the pharmacist in the use of different medications related to ICU care. The trainee will participate in discussions related to end-of-life decisions with patients and their families and will be instructed in ethical issues. The trainee will learn to calibrate transducers used for pressure measurements.

Every weekday afternoon, around 4 pm (except for Tuesday it will be at 3 pm), the ICU team will again make rounds with the ICU attending physician and will discuss the clinical evolution of each patient. They will make pertinent therapeutic modifications if needed. The ICU fellow will also provide information to the on-call fellow to maintain proper continuity of care.

The trainees will have the opportunity for post discharge follow-up care of patients transferred from the ICU. These patients are followed by the trainee rotating in the Pulmonary Consult service on the ward service. Follow up of the patients clinical evolution is also frequently discussed during the weekly Pulmonary Case conferences.

The fellow will also evaluate and enroll patients for various clinical drug trials in the ICU.

Educational purpose: To gain expertise in the evaluation, diagnosis and management of a broad range of critical illnesses. During this rotation the fellow will also will develop skills in procedures related to critical care medicine. They will be trained in the determination of severity of illness, ethics considerations, hemodynamic monitoring, calibration of ICU equipment, pharmacotherapy, advance cardiac life support, endotracheal intubation, management of artificial airways, mechanical ventilation, interpretation of acid/base disturbance, arterial blood gases and pulse oximetry. Under direct supervision of an attending physician, the fellow will develop leadership qualities. The fellow will direct and supervise the rotation of residents and medical students. The fellow will evaluate potential transfers and discharges and will learn about ICU organization and will interact with other medical services and consultants. Critical Care Medicine Fellows are expected to acquire a general knowledge of the current evidence based practice regarding the diagnosis and therapy of patients with critical illness admitted to the service.

The fellow will acquire skills in physical examination related to critical illness, interpretation of diagnostic radiological procedures, electrocardiographic studies and appropriate interpretation of laboratory testing results.

Teaching methods:

1) Supervised direct patient care activities by the assigned attending physician. In conjunction with the rest of the ICU team, the fellow will manage approximately 15-20 critically ill patients daily.

2) Interaction with other interdisciplinary services (respiratory therapy, nutritionists, pharmacists, physical therapy) and consultants. Through this experience, the fellow will learn about all aspects of CCM management.

3) Bedside discussions and presentations.

4) Didactic presentations in topics related to CCM.

5) Attendance at family meetings and discussion of Palliative Care and Ethics.

6) Presentations at the weekly Case Conference and the monthly CCM journal club.

7) Assigned readings to strengthen their practiced-based learning and improvement and providing them with the ICU hand book.

8) By using information technology which is available in the ICU and our sections libraries (Medline search, board reviews books and tapes and multiple ICU text books

9) Weekly board review meetings and CCM core lectures.

10) Morbidity and mortality monthly CCM conference.

11) Monthly CCM Grand Rounds.

12) Monthly Radiology Conference

13) Monthly orientation with Nurse Supervisor and Pharmacist

14) Hands-on ventilator management teaching by Respiratory Therapy.

When feasible, fellows will attend autopsies preformed on ICU patients. Also, they will participate in reviewing biopsy findings in ICU patients during the monthly Pathology conference.

Educational Content:

1) Mix of Disease: Respiratory failure, pulmonary infections, life-threatening asthma, COPD exacerbation, circulatory shock, myocardial infarction, cardiac arrhythmias, hypertensive crisis, acute renal failure, fluid and electrolytes disorders, endocrine emergencies, nutrition, gastrointestinal disorders, hematology/oncology emergencies, nervous system disorders, delirium, infectious diseases in ICU and other miscellaneous topics in critical care (poisoning, overdose, body temperature disorders and ICU management).
The fellow will demonstrate the ability to obtain a comprehensive and accurate history for the above mentioned variety of critical illnesses, to summarize findings, to develop diagnostic and therapeutic plans and present them to the attending physician.

2) Patient Characteristics: The ICU rotation is based at West Virginia University Hospital which is a 600 plus bed hospital and a major tertiary care referral center for West Virginia, Western Maryland and Southern Pennsylvania. Patients treated during this rotation are above the age of 18 and will have a diverse variety of pathologies present in these areas.
The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance and approximately 5-7% have no insurance coverage at all.

3) Type of clinical encounters: Fellows will care for all patients in the ICU service. The usual number is approximately 15-20 per day. Every day, 1-5 new patients are admitted to the ICU service and usually there are a similar number of discharges. Patients transferred to the MICU service come from either our in-patient population, emergency room services or transferred from other institutions. Also, fellows rotating

in the ICU service will participate in consultations for CCU and CTU mechanically ventilated patients.

These consultations will provide the fellows an excellent opportunity to develop skills treating a wide diversity of post-operative and post-cardiac arrest complications.

4) Procedures: During their ICU rotations fellows will be directly instructed by the attending physician on the performance of different ICU related procedures. They will be theoretically and practically instructed, and will develop expertise on arterial and central line placements, chest tubes, and endotracheal intubations, management of ventilators, pulmonary artery catheters placements, percutaneous tracheostomies and use of ultrasound equipment. They will directly participate in all bronchoscopic procedures performed on the MICU patients.

5) Educational tools: The Flink library, next to our MICU, possesses all kind of educational aids to be used by our fellows. Textbooks of Critical Care Medicine; as well as textbooks of Internal Medicine and other medical specialties are available. The library has access to Up-to-Date, Pub Med and all major medical journals related to our specialty. Fellows are encouraged to read the textbooks on Critical Care Medicine ("Civeta, Tylor and Kirby" and "Irwin Rippe") which are available in our Section's library. In addition, at the beginning of their training, fellows are given a link to our Handbook for CCM. Fellows have access to a reading list of Critical Care Medicine subjects provided in our board review course.
During their MICU rotation, fellows are expected to attend all the Section's educational activities. They will prepare cases for Tuesday Case Conference and will attend all of the MICU conferences.

Methods of Evaluation:

1) **Fellow performance:** At the end of the rotation, the attending faculty will complete a web-based electronic evaluation form in E-Value. The evaluation is competency based and in accordance with the six core competencies and the level of training. The evaluation is shared with the fellow and is available for on-line review by the fellow. Each evaluation is sent to the fellowship office for internal review. Evaluations are part of the fellow's files and are reviewed during the fellow/PD meeting semiannually. Some fellows may meet every 2-3 monthly depending on their performance.

2) **Faculty and Program Performance:** At the end of the rotation, the fellow will complete a web-based evaluation using E-Value commenting on the faculty, facilities service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are also sent to the fellowship office and are reviewed by the PD.

3) **In-training examination:** All fellows are required to take the in-service training examination. Results of this testing are reported to the PD and shared with each fellow by the PD. The PD discusses the results with each fellow and advises any action to improve performance. The global results are discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and

readings are taken.

Specific Competencies/Objectives

1. Patient Care

The objectives will be accomplished with attention to:

a) **The first year fellow** is expected to develop an understanding of critical illness and needs for ICU care. The fellow will gain familiarity with the interpretation of ICU radiological procedures and the performance of different invasive procedure including bronchoscopy in the mechanically ventilated patient. The fellow will be under the direct supervision of the attending physician; the fellow will develop experience in leading rounds and supervision of residents and students rotating though the ICU service. The fellow will attend ICU lectures and participate in all the service activities. They will be encouraged to become familiar with the different types of ventilator and interact with respiratory therapists. Furthermore, the fellows are expected to became familiar with the ICU equipment (monitors, pumps, transducers, pulse oximeter, etc.) and to learn the calibration of transducer and frequent trouble shooting encountered during invasive monitoring. They are expected to participate in and start developing skills in and developing all life and end-of-life care with patients and their families.

Patient Care Evaluations will be based on:

i) The fellow's capacity to obtain all pertinent historical information, physical examination and diagnostic studies. The fellow will be instructed to generate a comprehensive data set.

ii) His assessment and treatment plans using fund of knowledge and evidence based medical literature. The supervising attending may need to make modifications to the assessment and plans, as well as, provide guidance as to relevant information and appropriate literature/web resources.

b) **The second year fellow** is expected to continue development in all the above mentioned aspects of critical care medicine. They will take a more active participation in teaching residents and students rotating through the service. They will teach some of the ICU core lectures and will participate as speakers in the monthly multidisciplinary Critical Care Medicine Grand Rounds. They will gain more independence in decision making about ventilator management and the need for moving patients in and out the ICU. They will continue interacting with the nutritional and pharmacy services to gain expertise in nutritional support and drug monitoring.

Patient care evaluations will be based on:

i) Obtain pertinent data with minimal or no prompting and in a more efficient manner than expected of a first year fellow.
ii) Generate plan of care based on a broader knowledge and expertise with significant input from recent medical literature.

c) **The third year fellow** is expected to be efficient with ICU procedures. They are expected to be able to lead teaching rounds and to potentially make independent decisions about ICU patient care. They should be able to help junior fellows and residents with ICU procedures. By the end of their training, the fellow is expected to have gained expertise in airway management and mechanical ventilation, calibration and operation of hemodynamic systems. Also, they are expected to be able to order nutritional support (enteral and parenteral), as well as, to establish a plan of care and be familiar with the ICU management. They should have a general knowledge of the organization and administrative aspects of the ICU.

Patient care evaluations will be based on:

i) Be able to integrate pertinent history, diagnostic data and consultative recommendations in an efficient and accurate way.

ii) Lead rounds and make care plans in accordance with the state of the art recommendations. The fellow should have acquired a broad knowledge in critical care medicine based on a broader knowledge of physiological and medical literature.

2. Medical Knowledge

Based on the above guidelines, the fellow's medical knowledge will be evaluated through his presentations and management plans, as well as, interaction with the attending physician during rounds and conferences. The fellow's medical knowledge will be graded with attention to:

a) **The first year fellow** will be evaluated by the physiology and literature recommendations understanding behind their assessment and management plans for the most frequent illness encountered in the ICU. The fellows' procedural skills and understanding of mechanical ventilation. Participation during rounds, assigned review and conference attendance.

b) **The second year fellow** evaluation will also be evaluated by the above parameters. The fellow will be expected to have a broader knowledge of the physiology and literature pertinent to the managed cases and less common issues encountered in critically ill patients. The fellow should be able to perform ICU procedures under the attending's supervision, but with minimal attending participation.

c) **The third year fellow** evaluation will be based on his progression toward attending level, their rounded medical knowledge, a review of recent medical literature. They should be able to have knowledge of most critical care issues arising during rounds and management plans. The fellow should have reached a competent level of procedural skills.

3. Practice-Based Learning and Improvement

The fellow's ability to review relevant evidence based knowledge pertinent to the Patient's problems and utilization of recent publications to improve care of his and future patients. The capacity of the fellow to learn and improve his practice will be evaluated in accordance to his level of training.

a) **The first year fellow** evaluation will be based on their capacity to search medical literature to obtain information relevant to patients' best care and the need for guidance during the search and need for interpretation of the findings.

b) **The second year fellow** evaluation will depend on their capacity to search medical literature and information relevant to patients' care without prompting and provide more comprehensive data recovery and interpretation.

c) **The third year fellow** evaluation will be in accordance to their independent capacity to collect state of the art publications and guidelines to apply best of care and develop relevant protocols to improve ICU care.

4. Interpersonal and Communication Skills

Maintaining an effective and respectful communication with the patient, family, colleagues and all the members of the heath-care team will be evaluated by direct observation of the fellows' daily interactions and input by patient, families and other members of the MICU team (nurses, respiratory therapists, nutritionists and pharmacists). Improvement in performance will be expected with the progression of training and the goals will be accomplished with attention to:

a) **The first year fellow** will be evaluated by their capacity to communicate clearly, effectively, compassionately and respectfully with patients, families and all members of the health-care team.

b) **The second year** fellow in addition to the above communicative qualities, the fellow will also be evaluated by their ability to communicate as a consultant role with residents and other members of the health-care team.

c) **The third year fellow** evaluation will rest in the perfection of his communication skills with patient, families and other members of the health-care team. The fellows' communication skills should have reached attending level and they should be sought after by all members of the healthcare team and other physicians as informative and helpful.

5. Professionalism

This evaluation will be done in accordance to the fellow commitment to all aspects of patient care, his manners and appearance, as well as, the respectful relationship with patients, families and other members of the health-care team. The fellow's professionalism will be evaluated with attention to:

a) **The first year fellow** will be evaluated by his punctuality to attend rounds and conferences. Fellow availability to families, other health care team members and attending physicians. Fellows prompt response to calls and physical presence in the ICU when needed. Fellow's responsibility in the preparation of rounds and assignments.

b) **The second year fellow** will be graded in accordance to fellow capacity to meet the needs of the different aspects of MICU patient care. Fellow contribution to daily rounds and conferences schedules.

b) **The third year fellow** in addition to the qualities listed for the lower years of training, the fellow is expected to be the team role model of dedication and responsibility. The fellow attends, prepares conferences and keeps the ICU team ready and on schedule.

6. Systems-Based Practice

The familiarity with the health-care system particularly regarding interaction with other complementary services and facilities. The process, admissions and transfer, as well as, the facilitation of a smooth transition from the ICU to other areas of the hospital or long term-care facility will be accomplished and evaluated with attention to:

a) **The first year fellow** capacity to identify different aspects of systems to facilitate patient care (social workers, rehabilitation, home health support) and potential problems with the system which could compromise patient care (i.e., lack of health insurance to provide rehabilitation or home services).

b) **The second year fellow** in addition to the above he should demonstrate a capacity to craft solutions to the system-based problems. The fellow also should demonstrate a broad sensitivity to barriers to quality care. The fellow should be able to make plans for continuity of the patient's management once he is ready to be transfer from the ICU.

c) **The third year fellow** should show familiarity with system-based patient care and should be able to craft more creative solutions to system based practice using available resources.

Description and Evaluation of the Pulmonary Consult Service

The Consult Team will be formed by an attending from the Pulmonary and CCM Section and a fellow. Medical residents and students electing a Pulmonary Medicine rotation will also be included. During this rotation, trainees will learn all aspects of pulmonary consultative medicine. The fellow will evaluate and present the patient in detail to the pulmonary attending. They will interview and examine the patient at the bedside and will review pertinent physical findings, PFTs, chest radiographs and CT scans with the pulmonary trainee, the medical residents and the medical students. Afterward, recommendations will be given to the patient's primary service. If necessary, the patient is followed on a daily basis by the trainee with daily input from the attending physician. The patient is followed until it is deemed unnecessary to continue follow-up care.

Pulmonary Consult rotations allow the fellow to observe the expertise and bedside manners of a clinician experienced in the diagnosis and management of respiratory diseases, whether the disease is primary to the lung or secondary to a systemic illness. In addition, the fellow will develop the capacity to interact with members of other services at a consultant level and learns to synthesize all information pertinent to the respiratory system.
The Pulmonary Consult Service will have an attending faculty available for consultation 24 hours per day. The goals of the rotation are discussed with each fellow at the beginning of the rotation and a copy of the goals is posted on the pulmonary function work room bulletin board.

Pulmonary procedures (i.e. bronchoscopies and pulmonary exercise tests) generated during consultations, will be performed by the fellow and directly supervised by the pulmonary attending. Each fellow has to keep a signed record of each procedure performed and either enters each procedure into E-Value or includes a copy in his/her personnel folder.

Each weekday, as a part of the pulmonary consult service, the consult team, under the direct supervision of the attending faculty will read and discuss all pulmonary function tests performed by our laboratory.

The consult fellow along with PACS fellow and a designated section faculty will staff the Sleep clinic on each Thursday am of the month, from 8:30 AM to Noon
Consult fellow will select pulmonary cases along with 10 min presentation at the Case Conference each Tuesday at 4 PM.

In addition, a series of lectures on Pulmonary Function Tests and Pulmonary Exercise testing with written material for all pulmonary and critical care trainees will be given throughout the 3-year training program. A folder with these subjects is kept in the PFTs work room.

Educational Purpose: The goals and objectives of this rotation are to gain specialty expertise in the evaluation, diagnosis and management of a broad range of pulmonary illnesses. During the rotation in the Pulmonary Service, the fellow will be responsible for all the requested pulmonary consults. They will learn the use of the bronchoscope and

other pulmonary invasive procedures. Fellows will learn how to obtain informed consent and to administer conscious sedation.

Pulmonary Service rotations usually are a one-month block rotation. During this rotation the fellow will direct and supervise residents and medical students assigned to the service.

Teaching methods: 1) Supervised direct patient care activities by the assigned attending physician. In conjunction with the rest of the pulmonary service team, the fellow will provide approximately 60-90 pulmonary consult per month. 2) Interaction with other interdisciplinary services and consultants. 3) Bedside discussions and presentations. 4) Didactic presentations on topics related to Pulmonary Medicine. 6) Presentations at the weekly Case Conference and weekly Pulmonary Journal Club. 7) Assigned readings to strengthen their practiced-based learning and improvement and provide them with copies of publications and didactic lectures. By using information technology which is available in the PFTs laboratory and our sections libraries (Medline search, board reviews books and tapes and multiple ICU textbooks. 8) Pulmonary board review and core lectures in Pulmonary Medicine.

Review of pathology slides and discussion of cases at the monthly Pathology conference, Monthly Radiology conference, Monthly Pulmonary and Infectious Disease conference.

Educational Content:

1) Mix of disease: During their Pulmonary Service rotation, fellows will participate in the consultations for a broad variety of pulmonary diseases which include:

a) Obstructive lung diseases: Bronchial asthma, chronic bronchitis, bronchiectasis and emphysema will be the primordial focus of this section.
b) Cystic fibrosis and other less common pulmonary diseases with an obstructive pattern through inpatient management of CF patients
c) Cough and dyspnea.
d) Pulmonary functions test and cardiopulmonary exercise testing
e) Pulmonary cytology and pathology
f) Bronchoscopy and bronchoscopic interventional procedures
g) Pulmonary infections including HIV related
h) Preoperative pulmonary assessment
i) Pulmonary malignancies. Diagnosis, staging, histopathology and therapeutic options.

j) Diffuse interstitial lung disease
k) Pulmonary vasculitis, pulmonary hypertension and pulmonary embolism
l) Occupational and environmental lung disease
m) Drug induced lung disease
n) Lung injury resulting from radiation, inhalation, or trauma
o) Pulmonary manifestations of systemic diseases
p) Sarcoidosis
q) Lung transplantation: indications, pharmacology and post-transplant management
r) Respiratory failure: hypoxemic and hypercarbic
s) Disorders of the pleura and mediastinum
t) Genetic and developmental disorders of the respiratory system
u) Sleep disorders

The fellow will demonstrate the ability to obtain a comprehensive and accurate history for the above mentioned variety of pulmonary diseases. Also, the fellow will acquire skills in physical examination appropriate for the pulmonary illnesses, interpretation of diagnostic radiological procedures, pulmonary function studies, bronchoscopic procedures, and appropriate laboratory testing.

During training, the fellow will apply the skills listed above to provide a clear and concise evaluation of patients in the Pulmonary Service. The fellow will assist the resident to assess the patient, to coordinate input from the consultative services and develop diagnostic and therapeutic plans.

Pulmonary Fellows are expected to acquire a general knowledge of the current evidence based practice regarding the diagnosis and therapy of patients with pulmonary illnesses on our service.

2) Patient Characteristics: The Pulmonary Service rotation is based at West Virginia University Hospital which is a 600 plus bed hospital and a major tertiary care referral center for West Virginia, Western Maryland and Southern Pennsylvania. Consults are provided to patients over the age of 18. These patients have a diverse variety of pathologies present in these areas. The patient population is composed of men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of the patients have Medicare/Medicaid coverage, the rest private insurance and approximately 5-7% has no insurance coverage at all.

3) Types of Clinical Encounters: Fellows will be responsible for all the requested pulmonary consults. The usual number is approximately 2-4 per day. Once the consult is completed and presented to the attending physicians, the fellow will pass all the recommendations to the primary care team. When requested, the Pulmonary Service provides pulmonary consults to medical and surgical patients; as well as, obstetrician and gynecology and consultations requested from the Psychiatric Hospital. When needed, consultations are followed in the hospital and in the Pulmonary Clinics. The Pulmonary Service will also provide consultative service to non-ventilated CCU and CTU patients. These consultations will provide the fellows an excellent opportunity to develop skills treating a wide diversity of post-operative and cardiac pulmonary complications.

4) Procedures: During their Pulmonary Service rotation, the fellow will learn and develop expertise in the performance of different pulmonary related procedures. The fellow will directly supervise all the pulmonary exercise testing and will participate in all the bronchoscopic procedures resulting from consultations. They will be theoretically and practically instructed in bronchoscopy, chest tube thoracostomy and pulmonary testing. The fellow is expected to complete more than 100 bronchoscopies during the 3 years of training. Fellows will also participate and be instructed in the indications for laser therapy and stent implantations. During this rotation, fellows will follow up patients who underwent percutaneous tracheostomy in the MICU performed by our service. The fellow will gain expertise in the process of downsizing and decannulation.

5) Educational tools: The section's library possesses all kind of educational aids to be used by our fellows. Textbooks on Pulmonary Medicine; as well as, textbooks of Internal Medicine and other medical specialties are available. The library is equipped with computers with access to Up-to-Date, Pub Med and all major medical journals related to our specialty. Fellows are encouraged to read the textbooks on Pulmonary Medicine ("Murry and Nadal" and "Fishman's") which are available in the library. In addition, our library has textbooks on Fiber optic Bronchoscopy and Pulmonary Exercise. Fellows also have access to a reading list of Pulmonary Medicine subjects provided in our board review course.
During the Pulmonary rotation, the fellow is expected to prepare presentations for Thursday's Case Conferences and to attend all the Section's educational activities.

Method of evaluation:

1) Fellow performance: At the end of the rotation the attending faculty will complete a web-based electronic evaluation form in E-Value. The evaluation is competency based and in accordance with the six core competencies and the level of training. The evaluation is shared with the fellow and is available for on-line review by the fellow. Also each evaluation is sent to the fellowship office for internal review. Evaluations are part of the fellow's files and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete a web based evaluation using E-Value commenting on the faculty, facilities service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are also sent to the fellowship office and are reviewed by the PD with the faculty members.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to the each particular fellow and shared by the PD. The PD discusses the results with each fellow and advises them of actions to improve performance. The global results are discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and readings are taken.

Specific Competencies Objectives.

1) Patient Care

The objectives will be accomplished with attention to:

a) **The first year fellow** is expected to become familiar with the diagnosis and management of inpatients and outpatient common pulmonary diseases. During first year of training, the fellow will be introduced to the performance and interpretation of pulmonary function tests, as well as, pulmonary exercise tests. The fellow will start developing bronchoscopic skills and consultations. Participate in the teaching of residents and medical students rotating through the pulmonary service. Learning the interpretation of radiological pulmonary procedures will be an objective of this rotation too. They will prepare articles for the Pulmonary Journal Club and will prepare cases for the Case Presentation Conference. Evaluation will be based on the fellow's case presentation with attention to his history and physical examination, radiographic and pulmonary functions test data. During this year, the fellow may require prompting by the attending to develop skills in obtaining a more comprehensive data set. It may require modification of the assessment and plan of care and guidance by the attending as how to approach similar cases in the future and where to find pertinent educational resources.

b) **The second year fellow** is expected to continue growing in the above mentioned areas. They should be able to "self-navigate" with the bronchoscope and gain familiarity with different kinds of bronchoscopic biopsies and lavage. The fellow will continue developing consultative skills and expertise with chest tubes thoracostomies and pulmonary exercise testing. The fellow will be in-charge of preparing cases for the monthly Pathology Conference. The fellow patients load in the outpatients' clinic will be increased to 8-10 patients.

   In addition to the above expectations, the second year fellow will be expected to review all pertinent data and obtain any additional information in a more efficiently and independently than when he was a first year fellow.

c) **The third year fellow** performance is expected to reach attending level by the end of this year. The fellow should be able to perform bronchoscopies, pulmonary function and exercise test independently. The fellow should participate in invasive in the use of laser therapy and stent placements done by the invasive pulmonologist. The fellow will participate as a speaker in the pulmonary core lecture series to the second year medical students and to the medical residents. They should be proficient in the interpretation of pulmonary function tests and pulmonary radiological procedures

   The fellow's evaluation will be based on his capacity to generate a comprehensive plan of care based in broad knowledge of the disease and review of state of the art publications in the subject. The third year fellow will be able to perform their duties without any or minimal prompting by the attending.

2 Medical Knowledge

Provide quality of consultation, exhibit understanding the physiology and pathology of pulmonary illnesses. To demonstrate that they is progressing with reading and recent literature review.

To prepare case presentations for the weekly Case Conference. To educate residents and consultative services.
The objectives will be accomplished with attention to:

a) **The first year fellow** by their presentations. Observing that the fellow is reading and increasing his medical pulmonary knowledge under attending guidance. Improve his skills in the interpretation of pulmonary functions and exercise tests. To become familiar with bronchoscopic procedures. To be competent explaining pulmonary procedures to patients and obtaining consent.

b) **The second year fellow** medical knowledge will also be evaluated by the above parameters. The fellow will be expected to have reached a broader knowledge of the physiology and literature. Improvement in procedural skills and be able to reach a differential diagnosis without or minimal attending input.

c) **The third year fellow** evaluation will be based in his progression toward attending level, their rounded medical knowledge, a continuous review medical literature. They should be able to perform consultations and recommend management plans independently with the approval of the supervising attending. The fellow should have reached a competent level in all pulmonary procedural skills and pulmonary function testing.

3. Practice-Based Learning and Improvement

The fellow's ability to review relevant evidence based knowledge pertinent to the patient's pulmonary problems and utilization of recent publications to improve the patient's care and the care of future patients. The capacity of the fellow to learn and improve practice will be evaluated in accordance to level of training

The objectives will be accomplished with attention to:

a) **The first year fellow** evaluation will be based on their capacity to search medical literature to obtain information relevant to patients' best care and the need for guidance during the search and need for interpretation of the findings.

b) **The second year fellow** evaluation will depend on their capacity to search medical literature and information relevant to patients' care. The fellow should accomplish their work without prompting and provide more comprehensive data recovery and interpretation.

c) **The third year fellow** evaluation will be in accordance to their independent capacity to collect state of the art publications and guidelines to apply best of care and develop relevant protocols to improve consultations and patient care.

4. Interpersonal and Communication Skills

Maintaining an effective and respectful communication with the patient, family, colleagues and all members of the heath-care team. They will be evaluated by direct observation of the fellows' daily interactions and input by patients, families and other members of the pulmonary

and consultation team (residents and attending physicians). Improvement in interpersonal and communication skills performance will be expected to reach competency by the end of training.

The objectives will be accomplished with attention to:

a. **The first year fellow** will be evaluated by their capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all members of the consultation team.

b. **The second year fellow** in addition to the above communicative qualities, their ability to communicate in a consultant role with residents and other members of the health-care team.

c. **The third year fellows'** evaluation will rest in his capacity to communicate competently with patients, families and other members of the health-care team. His communication skills should have reached attending level and they should be sought-after by all members of the health-care team and other physicians as informative and helpful.

5. Professionalism

This evaluation will be done in accordance to the fellow's commitment to all aspects of patient care, his manners and appearance, as well as, the respectful relationship with patients, families and other member of the health-care team.

The fellow's professionalism will be evaluated with attention to:

a. **The first year fellow** will be evaluated by their punctuality to attend rounds and conferences. Their availability to meet with families, other health care team members and attending physicians. Their prompt response to calls and appropriate time for consultations. Their responsibility in the preparation of rounds and assignments.

b. **The second year fellow** in addition to the above first year expectations, they will be graded in accordance to their capacity to meet the needs of the different aspects of pulmonary consultations and laboratory procedures. Their contribution to daily rounds and conferences schedules.

c. **The third year fellow** in addition to the qualities listed for the lower years of training, they are expected to be the team role model of dedication and responsibility. The fellow attends, prepares conferences and rounds.

6. Systems-Based Practice

The fellow's familiarity with the health-care system, particularly regarding interaction with other complementary services and facilities, will also be evaluated.

The objectives will be accomplished with attention to:

a) **The first year fellow's** capacity to identify different aspects of the health-care system

to facilitate patient care (social workers, rehabilitation, home health support) and potential problems with the system which could compromise patient care (i.e., lack of health insurance to provide rehabilitation or home services).

b) **The second year fellow** in addition to the above, the fellow should demonstrate a capacity to craft solutions to the system-based problems. The fellow also should demonstrate a broad sensitivity to barriers to quality care. They should be able to make plans for continuity of the patient's management once the patient is ready to be transferred to another facility or home.

c) **The third year fellow** should show familiarity with system-based patient care and should be able to craft more creative solutions to system-based practice using available resources.

DESCRIPTION OF THE GOALS OF TRAINING AND EVALUATION AT THE VETERAN's ADMINISTRATION HOSPITAL

The trainees rotating at the VA Hospital will be directly supervised by Dr. Prasoon Jain & Dr. Prasad Devbhaktuni.

At the beginning of the rotation, Drs. Jain and Devbhaktuni will discuss the schedule and goals for the rotation with the trainees. The VA rotation is essentially a Pulmonary Medicine rotation and it is a one-month block rotation. Patients are located either in the medical ward or at the ICU if disease severity is more pronounced. Each fellow will rotate approximately three to four months throughout the 3 years of training at the Veteran Administration Hospital. They will participate in the care of all patients assigned to Dr. Jain's pulmonary service. The work day starts at 8:00 AM and usually ends by 5:00 PM.

At the beginning of the shift, the fellow is expected to see all the night-time admissions and review the progress of the already established patients before presenting them to attending. The trainee and the pulmonary attending physician will discuss in detail the patient's history and physical examination. Diagnostic work-up and treatment will be established. Review of laboratory tests and radiographic studies will also be done. The fellow is expected to perform daily rounds (4 days a week) and write notes on all the service patients. In addition, the fellow will read pulmonary function tests and perform all pertinent pulmonary procedures (bronchoscopies, insert lines, thoracentesis, etc) under the supervision of VA staff. Fellow will also attend the VA Hospital Pulmonary Outpatient Clinic.

The fellow is encouraged to use the VA Hospital library and online resources to gain knowledge about their cases.

One day a week, fellows rotating at the VA Hospital, will stay at our main institution (West Virginia University). On that day, the fellow will take care of his office work responsibilities (mail, dictations, telephone calls, etc.). AM will be cancer center clinic and the afternoon will be pulmonary continuity clinic.

Drs. Jain & Devabhaktuni will always be available for communication and interaction with the trainee. At the end of the rotation, they will complete an electronic evaluation in E-Value which will be reviewed by the program director.

Educational Purpose: The goal and objectives of this rotation are to gain expertise in the evaluation, diagnosis and management of a broad range of pulmonary illnesses. During the rotation in the VA Hospital, the fellow will be responsible for all the requested pulmonary consults. They will learn the use of the bronchoscope and other pulmonary invasive procedures. The fellow develops skills in the evaluation, diagnosis and management of patients with abnormal pulmonary radiological findings, including lung cancer. The fellow also will gain expertise in the management of pulmonary diseases treated in an outpatient setting.

Teaching methods: 1) Supervised direct patient care activities. The fellow will provide

care for approximately 4-8 patients each day. 2) Didactic presentations in topics related to pulmonary diseases. 3) Bedside discussions. 4). Assigned readings to strengthen their knowledge, practiced-based learning and improvement and provide them with copies of publications and didactic lectures. 5) Review of radiologic studies and pulmonary function tests. 6) Learning to use the VA Hospital library and online resources to gain knowledge about their cases.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the management of a variety of pulmonary disease:

a) Obstructive lung diseases. Understanding the pathophysiology and natural history, treatment and management of obstructive lung disease. Bronchial asthma, chronic bronchitis, bronchiectasis and emphysema will be the primordial focus of this section.
b) Cough and dyspnea.
c) Pulmonary functions test
d) Bronchoscopy and bronchoscopic interventional procedures
e) Pulmonary infections including HIV related
f) Preoperative pulmonary assessment
g) Pulmonary malignancies. Diagnosis, staging, histopathology and therapeutic options.
h) Diffuse interstitial lung disease
i) Pulmonary vasculitis, pulmonary hypertension and pulmonary embolism
j) Drug induced lung disease
k) Lung injury resulting from radiation, inhalation or trauma
l) Pulmonary manifestations of systemic diseases
m) Disorders of the pleura and mediastinum

2) Patients Characteristics: Most patients admitted to the service are admitted from the emergency room. All patients are armed forces veterans and mostly males. All patients are adults and have VA benefits.

3) Type of clinical encounters: The VA pulmonary service has approximately 4-6 patients and 1-2 consults daily. Some of these patients will be seen in an ICU setting, but usually have mild to moderately severe disease. Fellows will be responsible for all aspects of care. Also, four half days a week, the fellow will attend the outpatient pulmonary clinic with the attending. At the clinic, approximately 4-6 patients are evaluated.

4) Procedures: During this rotation, fellows will review radiographic studies and pulmonary function tests with Drs. Jain and Devbhaktuni. When needed, they also will participate in line placement and chest tube thoracostomy. They will review pathology slides from bronchoscopic procedures.

5) Educational tools: Fellows will have access to the VA main library which contains textbooks on Pulmonary Medicine, Internal Medicine and other medical specialties. Fellows have computer access to educational sites, including Up-to-Date, PubMed and all major medical journals.

During this rotation, fellows are supposed to review the educational material provided by the section during their month at the VA. Fellows will be able to review the CDs of the scheduled lectures and to discuss with the Program Director any questions they might have related to the missed lectures.

During this rotation, Drs. Jain and Devbhaktuni give the fellows a list to pertinent reading material, and discusses the different topics assigned to the fellows.

Methods of evaluation:

1) Fellow performance: At the end of the rotation, Drs. Jain and Devbhaktuni will complete an online evaluation of the rotating fellow for that month in E-Value. The evaluation is competency based and in accordance with the six core competencies and the fellows level of training. The evaluation is shared with the fellow and is available for on-line review by the fellow. Also each evaluation is sent to the fellowship office for internal review. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete a web based evaluation using E-Value commenting in the faculty, facilities service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to each the PD and shared with each fellow by the PD. The PD discusses the results with each fellow and advises them of any actions to improve performance. The global results are also discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and readings are taken.

Specific Competency Objectives

1. Patient Care

The objectives will be accomplished with attention to:

a) **The first year fellow** is expected to become familiar with the diagnosis and management of inpatients and outpatient common pulmonary diseases seen at the VA hospital.
During his first year of training, the fellow will be introduced to the performance and interpretation of pulmonary function tests, as well as, pulmonary exercise tests. The fellow will start developing bronchoscopic skills and consultations under direct supervision of Dr. Jain. The fellow rotating through this service will participate in Drs. Jain and Devbhaktuni's Outpatient Pulmonary Clinic one day at week.

The evaluation will be based on the fellow's case presentation with attention to the fellows' history and physical examination, radiographic and pulmonary functions test data.

During this year, the fellow may require prompting by Drs. Jain and Devbhaktuni to develop skills in obtaining a more comprehensive data set. It may require modification of the assessment and plan of care and guidance as how to approach similar cases in the future and where to find pertinent educational resources.

b) **The second year fellow** is expected to continue growing in the above mentioned areas. They should be able to gain familiarity with different kinds of bronchoscopic biopsies and lavage. The fellow will continue developing consultative skills within the VA system.

The evaluation will be based on the fellow's capacity to review all pertinent data and obtain any additional information more efficiently and independently than when he was a first year fellow.

c) **The third year fellow** performance is expected be able to work independently with consultations and be competent with bronchoscopies. They should be able to "navigate" in the VA system.

The fellow's evaluation will be based on his capacity to generate a comprehensive plan of care based on broad knowledge of the disease and review of state of the art publications on the subject. The third year fellow will be able to perform his duties without any or minimal prompting by Drs. Jain and Devbhaktuni.

2. Medical Knowledge

Provide quality of consultation, exhibit understanding of the physiology and pathology of the pulmonary illnesses. To demonstrate that they are progressing with reading and recent literature review.

The objectives will be accomplished with attention to:

a) **The first year fellow** by their presentations. Observing that the fellow is reading and increasing his medical pulmonary knowledge under Drs. Jain and Devbhaktuni's guidance. Improve their skills in the interpretation of pulmonary function and exercise tests to obtain familiarity with bronchoscopic procedures. To become competent explaining pulmonary procedures to patients and obtaining consent.
b) **The second year fellow** medical knowledge will also be evaluated by the above parameters. The fellow will be expected to have reached a broader knowledge of physiology and literature. Improvement in procedural skills and be able to reach a differential diagnosis without any or minimal attending input.

c) **The third year fellow** evaluation will be based on his progression toward attending level, their rounded medical knowledge, a continuous review medical literature. They should be able to perform consultations and recommend management plans independently with the approval of the supervising attending. The fellow should have reached a competent level in all pulmonary procedural skills and pulmonary function testing.

3. Practice-Based Learning and Improvement

The fellow's ability to review relevant evidence based knowledge pertinent to the patient's pulmonary problems and utilization of recent publications to improve their care and the care of future patients. The capacity of the fellow to learn and improve their practice will be evaluated in accordance to the respective fellow level of training

The objectives will be accomplished with attention to:

a) **The first year fellow** evaluation will be based on their capacity to search medical literature to obtain information relevant to patients' best care and the need for guidance during the search and need for interpretation of the findings.

b) **The second year fellow** evaluation will depend on their capacity to search medical literature and information relevant to patients' care. The fellow should accomplish their work without prompting and provide more comprehensive data recovery and interpretation.

c) **The third year fellow** evaluation will be in accordance to their independent capacity to collect state of the art publications and guidelines to apply best of care and develop relevant protocols to improve consultations and patient care.

4. Interpersonal and Communication Skills

Maintaining an effective and respectful communication with the patient, family, colleagues and all the members of the VA health-care team will be evaluated by direct observation of the fellows daily interaction with Drs. Jain and Devbhaktuni and input by patients, families and other members of the pulmonary and consultation team (residents and attending physicians). Improvement in interpersonal and communication skills performance will be expected to reach competency by the end of training.

The objectives will be accomplished with attention to:

a) **The first year fellow** will be evaluated by their capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all members of the consultation team.

b) **The second year fellow** in addition to the above communicative qualities, their ability to communicate in a consultant role with residents and other members of the health-care team.

c) **The third year fellow** evaluation will rest on their capacity to communicate competently with patients, families and other members of the health-care team. The fellows' communication skills should have reached attending level.

5. Professionalism

This evaluation will be done in accordance to the fellow's commitment to all aspects of patient care, manners and appearance, as well as, the respectful relationship with patients, families and other members of the health-care team.

The fellow's professionalism will be evaluated with attention to:

a**) The first year fellow** will be evaluated by their punctuality to the service duties, their availability to families, other health care team members and attending physicians, their prompt response to pages and consultations, and their responsibility in the preparation of rounds and assignments.

b) **The second year fellow** in addition to the above first year expectations, will be graded in accordance to their capacity to meet the needs of the different aspects of MICU patient care and their contribution to daily rounds and conference schedules.

c) **The third year fellow** in addition to the qualities listed for the lower years of training is expected to be the team role model of dedication and responsibility, their level of responsibility on consultations and interaction with patients and consultation services should be close to attending level.

6. System-Based Practice

The fellow's familiarity with the VA health-care system, particularly regarding interaction with other complementary services and facilities, will also be evaluated.

The objectives will be accomplished with attention to:

a) **The first year fellow** capacity to identify different aspects of the VA health-care system to facilitate patient care (social workers, rehabilitation and home health support) and potential problems with the VA system which could compromise patient care (i.e.: lack of facilities in the proximity to provide rehabilitation or home services).

b) **The second year fellow** in addition to the above should demonstrate a capacity to craft solutions to the system-based problems. The fellow should demonstrate a broad sensitivity to barriers to quality care. The fellow should be able to make plans for continuity of patient management once the patient is ready to be transferred to another facility or home.

c) **The third year fellow** should show familiarity with system-based patient care and should be able to craft more creative solutions to system based practice using available resources.

DESCRIPTION OF THE GOALS OF TRAINING AND EVALUATION OF THE PULMONARY AMBULATORY CLINIC SERVICE (PACS)

Each fellow will be assigned three half-days a month to the Pulmonary Ambulatory Clinic Service (PACS).

This schedule for the PACS fellow consists of:

1. Three ½ day per week of their own continuity clinic
2. One ½ day per week of Sleep Clinic
3. One half day per week of Cancer Center Clinic

Each clinic day, the Attending on Duty (AOD) assigned to that clinic will be physically present to supervise the fellows. Patients will be assigned to each fellow for continuity care during the 3 years of training. Patients will be evaluated by the fellow and presented to the attending physician. The level of supervision will change during each year of training. However, for all years of training, each patient evaluated by the fellow will have to be presented to the attending physician. The attending physician will confirm the findings and make pertinent modifications to the plans. The fellow will get guidance in accordance with evidence based medicine and resources. Pulmonary procedures generated in PACS will be scheduled and performed by the fellow under the direct supervision of the attending physician. Each fellow is expected to see, on average, one to three new patients and three to six returns patients during each ½ day session.

Educational Purpose: The goals and objectives of this rotation are to gain expertise in the evaluation, diagnosis and ambulatory management of a broad range of pulmonary illnesses. During this rotation, the fellow will learn how to approach patients with pulmonary symptoms in an outpatient setting. They will perfect their skills in obtaining a history and perform a physical examination with special attention to the pulmonary system. The fellows will learn the diagnostic approach to patients presenting with the classical pulmonary symptomatology of but not limited to dyspnea, cough, and sputum production. The fellow will develop skills in the evaluation, diagnosis and management of patients with abnormal pulmonary radiological findings. Also they will become familiar with the use and prescription of an array of pharmacological therapies; as well as the proper follow up of patients with a variety of pulmonary disease, and when hospitalization is indicated.

Teaching Methods: 1) Evaluation of the findings and presentation of the cases. 2) Interaction with patients, families, and health care personals. 3) Interpretation of the radiographic studies and pulmonary function tests. 4) Supervised direct patient care activities.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the management of a variety of pulmonary disease:

a) Obstructive lung diseases. Understanding the pathophysiology and natural history, treatment and management of obstructive lung disease. Bronchial asthma, chronic bronchitis, bronchiectasis and emphysema will be the primordial focus of this section.
b) Cough and dyspnea.
c) Pulmonary functions test
d) Bronchoscopy and bronchoscopic interventional procedures
e) Pulmonary infections including HIV related
f) Preoperative pulmonary assessment
g) Pulmonary nodules
h) Pulmonary malignancies. Diagnosis, staging, histopathology and therapeutic options.
i) Diffuse interstitial lung disease
j) Pulmonary vasculitis, pulmonary hypertension and pulmonary embolism
k) Drug induced lung disease
l) Lung injury resulting from radiation, inhalation or trauma
m) Pulmonary manifestations of systemic diseases
n) Disorders of the pleura and mediastinum

2) Patient Characteristics: Clinic patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, patients seen by our Pulmonary Consult service will be followed up as outpatients in the clinic. Patients are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance.

3) Type of clinical encounters: Each fellow will see 1-3 new patients and 5-6 returns. Continuity of care is the rule. If patients need a pulmonary invasive diagnostic procedure, the fellow will schedule the procedure with one of the attending physicians.

4) Procedures: During this rotation, fellows will review radiographic studies and pulmonary function tests with the attending physician. The work room at the outpatient clinic is equipped with computerized equipment for viewing radiological viewing. The fellow also will learn how to use and monitor their patients with peak flow spirometry.

Method of evaluation:

1) Fellow performance: The performance and progress of the fellows in PACS is evaluated by faculty members monthly utilizing assigned evaluations within E-Value. The result of these evaluations are reviewed by each fellow and discussed at the PD/fellow meetings. Also, fellows are evaluated by their patients. Fellows are given continuous oral feedback of their performance by the attending physician during the month.

2) Faculty and Program Performance: The fellow will complete an evaluation using E-Value commenting in the faculty and clinic service. The attending faculty receives anonymous reports of their evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to each particular fellow and shared by the PD.

Specific Competencies Objectives.

First Year Fellow

Patient Care: He/she will gain expertise with components of the history and physical examination of pulmonary patients. The fellow will obtain historical and perform physical examinations. He/she will review laboratory results, pulmonary function tests and radiographic films with the assistance of the pulmonary attending. Diagnostic and management plans will be developed under close supervision of the attending physicians. The fellow is expected to develop skills in getting a comprehensive data set.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. They should gain knowledge in the diagnosis and management of ambulatory pulmonary diseases. It is expected that the fellows will demonstrate that they are reading and increasing their knowledge in the field of pulmonary medicine.

Practice-Based Learning Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patients they follow in the pulmonary clinic, as well as, how they search and apply evidence based knowledge to improve the outcome of their patients. The fellow will gain familiarity with our computerized record system, as well as, with the management of the computer radiographic based data.

Interpersonal Communications Skills: The fellow's capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all pulmonary clinic members. The fellow's dictations and consultation letters may require some corrections by the attending physicians. Fellows are expected to develop competency in explaining pulmonary procedures to patients and obtaining consent.

Professionalism: The first year fellow is expected to develop good working habits. Each fellow is expected to attend his clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

System-Based Practice: The fellow is expected to become familiar with the different aspects of respiratory care. They will learn to interact with available health care system services (rehabilitation, social worker and home health support) to improve outcomes. During their first year of training, the fellow is expected to learn the process under the direct supervision of the attending physician.

Second Year Fellow

Patient Care: The second year fellow is expected to be comfortable in the evaluation and management of patients with pulmonary diseases. The fellow will continue obtaining all pertinent historical, laboratory, exam and radiographic data with more efficiency and independently than the first year fellow. Fellow presentations should be concise and their plans should require only mild modifications by the attending physician.

Medical Knowledge: The second year fellow is expected to have reached a broader knowledge of the physiology and management of obstructive and restrictive pulmonary diseases. They should demonstrate that they read publications pertinent to patients seen in the clinic.

Practice-Based Learning Practice: They will start generating a comprehensive plan of care based on a broader knowledge of the physiopathology and management of pulmonary diseases based on state of the art publications in order to improve patient care.

Interpersonal Communications Skills: By the second year of training, the fellow should be able to able to communicate with families and patients in a mature and professional way. Their dictations and consult letters will require minimal correction by the attending physicians.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Their appearance and manner should be very acceptable.

System-Based Practice: By their second year of training, the fellow should demonstrate a capacity to resolve most of the system-based problems confronted by their patients. They should be able to make plans for continuity of the patient's management and home needs. The fellow should show familiarity with oxygen therapy requirements, bronchodilators use, social services, respiratory therapists and home health services.

Third Year Fellow

Patient Care: Third year fellow's performance in the pulmonary clinic is expected to reach attending level. They should show familiarity with current treatment guidelines and be able to interpret properly pulmonary function tests and radiographic studies. They should require none or minimal prompting by the attending physician. The fellow should be able to establish an appropriate plan of care.

Medical Knowledge: By this level of training, they should demonstrate to have a good base knowledge of the different medical aspects of pulmonary diseases. The fellow should demonstrate that they are keeping abreast of recent state of the art publications related pulmonary medicine and that they are ready to take the specialty boards.

Practice Based Learning & Improvement: The fellow should demonstrate that they keep abreast of recent state of the art publications related to pulmonary medicine. They should show independent capacity to collect state of the art publications and established guidelines for the management of pulmonary diseases in order to apply best of care.

Interpersonal and Communication Skills: The third year fellow is expected to be able to communicate with patients, families, pulmonary clinic teams and referral physicians at an attending level. Dictations and summary letters should have none or minimal corrections by the attending physician.

Professionalism: In addition to the qualities listed for the lower years of training, the third year fellow is expected to become a role model of manners, dedication and responsibility while attending the clinic.

Systems-Based Practice: By the third year of training, the fellow should have mastered the system-based patient care. They should be able to utilize the system-based available resources for social services, rehabilitation and home care. During this year, the fellow will gain insight in the management of an ambulatory pulmonary clinic.

DESCRIPTION OF THE GOALS AND EVALUATION OF THE PULMONARY AMBULATORY CLINICS SERVICE ROTATION – PACS ROTATION

This rotation intensively exposes the trainee to ambulatory care pulmonary medicine including a multidisciplinary team approach to providing care for patients with lung cancer, sleep medicine, cystic fibrosis, and amyotrophic lateral sclerosis.

1. LUNG CANCER CLINIC

Fellows rotating on PACS and VA will attend a half-day multidisciplinary lung cancer clinic at the Mary Babb Randolph Cancer Center each week. In addition to the designed pulmonary attending, this clinic is staffed by attending physicians from the Divisions of Cardiothoracic Surgery and Medical Oncology.
Patients with suspected pulmonary malignancies, as well as those patients with already established diagnosis of a malignant pulmonary process are jointly evaluated by the above services. During this rotation, the trainee becomes familiar with the differential diagnosis of lung cancer, the approach to abnormal pulmonary findings and therapeutic options. Invasive procedures (i.e.: bronchoscopic biopsies, stenting, laser therapy and thoracentesis) required for diagnosis will be performed by the trainee under the direct supervision of his pulmonary attending. Attempts to maintain continuity of care by the trainee are stressed.

Educational Purpose: The goals and objectives of this rotation are to gain expertise in the evaluation, diagnosis and management of patients with lung cancer and its complications. Also, at this clinic the fellow will learn the diagnostic evaluation of patients referred with abnormal radiographic findings and complications of cancer treatment. The fellows will perfect their skills in obtaining a history and perform a physical examination with special attention to lung cancer. They will also learn indications for radiation therapy and become familiar with the use and prescription of an array of pharmacological therapies for lung cancer.

Teaching Methods: 1) Evaluation of the findings and presentation of the cases. 2) Learning interaction with patients, families, and other multidisciplinary lung cancer services. 3) Interpretation of the radiographic studies and pulmonary function tests. 4) Supervised direct patient care activities. 5) Indication for surgery.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the diagnosis and management of a variety of pulmonary malignancies:

a) All types of primary lung cancer.
b) All types of metastatic cancer to the lung
c) Pulmonary complications of radiotherapy
d) Pulmonary Complications of chemotherapies
e) Pulmonary infections in patients with lung cancer
f) Preoperative pulmonary assessment
g) Management of patients following thoracic surgery for lung cancer.
h) Management of patients with underlying obstructive or restrictive lung diseases with and lung cancer.

2) Patients Characteristics: Clinic patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, some patients are referred by our pulmonary consult service at RMH for further diagnostic work up or management. Patients are above the age of 18 and will have a diverse variety of pathologies present in the above geographic areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Also, 5-7% of patients do not have any type of insurance.

3) Type of clinical encounters: Each fellow will see 1-3 new patients and 1-3 returns. If patients need a pulmonary invasive diagnostic procedure, the fellow will schedule the procedure with one of the attending physicians.

4) Procedures: During this rotation, fellows will review radiographic studies and pulmonary function tests with the attending physician. The work room at the outpatient clinic is equipped with computer equipment for radiological viewing. The fellow will develop skill in the interpretation of computerized tomographic testing and PET scanning.

Method of evaluation:

1) Fellow performance: The performance and progress of the fellows in the lung cancer clinic is included in the evaluation of the Pulmonary Consult service. The result of this evaluation are reviewed by each fellow and discussed at the PD/fellow meetings. Also, fellows are evaluated by their patients. Fellows are given continuous oral feedback of their performance by the attending physician during the month.

2) Faculty and Program Performance: The fellow will complete a web based evaluation using E-Value commenting on the faculty and clinic service. The attending faculty receives anonymous reports of his evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training

examinations. Results of this testing are reported to the PD and shared with each particular fellow by the PD.

Specific Competencies Objectives

First Year Fellow

Patient Care: The fellow will gain expertise with components of the history and physical examination of patients with pulmonary malignancies. The fellow will review referral information and all available pertinent diagnostic data. They will learn diagnostic approaches to patients referred with either established pulmonary malignant processes, or abnormal chest radiographic findings. Diagnostic and management plans will be developed under close supervision of the attending physicians.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. They should gain knowledge in the diagnosis and management of malignant pulmonary diseases. It is expected that the fellow will demonstrate that they are completing required reading and getting familiar with the TNM classification.

Practice-Based Learning & Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patient with lung cancer, as well as, how they search and apply evidence based knowledge to improve the outcome of their patients.

Interpersonal Communications Skills: The fellow's capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all members of the thoracic oncology service. The fellows' dictations and consultation letters may require some corrections by the attending physicians. Also, they are expected to develop competency in explaining pulmonary procedures to patients (i.e., thoracentesis and bronchoscopies) and obtaining consent, as well as, to discuss any end of life issues.

Professionalism: The first year fellow is expected to develop good working habits. They are expected to attend their clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

System-Based Practice: The fellow is expected to become familiar with the different aspects of cancer care. They will learn to interact with available health care system services (rehabilitation, social worker, home health support and hospice) to improve care and outcome. During their first year of training, the fellow is expected to learn the process under direct supervision of the attending physician.

Second Year Fellow

Patient Care: The second year fellow is expected to be comfortable with the evaluation and management of patients with lung cancer. The fellow will continue obtaining all pertinent historical, laboratory, exam and radiographic data but more efficiently and independently than the first year fellow. Fellow presentations should be concise and their plans should require only mild modifications by the attending physician.

Medical Knowledge: The second year fellow is expected to have reached a broader knowledge of the etiology, epidemiology and diagnosis and management of lung cancer. They should demonstrate to be reading publications pertinent to the patients seen in the clinic. The fellow should be familiar with the different therapeutic option to each type of tumor in order to refer patients to the surgeon, oncologist, or radiotherapist.

Practice-Based Learning and Improvement: They will start generating a comprehensive plan of care based on a broader knowledge of lung cancer based on state of the art publications in order to improve diagnosis and patient care.

Interpersonal Communications Skills: By the second year of training the fellow should be able to able to communicate with families and patients in a mature and professional way. Their dictations and consult letters will require minimal correction by the attending physicians. They should be comfortable discussing end of life care with their patients.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Their appearance and manner should be very acceptable.

System-Based Practice: By the second year of training, the fellow should demonstrate a capacity to resolve most of the system-base problems confronted by patients with lung cancer. The fellow should be able to make plans for continuity of care and home needs. The fellow should show familiarity with different aspects of services helping patients with lung cancer, including social service and hospice care.

Third Year Fellow

Patient Care: Third year fellow's performance in the lung cancer clinic is expected to reach attending level. They should show familiarity with current treatment guidelines for lung cancer, as well as, understanding of the TNM classification. They should require none or minimal prompting by the attending physician. The fellow should be able to establish an appropriate plan of care, including choosing appropriate referrals and diagnostic options.

Medical Knowledge: By this level of training, the fellow should demonstrate to have a good base knowledge of the different medical aspects of lung cancer. The fellow should demonstrate they keep abreast of recent state of the art publications and guidelines in the management of lung cancer.

Practice Based Learning Improvement: The fellow should have familiarity with publications and resources related to lung cancer in order to apply best of care to his patients.

Interpersonal and Communications Skills: The third year fellow is expected to communicate with patients, families and referral physicians independently. Dictations and summary letters should have none or minimal corrections by the attending physician. They should be able to communicate with other members of the lung cancer consultative services at an attending level.

Professionalism: In addition to the qualities listed for the lower years of training, the third year fellow is expected to become a role model of manners, dedication and responsibility while attending the lung cancer.

Systems-Based Practice: By the third year of training, the fellow should have mastered the system-based patient care. The fellow should be able to utilize the system-based available resources for social services, rehabilitation and home care pertinent to patients with lung cancer. During this year, the fellow will gain insight in the management of an ambulatory lung cancer clinic.

2. SLEEP CLINIC

Trainees will attend the Sleep Clinic at the WVU Medicine Sleep Evaluation Center for a half day per week. This clinic is attended by the Consult/PACS fellow as well as any fellow on a Sleep Elective. The trainees will review the goals of the rotation and discuss them with the attending physician. Trainees will be able to learn and establish diagnoses of common sleep-breathing disorders and other common sleep disturbances. Under direct supervision by the attending physician, the fellow will gain knowledge in the treatment of these types of disorders (different types of non-invasive positive pressure ventilators, as well as, medication for specific types of sleep disturbance disorders). During their three years of training, our fellows will be encouraged to attend the Sleep Laboratory and to take electives in Sleep Medicine. During this rotation, the fellow will learn the basics of polysomnograms reading and interpretation. In addition, a didactic curriculum in Sleep Medicine is imparted during the training by different members of the Pulmonary Service.

Educational Purpose: The goals and objectives of this rotation are to gain expertise in the evaluation; diagnosis and management of patients with sleep related disorders. Also, at this clinic the fellow will learn to interpret the sleep studies results under the guidance of the attending physician. The fellow will gain familiarity with the different therapeutic approaches to patients with sleep disturbances. They will learn the indications for different types of masks and non-invasive CPAP and BiPAP systems; as well as the indications for tracheostomies and different therapeutic approaches to patients with insomnia and narcolepsy.

Teaching Methods: 1) Evaluation of the findings and presentation of the cases. 2) Learning interaction with patients, families and other multidisciplinary lung cancer services. 3) Interpretation of sleep studies and auto-titration results. 4) Supervised direct patient care activities. 5) Indication for psychiatric and surgical referrals.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the diagnosis and management of a variety of sleep related diseases:

1) Obstructive Sleep Apnea.
2) Central Sleep Apnea
3) Periodic Limb Movements
4) Restless Legs Syndrome
5) Idiopathic Hypersomnolence
6) Upper Airways Resistance Syndrome
7) Insomnia.
8) Narcolepsy
9) REM related disorders

2) Patients Characteristics: Clinic patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, some patients are referred by our pulmonary consult service at RMH for further diagnostic work up or management. Patients are above the age of 18 and will have a diverse variety of pathologies present in the above geographic areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Also, 5-7% of patients do not have any type of insurance.

3) Type of clinical encounters: Each fellow will see 2-3 new patients and 4-6 returns. The fellow will arrange for sleep related studies and any necessary laboratory work. Also, they will order appropriate mask and non-invasive ventilatory equipment.

4) Procedures: During this rotation, fellows will review the results of polysomnographic studies with the attending physician. The work room at the outpatient clinic is equipped with computer equipment to access results. They will also gain knowledge of the interpretation of sleep questionnaires and pertinent laboratory results.

Method of evaluation:

1) Fellow performance: The results of this evaluation are reviewed by each fellow and discussed at the PD/fellow meetings Fellows are also evaluated by their patients. All fellows are given continuous oral feedback of their performance by the attending physician during the clinic days.

2) Faculty and Program Performance: The fellow will complete a web based evaluation using E-Value commenting on the faculty and clinic service. The attending faculty receives anonymous reports of his evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to the PD and shared with each fellow and by the PD.

Specific Competency Objectives.

First Year Fellow

Patient Care: Fellow will gain expertise with components of the history and physical examination of patients with sleep disorders. The fellow will review sleep studies results and pertinent laboratory data. The fellow will gain familiarity with the Epworth scoring system. Diagnostic and management plans will be developed under close supervision of the attending physicians.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. It is expected that the fellow will demonstrate he/she is doing his/her reading and increasing his/her knowledge in the most frequent sleep disturbance encountered in the ambulatory sleep clinic. The fellow is expected to become knowledgeable about different types of masks and positive pressure equipment (CPAP and BiPAP).

Practice-Based Learning & Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patients they see in the sleep clinic, as well as, how they search and apply evidence based knowledge to improve the understanding and outcome of their patients. The fellows will also gain familiarity with polysomnographic scoring and reporting.

Interpersonal & Communications Skills: The fellow's will be expected to communicate clearly, effectively and respectfully with patients, families, nurses and all members of the sleep clinic. Their dictations and consultation letters may require some corrections by the attending physicians. Also, the fellow is expected to develop competency in explaining the sleep study process.

Professionalism: The first year fellow is expected to develop good working habits. They are expected to attend clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

Systems-Based Practice: The fellow will learn to interact with available health care system services (sleep laboratory and home health sleep equipment supplies) to improve patient care. During their first year of training, the fellow is expected to learn the process under the direct supervision of the attending physician.

Second Year Fellow

Patient Care: The second year fellow is expected to be comfortable in the evaluation and management of patients with sleep disturbances. The fellow will continue obtaining all pertinent historical, laboratory, exam and radiographic data more efficiently and independently than the first year fellow. Their presentations should be concise and plans should require only mild modifications by the attending physician.

Medical Knowledge: The second year fellow is expected to have reached a broader knowledge of the physiology and management of sleep disorder diseases. The fellow should demonstrate that they read publications pertinent to patients seen in the clinic. Familiarity with CPAP systems and pharmacologic agents is expected to be obtained.

Practice-Based Learning & Improvement: Fellows will start generating a comprehensive plan of care based on a broader knowledge of the physiopathology and management of the different sleep disturbances which patients present at the sleep clinic. They should gain familiarity with established guidelines to improve patient care.

Interpersonal & Communication Skills: By the second year of training, the fellow should be able to communicate with families and patients in a mature and professional way. Their dictations and consult letters will require minimal correction by the attending physicians.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Their appearance and manner should be very acceptable.

Systems-Based Practice: By the second year of training, the fellow should demonstrate a capacity to resolve most of the system-based problems confronted by patients with sleep disorders. They should be able to coordinate home system equipment and arrange for home setting auto titration studies. The fellow should show familiarity with the different home respiratory equipment to treat sleep disturbances.

Third Year Fellow

Patient Care: Third year fellow's performance in the sleep clinic is expected to reach independent competency. They should show familiarity with current treatment guidelines and be able to interpret polysomnographic results. They should require none or minimal prompting by the attending physician. The fellow should be able to establish an appropriate plan of care.

Medical Knowledge: By this level of training, the fellow should demonstrate to have a good base knowledge of the different medical aspects of sleep disorders. The fellow should show that they keep abreast of recent state of the art publications related to sleep medicine. They should be able to identify the most frequent polysomnographic patterns of different sleep disturbance breathing.

Practice Based Learning Improvement: The fellow should demonstrate that they keep abreast of recent state of the art publications related to sleep medicine. They should show independent capacity to collect state of the art publications and established guidelines for the management of sleep disturbances in order to deliver state of the art care.

Interpersonal and Communication Skills: The third year fellow is expected to be able to communicate with patients, families, pulmonary clinic team and referral physicians at an attending level. Dictations and summary letters should have none or minimal corrections by the attending physician.

Professionalism: In addition to the qualities listed for the lower years of training, the third year fellow is expected to become a role model of manners, dedication and responsibility while attending the clinic.

Systems-Based Practice: By the third year of training, the fellow should have mastered the system-based patient care. The fellow should be able to utilize the system-based available resources for home sleep supplies and care. During this year, the fellow will gain insight in the management of ambulatory sleep clinics.

3. AMYOTROPHIC LATERAL SCLEROSIS (ALS) CLINIC

Fellows rotating on PACS will be responsible for consultations proceeding from the Neurology Service to evaluate patients with ALS in their clinic. The fellow performance at the ALS clinic will be in accordance to his/her level of training following the guidelines of the pulmonary consult service. The trainee will evaluate the patient focusing in the components of the respiratory system. Under direct supervision by the attending physician, the fellow will get knowledge on the effect of neuromuscular diseases on pulmonary function. Furthermore, the trainee will receive understanding on the different approaches to patients with progressive respiratory insufficiency. By the end of his training, the fellow will learn about the use of tussive aids and non-invasive mechanical ventilation for patients with neuromuscular impairment. Understanding of the timing for bronchoscopy, and end of life care will also be of the learning objectives of this rotation.

This clinic occurs once per month on the third Thursday of each month.

Educational Purpose: The goals and objectives of this rotation are to gain expertise in the evaluation, diagnosis and ambulatory management of ALS. During this rotation, the fellow will learn how to approach patients with pulmonary symptoms in an outpatient setting. They will perfect their skills in obtaining a history and perform a physical examination with special attention to the ALS clinic system. The fellows will learn the diagnostic approach to patients presenting with respiratory failure and the classic pulmonary symptomatology of dyspnea, cough, and sputum production. The fellow will develop skills in the evaluation, diagnosis and management of patients with abnormal pulmonary radiological findings. Also they will become familiar with the use and prescription of an array of pharmacological therapies; as well as the proper follow up of patients with ALS disease, and when hospitalization is indicated.

Teaching Methods: 1) Evaluation of the findings and presentation of the cases. 2) Interaction with patients, families, and health care personals. 3) Interpretation of the radiographic studies and pulmonary function tests. 4) Supervised direct patient care activities.

Educational content:

1) Mix of disease: During this rotation the fellow is expected to gain expertise in the management of ALS:

a) Obstructive lung diseases. Understanding the pathophysiology and natural history, treatment and management of obstructive lung disease. Bronchial asthma, chronic bronchitis, bronchiectasis and emphysema will be the primordial focus of this section.
b) Cough and dyspnea.
c) Pulmonary function testing
d) Bronchoscopy and bronchoscopic interventional procedures
e) Pulmonary infections in neuromuscular respiratory failure
f) Preoperative pulmonary assessment for tracheostomy and percutaneous endoscopic gastric tube placement.
g) Pulmonary manifestations of ALS

2) Patients Characteristics: Clinic patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, patients seen by our Pulmonary Consult service will be followed up as outpatients in the clinic. Patients are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance.

3) Type of clinical encounters: Each fellow will see 1-3 new patients and 5-6 returns. Continuity of care is the rule. If patients need a pulmonary invasive diagnostic procedure, the fellow will schedule the procedure with one of the attending physicians.

4) Procedures: During this rotation, fellows will review radiographic studies and pulmonary function tests with the attending physician. The work room at the outpatient clinic is equipped with computerized equipment for viewing radiological viewing. The fellow also will learn how to use and monitor his/her patients with peak flow spirometry.

Method of evaluation:

1) Fellow performance: The performance and progress of the fellows in the ALS clinic is evaluated by faculty members on a semi-annual basis. The result of these evaluations are reviewed and by each fellow and discussed at the PD/fellow meetings. Also, fellows are evaluated by their patients. Fellows are given continuous oral feedback of their performance by the attending physician during the month.

2) Faculty and Program Performance: The fellow will complete an online evaluation using E-Value commenting on the faculty and clinic service. The attending faculty receives anonymous reports of their evaluations. These evaluations are sent to the fellowship office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examinations. Results of this testing are reported to each particular fellow and with Program Leadership

Specific Competencies Objectives

First Year Fellow

Patient Care: The fellow will gain expertise with components of the history and physical examination of pulmonary patients. The fellow will obtain historical and perform physical examinations. They will review laboratory results, pulmonary function tests and radiographic films with the assistance of the pulmonary attending. Diagnostic and management plans will be developed under close supervision of the attending physicians. The fellow is expected to develop skills in getting a comprehensive data set.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. They should gain knowledge in the diagnosis and management of ambulatory ALS disease. It is expected that the fellow will demonstrate they are doing his/her reading and increasing his/her knowledge in the field of ALS medicine.

Practice-Based Learning & Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patients they follow in ALS clinic, as well as, how they search and apply evidence based knowledge to improve the outcome of their patients. The fellow will gain familiarity with our computerized record system, as well as, with the management of the computer radiographic based data.

Interpersonal & Communication Skills: The fellow's capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all ALS clinic members. The fellow dictations and consultation letters may require some corrections by the attending physician. The fellow is expected to develop competency in explaining pulmonary procedures to patients and obtaining consent.

Professionalism: The first year fellow is expected to develop good working habits. They are expected to attend his clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

Systems-Based Practice: The fellow is expected to become familiar with the different aspects of respiratory care. The fellow will learn to interact with available health care system services (rehabilitation, social worker and home health support) to improve outcomes. During their first year of training, the fellow is expected to learn the process under the direct supervision of the attending physician.

Second Year Fellow

Patient Care: The second year fellow is expected to be comfortable in the evaluation and management of patients with ALS diseases. The fellow will continue obtaining all pertinent historical, laboratory, exam and radiographic data with more efficiency and independently than the first year fellow. Their presentations should be concise and their plans should require only mild modifications by the attending physician.

Medical Knowledge: The second year fellow is expected to have reached a broader knowledge of the physiology and management of obstructive and restrictive pulmonary diseases. They should demonstrate that they read publications pertinent to patients seen in the clinic.

Practice-Based Learning & Improvement: They will start generating a comprehensive plan of care based on a broader knowledge of the physiopathology and management of pulmonary diseases based on state of the art publications in order to improve patient care.

Interpersonal & Communication Skills: By the second year of training, the fellow should be able to able to communicate with families and patients in a mature and professional way. Fellow dictations and consult letters will require minimal correction by the attending physicians.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Fellow appearance and manner should be very acceptable.

Systems-Based Practice: By his/her second year of training, the fellow should demonstrate a capacity to resolve most of the system-based problems confronted by his/her patients. The fellow should be able to make plans for continuity of the patient's management and home needs. The fellow should show familiarity with oxygen therapy requirements, bronchodilators use, social services, respiratory therapists and home health services.

Third Year Fellow

Patient Care: Third year fellow's performance in the ALS clinic is expected to reach attending level. They should show familiarity with current treatment guidelines and be able to interpret properly pulmonary function tests and radiographic studies. They should require none or minimal prompting by the attending physician. The fellow should be able to establish an appropriate plan of care.

Medical Knowledge: By this level of training, they should demonstrate to have a good base knowledge of the different medical aspects of pulmonary diseases. The fellow should demonstrate that they keep abreast of recent state of the art publications related pulmonary medicine and that they are ready to take the specialty boards.

Practice Based Learning & Improvement: The fellow should demonstrate that they keep abreast of recent state of the art publications related to ALS medicine. They should show independent capacity to collect state of the art publications and established guidelines for the management of ALS disease in order to apply best of care.

Interpersonal and Communication Skills: The third year fellow is expected to be able to communicate with patients, families, pulmonary clinic teams and referral physicians at an attending level. Dictations and summary letters should have none or minimal corrections by the attending physician.

Professionalism: In addition to the qualities listed for the lower years of training, the third year fellow is expected to become a role model of manners, dedication and responsibility while attending the clinic.

Systems-Based Practice: By the third year of training, the fellow should have mastered the system-based patient care. The fellow should be able to utilize the system-based available resources for social services, rehabilitation and home care. During this year, the fellow will gain insight in the management of an ambulatory pulmonary clinic.

Description of the Goals and Evaluation of the Elective in Surgical Intensive Care Unit (SICU)

During this elective rotation, the trainee will be incorporated into the SICU team and will be under the supervision of the SICU attending physician. As a member of the team, the fellow will participate in patient care and didactic activities of the SICU service. He/she will follow surgical/trauma patients and participate in invasive procedures. The fellow will work-up patients assigned to him and will present his evaluation and plans to the SICU attending physician. During this rotation, the trainee will expand his level of knowledge in the care of critical care illnesses associated with surgical procedures and trauma. The trainee will have the opportunity to evaluate and manage patients who have post-operative respiratory failure along with patients who develop other critical illnesses that require SICU admission. Since in our institution, the SICU is managed by the trauma service, our fellows rotating in the SICU service are expected to participate in the care of patient receiving traumatic injuries, as well, as patient following neurosurgical interventions. The fellow will gain familiarity in the interpretation of ICP monitoring and management of neurosurgical trauma patient. Upon completion of his rotation, the trainee will receive a written evaluation by the SICU attending. This evaluation will jointly be reviewed by the trainee and the Program Director. Each pulmonary and CCM fellow will be mandated to do a month rotation in the SICU during his/her training.

Educational purpose: The fellow gains expertise in the evaluation, diagnosis and management of a broad range of surgical critical illnesses. During this rotation the fellow will participate in invasive SICU related procedures. They will learn the interpretations of injury scores related to SICU and Trauma patients. An important educational goal of this rotation is to gain expertise in the management of patients with respiratory failure following surgical procedure and trauma. The fellow will evaluate potential transfers and discharges. He/she will learn about SICU organization and will interact with other medical services and consultants. Fellows rotating through the SICU are expected to acquire a general knowledge of the current evidence based practice regarding the diagnosis and therapy of patients with surgical critical illness and trauma. To learn the indication and interpretation of intracranial monitoring will also be an educational focus of this rotation.

Teaching methods: 1) Supervised direct patient care activities by the assigned attending physician. In conjunction with the rest of the ICU team, the fellow will participate in rounds of approximately 10-20 critically ill surgical patients daily. 2) Interaction with other interdisciplinary services (trauma, anesthesia, respiratory therapy, nutritionists, pharmacists, physical therapy) and consultants. Through this experience, the fellow will learn about all aspects of CCM management of surgical patients. 3) Bedside discussions and presentations. 4) Didactic presentations in topics related to surgical ICU patients. 5) Attendance at family meetings and discussion of Palliative Care and Ethics. 6) Assigned readings. 7) Also, by using information technology which is available in the SICU and our sections libraries (Medline search, board reviews books and tapes and multiple ICU text books. 8) Weekly board review meetings and CCM core lectures. 9) Monthly CCM Grand Rounds. 10) Monthly Radiology Conference 11) Monthly orientation with Nurse Supervisor and Pharmacist. 12) Hands-on ventilator management teaching by Respiratory Therapy. 12) Monthly Critical Care Medicine Journal club.

Educational Content:

1) Mix of Disease: Patients with multiple trauma, chest contusion, flair chest, post operative respiratory failure, acute abdomen, pancreatitis, complication resulting from abdominal aortic aneurysm, critical illness related to the bile duct, pancreatitis, bowel obstruction/ischemia, pulmonary infections, circulatory shock, myocardial infarction, pulmonary embolism/DVTs in trauma patients, cardiac arrhythmias, acute renal failure, fluid and electrolytes disorders, endocrinologic emergencies, nutrition, gastrointestinal disorders, traumatic head injury, delirium, spinal cord injury, post-craniotomies related complications, surgical oncology, infectious diseases in SICU and other miscellaneous topics in critical care (complicated OBGYN conditions, poisoning, overdose, body temperature disorders, etc).

The fellow will demonstrate the ability to obtain a comprehensive and accurate history for the above mentioned variety of critical illnesses, to summarize findings, to develop a diagnostic and therapeutic plan and presenting them to the attending physician.

2) Patient Characteristics: The SICU rotation is based at West Virginia University Hospital which is a 600 plus bed hospital and a major tertiary care referral center for West Virginia, Western Maryland and Southern Pennsylvania. Patients treated during this rotation are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance and approximately 5-7% has no insurance coverage at all.

3) Type of clinical encounters: The usual number of SICU patients varies from approximately 10-20. The fellow will be assigned 3-6 patients. Every day 2-4 new patients are admitted to the SICU service and usually there are a similar number of discharges. Patients transferred to the SICU service come from either the emergency room or from the OR. Also patients from all non-thoracic surgical services at RMH requiring ICU care will be admitted to the SICU.

4) Procedures**:** During their ICU rotations the fellow will be directly instructed by the attending physician on the performance of different SICU related procedures. They will be theoretically and practically instructed and develop expertise on arterial and central line placements, chest tubes and endotracheal intubations, management of ventilators, and pulmonary artery catheters placements. The fellow will observe the placement of ventriculostomy catheters and will learn the interpretation of the ICP data.

Methods of Evaluation:

1) Fellow performance: At the end of the rotation, the SICU attending will complete a web-based electronic evaluation form in E-Value. The evaluation is competency based and in accordance with the six core competencies. The evaluation is shared with the fellow and is available for on-line review by the fellow. Each evaluation is sent to the fellowship office for internal review. Evaluations are part of the fellow's files and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete a web based evaluation using E-Value commenting on the faculty, facilities service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are also sent to the residency office and are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examination. Results of this testing are reported to each fellow and shared by the PD. The PD discusses the results with each fellow and advises any action to improve performance. The global results are discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and readings are taken.

Specific Competency Objectives.

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examination and diagnostic studies. Understanding of the trauma/surgical process. Ability to reach a sound management plan.

Medical Knowledge: The fellow's SICU medical knowledge will be evaluated through his presentations and management plans, as well as, interaction with the attending physician during rounds and conferences. The fellow understanding of changes associated with trauma and surgical interventions. His/her awareness of recent state of the art publications and guidelines for the care of the critically ill surgical/trauma patient. The fellow's knowledge and skills with SICU procedures.

Practice-Based Learning and Improvement: The fellow's ability to review relevant evidence base knowledge pertinent to the SICU/Trauma patients. The utilization of guidelines and application of current knowledge to improve care of his/her and future patients.

Interpersonal and Communication Skills: By the clarity of the notes and presentations. His/her capacity to communicate, effectively, compassionately and respectfully with patients, families and all members of the SICU/Trauma team.

Professionalism: Determined by his punctuality to attend rounds and conferences. His/her prompt response to page and situation requiring his presence. His/her responsibility in the preparation of rounds and assignments. The respectful interaction with members of the SICU team, patients and their families. Interaction with other consultative services.

Systems-Based Practice: The familiarity with the health-care system particularly regarding interaction with other complementary services and facilities. Dealing with admissions and transfers. Utilization of the different components of the health care system (social workers, therapists, dietitians, pharmacy, etc….)

Description of the Goals and Evaluation of the Elective in the Cardiothoracic Unit (CTU)

Fellows rotating in the CTU service will be under the supervision of one of the cardiothoracic surgeons. The goals will be reviewed and discussed at the beginning of the rotation. During the CTU rotation, the trainee will directly participate in the care of CT patients and will learn the postoperative management of patients undergoing cardiothoracic surgical procedures (i.e., CABG and lung resections) who require CTU care. Knowledge in the diverse respiratory complications during the post-operative period will be obtained. Familiarity with fluid management, coagulopathies and hemodynamic management will be part of the focus of this rotation. The process of weaning CTS patient from mechanical ventilation will play a very important role in this rotation too. Fellows also will have the opportunity to observe videos assisted thoracoscopic procedures, as well as, lung resections performed by the CT Surgery service. The length of this rotation will be one month.

Educational purpose: The fellow will gain expertise in the evaluation, diagnosis and management of a broad range of cardiothoracic critical illnesses. During this rotation the fellow will participate in invasive CTU related procedures and will observe thoracoscopic procedures and pleurodesis. The fellow will interact with other medical services and consultants involved in the care of CTS patients. Fellows rotating through the SICU are expected to acquire a general knowledge of the outcome of patients undergoing CABG, lung resections and pneumonectomies.

Teaching methods: 1) Supervised direct patient care activities by the assigned attending physician. 2) Bedside discussions and presentations. 3) Didactic presentations in topics related to CTU surgical patients. 4) Attendance at family meetings and discussion of Palliative Care and Ethics. 5) Assigned readings. 6) Using information technology which is available in the CTU and our sections libraries (Medline search, board reviews books and tapes and multiple ICU textbooks. 7) Weekly board review meetings and CCM core lectures. 8) Monthly CCM Grand Rounds. 9) Hands-on ventilator management teaching by Respiratory Therapy. 10) Interaction with other interdisciplinary services (anesthesia, respiratory therapy, nutritionists, pharmacists, physical therapy) and consultants. Through this experience the fellow will learn about all aspects of the management of post operative cardiothoracic surgical patients.

Educational Content:

1) Mix of Disease:
Post coronary artery bypass graft
Pneumonectomies
Lobectomies
Esophagogastectomies
Thoracic wall resections
Mediastinitis
Empyema
Esophageal perforations
Cardiac arrhythmias
Electrolytes imbalance
Nutritional management
Management of shock in the CT surgical patient
Intraaortic balloon pump

The fellow will demonstrate the ability to obtain a comprehensive and accurate history for the above mentioned variety of critical illnesses, to summarized findings, to develop diagnostic and therapeutic plans and presenting them to the attending physician.

2) Patient Characteristics: The CTU rotation is based at West Virginia University Hospital which is a 600 plus bed hospital and a major tertiary care referral center for West Virginia, Western Maryland and Southern Pennsylvania. Patients treated during this rotation are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance and approximately 5-7% has no insurance coverage at all.

3) Type of clinical encounters: The usual number of CT surgery patients varies from approximately 5-10 daily. The fellow will participate in rounds and discussions of the progress and plans. He will interact with all consultant, pharmacy and nutritional services. Most patients admitted to the CTU come from the operating room. Also some patients are transferred from the surgical ward and emergency room.

4) Procedures**:** During the CTU rotation, the fellow will be directly instructed by the attending physician on the performance of different CTS related procedures. They will insert arterial and central lines. They will manage mechanically ventilated patients, and direct the weaning process. Chest tube thoracostomies and drainage systems. The use of IABP in the postoperative period.

Methods of evaluation:

1. Fellow performance: At the end of the rotation, the CTU attending will complete an evaluation in E-Value. The evaluation is competency based and in accordance with the six core competencies. The evaluation is shared with the fellow and is available for review. Evaluations are part of the fellow's files and are reviewed during the fellow/PD meeting semiannually.

2. Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting on the faculty, facilities, and service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are also sent to the residency office and are reviewed by the PD.

3. In-training examination: All fellows are required to take the in-service training examination. Results of this testing are reported to each fellow and shared by the PD. The PD discusses the results with each fellow and advises any action to improve performance. The global results are discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and readings are taken.

Specific Competencies Objectives

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examination and diagnostic studies in patients admitted to the CTU. The fellow will participate in daily rounds and CTU procedures. All these under the supervision of their CTU attending.

Medical Knowledge: During this rotation, the fellow is expected to gain knowledge in the post-operative patients undergoing thoracic surgical procedures. The fellow will read about the different aspect of CTU care and publications related to their patients.

Practice-Based Learning and Improvement: The fellow ability to obtain pertinent information about his patient conditions and application of this knowledge to improve their patient's outcome.

Interpersonal and Communication Skills: By the clarity of the notes and presentations. The fellow capacity to communicate, effectively, compassionately and respectfully with patients, families and all members of the CTU team will be evaluated.

Professionalism: Fellow prompt response to pages and situations requiring their presence. Their responsibility in the preparation of rounds and assignments. The respectful treatment to members of the CTU team, patients and their families. Their attendance and punctuality.

Systems-Based Practice: Understanding the proper coordination of the different components of the health care system involved in the care of CTU patients. Interaction with respiratory therapists, dietitians, rehabilitation and other consultative services. Planning for rehabilitation and home health care support.

Description of the Goals and Evaluation of the Elective in the Coronary Care Unit (CCU)

This rotation is a mandatory one month rotation. Fellows rotating in the CCU will be under the supervision of a cardiology faculty. The goals and objectives of the rotation will be discussed at the beginning of the rotation. This experience will allow the trainee to gain knowledge in treating patients with acute cardiac diseases. As a member of the CCU team, the trainee will participate in daily rounds, patient care and all didactic activities of the CCU service.

This experience will allow the trainee to gain experience in treating patients with acute cardiac diseases. Trainees taking a CCU rotation will be under the supervision of one of the Cardiology faculty. Fellow will directly participate in the care of the CCU patients, and gain insight in the approach to acute coronary diseases, cardiac arrhythmias, and indications for cardiac invasive procedures. As a member of the CCU team, the trainee will participate in daily rounds, patient care, and all didactic activities of the CCU service. During this rotation the trainee will learn the interpretation and management of IABP and will observe echocardiographic procedures and angiographies. Upon completion of his rotation, the trainee will receive a written evaluation by CCU attending. This evaluation will jointly be reviewed by the trainee and the Program Director.

For the CCU elective rotation the schedule will be as follows for fellows:

1. One week performing echocardiograms and learning to interpret them (all day)
2. One week in cath lab with right heart catheterization (anytime one is scheduled)
    a. Minimum of five right heart catheterizations are required.
3. All four weeks rounding in ICU with cardiology team one (9-11)
4. All four weeks interpreting EKG's (8-9)
    a. Minimum of 100 EKG interpretations are required per rotation.

Educational purpose:
To gain insight in the approach to acute coronary diseases, cardiac arrhythmias and indications for cardiac invasive procedures. During this rotation the trainee will also learn the interpretation and management of IABP. The fellow will observe echocardiography recording and angiographs. The fellow will refresh and expand their knowledge in interpretation of EKGs. Management of acute coronary syndrome, cardiogenic shock, and mechanical ventilation of patients' respiratory failure and acute cardiac events.

Teaching methods: 1) Supervised direct patient care activities by the assigned attending physician. 2) Bedside discussions and presentations. 3) Didactic presentations in topics related to coronary unit patients. 4) Attendance at family meetings and discussion of Palliative Care and Ethics. 5) Assigned readings. 6) Using information technology which is available in the CCU and our sections libraries (Medline search, board reviews books and tapes and multiple ICU textbooks. 7) Interaction with other interdisciplinary services (respiratory therapy, nutritionists, pharmacists, physical therapy) and consultants. Through this experience, the fellow will learn about all aspects of the

management of coronary care patients.

Educational Content:

1) Mix of Disease:

Acute myocardial infarction
Congestive heart failure
Cardiac valvular disease and malformations
Cardiac arrhythmias
Cardiaogenic shock
Pericarditis
Pericardiac tamponade
Right side heart failure
Respiratory failure
Pacemakers
Implantable defibrillators
Thrombolytic therapy

The fellow will demonstrate the ability to obtain a comprehensive and accurate history for the above mentioned variety of critical illnesses, to summarized findings, to develop diagnostic and therapeutic plan and presenting them to the attending physician.

2) Patient Characteristics: The CCU rotation is based at West Virginia University Hospital which is a 600 plus bed hospital and a major tertiary care referral center for West Virginia, Western Maryland and Southern Pennsylvania. Patients treated during this rotation are above the age of 18 and will have a diverse variety of pathologies present in these areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance and approximately 5-7% has no insurance coverage at all.

3) Type of clinical encounters: The usual number of CCU patients varies from approximately 5-8 daily. The fellow also will participate in the care of coronary patients admitted to the cardiac Step-Down Unit. The fellow will participate in rounds and discussions of the progress and plans. Patients admitted to the CCU come from the emergency room, angiography suite, medical ward, and transferred from another hospitals.

4) Procedures**:** During the CCU rotation, the fellow will gain insight on the performance of different CCU related procedures. Echocardiography and IABP. They will insert arterial and central lines. They will manage mechanically ventilated patients, and direct the weaning process. Thoracentesis and chest tube thoracostomies.

Methods of evaluation:

1) Fellow performance: At the end of the rotation, the CCU attending will complete an evaluation in E-Value. The evaluation is competency based and in accordance with the six core competencies. The evaluation is shared with the fellow. Evaluations are part of the fellow's files and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting on the faculty, facilities, and service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD.

3) In-training examination: All fellows are required to take the in-service training examination. Results of this testing are reported to each fellow and shared by the PD. The PD discusses the results with each fellow and advises any action to improve performance. The global results are discussed without identifiers at a faculty meeting. Corrective measures in the lecture schedule and readings are taken.

The objectives of this rotation and evaluations will be accomplished with attention to the six core competencies

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examinations and diagnostic studies in the Coronary Care Unit. The diagnostic procedures and monitoring of patients with acute coronary events. Ability to reach a sound management plan.

Medical Knowledge: The fellow's understanding of changes associated with acute cardiac events requiring CCU. His/her awareness of recent state of the art publications and guidelines for the care of patients with acute myocardial infarction. Interpretation of EKGs and management of cardiac arrhythmias.

Practice-Based Learning and Improvement: The fellow's ability to review relevant evidence base knowledge pertinent to CCU patients. The utilization of guidelines and application of current knowledge to improve outcome of patients admitted to the CCU.

Interpersonal and Communication Skills: By the clarity of the notes and presentations. His/her capacity to communicate effectively, compassionately and respectfully with patients, families and all members of the CCU team.

Professionalism: His/her prompt response to pages and situations requiring their presence. His/her responsibility in the preparation of rounds and assignments. The respectful treatment of members of the CCU team, patients and their families. Respectful interaction with other CCU consultative services.

System-Based practice: The familiarity with the health-care system particularly regarding continuity of care for patients admitted with acute cardiac events. Proper coordination of transfers to other units and rehabilitation hospitals.

Description of the Goals and Evaluation of the Elective in Anesthesia

Fellows can take a one month elective rotation in anesthesiology under the supervision of one of the anesthesiology attending. The goals and objectives of this rotation will be discussed with the PD and the attending anesthesiology physician.

Educational purpose: The primary goal of this rotation will be to gain expertise in airway management and endotracheal intubations. The trainee will learn about intubation techniques in general and the approach to patients with difficult upper airways. During this rotation, trainees will gain familiarity with pharmacologic agents used during endotracheal intubation and anesthesia. Furthermore, the fellow will gain knowledge in the effect of different sedative and analgesic agents on the cardiovascular and respiratory system. Evaluation of the readiness for extubation; identification of potential complications encountered in the post-extubation period and the need for further observation in the post-anesthesia unit will also be part of the educational purpose of this rotation.

Teaching Methods: 1) Supervised direct intubation techniques. 2) Didactic presentations in topics related to complications of anesthesia requiring ICU care. 3) Case discussions. 4). Assigned readings. 5) Use of the anesthesiology library and www resources accessible in the anesthesiology department and our section library.

Educational content:

Mix of disease:

1. Evaluation of the anatomical landmarks to predict outcome of intubation
2. Air way classification
3. Identification of the AHA classification
4. Pulmonary and cardiovascular clearance for anesthesia
5. Intubation techniques
6. Types of artificial airways
7. Intubation equipment (blades and types laryngoscopes)
8. Use of sedatives, analgesics and neuromuscular blockades
9. Monitoring during Anesthesia
10. Use of end-tidal CO2 monitoring
11. Types of anesthetic agents
12. Vasoactive agents in the OR.
13. Malignant hyperthermia

2) Patients Characteristics: Patient requiring endotracheal intubations and anesthesia for surgical procedures at Ruby Memorial Hospital.

3)Procedures: During this rotation, fellows will review radiographic, pulmonary and cardiovascular studies of the patients assigned to him. They will participate in endotracheal intubations and the evaluation of the extubation process.

4) Type of clinical encounters: Fellows will participate in the pre-op evaluations of patients with his assigned attending physician. They will participate in endotracheal intubation and OR care under the supervision of his assigned attending physician.

Methods of evaluation:

1) Fellow performance: At the end of the rotation, the anesthesiology attending will complete an evaluation form in E-Value. The evaluation is competency based and in accordance with the six core competencies and the fellows level of training. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD.

The goal of the rotation will focus on some of the six core competencies.

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examination pertinent to the anesthesia procedure. Anatomical evaluation of the patient to determine the potential for difficult airways management.

Medical Knowledge: During this rotation, the fellow is expected to gain knowledge in the evaluation of patients for endotracheal intubation procedures. The fellow should become familiar with the different types of upper airways. Also, they should be able to identify patients with difficult airways and to select appropriate equipment and pharmacological agents to proceed with endotracheal intubation.

Practice-Based Learning and Improvement: The fellow should be able to identify sources of information pertinent to upper airway management. They should be able to apply the knowledge acquired during this rotation for the future management of their patients' airways in the ICU.

Interpersonal and Communication Skills: The fellows' capacity to communicate effectively with the anesthesia and surgical team.

Professionalism: Fellow attendance and punctuality. The prompt response to assignments. Their manners and behavior in the OR.

Systems-Based Practice: To understand the different components of airway management. Potential for complications and need for respiratory care services and observation in the post-anesthesia unit or ICU.

Evaluation and Goals of the Elective in Sleep Medicine

The fellow in Sleep Medicine will be under the supervision of one of the Sleep Medicine attendings. In addition, they will be able to elect the rotation with one of the sleep medicine board certified clinical faculty practicing in our community. The fellow will attend sleep clinic with the elected service and will participate in the reading of polysomnographic studies with the attending assigned to the sleep laboratories. Fellows taking more than one month rotation in sleep medicine will prepare a research project related to sleep medicine.

Educational purpose: During this rotation the fellow gains insight in the diagnosis and management of different sleep disorders. The fellow will strengthen his knowledge in sleep history, diagnostic approaches and therapeutic choices related to sleep disturbances. The fellow will interact with other sleep services, including neurology and ENT. Understanding the equipment and organization of the sleep laboratory.

Teaching methods: Patients work up and presentations to the attending physician. Presentation of sleep cases at the section case conference. Reading guides. Attending the sleep laboratory. Participating in PSG reading with the attending physician. Board review. Attending the sleep clinic with the assigned attending physician.

Educational content:

Mix of disease: During this rotation the fellow is expected to gain expertise in the diagnosis and management of a variety of sleep related diseases:

1) Obstructive Sleep Apnea.
2) Central Sleep Apnea
3) Periodic Limb Movements
4) Restless Legs Syndrome
5) Idiopathic Hypersomnolence
6) Upper Airways Resistance Syndrome
7) Insomnia.
8) Narcolepsy
9) REM related disorders
10) Parasomnias

2) Patients Characteristics: Sleep patients are either self or PCP referrals from West Virginia, Western Maryland and Southern Pennsylvania. Also, some patients are referred by our pulmonary consult service at RMH for further diagnostic work up or management. Patients are above the age of 18 and will have a diverse variety of sleep disturbances present in the above geographic areas. The fellow is exposed to both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance.

3) Type of clinical encounters: Each fellow will participate in PSG readings, and clinical encounters in the sleep clinic. It is expected that each fellow will participate in the reading of at least 4-8 PSG studies per week, and evaluate 6-12 patients per week.

4) Procedures: During this rotation, fellows will review the results of polysomnographic studies with the attending physician. The work room at the outpatient clinic is equipped with computer equipment to access results. They will also gain knowledge of the interpretation of sleep questionnaires and pertinent laboratory results.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the fellow will be evaluated using E-Value. The result of these evaluations are reviewed by each fellow and discussed at the PD/fellow meetings. All fellows are usually given continuous oral feedback of their performance by the attending physician during their rotations.

2) Faculty and Program Performance: The fellow will complete an evaluation using E-Value commenting on the faculty and clinic service. The attending faculty receives anonymous reports of his evaluations. These evaluations are sent to the Program Manager and are reviewed by the PD.

Evaluation of the rotation will be done in accordance with the six core competencies and level of training.

First Year Fellow

Patient Care: The fellow will further gain expertise with components of the history and physical examination of patients with sleep disorders. They will be able to review sleep study results and pertinent laboratory data with mild or no prompting by the attending physician.

Medical Knowledge: This will be evaluated by the fellow's presentations, discussion of data and findings. The fellow will focus on components of sleep in the different components of the sleep architecture and be able to identify REM periods and different sleep stages.

Practice-Based Learning & Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to the patients they see in the sleep clinic. In addition, the fellow is expected to distinguish sleep disturbances other than obstructive sleep apnea in the polysomnographic tracing.

Interpersonal & Communication Skills: The fellow's will be expected to communicate clearly, effectively and respectfully with patients, families, nurses and all members of the sleep clinic. Their dictations and consultation letters may require some corrections by the attending physicians. The fellow will be able to explain the sleep study process to patients and families.

Professionalism: The first year fellow is expected to develop good working habits. He/she is expected to attend their clinic punctually. They must be courteous and maintain good manners with patients, families and clinic personnel.

Systems-Based Practice: The fellow will learn about the system and different services involved with polysomnographic studies. They will also learn about health insurance coverage and arrangements for home non-invasive ventilator equipment.

Second Year Fellow

Patient Care: Fellows opting for a second elective in sleep medicine will participate in the outpatient clinic. The interaction with patients will be done more independently. During their second rotation, the fellow is expected to evaluate patients and reach a management plan with some or minimal input by the attending physician.

Medical Knowledge: During their second elective, the fellow will continue accumulating knowledge in sleep medicine. It is expected that the fellow will be able to identify the different components of sleep studies and the placement of electrodes and flow meters.

Practice-Based Learning & Improvement: They should generate a project in sleep disorders. Identify new information in sleep medicine. Participate in the exchange of information with the sleep laboratory personnel and attending physician.

Interpersonal & Communication Skills: By the second sleep elective, the fellow should be able to able to communicate with sleep clinic, sleep laboratory personnel, families and patients in a mature and professional way. Fellow case presentations should be clear and researched.

Professionalism: The fellow should be able to maintain proper interactions with patients and clinic personnel. Fellow appearance and manners should be very acceptable and should show sensitivity to patients of diverse anatomical configurations and backgrounds.

Systems-Based Practice: Fellows taking a second month elective in Sleep Medicine should demonstrate a capacity to utilize the different components of home health care to optimize utilization and compliance with sleep equipment.

Third Year Fellow

Patient Care: They will attend the Sleep Clinic with the service team. They should be able to evaluate patients and establish plans with minimal or no prompting by the attending physician.

Medical Knowledge: During his third sleep elective, the fellow is expected to spend time in the sleep laboratory and participate in polysomnographic studies reading. The fellow should be able to identify EEG stages and airflow changes. Furthermore, they will be able to identify muscles tone changes during sleep stages. They should have submitted a research project for IRB approval under the supervision of the sleep attending.

Practice Based Learning & Improvement: The fellow should maintain a high level of reading in order to participate in active exchange of information with attendings, patients and their families.

Interpersonal and Communication Skills: During his third rotation, the fellow is expected to communicate with patients, families and pulmonary clinic team and referral physicians at an attending level. The fellow should be able to supervise residents and junior fellows attending the sleep clinic.

Professionalism: In addition to the qualities listed for the first two elective months, during their third sleep rotation they are expected to become a role model of manners, dedication and responsibility while attending the clinic.

Systems-Based Practice: During his/her third month elective in Sleep Medicine, the fellow should show that they are able to utilize the system-based available resources to proceed with sleep diagnostic studies, home sleep supplies and care. Fellows rotating for a third time in sleep medicine should become familiar with the organization and management of sleep laboratories.

Description of the Goals and Evaluation of the Elective in the Pulmonary Function Laboratory

Fellows may take a 2-4 weeks elective in the pulmonary function laboratory. During this rotation, the fellow will be under the direct supervision of the Pulmonary Consult Service attending physician.

Educational Purpose: During this rotation, the fellow will learn about the pulmonary function laboratory equipment and the testing procedures. They will interact with the respiratory therapist assigned to the PFT and learn how to perform spirometry testing. The fellow also will familiarize with the measurements of body box plasthymography, carbon monoxide diffusing capacity and helium dilution techniques. The fellow will also observe and participate in airway hyperreactivity testing. The trainee will be expected to understand and learn the methodology and interpretation of pulmonary function testing. In addition, the trainee will learn the principles of arterial blood gas analysis and the interpretation of the results.

Furthermore, the rotating fellow will participate in all pulmonary exercise studies performed by the Pulmonary Consult Service. The trainee will gain knowledge on the indications and contraindications for pulmonary exercise testing. They will review the patient's medical record and perform a brief history and physical examination on the patient prior to testing and will be responsible for insertion of any required invasive line. During the entire study, the trainee will monitor the patient's vital signs, electrocardiogram and other aspects of the patient's clinical status closely. The trainee will collect all the data and interpret the results. A preliminary report will be written which will be discussed and reviewed by the pulmonary attending physician. A final report will be done and signed by the trainee and the attending and placed in the patient's permanent record.

Teaching Methods: Direct teaching by the assigned attending physician. Practical demonstration of PFTs equipment by the respiratory therapists. Participation in pulmonary exercise testing. Reading guide. Textbooks and hand outs. Didactic lectures.

Educational content:

1) Mix of disease: A variety of obstructive and restrictive diseases requiring pulmonary laboratory testing: COPD, asthma, Chronic bronchitis, interstitial lung diseases, hypersensitivity pneumonitis, and pulmonary hypertension. Evaluation of unexplained dyspnea by pulmonary exercise testing. Pulmonary bronchoprovocation tests.

2) Patients Characteristics: Patients evaluated by our fellows at the PFTs laboratory are from West Virginia, Western Maryland and Southern Pennsylvania. Most patients are referred for testing by the Ruby Memorial Hospital physicians. Patients are above the age of 18 and will have a diverse variety of pulmonary pathologies present in the above geographic areas. The testing is done in both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Approximately 5-7 of patients do not have any type of health care coverage.

3) Type of clinical encounters: During this rotation, the fellow does not participate in the care of the patients. The fellow will only participate in the laboratory testing and reading of the laboratory results (PFTs and pulmonary exercise tests).

4) Procedures: Spirometry, lung volumes determination, diffusing capacity testing, bronchoprovocation tests, and pulmonary exercise testing by treadmill or cycle ergometry.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the fellow will be evaluated by the attending physician using E-Value. The results of these evaluations are reviewed by each fellow and discussed at the PD/fellow meetings. All fellows are usually given continuous oral feedback of their performance by the attending physician during their rotations.

2) Faculty and Program Performance: The fellow will complete an evaluation using E-Value commenting on the faculty, and clinic service. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD. Evaluation of the rotation will be done in accordance with the six core competencies:

Patient Care: The evaluation of the patients scheduled for pulmonary function testing. Examination and monitoring of patients undergoing pulmonary exercise testing.

Medical Knowledge: Determination of the acquisition of skills in pulmonary functions and performance of pulmonary exercise testing. Knowledge of cardiovascular physiology during exercise and familiarity with parameters to be measured.

Practice-based Learning and Improvement: Familiarity with ATS guidelines, equipment and state of the art publications to effectively evaluate testing results.

Interpersonal and Communication Skills: The fellow should be able to communicate with families and patients in a mature and professional way. Fellows should have a peer interaction with respiratory therapists and write clear, organized and accurate interpretation of the testing results.

Professionalism The fellow will be evaluated by his attendance, punctuality, respect and manners with patients and respiratory therapists.

Systems-Based Practice: During this rotation the fellow should learn about the different components and management of a Pulmonary Function Laboratory.

Description of the Goals and Evaluation of the Elective in Radiology

Fellows rotating through the radiology service will be under the supervision of the attending in the Chest Radiology Service. The goals and objectives of the rotation will be reviewed and discussed with the attending physician at the beginning of the rotation. Fellows will participate in the daily reading of the different radiology chest procedures. By the end of the rotation, the fellow should have obtained expertise in the interpretation of the different chest radiology procedures including radiograms, computerized tomography and magnetic resonance imaging and positron electron tomography. In addition, the fellows will have exposure to the invasive radiology procedures of the chest, including percutaneous fine needle aspiration and CT-guided thoracentesis. Fellows will be able to choose this elective during a 2-4-week period.

Educational purpose: The primary goal of this rotation will be to gain expertise in the interpretation of radiological procedure pertinent to Pulmonary and Critical Care Medicine. Chest radiographs, computerized tomography of chest, positron emission tomography to attend invasive radiological procedures of the chest.

Teaching Methods: 1) Participation in the radiological reading with the attending physician. 2) Assigned readings 3) Case presentations at the weekly Case Conference. 4). Attending radiology conferences.

Educational content:

1) **Mix of disease**:
Radiographic studies of different obstructive and restrictive pulmonary disease: COPD, Interstitial lung diseases, pulmonary edema, acute respiratory distress syndrome, pneumothorax, pleural effusions, and connective tissue diseases involving the lungs, pulmonary vasculitis, pulmonary neoplasm, pneumonias, bronchiectasis, cystic fibrosis and pulmonary embolism among others.

2) **Patient Characteristics:** Patients undergoing radiographic procedures at Ruby Memorial Hospital. Patients are from West Virginia, Western Maryland and Southern Pennsylvania. Studies are from outpatients and in-patients from all the different services of WVU Hospitals. Patients are above the age of 18 and will have a diverse variety of pulmonary pathologies present in the above geographic areas. The testing is done in both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Approximately 5-7 of patients do not have any type of health care coverage.

3) **Procedures**: The fellow will not participate in procedures during this rotation. They will participate in the reading process of radiographic studies.

4) **Type of clinical encounters:** No clinical encounters are expected in this rotation. The fellow will mostly spend time in the reading room with the radiology attending physician. He also may observe radiological invasive procedures.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the radiology attending will complete an evaluation in E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow and is available for review by the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting on the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD.

The evaluation will be done in accordance to some of the six core competencies. Patient Care will not be evaluated since the fellow will not have any patient contact during this rotation.

Medical Knowledge: By the fellow understanding the different chest radiographic procedures. Their capacity to identify anatomical structures and pathological patterns. Their understanding of the differential diagnosis of the radiological findings. Understanding the risk of radiological exposure with different procedures.

Practice-Based Learning and Improvement: The fellows' ability to navigate through the different areas of the radiology network and to utilize learning resources.

Interpersonal and Communication Skills: By the clarity of the presentation of the radiological findings to the attending.

Professionalism: Their attendance and punctuality. His/her manners and professional behavior with the attending and radiology team.

Systems-Based Practice: Understanding the utilization of the different radiological techniques in the diagnostic process of pulmonary diseases. Learning about the cost and utility of different radiological procedures.

Description of the Goals and Evaluation of the Elective in Infectious Diseases

The trainee electing a rotation in this sub-specialty will be under the supervision of one of the Infectious Diseases (ID) attending. The goals and objectives of this rotation will be discussed with the attending physician at the beginning of the rotation. The fellow will participate in rounds and in all the didactic activities of the ID service. Fellows will be able to choose an ID rotation in a 2-4 week period

Educational purpose: The focus of the rotation will primarily be on the diagnostic approach to patients suspected of having an infectious process. In addition, the fellow will expand his knowledge in the management of patients with HIV and other topics related to Pulmonary and CCM. Furthermore, it is expected that the fellow will gain knowledge in the indications and use of antibiotics, mechanism of action, antibiotic resistance, and pharmacokinetics of these agents.

Teaching methods: Bedside teaching during ID consultations. Didactic conferences. Case presentation, assigned readings and provided articles.

Educational content:

1) Mix of disease:

Intracranial processes: meningitis, encephalitis, brain abscess
Sinusitis and oropharyngeal infections
Myelitis and epidural abscess
Pneumonias, tuberculosis, mediastinitis, empyema, pericarditis
Ventilator associated pneuomonia
Intraabdominal infections
Cellulitis
Catheter related infections
Infection caused by multidrug resistance antibiotics
HIV related infections

2) Patients Characteristics: Patients undergoing consultation at Ruby Memorial Hospital by the ID service. Patients are from West Virginia, Western Maryland and Southern Pennsylvania. Patients are above the age of 18 and have a diverse variety of infectious pathologies present in the above geographic areas. The testing is done in both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Approximately 5-7 of patients do not have any type of health care coverage.

3)Procedures: During this rotation the only procedure the fellow may participate in is the reading of special staining for bacteria: gram stain, and AFB stain.

4)Type of clinical encounters: The fellow will evaluate patients assigned to him/her. They will obtain a medical history and physical examination focused in the infectious aspect of disease. Fellows will present the patient to the attending physician and they will discuss findings, diagnostic work-up and management.

Methods of evaluation

1) Fellow performance: At the end of the elective, the ID attending will complete an evaluation within E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations and are reviewed by the PD.
Evaluation of the rotation will be done in accordance with the six core competencies.

Patient Care: Fellow is expected to participate in patient evaluations and daily rounds. The fellow is expected to elaborate a differential diagnosis and diagnostic work, as well as, a management plan and present them to the ID attending physician.

Medical Knowledge: Fellows rotating through the ID service are expected to read about pertinent literature related to the service patients. They should become familiar with recent ID guidelines, antibiotic use and monitoring.

Practice-Based Learning and Improvement: During this rotation the fellow is expected to learn about sources of information related to ID (books and journals), as well as familiarity with different staining and cultures techniques.

Interpersonal and Communication Skills: The fellow should be able to communicate with families and patients in a mature and professional way. His notes should be organized and clear.

Professionalism The fellow will be evaluated by their attendance, punctuality, respect and manners with patients and health care workers.

Systems-Based Practice: During this rotation the fellow should learn to use all the health care system resources to support patients with infectious diseases in and out the hospital. Support for home antibiotic therapy, need for social worker involvement, consideration for long-term care facilities and rehabilitation hospitals.

Description of the Goals and Evaluation of the Elective in Pathology

Fellows rotating in the pathology service will be under the direct supervision of the Pathology Program Director. The goals and objectives of the rotation will be discussed with the attending physician. Fellows may elect to do this rotation for a period of 2-4 weeks.

Educational purpose: Learning about the different staining for lung specimens and special pulmonary pathogens. Gain knowledge in cytology and histology staining of the pulmonary issue. Identify the histology of different types of pulmonary tumors and interstitial pulmonary diseases. To participate in the evaluation of pulmonary autopsies in order to gain familiarity with the anatomical demarcation of the lung parenchyma, airways, thoracic blood vessels and lymph nodes.

Teaching methods: One on one microscopic reading of pulmonary specimen. Supplied reading material. Interaction with pathologist and laboratory technicians. Computer programs of slides of pulmonary pathology and microbiology.

Educational content

Mix of disease:

Adenocarcinoma
Squamous cell carcinoma
Small cells carcinoma
Large cell carcinoma
Large cell carcinoma
Braonchoalveolar cells carcinoma
Carcinoid tumor
Mesothelioma
ILD
Sarcoidosis
Pulmonary vasculitis
Pulmonary embolism
Granulomatous diseases due to dust exposure
Pneumonias
Mycombacteria pulmonary infections
PCP pneumonias

Patients Characteristics: The fellows will view specimen and biopsy procedures from WVU patients. These patients are from West Virginia, Western Maryland and Southern Pennsylvania. Specimens will result from bronchoscopic or surgical procedures.

Patients are above the age of 18 and will have a diverse variety of pulmonary pathologies present in the above geographic areas. The testing is done in both men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Approximately 5-7 of patients do not have any type of health care coverage.

Type of clinical encounters: During this rotation, the fellows do not participate in the care of the patients. The fellow will only participate in the microscopic reading of specimens.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the pathology attending will complete an evaluation form in E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD. Evaluation of the rotation will be in accordance to some of the six core competencies. Patient Care will not be evaluated, since during this rotation the fellow will not have any direct contact with patients.

Medical Knowledge: The fellow identification of different pulmonary pathologies. Most common cytology staining and pathological preparations of malignant and non malignant lung tissue. The fellow should be able to identify the pathological characteristics of primary lung cancer. Also, some of the most frequent interstitial and alveolar pathological processes (IPF, NSIP, DIP, RB, ARDS, AIP and PAP).

Practice-Based Learning and Improvement. The capacity of the fellow to use different resources to increase his knowledge in basic pathology.

Interpersonal and Communication Skills: The fellow ability to interact with the pathology team and his description the pathological preparations and slides.

Professionalism: By his attendance and punctuality. Their manners and respectful behavior.

Systems-Based practice: Understanding the pathology diagnostic process. Understanding the need for further specific staining to establish a diagnosis of primary pulmonary malignancy.

Description of the Goals and Evaluation of the Elective in Nephrology

The trainee electing a rotation in nephrology will be under the supervision of the Nephrology attending. The goals and the objectives of the rotation will be discussed at the beginning of the rotation. The fellow will rotate with the nephrology consult service. The fellow will can elect to take this rotation for a period of 2-4 weeks.

Educational purpose:
Evaluation, prevention, diagnosis and management of renal failure.
To learn about indications and contraindications of different dialysis modalities.
Understanding CVVH and CVVHD, as well as, different fluid replacement therapies.
Fluid and electrolytes managements in dialyzed patients.
Complications of different dialysis modes.
Pulmonary complications emerging in the post-renal transplant patient.
Learn how to set a CVVHD machine.

Teaching methods:
Bedside discussions and presentations.
Assigned reading about dialysis equipment
Manipulation of the CVVHD machine.
Didactic presentations in topics related to renal failure and dialysis
Attendance at family meetings and discussion of dialysis decisions
Board review questions

Educational content:
1) Mix of disease:
Renal Failure from different etiologies
Renal complications induced by pharmacological agents
Renal complication following radiographic procedures
Renal complication during sepsis and septic shock
Renal complications following traumatic injuries
Pulmonary-renal syndromes
Electrolytes abnormalities
Acid base disturbances
Dialyzable poisons

5) **Patients Characteristics:** Patients evaluated by the nephrology service at Ruby Memorial Hospital. Patients are from West Virginia, Western Maryland and Southern Pennsylvania. Patients are above the age of 18 and will have a diverse variety of renal pathologies present in the above geographic areas. Patients are men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance. Approximately 5-7 of patients do not have any type of health care coverage.

3)Procedures: The fellow will participate in the placement of dialysis catheters, and in the setting of CVVHD apparatus.

4) Type of clinical encounters: During this rotation, the fellow will evaluate and follow patients assigned to him/her. These patients will have renal insufficiency of failure caused by different renal pathologies. The fellow will also participate in dialysis evaluations and will see patients in the medical ward, dialysis units, and ICUs.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the nephrology attending will complete an evaluation in E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations and are reviewed by the PD.

The evaluation of the rotation will be done with attention to the six core competencies.

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examinations and diagnostic studies pertinent to the kidneys. He/she will participate in daily rounds and plan of care with the nephrology team.

Medical Knowledge: During this rotation, the fellow is expected to gain knowledge in the approach to patients with renal dysfunction and renal failure. The fellow will gain understanding of CCVHD and dialysis procedures.

Practice-Based Learning and Improvement: The fellow will be evaluated by their capacity to obtain state of the art and recent information about the problems which the patients in the service present.

Interpersonal and Communication Skills: The fellow capacity to communicate, effectively, compassionately and respectfully with patients, families and all members of the nephrology team.

Professionalism: Their manners and the respectful treatment to members of the nephrology and dialysis team, patients and their families. Their attendance and punctuality.

Systems-Based Practice: Understanding the proper coordination of the different components of the health care system involved patients with end-stage renal disease. His/her understanding of the different components in the care of patients with renal failure. Need for continuity of care once the patient is discharge from the ICU and hospital. Potential use of rehabilitation services and follow-up in dialysis units.

Description of the Goals and Evaluation of the Elective in the Bone Marrow Transplant Unit (BMT)

During this rotation the fellow will have the opportunity to participate in the care of patients undergoing bone marrow transplant at our institution. The fellow will be under direct supervision of the BMT attending. Fellows can take this elective for a period of 2-4 weeks

The fellow taking this rotation will actively participate in patient care and all activities of the BMT service, including rounds, diagnostic and therapeutic decisions and academic activities of the service.

Educational purpose:
To gain knowledge in the care of patients undergoing BMT procedures fellows will learn: what kind of patients are candidates to have BMT; chemotherapeutic and radiation regimens, post BMT surveillance, diagnostic procedure in BMT patients and management of complications.

Teaching methods:
Bedside discussions and presentations.
Assigned reading about complications of bone marrow transplant
Didactic presentations in topics related to bone marrow transplant
Attendance at family meetings and discussion related to BMT
Board review questions

Educational content:
1) Mix of disease:
Infections during the post-transplant period
Pulmonary edema
Septic shock
Coagulopathies
Diffuse alveolar damage
Venous occlusive disease
Renal failure
Cardiomyopathies
Gastrointestinal bleeding
Graft versus host disease
Complications of radiation therapy
Complications of chemotherapy
Leukemias
Lymphomas
Nutrition in the post-transplant period

2) Patient Characteristics: Patients treated at the Bone Marrow Transplant service at Ruby Memorial Hospital. Patients are from West Virginia, Western Maryland and Southern Pennsylvania. Patients are above the age of 18 and will have a diverse variety of renal pathologies present in the above geographic areas. Patients are men and women of multiple ethnic and socioeconomic backgrounds and age. The majority of patients have Medicare/Medicaid coverage, the rest are private insurance.

3)Procedures: The fellow will participate in the placement of central lines and bronchoscopic procedures.

4)Type of clinical encounters: During this rotation, the fellow will evaluate and follow patients assigned to him/her. These are patients with complications related to BMT. The fellow will also participate in daily rounds in the BMT unit.

Methods of evaluation:

1) Fellow performance: At the end of the elective, the BMT attending will complete an evaluation in E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his evaluations. These evaluations are reviewed by the PD. The evaluation of the rotation will be done with attention to the six core competencies.

Patient Care: The fellow's capacity to obtain all pertinent historical information, physical examination and diagnostic studies. The diagnostic procedures and monitoring of patients undergoing BMT. The fellow's understanding of the complications of pre-transplant therapy and immune suppression.

Medical Knowledge: The fellow's understanding of changes associated with bone marrow transplant. His/her awareness of recent state of the art publications and guidelines for the care of patients following BMT. Understanding of standard prophylactic treatment and care.

Practice-Based Learning and Improvement: The fellow's ability to review relevant evidence based knowledge pertinent to BMT patients. The utilization of guidelines and application of current knowledge to improve the outcome of patients undergoing bone marrow transplant procedures.

Interpersonal and Communication Skills: By the clarity of the notes and presentations. His/her capacity to communicate, effectively, compassionately and respectfully with patients, families and all members of the BMT team.

Professionalism: His/her prompt response to page and situation requiring his/her presence. The respectful treatment of members of the BMT team, patients and their families.

Systems-Based Practice: Gaining familiarity with the health-care system surrounding bone marrow transplant. Understanding economical limitations and potential sources of help for further care once the patients are transferred to home or a rehabilitation unit. Learning coordination with other medical and social services.

Description of the Goals and Evaluation of Elective in Research

The purpose of our fellowship program is to prepare internists for a career in clinical Pulmonary and Critical Care Medicine. However, one of the major goals of our program is to also help fellows to obtain critical thinking, develop their research potentials and academic interest. This may be accomplished by initiating a new research project or by continuing with a project currently underway. Fellows will be encouraged to develop their own research projects. During the research rotation, the fellow will develop the capacity to prepare a research project and complete the IRB submission for approval.

Research opportunities are available in both clinical and basic science within the department in the areas of Sleep, Pulmonary and Critical Care Medicine. Furthermore, the fellow will be able to participate in collaborative projects with colleagues from the Basic Sciences Departments, Cancer Center and NIOSH. In addition, the fellow will be able to participate in the clinical trials of the Section. All fellows will have at least one month dedicated to research during each year of training. Fellows who have an active project will be allowed to take additional research electives.

The main faculty for research within the Pulmonary/CCM fellowship are Drs. Lee Petsonk and Rich Johnston

If the fellow participates in a project which is already underway, the fellow will be expected to learn about the different components of the investigation and initial IRB approval.

The goals and objectives for research during the fellowship are distributed to the fellows at the beginning of the fellowship and is part of the files of the program.

Educational purpose: All fellows will be involved in research activity during the 3 years of training. The research guidelines of the program are aimed to help the fellow learn the preparation of research projects by:
1) Understanding the different investigative methods and organization of the research project. To become familiar with IRB submissions and approval. To learn the process of collecting background information and be able to reach a hypothesis for the investigation. Complying with all guidelines regarding appropriate use of human subjects in research protocols.

2) Learn about patient selection, inclusion/exclusion criteria and different types of studies (i.e., prospective/retrospective, comparative, blinded/non blinded, interventional).

3) To learn the interpretation and presentation of the collected data and different types of studies. Understanding the statistical approach to the results; and preparation of abstracts, case report and manuscripts. Gain knowledge of the submission process.

Teaching methods:

The first year fellows will discuss the research goals with the PD and will review the research guidelines of the program.
The first year fellow will be introduced to research during our Pulmonary and CCM journal clubs; as well as during the fellow's research conference.
Fellows will be encouraged to develop their own areas of research under the supervision of a faculty member who will act as preceptor.

The preceptor will guide the research project and give a written evaluation for each research elective the fellow takes under his supervision.
Presentations of projects, evolution of the research study and presentation of the data at the fellows research conference.

Method of evaluation:

1) Fellow performance: At the end of research elective the preceptor will complete an evaluation in E-Value. The evaluation is competency based and in accordance with pertinent competencies for this rotation. The evaluation is shared with the fellow. Evaluations are part of the fellow's file and are reviewed during the fellow/PD meeting semiannually.

2) Faculty and Program Performance: At the end of the rotation, the fellow will complete an evaluation using E-Value commenting in the faculty, facilities, service experience and duty hours. The attending faculty receives anonymous reports of his/her evaluations. These evaluations are reviewed by the PD.

The fellow progress in the research area will be evaluated in accordance to the sis core competencies and the fellow's level of training.

First Year Fellow

Patient Care: If the research project involves human subjects, the fellow must confirm that consent has
been obtained before enrollment and patients are cared for in accordance with the guidelines outline in the IRB approval.

Medical Knowledge: Review of medical literature relevant to the proposed research project.

Practice-Based Learning and Improvement: The fellow is effectively using available information resources to accomplish his research goals.

Professionalism: His commitment to carry out the research project in an ethical manner and in accordance to the IRB proposal.

Interpersonal and Communication Skills: The fellow's interaction with research participants and with other members of the research team. The fellow's manners and

clarity during the presentation of the consent form to patients and families.

Systems-Based practice: Familiarity with research resources within the system and research regulatory agencies. The fellow is alert to system-based challenges that could be addressed as part of a research project.

Second Year Fellow

Patient Care: Continues to be compliant with all research guidelines regarding human subjects. The fellow will continue with close monitoring of patients for potential side effects. He will ascertain that the study methods are followed.

Medical Knowledge: The fellow is expected to continue monitoring medical literature pertinent to the study.

Practice-Based Learning and Improvement: Continues to keep abreast of newly published data relevant to the fellow's project.

Professionalism: The fellow is expected to demonstrate a respectful approach to participants and continue demonstrating an ethical behavior in the handling of data.

Interpersonal and Communication Skills: Maintaining an effective compassionate and respectful communication with patient, families, colleagues and all other members of the research team. The fellow's clarity during research presentations and continue monitoring reports.

Systems-Based Practice: The fellow interaction with other departments involved in research. His/her understanding of medical clinical trials and CTRU resources. Maintain the research studies with sensitivity to the health care systems.

Third Year Fellow:

Patient Care: The fellow will continue growing in the monitoring of the research project. Their adherence to the methodology of the study, monitoring for adverse event and continue compliance with IRB guidelines.

Medical Knowledge: The fellow is expected to have obtained expertise in his research area and preparation for publications of the results in an organized manner.

Practice-Based Learning and Improvement: Collection of pertinent information to elaborate a scientific discussion of the findings. The fellow's capacity to utilize research results to improve patient care.

Professionalism: Demonstrating a personal commitment to all aspects of research integrity.

Interpersonal and Communication Skills: Prepares the project for presentation and publication in a clear and effective manner.

Systems-Based Practice: Evaluates research data to determine if improvements in health care systems are suggested by results. His awareness of the potential sources in the system to support research

Description of the Goals and Evaluation of the Elective in Palliative Care

This rotation will be done under the supervision of Dr. Alvin Moss, Medical Director of Palliative Care. The rotation can be of two weeks to one month duration.

Educational Purpose: This rotation will give the fellows the opportunity to learn how to communicate with patients and families during the end of life. Also, they will develop skills in pain and symptom management during the dieing process. The majority of the consultations will require Pulmonary and CCM fellows to work with the attending physicians and the palliative medicine consulting physician to reach agreement on goals of care with patients and legally appropriate decision-makers.

Principal Teaching Methods

a) Supervised Direct Patient Care Activities**:** The fellows will encounter patients in the West Virginia University Hospitals on whom palliative care consultations are requested. There are approximately 30-40 consultations per month. A board-certified hospice and palliative medicine physician consultant will supervise them and they will interact with the interdisciplinary palliative care team.

b) Interdisciplinary Team Meetings: Patients being followed by the consultation service will be reviewed with regard to overall aspects of management on a weekly basis. The interdisciplinary palliative care team includes nurse practitioners, physical therapists, occupational therapists, speech pathologists, social workers and chaplains.

c) Didactic Lectures: Didactic presentations by the faculty on various key palliative care topics will be held during the month-long rotation: core material for the rotation also includes three hours of CME accredited instruction on end-of-life care including pain and symptom management. Included in these three hours of instruction are opioid dosing based on pharmacokinetics, symptom management of the most common symptoms of patients at the end of life, assessment of decision-making capacity, indications for hospice; referral and the four levels of hospice services and outcomes of palliative care consultation.

d) Assigned Readings: All fellows are expected to read articles, handouts and books distributed during the month. Please see educational materials noted below in IV.

Educational Content:

a) Mix of diseases – Based upon the data collection by the Palliative Care Consultation Service, the following are the primary diagnoses of the patients who are seen by the service:

1. Cancer
2. Neurologic Disease
3. Cardiac Disease
4. Multi-Organ System Failure
5. Pulmonary Disease
6. Renal Disease
7. Other

b) Patient characteristics – The rotation is based at Ruby Memorial Hospital, which is a 600 plus bed hospital and the major tertiary care referral center for West Virginia, Southwestern PA and Western Maryland. Patients encountered during this rotation reflect the diverse nature of pathology present in the area with exposure to men and women of multiple ethnicities and socioeconomic backgrounds.

c) Learning venues - Fellows will work directly with the WVU Palliative Medicine consultant physician and the interdisciplinary palliative care team. The patient encounters occur in West Virginia University Hospitals. The fellows are expected to perform a complete history and physical examination, review laboratory and X-ray findings, develop a management plan and present it to the faculty physician. The fellows will participate in multiple family meetings during the rotation and have an opportunity to lead them.

d) Structure of rotation: The fellows' primary responsibility is to see the palliative care consultations at Ruby Memorial Hospital. During their rotation, fellows continue to attend their primary care continuity clinic ½ day a week and all the educational activities of the Pulmonary and CCM section

Educational Materials

a) At the beginning of each rotation materials are given to each fellow including the palliative medicine rotation learning goals and objectives, reading list, articles from the current medical literature, the American Pain Society Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain, Dying Well and Hard Choices for Loving People.

b) Computerized bibliographic retrieval is available 24 hours a day 7 days a week on computers at the hospitals and the fellow's personal computer.

c) All fellows can access Up-to-Date Online throughout the Health Sciences Center and Hospital.

d). Fellows are expected to read articles from the reading list, the primary literature and standard medical texts throughout their rotation.

Methods of Evaluation

a. Fellow Performance: At the end of each rotation the faculty completes an evaluation through E-Value. The evaluation is competency based and assesses core competency performance. The evaluation is shared with the fellow. The evaluation will be reviewed by the Pulmonary and CCM program director and discussed with the fellow during the semi-annual review.

b. Program and Faculty Performance: Upon completion of the rotation, the fellows will be asked to complete a service evaluation form commenting on the faculty, facilities and service experience. These evaluations will be sent to the residency office for review and the attending faculty physician will receive anonymous quarterly copies of completed evaluation forms. The Program Directors will review results annually.

c. Fellows Medical Knowledge: Fellows take two 20-questions multiple choice tests during the rotation to assess their knowledge of core information in palliative medicine.

Institutional Resources: Strengths and Limitations

a). Strengths:

1. Significant opportunities to treat cancer and other patients with severe pain that has persisted despite management by attending physicians.
2. Significant opportunities to improve communication skills by participating in multiple family meetings addressing end-of-life decision-making.

The evaluation of the rotation will be done in accordance to the specific competencies:

Patient Care

1. By the conclusion of the rotation, palliative care rotating fellows will understand the concept of professionalism requirements putting the best interests of patients above their own and be able to identify the appropriate professional response in commonly occurring clinical situations.
2. Describe the ethical principles underlying the practice of patient care.
3. Use ethical principles in the process of ethical decision-making to resolve ethical dilemmas in patient care.
4. Demonstrate medical knowledge of West Virginia and federal laws applicable to the health care system and individual patient care.
5. Be able to communicate effectively with patients and families in regard to end-of-life treatment decisions.

Medical Knowledge

1. Define palliative care and discuss how it applies to the ethical practice of medicine.
2. Explain the principles of palliative medicine.
3. All fellows will be evaluated by the supervising faculty for appropriate analytic approach to life-limiting illness and fellows will be evaluated for satisfactory basic and clinical knowledge of palliative medicine.
4. The fellows on palliative medicine consult rotation will gain knowledge on current evidence-based practices to assess and manage pain and symptoms.
5. The fellow will gain understanding into the pathophysiology and prognosis of life-limiting illnesses.

Interpersonal and Communication Skills

1. Fellows will productively and cooperatively participate in Interdisciplinary Treatment Planning.
2. Fellows will create and sustain a therapeutic and ethically sound relationship with patients and their families.
3. Fellows will demonstrate ability to communicate effectively and demonstrate caring, compassionate and respectful behavior.

Professionalism

1. Exposure to a wide variety of the most common and serious life-limiting illnesses.
2. The fellow will demonstrate respect, compassion and integrity. He/she will be committed to excellence and continuous professional development.
3. The fellow will demonstrate professional behaviors consistent with the WVU IM residency core competency curriculum.

Practice Based Learning and Improvement

The fellow will use hospital and University library resources to critically appraise medical literature and apply evidence to patient care. They will use electronic references to support patient care and self-education. In addition, they will consistently seek out and analyze data on practice experience, identify areas for improvement in knowledge or patient care performance and make appropriate adjustments. Fellows will additionally model independent learning and development.

Systems Based Practice

The fellow will be sensitive to health care costs while striving to provide quality care. They will begin to effectively coordinate care with other health care professionals as required for patient needs.

They will understand and adopt available clinical practice guidelines. They will work with patient care managers, discharge coordinators and social workers to coordinate and improve patient care and outcomes. Fellows will understand the indications for referral to hospice and the four levels of service provided by hospice. They will have the opportunity to spend time with a hospice team if desired.

PULMONARY AND CRITICAL CARE MEDICINE
MOONLIGHTING POLICY

Because residency education is a full time endeavor, ACGME fellows must ensure that moonlighting does not interfere with their ability to achieve the goals and objectives of their educational Program. Fellows are responsible for ensuring that moonlighting and other outside activities do not result in fatigue that might affect patient care or learning. Fellows are responsible for complying with their Program Duty Hours Policy. Note: The ACGME requires Program Director pre-approval of all moonlighting activity by ACGME fellows (http://www.acgme.org).

Residents/fellows on J1 VISA's are not permitted to moonlight, either internally or externally. It is the responsibility of other fellows to obtain written permission to moonlight from the Program Director prior to beginning the moonlighting activity. This is true both for "internal" and "external" moonlighting (see definitions below). All fellows must sign a Moonlighting Approval Form which will be placed in their file. The Program Director will monitor fellow performance in the Program to ensure that moonlighting activities are not adversely affecting patient care, learning or resident fatigue. If the Program Director determines that the fellow's performance does not meet expectations, permission to moonlight will be withdrawn. The GMEC will periodically review reports by the Program Directors regarding moonlighting activity.

Any fellow moonlighting without written pre-approval will be subject to disciplinary action.

"Internal moonlighting" is defined as extra work for extra pay performed at a site that participates in the resident's/fellow's training Program. This activity must be supervised by faculty and is not to exceed the level of clinical activity currently approved for the trainee. While performing internal moonlighting services, residents are not to perform as independent practitioners. Internal moonlighting hours must be documented in E*Value, and they must comply with written policies regarding all Duty Hours as per the training Program, WVU and ACGME.

"External moonlighting" is defined as work for pay performed at a site that does not participate in the fellow's training Program. External moonlighting hours must be documented (including days, hours, location, and brief description of type of service(s) provided) in order to comply with Medicare reimbursement requirements for GME. For external moonlighting, the trainee is not covered under the University's professional liability insurance program as the activity is outside the scope of the University's employment. The trainee is responsible for his/her own professional liability coverage (either independently or through the entity for which the trainee is moonlighting), DEA licensure, Medicare (or other governmental) provider number and billing training, and licensure requirements by the West Virginia State Medical Board and any other requirements for clinical privileging at the employment site.

Please note that moonlighting is not permitted during inpatient ward service rotations, ICU, and CCU rotations. Therefore, moonlighting (both external and internal) is allowed only during elective months. All hours accumulated during internal/external moonlighting should be logged into E*Value system. Moonlighting, both internal and external, must comply with ALL the duty hour regulations per the training program, WVU and the ACGME.

Department of Medicine Policy on Non-Teaching Patients West Virginia University

West Virginia University Hospitals does not have any non-teaching patients admitted to the hospital. All attending physicians have Faculty appointment in the School of Medicine.

PROCEDURE DOCUMENTATION REQUIREMENTS

All documentation and tracking of fellow procedures will be entered into the E-Value system.

Procedures must be logged by fellows at least once per month in order to ensure accuracy on the procedure count as well as providing an up-to-date documentation of where a fellow stands as far as procedural experience.

The Program Manager will check procedure logs at least once per month and will send an email to each fellow and the Program Director if Procedure logs are deficient.

This will assist the Program Director in determining the fellow's procedure skills.

Before performing a procedure, the fellow will discuss it with their Pulmonary/CCM attending. They will provide direct supervision and instructional education. Educational tools will be also provided in the fellow's manual.

For all pulmonary and intensive care medicine procedures, the fellow will have direct supervision by one of the service attending until competency in the procedure is established.

First year fellows will perform arterial lines and central lines under direct attending supervision until competency in the performance of the procedure is observed. Thereafter, the first year fellow will be able to perform these procedures on his own. However, in the presence of a difficult case, they should call for attending supervision.

All fellows are required to have direct attending supervision for insertion of pulmonary artery catheters and chest tube drainages. Once the fellows' shows competency with these procedures, the fellow will be able to perform them on their own in situations when the attending is not physically available. However, the fellows are encouraged to perform these procedures under attending supervision whenever possible.

All fellows will need the physical presence of an attending to perform endotracheal intubations, tracheostomies, and bronchoscopic procedures.

In order to complete the fellowship requirements, all fellows must have performed at least 100 bronchoscopies under direct attending supervision.

West Virginia University School of Medicine Graduate Medical Education Policy on Program and Institution Closure/Reduction

XXVII.Program and Institution Closure/Reduction Policy:

If the School of Medicine intends to reduce the size of a program or to close a residency program, the department chair shall inform the resident as soon as possible of the reduction or closure.

In the event of such reduction or closure, the department will make reasonable efforts to allow the residents already in the Program to complete their education or to assist the resident in enrolling in an ACGME accredited program in which they can continue their education.

Should the WVU School of Medicine decide to discontinue sponsorship for graduate medical education, residents will be notified of the intent in writing by the DIO as soon as possible after the decision is confirmed by the GMEC and the institutional leadership including the Dean of the School of Medicine.

PULMONARY AND CRITICAL CARE MEDICINE PROMOTION GUIDELINES

Promotion

1. Fellows are promoted if they receive satisfactory evaluations in each of the portions of their evaluations for each rotation.

2. If an unsatisfactory evaluation is received then the fellow will meet with the program director to define the reasons for the suboptimal performance. A plan will be crafted to accomplish satisfactory performance on subsequent rotations.

3. If unsatisfactory performance is demonstrated on subsequent rotations then policies for probation, outlined below, are implemented.

A. Initial Probation: If, after documented counseling, a fellow is not performing at an adequate level of competence, demonstrates unprofessional or unethical behavior, engages in misconduct, or otherwise fails to fulfill the responsibilities of the program, the fellow may be placed on probation by the Program Director or education committee. The fellow must be informed in person of this decision and must be provided with a probation document which includes the following:

1. A statement of the grounds for probation, including identified deficiencies or problem behaviors;
2. The duration of probation which, ordinarily, will be at least three months;
3. A plan for remediation and criteria by which successful remediation will be judged;
4. Notice that failure to meet the conditions of probation could result in extended probation, additional training time, and/or suspension or dismissal from the program during or at the conclusion of the probationary period and;
5. Written acknowledgement by the fellow of the receipt of the probation document.

B. Extended Probation: The status of a fellow on probation should be evaluated periodically, preferably every three months, but at a minimum, every six months. If, at the end of the initial period of probation, the fellow's performance remains unsatisfactory, probation either may be extended in accordance with the above guidelines (A, 1-5) or the fellow may be suspended or dismissed from the program. Probationary actions must be reported to the Graduate Medical Education (GME) Office, and probation documents must be forwarded to the GME Office for review before they are issued.

Suspension and Dismissal

A. Suspension and Dismissal: A fellow may be suspended from clinical activities by his or her program director, department chair, or by the faculty director of the clinical area to which the fellow is assigned. This action may be taken in any situation in which continuation of clinical activities by the fellow is deemed potentially detrimental or threatening to patient safety or the quality of patient care. Unless otherwise directed, a fellow suspended from clinical activities may participate in other program activities. A decision involving suspension of clinical activities of a fellow must be reviewed within three working days by the department chair (or his or her designee) to determine if the fellow may return to clinical activities, and/or whether further actions is warranted (including, but not limited to, counseling, probation, fitness for duty evaluation, or summary dismissal).

B. Program Suspension: A fellow may be suspended from all program activities and duties by his or her program director, department chair, the Associate Dean for Clinical Activities or Graduate Medical Education, or the Dean of the School of Medicine. Program suspension may be imposed for conduct that is deemed to be grossly unprofessional, incompetent, erratic, potentially criminal, or threatening to the well-being of patients, staff, or the fellow. A decision involving program suspension of a fellow must be reviewed within three working days by the department chair (or his or her designee) to determine if the fellow may return to some or all program activities and duties and/or whether further action is warranted (including, but not limited to, counseling, probation, fitness for duty evaluation, or summary dismissal).

C. Dismissal During or at the Conclusion of Probation: Probationary status in a fellowship program constitutes notification to the fellow that dismissal from the program can occur at any time (i.e., during or at the conclusion of probation). Dismissal prior to the conclusion of a probationary period may occur if conduct, which gave rise to probation, is repeated or if grounds for Program Suspension or Summary Dismissal exist. Dismissal at the end of a probationary period may occur if the fellow's performance remains unsatisfactory or for any of the foregoing reasons, prior to dismissal, the GME office must be notified of any dismissal of any fellowship during or at the conclusion of a probationary period.

D. Summary Dismissal: For serious acts of incompetence, impairment, or unprofessional behavior, a department chair may immediately suspend a fellow from all program activities and duties for a minimum of three days and, concurrently, issue a notice of dismissal effective at the end of the suspension period. The fellow does not need to be on probation, nor at the end of a probationary period, for this action to be taken. The fellow must be notified in writing of the reason for suspension and dismissal, have an opportunity to respond to the action before the dismissal is effective and be given a copy of the GME Appeals Process. Prior to dismissal the GME office must be notified of any dismissal of any fellowship during or at the conclusion of a probationary period.

decision involving suspension of clinical activities of a fellow must be reviewed within three working days by the department chair (or his or her designee) to determine if the fellow may return to clinical activities, and/or whether further actions is warranted (including, but not limited to, counseling, probation, fitness for duty evaluation, or summary dismissal).

E. Grievance Procedure: Fellow is encouraged to seek resolution of grievances relating to fellow's appointment or responsibilities, including any differences between fellow and WVUH, the Institute or WVU with respect to the interpretation of, application of, or compliance with the provision of the agreement, in accordance with the grievance procedures set forth on the WVU website https://grievanceprocedure.wvu.edu/

Forms and procedures are available from the Human Resources Department located on the ground floor of the Health Sciences Center, North.

Condition for Reappointment:

A. Promotion: Decisions regarding resident promotion are based on criteria listed above, and whether resident has met all departmental requirements. The USMLE is to be used as a measure of proficiency. Passage of the USMLE, step 3 is a requirement for advancement for the 3rd year of residency for all allopathic residents as indicated in Section VII. Resident Doctor Licensure Requirement.

B. Intent Not to Renew Contract: In the event that WVU School of Medicine elects not to reappoint a resident to the program and the agreement is not renewed, the program director shall provide the resident with a four (4) month advance written notice of its determination of non-reappointment unless the termination is "for cause." The GME Office must also be notified in writing. Intent not to renew is subject to academic grievance as outlined in XI.

C. Intent Not to Promote to the Next Level of Training: In the event the WVU School of Medicine GME program elects not to advance or promote a resident to the next level of training, the Program Director shall notify the resident with at least four (4) months advance written notice of said intent unless the cause for non-promotion occurs during the final four months of the contact period. The GME Office must also be notified in writing. Intent not to promote is subject to academic grievance as outlined in section XI.

WVU PULMONARY AND CRITICAL CARE FELLOWSHIP PROGRAM POLICY FOR REAPPOINTMENT/PROMOTION

Background

The intention of the Program is to promote to the next level of training all fellows whose performance has been entirely satisfactory. The Program does not utilize a pyramid system of promotion.

Methods

After a minimum of one-half of the current appointment, the performance of the fellow will be reviewed by the Program Director or designee. Compiled evaluation reports from E-Value as well as documentation in the fellow's file pertaining to clinical competence and performance will be reviewed in the context of the fellow's entire academic record.

Fellows will be reappointed only when their Patient Care, Medical Knowledge, Practice Based Learning, Communication & Interpersonal Skills, Professionalism, System Based Practice, and Overall Clinical Competence are evaluated as satisfactory.

If the fellow fails to meet criteria for reappointment, the fellow's file will be reviewed and presented to the Academic & Professional Standards Subcommittee. The subcommittee's recommendation regarding reappointment will be passed to the Department Chairman who will make a final decision and notify the resident promptly.

Due Process

Should the decision be for non-renewal, the fellow may respond either in writing or in person to the Program Director. If the results are still unsatisfactory to the fellow, the fellow may request to have the decision reviewed by the following, sequentially:

1. Department of Medicine Advisory Committee

2. WVU School of Medicine Associate Dean for Graduate Medical Programs

3. Health Science Center Committee on Graduate Medical Education

West Virginia University Pulmonary/CCM Quality Improvement Policy

As a focal point of the ACGME Clinical learning environment review program (CLER) and to aid in a lifelong learning process of developing methods to evaluate quality of patient care provided and implement change to improve that quality or increase safety of patient care, the following quality improvement requirement has been developed:

1. Fellows will continue to evaluate, critique and develop educational presentations for monthly Morbidity and Mortality conference.
2. Every month the presentations include personal reflection on quality of care provided as well as the ability to evaluate suboptimal outcomes in cases performed by non-resident providers.
3. Evaluation of systematic errors, recurrent negative outcomes and sentinel events may lead to the development of quality improvement projects.
4. M&M conference is modulated by MICU Director and other PCCM faculty.

All fellows will develop and complete a quality improvement project that meets the following criteria:

A. The project will have the goal of improving the quality of care provided and/or increasing patient safety measures by the individual resident or a larger component of the health care system (hospital, department, residents, or care team).
B. The project must include oversight by a faculty member.
C. This project will include data to validate improvement (or lack thereof).
D. The project must be completed one month prior to the completion of fellowship and the fellow should have defined the project by Jan 1st of the PGY2 year.
E. The project should be of publishable quality, and may meet the requirements for the senior academic project.
F. Fellows must submit an abstract to the program manager and director for inclusion in the resident portfolio and for project approval by the program director.

Fellows will be required to complete the QI Curriculum and can utilize the resources available in the QI curriculum for the development of this project.

PULMONARY AND CRITICAL CARE MEDICINE PROGRAM
RESEARCH EXPECTATIONS FOR TRAINEES

It is expected that each fellow has some research activity during the three years of training, and in order to graduate from the program each fellow needs to accomplish the following minimal goals:

A) During the first year of fellowship, the trainee should have at least presented a case or the results of a research study at the meeting of the West Virginia ACP Chapter.
B) Before graduation, the trainee must have either submitted a case presentation to the national meeting of the ACCP, or an abstract to a national meeting such as ATS/ACCP or the Society of CCM, or a review article to a peer review journal.
C) Fellows are expected to write a manuscript with the results of a research project completed during their training.
D) Collaboration in a book chapter will be considered equivalent to a research project.

The above are the minimal requirements; however, each fellow is encouraged to reach higher goals, and to develop clinical research projects under the supervision of one of the section or institution faculty.

Fellows should become familiar with the process of research project development. Background in the medical literature should be investigated for any potential project. The project should be discussed with the faculty mentor, and develop in accordance to the following format.

Title: Introduction:
Background information
Purpose of the study and goals
Hypothesis

Methodology:
Patient population and number of subjects. Inclusion/exclusion criteria
Type of study (prospective/retrospective, comparative, blinded/non blinded, intervention, data collection, sample analysis, etc.)
Duration of the study

Statistical plan:
How is the data going to be analyzed?

Projects will be presented for discussion at the “Fellow Research Conference” which is scheduled the third Monday of each month from 12-1 pm. The fellow is expected to gain expertise in writing proposal and submissions to the IRB.

Fellows will be able to take elective time for research upon discussion with the Program Director. The evaluation of the fellow’s research activity will be done by the assigned mentor,

and will be also evaluated and discussed at the semi-annual Section faculty meeting.

Section of Pulmonary and Critical Care Medicine
Policy on Supervision by the Fellows of Resident and Medical Students rotating in our Pulmonary and MICU Services

Fellows play an integral role in the teaching and supervision of residents and medical students rotating in our Sections' Services. The fellows, together with the attending faculty, are responsible for the teaching and supervision of internal medicine residents or other specialties residents (Family Practice Medicine, Anesthesiology, and Emergency); as well as medical students rotating in our MICU or Pulmonary Service.

MICU Service:

All patients must be seen and examined by the Fellow.

Each month the fellow assigned to this service participates in the initial orientation of residents and medical students.

Usually a total of 4-5 residents and 1-2 medical students rotate each month in the MICU.

The goals and objectives of the rotation are reviewed at the beginning of the rotation.

Fellows will explain the daily schedule and the dynamic of the service to the trainees.

Expectations of the rotation will be outlined. Fellows will explain the use of the MICU manual and all the educational tools available to trainees during the rotations.

Residents and medical students will be made aware of the available Critical Care textbooks and how to get access to educational computer based medical programs (Up-to-Date, PubMed, ACCP/ATS web sites; as well as how to access major medical journals available in our institution.

Fellows will guide and supervise residents and medical students in the preparation of daily rounds. The fellow will advise them in the diagnostic work-up orders and management decisions. The fellow will discuss the evolution of patients, physical findings, laboratory results, and radiographic studies.

Fellows will conduct rounds with the residents and medical students prior to Attending rounds. Fellows will instruct residents and medical students in the utilization of other medical services participating in MICU care (nutritionists, pharmacists, rehabilitation, respiratory therapist, utilization, etc.).

The fellow will review residents and medical students' daily notes.

Fellows will discuss any potential invasive procedure with the trainees. Indications and potential complications will also be discussed.

Fellows will supervise any procedure performed by residents and medical students in the Unit and will ascertain that proper documentation of the procedure is placed in the patient's medical records.

Residents rotating in the MICU service will be allowed to perform arterial and central lines under the direct supervision of the fellow and/or the attending physician. Residents will be allowed, under direct supervision to place chest tube thoracostomy and dialysis catheters.

Fellows will give continuous feedback to the residents and medical students on their performance.

During and at the end of the rotation, the fellow will give in-put to the attending physician on the residents and medical students' performance which will contribute to their monthly evaluations.

Pulmonary Service:

All patients must been seen and examined by the fellow.

In the Pulmonary Consult Service, the fellow's role as a teacher and supervisor is also essential in the education of residents and medical students rotating on the service.

The fellow will participate in the initial orientation of residents and medical students. The goals and objectives of the rotation will be reviewed. The fellow will explain the daily schedule and the dynamic of the service. The fellow will review consultations and daily progress of patients seen by the residents and medical students.

Fellows will review the residents and/or medical students' history and physical examination. The fellows will discuss with the trainees the diagnostic work-up; participate in formulating a treatment and management plans. Fellows will help the residents and medical students to prepare the case for presentation to the attending physician.

Fellows, together with the attending physician assigned to the service, will provide reading material and will instruct the residents and medical students in the interpretation of pulmonary functions studies and radiological imaging. Residents and medical students will have access to our Section Library. They will be made aware of the available Pulmonary Medicine text books, and they will have access to educational computer based medical programs (Up-to-Date, PubMed, ACCP/ATS web sites; as well as how to access major medical journals available in our institution.

Residents will be allowed to participate in thoracenteseis procedures under the direct supervision of the fellow and/or attending physician.

Residents and medical students are expected to read pulmonary function tests under supervision. They will be allowed to observe other pulmonary procedures (bronchoscopies and pulmonary exercise tests). Fellows will instruct the residents and medical students on the indications and complications of procedures performed by the Pulmonary Service.

Fellows will give continuous feedback to the residents and medical students during their rotation. Fellows will give input on the residents and medical students to the attending and these contributions are used for the residents and medical students' evaluations.