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West Virginia University

Pulmonary & Critical Care Fellowship:

The Manual

A reference for fellows on general expectations, rotations, call, and various policies of graduate medical education and the institution

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Introduction

The purpose of this manual is to provide a concise reference for fellows in the WVU Pulmonary and Critical Care Fellowship program covering general expectations for their training period. The fellowship website (https://medicine.hsc.wvu.edu/medicine/sections-of-medicine/pulmonary-critical-care-and-sleep-medicine/pulmonarycritical-care-medicine-fellowship/) is a great resource—it is frequently updated and has the most up to date policies and schedules. If there is a discrepancy, please reach out to the Program Director, Associate Program Director, or Program Manager for clarification.

Given that we practice in an ever-evolving field of medicine, some would say the only constant is change. Imagine this manual as a living document, like the United States Constitution or a work in progress, like the Denny's menu.

Most of the rules and policies can be simplified as follows: do the right thing, provide excellent care for patients, and cultivate academic curiosity.

Program Aims

Our Pulmonary & Critical Care Medicine (PCCM) fellowship program aims are to enable our fellows to become independent, practicing pulmonologists/intensivists, capable of managing patients in a variety of pulmonary and critical care clinical settings. We want to instill in our fellows the value of on-going scholarship (regardless of career goals) by developing research projects locally and exposure to national professional organizations (such as the American Thoracic Society and the American College of Chest Physicians). We will accomplish our aims through the 3-year curriculum with focus on medical knowledge and patient care in our clinical settings, communication skills development, practice-based learning and improvements, systems-based practice, and professionalism. Experience will be gained with a focus on patient care in all settings: outpatient, inpatient consultations, and the intensive care unit. Outpatient clinics include continuity clinic (general pulmonology) as well as sub-specialty clinics of sleep medicine, thoracic oncology, adult cystic fibrosis, interstitial lung disease, severe COPD, pulmonary hypertension, and ALS clinics. Our fellows are required to do fellow-driven research, patient safety, and quality improvement projects. The fellows will participate in daily conferences designed to enhance general pulmonary and critical care medical knowledge and current topic reviews with faculty. Our fellows gain exposure to the medically underserved population by participation in our clinical and hospital settings.

Core Competencies

Per the ACGME, there are 6 core competencies: patient care, medical knowledge, practice-based learning and improvement, interpersonal communication skills, professionalism, and systems-based practice. Fellows are expected to be competent in all of these areas.

Patient care: provide compassionate, appropriate, and effective care to patients.
Medical knowledge: demonstrate knowledge of the relevant established and evolving sciences and be able to apply this knowledge to patient care.
Practice-based learning and improvement: know limits in understanding, set goals to improve, incorporate feedback, reference medical literature, and educate others (patients, families, residents)
Interpersonal communication skills: effectively exchange information and collaborate with patients, families, and health professionals; lead teams and maintain timely records
Professionalism: Carry out responsibilities and adhere to ethical principles
Systems-based practice: Recognize the larger context and system of health care, optimize use of available resources, cost awareness, advocate for quality of care

For the full ACGME document:
https://medicine.hsc.wvu.edu/media/365654/acgme-core-competencies.pdf

Curriculum

Core rotations: Medical ICU (2 months), Night Float (2 separate half-month blocks)/Pulmonary Ambulatory Clinic Service (2 separate half-month blocks), Pulmonary Consults (2 months), and the Veteran's Affairs Medical Center in Clarksburg (1 month)
These are required rotations comprising 7 months of the year, and vacation is to be avoided.

Electives are one month in duration, and taking vacation is encouraged. Fellows do not take off-service call during electives, as they are still participating in MICU weekend coverage. Fellows will participate in general pulmonary clinic 2 half days/week during electives to maintain continuity

- Non-medical ICU electives (must complete 3 over the course of training): Surgical ICU, Neuro-critical care, Cardiovascular ICU
- Other required electives: sleep medicine, thoracic surgery, and research
- Optional electives: anesthesia, LTACH, PFT lab, lung transplant (at the Cleveland Clinic), ED ultrasound, chest radiology, cardiology/advanced heart failure, pathology, and more!

Didactic Curriculum

Required didactics our held Monday – Friday for 12:00-1:00pm every day. The schedule is uploaded monthly into the Pulm-CCM Microsoft Outlook calendar which all fellows are given access to upon starting the program. The calendar reflects any real time changes that occur throughout the month. The calendar will also list learning opportunities available for you through other sections, that you are welcome to attend.

A typical month will feature combined conferences with radiology and pathology, ICU morbidity & mortality, separate pulmonary and critical care journal clubs, research conference, 2 combined

lectures with the internal medicine residents, as well as weekly conferences of ICU sign out, pulmonary case discussion, and thoracic tumor board. Lectures are a mix of group discussions, fellow-led presentations, and faculty-led presentations.

Additionally, we host notable speakers from outside of the institution for a Fab 5 lecture series (around 5/year).

Conference Attendance

Policy: The educational conferences are important. The planned didactics exceed the minimum requirement for conference-based educational experience. **<u>All fellows are required to attend at least 80% of the conferences.</u>**

- Most conferences are from 12 PM to 1 PM Monday through Friday. The conference schedule runs on an 18-month cycle, so lectures are repeated 2x over a 3 year training period.
- Check e-mail for an updated conference schedule each month. Additional changes will be reflected on the Outlook calendar.
- Conferences are led by fellows and academic faculty.
- Poor conference attendance will be reviewed by the Program Director.
- Exceptions to conference attendance: urgent patient care issues, time off (vacation, pre-call, post-call, or night float obligation), or external conference attendance (regional or national meetings)
- Faculty should avoid scheduling procedures during the noon hour when possible. If this cannot be avoided, faculty should make an effort to send fellows to conference and complete the procedure themselves.

Attendance Tracking: Conference attendance is tracked independently by the fellow scanning a QR coded provided in person and virtual for the attending via TEAMs. The program manager will run monthly reports to notify you of your monthly attendance percentage and your overall attendance percentage. If you miss a conference or forget to sign in for conference it is up to you to notify the program manager so your attendance can be updated.

Professional Development Funds

An educational discretionary fund will be provided for the Pulmonary and Critical Care fellows. These funds run on an academic calendar and may be utilized for customary and justifiable educationally related expenses including but not limited to the purchase of medical textbooks, medical instruments, educational software, medical licensure examinations or educational conferences. The funds **<u>may not</u>** be used to purchase computers, smart phones or other hardware. The PCCM fellows will be responsible for any money spent in excess of the allotted amount. In order to use these discretionary funds, the fellow **<u>must</u>** submit a request for specific items to the Program Administrator. All purchases must be pre-approved by the fellowship program director or the associate program director in the absence of the program director. These purchases can be paid for using the Departmental procurement card or can be purchased by the fellow

directly and then reimbursed to the fellow, as long as the fellow can provide a detailed receipt indicating the last four digits of the credit card used for payment along with the date of purchase. It is the responsibility of the fellow to submit receipts for reimbursement to the program manager by Annual Department Deadlines.

Professional Development Fund Amounts:

Please Check in with your Program Manager to confirm your remaining balance through the year.

Frist Year Fellows July-December: $650.00

Frist Year Fellows January-December: $1,300.00

Second Year Fellows January-December: $1,300.00

Third Year Fellows January-June: $650.00

Recruitment/Selection

https://medicine.hsc.wvu.edu/media/365688/criteria-for-appointment.pdf

Policy: The selection of fellows is done by the Program Director in conjunction with the section faculty. Selection criteria for eligible candidates is in accordance with the GME policies of our institution. Eligibility for applicants must include: completion of residency training in an ACGME approved Internal Medicine program and meeting all GME requirements.

- Applications are received through the Electronic Residency Application Service (ERAS).
- Applications are screened by the faculty in the section, especially the Program Director and Associate Program Director.
- Interviews are offered through an email from the Program Director.
- On the day of the interview, the candidate meets with the Program Director for an overview of the program, and then will go through an interview process with different faculty members +/- fellows.
- Following the interviews, the relevant faculty members will complete an evaluation form.
- The fellowship Program Manager will compile the evaluation forms and a rank list (NRMP) will be generated after thorough discussion during a rank order meeting with section faculty and fellows.
- Interviews typically run from late August to early November.

Evaluations and Milestones

1. Each fellow will be evaluated by faculty, nursing staff and/or patients' following completion of scheduled Block Rotation. Additional peer evaluations will occur at least annually. The evaluations assess the core competencies previously described above.
2. Each fellow will complete an evaluation of each faculty member and of each rotation via the E-value system. Confidentiality will be maintained. 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 PD Associate PD semi-annually to formally review progress. Core competencies, didactic attendance, licensure, scholarly activity, duty hour concerns, moonlighting, and supervision will be discussed.
6. The Clinical Competency Committee will meet twice per year for semi-annual milestone evaluation of the fellows
7. The PD and APD will be available for additional discussion of a fellow's progress. Each fellow is strongly encouraged to seek the guidance for any perceived difficulty or problem.
8. At the conclusion of training, a formal written final evaluation will be completed by the PD and maintained in the fellow's permanent file. This evaluation will summarize the fellow's years of training and verify that the fellow has demonstrated sufficient professional ability to proceed.
9. The fellow will have access to his academic file and evaluations.
10. All evaluations assigned are requested to be completed in a timely manner (within two weeks).

Evaluations will include the core competencies, as outlined by the ACGME. Here is an example showing the options in an evaluation, with a spectrum of choices spanning "critical deficiencies" to "aspirational."

ACGME Milestone Evaluation-Pulmonary Disease and Critical Care Medicine

Patient Care

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5	Not Yet Assessable
Patient Care 1: History and Physical Examination	○	○	○	○	○	○	○	○	○	○	○
Patient Care 2: Disease Management in Critical Care	○	○	○	○	○	○	○	○	○	○	○
Patient Care 3: Disease Management in Pulmonary Medicine	○	○	○	○	○	○	○	○	○	○	○
Patient Care 4: Pre-Procedure Assessment	○	○	○	○	○	○	○	○	○	○	○
Patient Care 5: Procedures (Invasive and Non-Invasive)	○	○	○	○	○	○	○	○	○	○	○

Medical Knowledge

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5	Not Yet Assessable
Medical Knowledge 1: Clinical Reasoning											
Medical Knowledge 2: Scientific Knowledge of Disease and Therapeutics											

Systems-Based Practice

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5
Systems-Based Practice 1: Patient Safety and Quality Improvement										
Systems-Based Practice 2: Coordination and Transition of Care										
Systems-Based Practice 3: Population Health										
Systems-Based Practice 4: Physician Role in Health Care Systems										

Practice-Based Learning and Improvement

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5
Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice										
Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth										

Professionalism

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5
Professionalism 1: Professional Behavior and Ethical Principles										
Professionalism 2: Accountability										
Professionalism 3: Well-Being and Resiliency										

Interpersonal and Communication Skills

	Not Yet Completed Level 1	Level 1		Level 2		Level 3		Level 4		Level 5
Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication										
Interpersonal and Communication Skills 2: Interprofessional and Team Communication										

Interpersonal and Communication Skills 3: Communication within Health Care Systems	○	○	○	○	○	○	○	○	○	○
Interpersonal and Communication Skills 4: Complex Communication Around Serious Illness	○	○	○	○	○	○	○	○	○	○

Patient Safety

https://medicine.hsc.wvu.edu/media/365700/patient-safety.pdf

The fellowship requires that fellows report all patient safety issues including events affecting the quality of care provided to patients, morbidity events, and near miss incident. The goal is to prevent future recurrences and create a safer working environment.

To complete a report, go to the 'Connect', 'Applications' and select 'Origami Event Reporting Portal'. The link bellow will take you to the Origami Event Reporting System.
https://live.origamirisk.com/Origami/IncidentEntry/Welcome

Program Evaluation Committee (PEC)

The PEC meets 2x/year to evaluate the training program with a goal of improving the education and experience. Fellows are invited to attend the meetings to communicate their impressions.

Policy: The PEC exists to participate in the development of the program's curriculum and related learning activities, assess the effectiveness of that curriculum, and identify actions needed to improve or correct (in-line with ACGME standards).

- Members of the PEC include the PD, APD, fellows (at least 1 per year) and other section faculty (all are encouraged to participate)
- The PEC will formally document an Annual Program Evaluation (APE) between late May and early June
- Program evaluations to be distributed through E-Value
- In addition to evaluations, additional data to be reviewed includes: case logs, involvement in hospital and departmental improvement/safety initiatives, scholarly activity, patient satisfaction, graduate performance, faculty development, mentoring, and an assessment of program strengths and weaknesses
- Based on the information and discussion, the Committee will prepare an action plan to document plans to improve fellow performance, faculty development, graduate performance, program quality, and update on the previous year's action plan
- The final report/action plan will be provided to the GME committee.

Documentation

Timely, clearly-worded documentation is essential in pulmonary and critical care. It aids in communication with other providers, documents a plan of care (patient safety implications), and is the basis for billing. The general policy is that notes on inpatients or for any procedures should be completed on the same day, notes for outpatients should be completed within 1 week.

Procedures

Beyond the documentation within the medical record, it is also important for fellows to log procedures into the E-Value system. This should be done monthly at a minimum, but is easier to keep track of if done daily. This log is important for the PD when assessing the fellow's procedural skills. Many institutions will need documentation of a minimum number of certain procedures for credentialing purposes as well.

Before performing a procedure, the fellow will discuss it with their attending. Direct supervision and instructional education will be provided until competency in the procedure is established. Even if supervision is not required, it is encouraged to call for help with difficult cases.

- First year fellows will perform arterial and central lines under 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.
- All fellows are required to have direct attending supervision for thoracentesis and chest tube insertion. Once competent, the fellow will be able to perform them on their own in urgent/emergent situations when the attending is not physically available.
- All fellows will need the physical presence of an attending to perform endotracheal intubations and bronchoscopies. In order to complete the fellowship requirements, all fellows must have performed at least 100 bronchoscopies under direct attending supervision.
- Fellows will maintain a detailed log of procedures, including advanced bronchoscopies and moderate sedation.

Transitions of Care

https://medicine.hsc.wvu.edu/media/365673/handoffsandtransitionsofcare2017logo.pdf

1. Out-patient service – not required. If a fellow is going to miss time, all patient information is maintained in the chart for cross coverage purposes. As noted in the section on vacation/leave, with advanced notice of time off, the clinics can be rescheduled.

2. In-patient service
    a. Daily sign-in and sign-out
        i. There must be a formal sign out daily by each resident on an inpatient service. This includes direct communication

ii. Fellows must directly sign out their patients to the night float fellow, along with a written sign-out. This should include: name, age, sex, room, relevant diagnoses, active problems, code status, and follow up/required actions

iii. Residents that are post-call must communicate the events of the preceding night to the fellows coming on that day. This should include new admissions and significant updates.

b. Transfer to another Level of Care

i. When a patient is transferred from one level of care to another, e.g. the wards to the ICU, there must be documented communication between fellow physicians that includes the summarized, relevant information to provide effective care.

ii. The fellow that "sends" the patient to the service providing a different level of care must write a note that summarizes the clinical events preceding the transfer, and should also communicate verbally.

c. End of Rotation

i. On completion of an inpatient rotation, the fellow physician must communicate with the fellow physician that is coming on service to assume the care of his or her patients. This will ensure that each patient on the service continues to receive continuous, high quality care without interruption.

ii. Communication should include an off-service note written by the fellow rotating off service. Communication should also include a face-to-face hand off that provides an opportunity to discuss each patient and allow questions and clarification of any issues.

Promotion/Dismissal

The intention of the program is to promote all fellows whose performance has been entirely satisfactory. After a minimum of one-half of the current appointment (6 months), the performance of the fellow will be reviewed by the PD or APD. Compiled evaluation reports from E-Value as well as any other documentation in the fellow's file will be reviewed in the context of the fellow's entire academic record. Fellows will be reappointed only when their Core Competencies 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. Should the decision be for non-renewal, the fellow may respond either in writing or in person to the PD. 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

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 PD to explore 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.

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 in which he/she is enrolled, the fellow may be placed on probation by the PD 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.

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 (*Initial Probation* 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 fellow may be suspended from clinical activities by his or her PD, 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).

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).

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.

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.

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:

1. *Promotion*: Decisions regarding resident promotion are based on criteria listed above, and whether fellow has met all departmental requirements.
2. *Intent Not to Renew Contract*: In the event that WVU School of Medicine elects not to reappoint a fellow to the program and the agreement is not renewed, the program director shall provide the fellow 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.

3. *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 fellow 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.

Research

Research drives the science of medicine! The best research often starts with a curious spirit (What kind of webs would spiders weave if we gave them different drugs?), and the fellowship program aims to encourage scholarly activity in the pursuit of knowledge. There are many opportunities for research:

- By the end of the 1st year of training, fellows will choose a faculty mentor and join an ongoing project or develop a new study. Developing the skills to write a research manuscript is expected.
- Within 3 years of fellowship, participation in a quality improvement project is also expected (this can be a shared effort).
- Submission of at least 1 interesting case report/series or original research is required for local or national professional meetings (such as ATS, CHEST, SCCM, ACP…). More submissions are encouraged.
- WVU hosts a Resident Research Day where participation is strongly encouraged as well.
- Collaboration with National Institute of Occupational Safety and Health or basic scientists at WVU
- Regularly occurring pulmonary and critical care research conference to help focus on goals.
- And much more!

Quality Improvement

This is a major point of emphasis—review of health systems and a plan to improve the quality of care. Quality improvement can apply to almost any process and can be "low-hanging fruit" for research. Lifelong learning.

https://medicine.hsc.wvu.edu/media/365674/healthcare-quality-policy.pdf

1. Fellows will continue to evaluate, critique, and develop educational presentations for monthly Morbidity and Mortality conference. Every month the presentations include personal reflection on quality of care provided as well as the ability to evaluate suboptimal outcomes.

2. 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 provider or a larger component of the health care system
    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 mid-point of their training.
    e. The project should be of publishable quality, and may meet the requirements for the senior academic project.

Supervision

With any questions, fellows are encouraged to check with their supervising faculty. Retaliation upon, or derogatory statements made to, a trainee requesting help/supervision is never acceptable and will not be tolerated.

https://medicine.hsc.wvu.edu/media/370936/supervision-policy_2_10_2023.pdf

Supervision of Residents

The fellows have a role in the supervision of residents and medical students rotating on pulmonary consult and Medical ICU services. In conjunction with the attending physicians, the fellows are responsible for the teaching and supervision of internal medicine residents or residents from other specialties (Family Medicine, Anesthesiology, and Emergency Medicine); as well as medical students on clinical rotations.

MICU: All patients must be seen and examined by the fellow. The fellow will lead the initial orientation of residents and medical students on the 1st day 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. 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). 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 discuss any potential invasive procedure with the trainees: indications and potential complications. 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 medical record.

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 input to the attending

physician on the residents and medical students' performance which will contribute to their monthly evaluations.

Pulmonary consult 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. Once again, 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 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.

Fellows will give continuous feedback to the residents and medical students during their rotation. Also, 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

Supervision of Fellows

Policy on Supervision and Responsibilities:

1. Role of the Attending:
    a. Faculty and fellows should inform the patients of their role in each patient's care.
    b. Ultimate responsibility for patient care decisions fall on the attending
    c. Faculty is expected to respond fully and respectfully to any questions or concerns expressed by the care team, including residents and fellows 24/7.
    d. Faculty supervision should be of sufficient duration to assess the knowledge and skills of each fellow and delegate the appropriated level of authority and responsibility.
    e. At a minimum, the fellow should notify the attending of significant changes in the patient's condition, such as need for > 2 vasopressors, possibility of brain death, severe ARDS, or inability to oxygenate/ventilate.
2. Levels of Supervision of fellows by faculty:
    a. Direct Supervision –The supervising physician is physically present with the resident/fellow during the key portions of the patient interaction, OR, if the supervising physician and/or patient is not physically present with the resident/fellow, the supervising physician is concurrently monitoring the patient care through appropriate telecommunication technology, (although some RRCs may choose not to permit this). All PGY1 residents must initially be supervised directly. [ACGME CPR, VI.A.2.c).(1)]
    b. Indirect Supervision - The supervising physician is not providing physical or concurrent visual or audio supervision but is immediately available to the resident/fellow for guidance and is available to provide appropriate direct supervision should that be required. [ACGME CPR, VI.A.2.c).(2)]

   c. Oversight –The supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered. [ACGME CPR, VI.A.2.c).(3)]
3. Role of the fellow:
   a. To supervise the medical residents in the clinical care of patients.
   b. To understand the medical plan for each patient
   c. To manage the team as a whole including allotment of patients based on individual resident workload and performance.
   d. Making sure all residents are available and participate during rounds
   e. To communicate clearly to the attending of record as designated
   f. To enhance teaching on this service by organizing presentations and the case conferences.
   g. Present during the "check out rounds".
   h. Help arrange for few select conferences (teaching on ICU topics) for MICU resident on monthly basis.
4. Fellow on call (Night Float Fellow):
   a. To supervise the admission, diagnostic evaluation and treatment of newly admitted patients
   b. To communicate with the attending of record as designated
   c. To oversee care of all inpatients
   d. To support/supervise the residents on MICU team as they manage both newly admitted and existing inpatients

Important to remember

- Calling for help/supervision is NOT a sign of weakness
- Ideal supervision will optimize patient care as well as resident education
- Do not hesitate to contact the attending for any major issue or a problem

Vacation/Sick Leave

Vacation Policy

Please take vacation, it is important for your health and wellness. Vacation time should be planned for elective months. <u>You accrue 2 days of annual leave per month. A day of annual leave is equal to 7.5 hours. You stop accumulating annual leave at 24 days, all unused accrued annual leave carries over from year to year.</u>

The biggest caveat is to request the time off with adequate advance planning—ideally 3 months to allow for clinic cancellation. When taking time off, you will complete and submit via email the Time Off Request Form that is in located TEAMs, to your PD, APD, Program Manager, Clinic Scheduler, and Chief Fellow. This form allows for us to track your days off, ensure that clinics are cancelled, in-baskets are covered, and that all duties are taken care of while you are away.

Sick Leave

Full time fellows will accrue 1.5 days of sick leave per month. In almost all cases, sick leave must be accrued prior to its use. An employee may use sick leave when they are ill, injured, and/or in need of medical attention, and when a member of their immediate family is seriously ill, injured, and/or in need of medical attention. Sick leave for more than five (5) consecutive workdays cannot be granted to an employee without satisfactory proof of illness and/or injury as evidenced by a signed statement from the employee's, or employee's family member's, physician or by other written proof. Should an employee need to be absent from work for an extended period due to illness and/or injury, a signed statement of medical clearance will be required before they can return to work. These situations will be managed in cooperation with the university's Medical Management Office. More information regarding sick leave can be found under WVU GME Policies titles 'Leave Policy'.

GME Policy: https://medicine.hsc.wvu.edu/media/371117/gme-institutional-leave-policy-final.pdf

FAQ: https://medicine.hsc.wvu.edu/media/371116/resident-leave-faqs-final.pdf

Medical/Parental/Caregiver Leave Request: https://wvu.qualtrics.com/jfe/form/SV_egPiYB7Wys6vFhc

Wellness

Wellness–the act of practicing healthy habits on a regular basis to attain better physical and mental health. Instead of just surviving, truly thriving. The opposite of burn out. Fellow wellness deserves more space than what can be included in this manual and takes different forms for different people. Please spend time away from the hospital and around friends and family whenever possible. West Virginia has some beautiful outdoor recreation including: Cooper's Rock State Park (just outside of Morgantown), the newest National Park—the New River Gorge, multiple ski resorts, white water rafting, hiking trails, and regional festivals.

All 1st year fellows are required to attend a session with the WVU Faculty and Staff Assistance Program. If this is a productive session, additional appointments can be scheduled. The critical care faculty participate on a regular basis.

When possible, we plan several wellness events during the year for the section. Past events include Zero-hour (an after work hang out at a restaurant with goal for breaking down traditional barriers), catered fellow lunches, various celebrations (baby showers, retirement parties), outdoor cook-outs, and much more!
https://medicine.hsc.wvu.edu/media/365698/well-being-policy.pdf

Rotations

This section is intended to serve as an overview of the various rotations that comprise the pulmonary and critical care fellowship. Individual rotations may vary at the discretion of the attending physician and changes in workload.

https://medicine.wvu.edu/medicine/divisions-of-medicine/pulmonary-critical-care-and-sleep-medicine/pulmonarycritical-care-medicine-fellowship/curriculum-and-rotations/

All rotations have detailed expectations. For core rotations, the expectations and evaluations change according to post-graduate year. Evaluations of fellow performance are requested at the end of the rotation via E-Value, broken down in accordance to the core competencies. See also the section on ACGME Milestones.
Faculty are encouraged to give direct feedback on a weekly basis (Feedback Friday).
An annual in-training exam (ITE) is also proctored to assess medical knowledge in specific areas.

Core Rotations

The bread and butter of pulmonary and critical care: these rotations will make up at least half of each year of fellowship: Medical ICU, pulmonary consults, VA Medical Center (includes clinic and consults), PACS, and night float.

Medical ICU

Ruby Memorial features a robust medical ICU, currently divided into 2 teaching services (MICU 1 and MICU 2) with a roughly equal distribution of patients. In fall of 2022, we plan to launch a 3rd MICU team, which was previously opened to deal with local surges in COVID-19. During the day, faculty will triage admissions to the ICU from external hospitals. The fellows on service will take transfer calls from within Ruby Memorial and the Emergency Department.

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 discharging patients from the unit.
The 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 resident, possibly a medical student, a pharmacist, and a dietician. Bedside nurses and respiratory therapists will join rounds for their specific patients. Morning rounds typically start at 9 AM, the attending will notify you if there is a change here. Prior to rounds, the fellow is expected to have examined the patients, reviewed new data, and imaging before formal rounds start. Furthermore, any new patient admitted during the night, and all nighttime events will have already been reviewed by the fellow.

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 (notes are written by the residents unless otherwise specified). The MICU fellow will supervise the care of each patient and ascertain that the plan for every patient is followed 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 consultation 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.

Every weekday afternoon, around 4 p.m., the ICU team will again make rounds to review events from the day and any changes in patient status. This is often fellow led, with a verbal check out with the attending. These rounds are especially important to prepare for the night float team. The ICU fellow will provide information to the on-call fellow (the daytime ICU fellows alternate as "late stay" after 5 PM until the night float fellow arrives at 7 PM) for cross coverage purposes, before giving a sign out to the night float fellow at 7 PM. The trainees will also have the opportunity for post-ICU follow-up care on the pulmonary consult service.

Specific competencies:
Patient care

1st Year Fellows

- Expected to develop an understanding of critical illness and needs for ICU care.
- Will gain familiarity with the interpretation of ICU radiological procedures and the performance of different invasive procedure including bronchoscopy in the mechanically ventilated patient.
- Will be under the direct supervision of the attending physician.
- Will develop experience in leading rounds and supervision of residents and students rotating though the ICU service.
- Will attend ICU lectures and participate in all the service activities.
- Will become familiar with the different types of ventilator and interact with respiratory therapists.
- 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.
- Expected to participate in and start developing skills in and developing all life and end-of-life care with patients and their families.
- Evaluations will be based on:
    - 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.
    - His/her 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.

2nd Year Fellows

- Expected to continue her/his development in all the above-mentioned aspects of critical care medicine.
- Will take a more active participation in teaching residents and students rotating through the service including teaching some of the ICU core lectures
- Will gain more independence in decision making about ventilator management and the need for moving patients in and out the ICU.
- Will continue interacting with the multi-disciplinary team (including dietician, pharmacist, RT's, bedside nurses) to gain expertise in nutritional support and drug monitoring.
- Evaluations will be based on:
    - Obtaining pertinent data with minimal or no prompting and in a more efficient manner than expected of a first year fellow.
    - Generating a plan of care based on a broader knowledge and expertise with significant input from recent medical literature.

3rd Year Fellows

- Expected to be efficient with ICU procedures.
- Expected to be able to lead teaching rounds and to potentially make independent decisions about ICU patient care.
- 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.
- 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.
- Should have a general knowledge of the organization and administrative aspects of the ICU.
- Patient care evaluations will be based on:
    - Ability to integrate pertinent history, diagnostic data and consultative recommendations in an efficient and accurate way.
    - 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

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 as follows:

1st Year Fellows

- Evaluation by the physiology and literature recommendations understanding behind their assessment and management plans for the most frequent illness encountered in the ICU.
- Procedural skills and understanding of mechanical ventilation.
- Participation during rounds, assigned review and conference attendance.

2nd Year Fellows

- Evaluation by the above parameters.

- 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.
- Should be able to perform ICU procedures under the attending's supervision, but with minimal attending participation.

<u>3rd Year Fellows</u>

- Evaluation will be based on his progression toward attending level, rounded medical knowledge, and a review of recent medical literature.
- Should be able to have knowledge of most critical care issues arising during rounds and management plans.
- Should have reached a competent level of procedural skills.

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.

<u>1st Year Fellows</u>

- 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.

<u>2nd Year Fellows</u>

- 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.

<u>3rd Year Fellows</u>

- 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.

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 fellow's 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:

<u>1st Year Fellows</u>

- Evaluated by their capacity to communicate clearly, effectively, compassionately, and respectfully with patients, families, and all members of the health-care team.

2nd Year Fellows

- 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.

3rd Year Fellows

- Evaluation will rest in the perfection of his communication skills with patient, families, and other members of the health-care team. The fellow's 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.

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:

1st Year Fellows

- Evaluated by his punctuality to attend rounds and conferences. Fellow availability to families, other health care team members and attending physicians. Fellow's prompt response to calls and physical presence in the ICU when needed. Fellow's responsibility in the preparation of rounds and assignments.

2nd Year Fellows

- Graded in accordance to fellow capacity to meet the needs of the different aspects of MICU patient care. Fellow contribution to daily rounds and conference schedules.

3rd Year Fellows

- 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 and prepares conferences and keeps the ICU team ready and on schedule.

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:

1st Year Fellows

- 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).

<u>2nd Year Fellows</u>

- In addition to the above he/she 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.

<u>3rd Year Fellows</u>

- Should show familiarity with system-based patient care and should be able to craft more creative solutions to system-based practice using available resources.

MICU 3 Rotation

Overview:

With growth of the traditional Medical ICU teams, a third service "MICU 3" is planned to aid in expansion. In contrast with MICU 1 and 2, MICU 3 will not have a dedicated faculty physician in 2023-2024 academic year, but rather both of the ICU faculty will provide coverage and education for the rotating fellow.

For the initial version, MICU 3 will act as a "**swing shift**" with clinical duty from **1 PM to 9 PM** on weekdays, Monday through Friday. <u>The MICU 3 fellow is expected to attend didactics at noon before the start of clinical responsibilities.</u>

Shift responsibilities include aiding the MICU 1 and 2 teams with procedures, sedation, codes/admissions, afternoon rounds, and protection during sign out's (5 PM and 7 PM). Additional responsibilities include teaching and supervising resident physicians and other learners.

Training Goals and Objectives:

During the day, faculty will triage admissions to the ICU from external hospitals. On a rotating basis, the three fellows (M1, M2, swing shift fellow) on service will take transfer calls from within Ruby Memorial and the Emergency Department.

The attending physicians will be available 24 hours per day to discuss any issue pertinent to the service. Prior to afternoon rounds, the M3/swing shift fellow is expected to have examined all new patients, reviewed new data, and imaging. Any updates to the previously discussed day-plan will be discussed. The MICU fellows will supervise the care of each patient and ascertain that the plan for every patient is followed through. The fellow will also interact with respiratory therapists in the management of ventilators. 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.

Specific competencies:

Patient care

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- Expected to develop an understanding of critical illness and needs for ICU care.
- Will gain familiarity with the interpretation of ICU radiological procedures and the performance of different invasive procedure including bronchoscopy in the mechanically ventilated patient.
- Will be under the direct supervision of the attending physician.
- Will develop experience in leading rounds and supervision of residents and students rotating though the ICU service.
- Will attend ICU lectures and participate in all the service activities.
- Will become familiar with the different types of ventilator and interact with respiratory therapists.
- 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.
- Expected to participate in and start developing skills in and developing all life and end-of-life care with patients and their families.
- Evaluations will be based on:
    - 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.
    - Generate 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.

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- Expected to continue development in all the above-mentioned aspects of critical care medicine.
- Will take a more active participation in teaching residents and students rotating through the service including teaching some of the ICU core lectures
- Will gain more independence in decision making about ventilator management and the need for moving patients in and out the ICU.
- Will continue interacting with the multi-disciplinary team (including dietician, pharmacist, RT's, bedside nurses, and case managers) to gain expertise in nutritional support, drug monitoring and long term discharge planning.
- Evaluations will be based on:
    - Obtaining pertinent data with minimal or no prompting and in a more efficient manner than expected of a new trainee.
    - Generating a plan of care based on a broader knowledge and expertise with significant input from recent medical literature.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- Expected to be efficient with ICU procedures.

- Expected to be able to lead teaching rounds and to potentially make independent decisions about ICU patient care.
- Should be able to help 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.
- 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.
- Should have a general knowledge of the organization and administrative aspects of the ICU.
- Patient care evaluations will be based on:
    - Ability to integrate pertinent history, diagnostic data and consultative recommendations in an efficient and accurate way.
    - 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

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 as follows:

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- Evaluation by the physiology and literature recommendations understanding behind their assessment and management plans for the most frequent illness encountered in the ICU.
- Procedural skills and understanding of mechanical ventilation.
- Participation during rounds, assigned review and conference attendance.

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- Evaluation by the above parameters.
- 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.
- Should be able to perform ICU procedures under the attending's supervision, but with minimal attending participation.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- Evaluation will be based on his progression toward attending level, rounded medical knowledge, and a review of recent medical literature.
- Should be able to have knowledge of most critical care issues arising during rounds and management plans.
- Should have reached a competent level of procedural skills.

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/her current and future

patients. The capacity of the fellow to learn and improve practice will be evaluated in accordance to their level of training.

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- 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.

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- 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.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- 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.

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 fellow's daily interactions and input by patient, families and other members of the MICU team (nurses, respiratory therapists, nutritionists, pharmacists, and case managers). Improvement in performance will be expected with the progression of training and the goals will be accomplished with attention to:

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- Evaluated by their capacity to communicate clearly, effectively, compassionately, and respectfully with patients, families, and all members of the health-care team.

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- 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.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- Evaluation will rest in the perfection of his communication skills with patient, families, and other members of the health-care team. The fellow's 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.

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:

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- Evaluated by his punctuality to attend rounds and conferences. Fellow availability to families, other health care team members and attending physicians. Fellow's prompt response to calls and physical presence in the ICU when needed. Fellow's responsibility in the preparation of rounds and assignments.

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- Graded in accordance to fellow capacity to meet the needs of the different aspects of MICU patient care. Fellow contribution to daily rounds and conference schedules.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- 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 and prepares conferences and keeps the ICU team ready and on schedule.

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:

1st Year Pulmonary & Critical Care Fellows and Critical Care Fellows July-October

- Identify different aspects of systems to facilitate patient care (social workers, rehabilitation, and 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).

2nd Year Pulmonary & Critical Care Fellows and Critical Care Fellows November-February

- In addition to the above he/she 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.

3rd Year Pulmonary & Critical Care Fellows and Critical Care Fellows March-June

- Should show familiarity with system-based patient care and should be able to craft more creative solutions to system-based practice using available resources.

Fellow Expectations and Responsibilities:

- In addition to the ACGME milestones described above, the fellow will participate in regularly scheduled didactics at noon.
- MICU 3 fellow can help in preparation and presentation of monthly Morbidity and Mortality Conference.
- If the faculty is unavailable to present at the Critical Care and Trauma Institute lecture series (Tuesdays and Thursdays at 1:30), the MICU 3 fellow can teach.
- The fellow is expected to teach CCM topics to medical students and residents on MICU service.
- One of the many anticipated benefits of the MICU 3 swing shift coverage is to protect transitions of care for the other fellows, enabling them to leave the hospital on time after a shift.

The MICU 3 curriculum is subject to change and will be reviewed periodically throughout the year—both to improve patient care and the training environment. Input from participating fellows will be solicited and honest feedback is appreciated.

(Updated 7.10.2023)

Pulmonary consults

The consult team will be formed by an attending and 2 fellows. There may be residents and students as well, but not always. During this rotation, fellows will learn many aspects of inpatient pulmonary medicine. The consult team is listed in the call schedule from 8 AM to 5 PM, but the daily schedule may vary depending on scheduling of procedures and the availability of the attending physician for daily rounds. Fellows are expected to evaluate all patients and supervise the residents in their evaluation of patients. Presentations should include detailed relevant history, pertinent physical exam findings, extent of respiratory support when applicable, PFT's (if available), and chest imaging.

Following rounds, recommendations will be given to the patient's primary service. If necessary, the patient is evaluated on a daily basis by the trainee with input from the attending physician. The patient is followed until it is deemed unnecessary to continue follow-up care. This 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 learn to synthesize all information pertinent to the respiratory system. All bronchoscopies generated during consultation should be performed by a fellow on the service and directly supervised by the pulmonary attending. Each fellow has to keep a record of procedures performed. Additionally, the consult team is responsible for reading pulmonary function testing.

The fellows on the consult service will prepare cases for discussion for the regularly recurring pulmonary case conference (at noon 2x/month). The fellows will also coordinate with other

providers on outpatient assignment planning to admit patients to the hospital or arranging for outpatient procedures (when necessary).

Specific competencies:

Patient care

1st Year Fellows

- Expected to become familiar with the diagnosis and management of inpatients and common outpatient pulmonary diseases.
- Introduction to the performance and interpretation of pulmonary function tests (including pulmonary exercise tests).
- Develop bronchoscopy skills and consultations.
- Participate in the teaching of residents and medical students rotating through the pulmonary service.
- Learning to interpret relevant imaging studies.
- Prepare cases for the case conference discussion.

2nd Year Fellows

- Expected to continue growing in the above mentioned areas.
- Should be able to “self-navigate” with the bronchoscope and gain familiarity with different kinds of bronchoscopic biopsies and lavage.
- Continue to develop consultative skills and expertise with chest tubes and pulmonary exercise testing.
- Responsible for the preparation of cases for the monthly Pulmonary Pathology Conference.
- Expected to grow in efficiency and work toward independence

3rd Year Fellows

- Performance is expected to reach attending level by the end of this year.
- Should be able to perform bronchoscopies, pulmonary function and exercise testing independently.
- Present in the pulmonary core lecture series to the second year medical students and to the medical residents.
- Be proficient in the interpretation of pulmonary function tests and pulmonary imaging interpretation.
- 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.
- Able to perform their duties without any or minimal prompting by the attending.

Medical knowledge

Provide quality of consultation, exhibit understanding of 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:

1st Year Fellows

- Observing that the fellow is reading and increasing his/her medical pulmonary knowledge under attending guidance. Improve his/her 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.

2nd Year Fellows

- 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 is expected, as is the ability to reach a differential diagnosis with minimal attending input.

3rd Year Fellows

- Evaluation based on his/her progression toward attending level, well-rounded medical knowledge, and 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.

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 his/her practice will be evaluated in accordance to his/her level of training. The objectives will be accomplished with attention to:

1st Year Fellows

- 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.

2nd Year Fellows

- 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.

3rd Year Fellows

- Goal for 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.

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:

1st Year Fellows

- Capacity to communicate clearly, effectively, compassionately and respectfully with patients, families, nurses and all members of the consultation team.

2nd Year Fellows

- 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.

3rd Year Fellows

- Capacity to communicate competently with patients, families and other members of the health-care team. His/her 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.

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:

1st Year Fellows

- 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.

2nd Year Fellows

- 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.

3rd Year Fellows

- 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.

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:

1st Year Fellows

- 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).

2nd Year Fellows

- In addition to the above, the fellow should demonstrate a capacity to craft solutions to the system-based problems. The fellow 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.

3rd Year Fellows

- Show familiarity with system-based patient care and should be able to craft more creative solutions to system-based practice using available resources.

Clarksburg VA Medical Center

The Clarksburg VA rotation features two very experienced pulmonologists with a lot to offer, Drs. Prasoon Jain and Prasad Devabhaktuni. Both like to teach. Clarksburg is about an hour's drive south of Morgantown. Clinical exposure includes inpatient consults and outpatient pulmonary and sleep clinics. The rotation is weekdays except Tuesday, when the VA fellow will attend thoracic oncology and general pulmonology clinics in Morgantown, WV.

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.

Pulmonary Ambulatory Clinic Service (PACS)

Each trainee will spend time covering the PACS rotation. Often, it is combined with night float to break up the month, but other times it is assigned as a primary rotation. Some months may have 2 fellows on PACS. Most of the clinics are located in the Physician's Office Center (POC) building located next to the main hospital. General pulmonary clinic will expose trainees to patients with various respiratory diseases. Each patient seen in clinic by the trainee, then presented to the attending physician (will be physically present during clinic hours), and then the patient will be seen in conjunction with the attending.
While on PACS, fellows will have three half days of continuity clinic. Sub-specialty clinics are also part of the rotation—thoracic oncology clinic Tuesday mornings at the cancer center, interstitial lung disease clinic Wednesday afternoons, sleep medicine and pulmonary hypertension on Thursday mornings, ALS in the neurology clinic 1-2x/month, and cystic fibrosis clinic Friday

mornings 2-3x/month. Additional sub-specialty clinics of post-COVID-19, severe COPD, muscular dystrophy, or severe asthma may develop in the near future.

The PACS fellow is also responsible for administering and interpreting cardiopulmonary exercise testing in the PFT lab on Monday mornings (if not in clinic at the time) and presenting a lecture at noon towards the end of the month (PACS lecture). The PACS fellow should also attend Thoracic Tumor Board to discuss relevant patients on Tuesdays at 4 PM.

Night Float

The night float service allows for in-house coverage at night, with a fellow on site in the medical ICU (call room is provided). The night float fellow is in charge of assisting with coverage for all of the medical ICU patients, triaging transfers from the floor, ED, and outside hospitals, and overseeing/performing ICU procedures. Many fellows enjoy this rotation due to the autonomy. Additional support in the ICU typically includes a senior resident from the ICU service (who fields most phone calls in cross coverage) and another back up resident. With times of increased ICU census, sometimes there is a third resident also present at night. Call runs from 7 PM to 7 AM, Saturday through Thursday night—allowing for 6 days of work with Friday nights off. This rotation is usually for half of a given month, split with PACS. Friday nights are covered by 1 of the weekend call fellows (see Call section of manual).

Electives

Calling non-core rotations "elective" is somewhat misleading because many of them are required. Electives can be repeated as long as the required electives are fulfilled. For fellows on elective, they will continue to spend two half days per week in the Pulmonary Clinic for continuity of care.

Research

As above, there is a research requirement for completion of the fellowship. The research month should not be scheduled without an IRB approved project. If there is a strong clinical interest and record of productive research, this elective can be repeated.

Thoracic surgery

Ruby Memorial features a robust group of thoracic surgeons. The chief of their section is Dr. Ghulam Abbas. The goal of this rotation is for fellows to learn more about specific lung surgeries, pre-operative evaluation for surgical patients, post-operative management of common thoracic diseases, chest tube insertion/management, and to enhance collaboration with our surgical colleagues. Days usually start early with rounds (8SE workroom) before heading to the OR at 7 AM. Fellows can select cases they find particularly interesting to assist. Fellows are expected to participate in thoracic oncology clinic in the cancer center as well as Thoracic Tumor Board as part of the rotation.

The population of patients that will be involved in the rotation includes outpatient thoracic oncology patients, preoperative/postoperative patients, consults on hospitalized patients, as well patients on extracorporeal membrane oxygenation (ECMO) therapy.

Objectives:

- Common thoracic surgical procedures
    - Pulmonary biopsies (mediastinoscopy, rigid bronchoscopy, EBUS, open lung biopsy)
    - Pulmonary resections (wedge, segmentectomy, lobectomy, pneumonectomy)
    - Pleural disease management (pleurodesis, decortication, chest tubes, PleurX)
    - Percutaneous tracheostomy placement
    - Tracheal stenting or Laser therapy

- The rationale for the selection of appropriate surgical candidates
- Preoperative and postoperative management of thoracic surgical patients
- Diagnosis and surgical management of lung malignancies
- Chest Tube Management
- ECMO cannulation

The clinical team will include all or some of the following: thoracic surgeons, thoracic surgery fellow, general surgery residents, PA, NP

Patient care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of critical care problems. They 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.

Medical knowledge

Fellows must demonstrate basic knowledge and clinical competence in managing the following conditions and topics commonly encountered under the thoracic surgery service:

1. Pathophysiology and clinical management of patients pre- and post-operative with lung malignancies, pleural diseases, mediastinal diseases, diseases of the main airways, severe hypoxemic respiratory failure, and diaphragm dysfunction
2. Recognize the parameters used to assess post-operative blood loss and bleeding, and develop understanding for rational use of reversal agents, blood products and transfusion goals and strategies
3. Insertion and management of patients with chest tubes and an understanding of the drainage system
4. Post-operative ventilator management and weaning for ECMO patients
5. Post-operative pain management of thoracic surgical patients

Practice-based learning and improvement
Fellows must exhibit a commitment to investigation and evaluation of one's own patient care as well as appraisal and assimilation of scientific evidence and improvements in patient care. This can be accomplished through regular participation in fellow-level journal clubs and through Quality Improvement projects such as Root Cause Analysis of cases or participation in Morbidity and Mortality conference.

Interpersonal and communication skills
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professional. This can be demonstrated in the ability to apply understanding of family dynamics in discussions with patients and families regarding complex medial situations and decision-making, to collaborate with team members from other services (as in the co-management of ECMO patients with the cardiology service) and to effectively supervise and manage the care of patients by nurses, physician assistants, and residents in an appropriate yet collegial manner. Fellows can also demonstrate strong interpersonal and communication skills though regular teaching, both informal and formal, of residents and other team members.
Orders on all surgical patients should be entered by the intensivist team. If a consultant requests a test or medication it should be discussed with the Thoracic Surgery team and Thoracic Surgery team will enter the order.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Specifically, they must skillfully address ethical issues for patients and families under the care of the Thoracic Surgery service. Fellows must also exhibit professionalism in all aspects of interaction with colleagues and other team members, behaving in a manner befitting an advanced healthcare professional. This can be exhibited by setting a tone of respect and collegiality for the healthcare team members, willingly seeing patients and families to discuss a patient's care, protecting staff, family, and patient's interests and confidentiality, and completing medical records punctually and with appropriate documentation.

Systems-based practice
Fellows must practice in a way that demonstrates an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimum value. Understand the relationships of local and national health care systems and how changes to improve the system involve individual and group efforts. Optimize coordination of patient care within one's own practice.

The purpose of this rotation is education. Continuous learning, using up-to-date medical evidence, in the case of patients with diseases or disorders amenable to surgical approach. Understand the risk, benefits, indications and contraindications of thoracic surgery procedures. Trainees will receive formal feedback.

Fellows will be excused from the thoracic surgery to attend fellow's own continuity clinic and conferences that take place as part of their fellowship. Fellows will go back to thoracic surgery after clinics to finish their shift. Fellows must inform the thoracic surgery staff physicians about the vacations and other commitments like clinics and conferences at the start of the rotation. Fellows must attend half of working days in a month (can include weekends) to get the credit for the elective month (approx. 100 hrs.)

Non-medical ICU's

For completion of the fellowship, a total of 3 months of training in non-medical ICU's is required. Thoracic surgery may count as 1 of the ICU months. For these rotations, fellows are not expected to take call as they are still participating in call for the medical ICU.

Cardiovascular ICU

This experience will allow the fellow to gain experience in treating patients with acute cardiac diseases. The CVICU is staffed by several different medical intensivists and conducts multidisciplinary rounds similar to the MICU. Drs. Paul McCarthy and Ankit Sakhuja are the co-directors. Goals for the rotation: directly participate in the care of the CVICU patients, gain insight in the approach to acute coronary diseases, cardiac arrhythmias, and indications for invasive cardiac procedures. The fellow will also see many post-operative patients following cardiac or thoracic surgeries. Special attention should be given to acquiring and interpreting bedside Echo studies, performing right heart catheterization, EKG interpretation, and any advanced cardiac life support (IABP, ECMO). For senior fellows in good standing, there are often moonlighting opportunities related to CVICU coverage.

Duty hours are typically 6 AM to 6 PM.

The population of patients admitted to the CVICU includes cardiac surgery patients, thoracic surgery patients, vascular surgery patients, and cardiology patients as well patients on extracorporeal membrane oxygenation (ECMO) therapy.

The primary objectives of the CVICU rotation include achieving competence in the management of:

- cardiology patients and the postoperative care for patients undergoing coronary artery bypass grafting (CBG, including off-pump CABG)
- cardiac valve repair/replacement (including minimally invasive approaches)

- Surgical treatment of arrhythmias, aortic reconstruction, thoraco-abdominal aortic aneurysm repair (invasive and non-invasive approaches), distal bypass grafting, carotid endarterectomy, complicated thoracic surgical cases as well as complex surgeries for patients with cardiovascular co-morbidities.
- In addition to achieving competence in management of patients requiring initiation of, therapy from, and weaning off of extra-corporeal membrane oxygenation (both venovenous and veno-arterial ECMO) and other mechanical circulatory devices such as rightand left- ventricular assist devices.

The clinical team is made up of CVICU Intensivists, cardiac surgeons and fellows, cardiothoracic anesthesiologist and fellows, cardiac surgery PA's and NP's, and CVICU nurses.

Patient Care
Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of critical care problems. They 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.

Medical knowledge
Fellows must demonstrate basic knowledge and clinical competence in managing the following conditions and topics commonly encounters in the peri-operative management of cardiac and vascular surgery patients:

1. Pathophysiology and clinical management of patients pre- and post-operative with unstable coronary artery disease, cardiomyopathy of multiple etiologies (ischemic, congenital, alcoholic, etc.), congestive heart failure, cardiac tamponade, valvular heart disease, electrophysiologic disease/arrhythmias, aortic dissections/aneurysms.
2. Non-invasive and invasive cardiovascular evaluation including electrocardiography, transthoracic echocardiography, transesophageal echocardiography, pulmonary artery catheterization, stress testing, and cardiovascular imaging.
3. Interpretation and understanding of invasive cardiovascular evaluations and therapy including cardiac catheterization, angioplasty and stenting.
4. Non-invasive pulmonary evaluation including pulmonary function tests, blood gas and acid base analysis and pulmonary imaging.
5. Pharmacokinetics and pharmacodynamics of medications prescribed for medical management of adult cardiothoracic patients, including inotropes, chronotropes, vascoconstictors and vasodilators.
6. Invasive cardiovascular monitoring and interpretation: arterial, central venous, pulmonary artery, mixed venous saturation and cardiac output.
7. Post-operative effects of cardio-pulmonary bypass on cardiac, respiratory, neurologic, metabolic, endocrine, hematological, renal systems.
8. Recognize the parameters used to assess post-operative blood loss and bleeding, and develop understanding for rational use of reversal agents, blood products and transfusion goals and strategies.

9. Insertion and management of patients with circulatory assist devices including intraaortic counterpulsation devices; left, right and bi-ventricular assist devices, and extra-corporeal membrane oxygenation.
10. Knowledge and peri-operative management of pacemaker devices including insertion and modes of action.
11. Post-operative ventilator management and weaning for patients undergoing fasttrack/routine cardiac surgery as well as those with complication and ventilator dependent respiratory failure, such as those patients with Acute Respiratory Distress Syndrome / Acute Lung Injury / Transfusion Relation Acute Lung Injury (ARDS/ALI/TRALI).
12. Post-operative pain management of adult cardiovascular surgery patients.

Practice-based learning and improvement
Fellows must exhibit a commitment to investigation and evaluation of one's own patient care as well as appraisal and assimilation of scientific evidence and improvements in patient care. This can be accomplished through regular participation in fellow-level journal clubs and through Quality Improvement (QI) projects such as Root Cause Analysis of cases or participation in Critical Care Morbidity and Mortality conference.

Interpersonal and communication skills
Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professional. This can be demonstrated in the ability to apply understanding of family dynamics in discussions with patients and families regarding complex medial situations and decision-making, to collaborate with team members from other services (as in the co-management of ECMO patients with the cardiology service) and to effectively supervise and manage the care of patients by nurses, physician assistants, and residents in an appropriate yet collegial manner. Fellows can also demonstrate strong interpersonal and communication skills though regular teaching, both informal and formal, of residents and other team members.

Orders on all surgical patients should be entered by the intensivist team. If a consultant requests a test or medication it should be discussed with the CVICU team and CVICU team will enter the order. All orders for cardiology patients should be entered by the cardiology team. For cardiology patients seen by the CVICU team as a consult, the CVICU will discuss the case with the cardiology team and make recommendations but will not write orders.

Professionalism
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Specifically, they must skillfully address ethical issues for patients and families in an adult cardiovascular surgery unit such as goals of care and end-of-life discussions. Fellows must also exhibit professionalism in all aspects of interaction with colleagues and other team members, behaving in a manner befitting an advanced healthcare professional. This can be exhibited by setting a tone of respect and collegiality for the healthcare team members, willingly seeing patients and families to discuss a patient's care, protecting staff, family,

and patient's interests and confidentiality, and completing medical records punctually and with appropriate documentation.

Systems-based practice
Fellows must practice in a way that demonstrates an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimum value. In the CVICU, this can be demonstrated through an understanding of resource utilization both within the hospital (which cardiac testing is appropriate, or rational use of circulatory assist devices) as well as in a larger context such as in the evaluation of potential candidates for heart transplant.

Daily work flow-- The fellow will be an integral part of the team and will be viewed as a co-leader alongside the attending cardiovascular intensivist. The purpose of the rotation is fellow education and there will be some flexibility in structure to meet the educational goals of the fellow. Fellows can manage a selected group of patients under the direction of the attending intensivist or can oversee the care of patients managed by CVICU advanced practioners. The CVICU employs a shift model (6am – 6pm/6pm – 6am). Fellows are encouraged to work a mixture of days and nights. Due to the nature of critical illness there are times that shifts may extend longer than scheduled. The service respects ACGME rules and fellows are expected to adhere to duty hour rules. There is a morning report daily at 6:30am with cardiac surgery and any fellows working day shift should attend this meeting.
Procedures-- Fellows will be permitted to perform procedure they are competent in on CVICU patients under the supervision of critical care and surgical attendings. Fellows will have the opportunity to participate in a variety of procedures including ECMO cannulation, pacemaker, placement transesophageal echocardiography, thoracic procedure and others. These opportunities will be based on clinical situations.

Education-- The purpose of this rotation is education. Didactic sessions will occur at least four days per week. Additionally, a weekly CVICU conference takes place on Thursday afternoon. Fellows are also encouraged to attend monthly cardiac surgery M&M, weekly cardiac surgery grand rounds, cardiology grand rounds and every other month CVICU case conference and journal club.

Neuro-Critical Care

Fellows are encouraged to complete a rotation in the Neuro ICU. 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. Dr. Matt Smith is the director. He will review the schedule, goals, and expectations for the rotation.

Patient Care
The care of patients with diseases or conditions amendable to neuro-critical care.
1. Learn the proactive of health promotion, diagnosis care and treatment.

2. Learn the respective risks and benefits of the procedures they perform.
Objectives:

- This entails the safe, efficient and appropriate utilization of neuro-critical care knowledge and techniques.
- The diversity of illness within the patient population allows fellows to perform neuro-critical care with broad experience in critical care medicine will be obtained.
- Demonstrate appropriate, evidence based, direct care to:
    - patients with critical illness and injury, including life threatening trauma and multisystem organ failure.
    - post-operative patients from cardiothoracic, vascular, gastrointestinal, genitourinary, endocrine, orthopedic, neurosurgical, plastics, ENT and trauma.
- Demonstrate knowledge and competency in:
    - urgent consultation in the emergency department, post-anesthesia recovery unit, medical-surgical wards, and ICUs.
    - resuscitation skills including advanced cardiopulmonary resuscitation, crisis management and acute trauma assessment and resuscitation.
    - emergency airway management using bag and mask ventilation in non-intubated, conscious and unconscious, paralyzed and non-paralyzed patients.
    - laryngoscopy and intubation techniques, including rapid sequence intubation, in patients with critical illness or injury. Demonstrate the proper immobilization technique for intubating patients with potential cervical spine injury and the proper pharmacologic management for patients with elevated intracranial pressure.
    - ventilator management skills including the use of volume and pressure modes, positive end expiratory pressure, supplemental oxygen, and lung protective ventilation strategies to adjust for elevated airway pressures.
    - performance of bedside procedures, specifically central venous and arterial catheterization, intubations, chest tubes, pulmonary artery catheters and fiberoptic larygotracheobronchoscopy.
    - Brain death certification
- Apply clinical criteria of brain death and basic principles of support for potential organ donors.
- Demonstrate the proper assessment and management of patients with
    - intracranial hypertension, including evaluation of data from ICP monitors or extra-ventricular drains.
    - invasive monitoring devices, including devices for central venous, arterial, pulmonary and arterial assessment.
    - requiring large volume fluid and blood product resuscitation.
- Identify, evaluate, and prioritize current ICU patient care needs by participating in multidisciplinary daily rounds on critically ill patients.
- Identify and prioritize current and future patient care needs through participation in daily gatekeeping activities.

Medical knowledge

Continuous learning, using up-to-date medical evidence, in the case of patients with diseases or disorders amenable to neuro-endovascular therapy.43

1. Performance will be assessed by global faculty evaluations and documentation of participation at teaching conferences, particularly the monthly Morbidity & Mortality Conference and weekly NCCU conferences.
2. Adequately interpret relevant imaging studies.
3. Evaluate indications for neuro endovascular therapy.
4. Establish a treatment plan for neurovascular conditions commonly encountered in clinical practice.

Objectives:

- List and describe the most current evidence-based medical practices pertaining to the treatment of critically ill patients.
- State the etiology, describe the pathophysiology, demonstrate the appropriate management and evaluate the outcomes of patients with:
    - Central nervous system pathology including encephalopathy, cerebral vascular accidents, traumatic brain injury, and brain death
    - Cardiovascular instability including arrhythmias, myocardial infarction, congestive heart failure, vascular abnormalities, and shock
    - Respiratory failure including acute respiratory distress syndrome, chronic obstructive lung disease, respiratory muscle weakness, pneumonia, tension pneumothorax, and pulmonary embolus
    - Acute and chronic renal insufficiency
    - Metabolic, endocrine and electrolyte abnormalities
    - Infectious diseases including sepsis and septic shock. Differentiate treatment plans for patients who are immunocompetent versus immunosuppressed
    - Hematologic disorders including anemia, neutropenia, thrombocytopenia and thrombocytosis.
    - Acute allergic reactions and/or anaphylaxis.
    - Gastrointestinal diseases including acute and chronic liver failure, pancreatitis, cholecystitis, gastritis, peptic ulcer disease, and upper and lower gastrointestinal hemorrhage
    - Genitourinary pathology
    - Trauma
    - Neuromuscular disorders
    - Thermal injuries
    - Nutritional disorders
    - Oncologic complications
    - Life threatening geriatric problems
    - Psychiatric disorders causing special ICU problems
    - Circulatory insufficiency. Determine whether this pharmacological support is adequate or whether further fluid or mechanical circulatory support is needed

- Describe the strategies to manage ethical and legal dilemmas between patients, families, and staff in the ICU.

- List the risks, benefits, indications, and contraindications for:
    - common ICU bedside procedures such as central and arterial lines, intubations, chest tubes, pulmonary artery catheters, needle thoracostomy, and fiberoptic bronchoscopy.
    - ICP monitor, extra-ventricular drain, and lumbar drain placement and describe the possible limitations and complications of these devices.
    - Insertion of esophagogastric balloon tamponade devices. Describe the uses and limitations of these devices.

- Demonstrate knowledge of:
    - neuroimaging techniques, indications for the different studies, interpretation of the data relative to the patient's clinical presentation and findings, and describing subsequent steps in assessment and/or management.
    - central venous and pulmonary artery catheter data interpretation by listing the differential diagnosis, evaluating the catheter data in relation to other patient data and trends, and describing subsequent steps in assessment and/or management.
    - electrocardiogram (ECG) interpretation by listing the differential diagnosis, evaluating the ECG in relation to other patient data and trends, and describing subsequent steps in assessment and/or management.
    - arterial and venous blood gases and other laboratory data interpretation by listing the differential diagnosis, evaluating the data in relation to other studies and patient trends, and describing subsequent steps in assessment and/or management.

- List the indications for:
    - Advanced neurological monitoring (i.e., brain tissue oxygen, continuous EEG, electrocorticography, transcranial dopplers, etc).
    - extra-corporeal membrane oxygenation and describe its function.
    - use of a ventricular assist device and describe its function.
    - use of an intra-aortic balloon pump and describe its function.
    - the insertion of transvenous temporary cardiac pacemakers.
- Demonstrate knowledge of the pharmacokinetics, pharmacodynamics, metabolism, and excretion of various drugs used in the ICU

Practice-based learning and improvement
Demonstrate the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.
1. Self-evaluation using scientific evidence, "best practices" and self-assessment programs. Performance will be assessed global faculty evaluations.

2. The fellow will be able to recognize similar themes in patients and demonstrate incremental learning based on repeated exposure to these similar problems
3. Be able to learn from prior mistakes or deficiencies and incorporate new knowledge into the patient care to improve clinical practice.
4. The fellow will demonstrate the ability to respond favorably to feedback from the attending physician and implement improvements in practice.

Objectives:

- Understand the basic layout and functioning of an intensive care unit
- Be familiar with standard ICU operations including but not limited to work flow and nursing structure, etc.
- Understand and apply basic principles of effective, safe, and optimal patient care.
- Fellows are encouraged to investigate and evaluate their own patient care, clinical performance, and faculty appraisals to maintain personal and program goals and standards.

Interpersonal and communication skills

Effective communication with patients, peers, referring physicians and other members of the health care team concerning informed consent, patient care, safety issues and results of studies. Performance will be assessed global faculty evaluations and 360-degree evaluations from nurses and technologists on the neuro Endovascular service.

Competencies:

1. Communicate effectively with physicians, other health professionals, and health related agencies.
2. Work effectively as a member or leader of a health care team or other professional group.
3. Act in a consultative role to other physicians and health professionals.

Objectives:

- Demonstrate effective communication with nursing staff, peers, attending and referring physicians, consultants, organ recovery representatives, and other health care professionals including respiratory therapists, nutritionists, pharmacists, physical therapy, and study technicians.
- Establish a collegial rapport with patients and families and demonstrate patient and attentive listening to their concerns.
- Demonstrate effective discussion of patient diagnoses, prognosis, and management plan (including risks, benefits, and side effects) with patients and families using simple, easily understood language.
- Demonstrate proper written and verbal techniques for transfer of care both within and between services.
- Develop teaching skills through instruction of medical and procedural aspects of critical care medicine to interns and residents, medical students and other health care professionals through bedside teaching as well as formal didactic sessions.
- Demonstrate effective communication with nurse managers in order to establish ICU admission and discharge plans for critically ill patients.

- Demonstrate the ability to orchestrate care with other medical and surgical services.

Professionalism

High standards of professional conduct demonstrate altruism, compassion, honesty and integrity. Follow principles of ethics and confidentiality and consider religious, ethnic, gender, education and other differences in interacting with patients and other members of the health care team. Performance will be assessed with global faculty evaluations and 360-degree evaluations from nurses and advance practice professionals.

1. Compassion, integrity, and respect for others
2. The fellow is expected to communicate to patients with compassion, integrity and respect, regardless of race, or social or economic background.

Objectives:

- Demonstrate proper performance of all expected professional responsibilities.
- Demonstrate the practice of ethical principles in relation to patient care and confidentiality, including obtaining informed consent, implementing "Do Not Resuscitate" orders, withholding or withdrawing life support, and clarifying goals of care from advance directives or patient surrogates.
- Demonstrate ethical interactions with pharmaceutical representatives and be unbiased in prescribing habits.
- Demonstrate sensitivity to cultural, age, gender and disability issues.

Systems-based practice

Understand the relationships of local and national health care systems and how changes to improve the system involve individual and group efforts. Optimize coordination of patient care within one's own practice. Performance will be assessed global faculty evaluations and 360-degree evaluations from nurses and technologists on the Neuro-critical Care service.

1. Coordinate patient care within the health care system relevant to their clinical specialty.
2. Participate in identifying systems errors and in implementing potential system solutions.

Objectives:

- Describe the role of Critical Care Medicine within the WVU Medicine health systems.
- Evaluate and demonstrate cost-effectiveness of care for critically ill patients
- Develop proper documentation and billing skills.
- Demonstrate enthusiasm for expansion of global medical knowledge through participation in quality improvement projects and clinical trials occurring on patients in the ICU.
- Demonstrate consultation skills by identifying a specific need or question and contacting the appropriate medical, surgical, or support service to provide efficient and effective patient care.
- Demonstrate awareness of the role of West Virginia University, WVU Medicine, and UHA health systems in regional health care delivery through compliance with standard operating procedures and participation in quality improvement initiatives.
- Orchestrate the pre- and inter-hospital transportation of critically ill patients.
- Participate in:
    - Departmental Quality Improvement conferences and projects.

- Available opportunities for clinical and/or laboratory research in ongoing and/or newly developed studies.

Neuro-critical Care is a subspecialty that specializes in the critical and intensive care of patients with life-threatening neurological and neurosurgical injuries.

Suggested Reading
Wijdicks Practice of Emergency and Neurocritical Care

Clinical Duties
During training the fellow will carry out all the following under close supervision of NCC staff:
1. Perform clinical evaluation of critically ill patients
2. Interpret diagnostic studies
3. Perform critical care bedside procedures (e.g. central line placement, arterial line placement, chest tube placement, endotracheal intubation, intracranial monitor placement, external ventricular drain placement, bronchoscopy, point of care ultrasound)
4. Interpret transcranial doppler testing
5. Use vasoactive medications
6. Interpret hemodynamic monitoring
7. Perform emergency evaluation of ischemic stroke patients with clinical decision making of IV tPA and/or endovascular therapy47
8. Perform sedation and analgesia up to and including insensibility and coma

Graded Responsibility
The NCC faculty will monitor the trainee progress in all aspects of patient care and medical knowledge. As the trainee gains skills, experience, and knowledge, the trainee will be given increasing responsibility for aspects of critical care. How quickly the trainee gains responsibility will depend on the complexity of the situation, the trainee’s experience with the situation or similar situations as well as the experience of the NCC staff. NCC staff will monitor performance regarding the remaining four competencies. Trainees will receive formal feedback. Trainees will be given increased responsibility for the diagnosis, evaluation, procedural treatment and clinical management of our patients as they gain experience and competence. It is a goal that trainees will be capable of performing critical care for patients with neurological injuries.

Fellows will be excused from the NCCU to attend fellow’s own continuity clinic and conferences that take place as part of their fellowship. Fellows will go back to NCCU after clinics to finish their shift.

Fellows are required to inform the above mentioned NCCU staff physicians about the vacations and other commitments like clinics and conferences at the start of the rotation. Fellows must attend half of working days in a month (can include weekend) to get the credit for the elective month (approx. 100 hrs.).

Surgical ICU

During this elective rotation, the fellow will be incorporated into the SICU team, 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. This is a favorite rotation with many fellows as they lead rounds and act as a junior attending.

Drs. Alison Wilson and Gregory Schaefer are the co-directors of the rotation.
Goals for the rotation: the fellow will be incorporated into the SICU team, and will be under the direct supervision of the SICU attending physician. During this mandatory elective rotation, the fellow will assist with running rounds on all patients in coordination with the SICU attending physician just like they do in MICU rotation. They will oversee all the SICU patients, lead rounds, supervise procedures, answer questions, interact with other interdisciplinary services, participate in family meetings and evaluate potential transfers and discharges. Fellows should gain experience of evaluating trauma patients in the ER during their SICU rotation.

The trainee will expand his/her 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.

Upon completion of this 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 interpretation 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.
They 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 invasive monitoring (intracranial, intra-abdominal) 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 rounds.
4. Didactic presentations in topics related to surgical ICU patients as part of Critical Care Institute.
5. Attendance at family meetings and discussion of Palliative Care and Ethics.
6. Use information technology which is available in the SICU and our sections libraries (Medline search, board reviews books and tapes and multiple ICU text books.)
7. Monthly CCM Grand Rounds.
8. Weekly board review meetings and CCM core lectures as part of the Pulmonary/CCM lecture series
9. Monthly Radiology Conference
10. Monthly orientation with Nurse Supervisor and Pharmacist.
11. Hands-on ventilator management.
12. Monthly Critical Care Medicine Journal club

Fellows will be excused from the SICU to attend fellow's clinic and conferences that take place as part of their fellowship. Fellows will go back to SICU after conference/clinics to finish their shift. Fellows will inform the above-mentioned SICU staff physicians about the vacations and other commitments like clinics and conferences at the start of the rotation. Fellows must attend more than half of working days in a month (can include weekend) to get the credit for the elective month.

Educational Content:

1. Mix of Disease: Patients with multiple trauma, chest contusion, flail 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, surgical oncology, infectious diseases in SICU and other miscellaneous topics in critical care (complicated OB/GYN 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 700 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. 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 some surgical services requiring ICU care at times admitted for non-operative management.
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.

Others

Additional rotations include chest radiology, anesthesiology, LTACH, advanced heart failure (all highly recommended), ED ultrasound, ENT, pathology, nephrology, ID, and many more. For any of these rotations, the PD, APD, or Program Manager can put you in contact with the appropriate preceptor in advance of the rotation to review the curriculum and expectations.

Lung transplant elective at the Cleveland Clinic is an option, but please let the PD know a year in advance so out of state licensing can be arranged.
If there is a strong clinical interest in a relevant field not listed above, other rotations can be arranged.

Allergy & Immunology

Faculty Representative: Brian Peppers, DO

Duty Hours: Monday – Friday (8 AM – 5 PM), excluding days when the fellow will attend their continuity clinic in the POC. ACGME duty hour requirements will be strictly adhered.

The trainees rotating on Allergy and Immunology will be directly supervised by Dr. Brian Peppers

Daily Workflow

1. This rotation is mostly ambulatory. There will be times that you are scheduled to work a MICU weekend during your elective.

2. Workday is Monday through Friday 8 am to 5 pm.

3. Occasionally, the fellow will perform consultations on the inpatients at Ruby Memorial Hospital. These are discussed and seen with the allergy faculty on call. Number of consultations varies per week.

4. Fellow will have pulmonary their own continuity clinic for 2 half days per week.

Allergy and Immunology Rotation Objectives

• The mission of the allergy/immunology elective is to provide our PCCM fellows with the opportunity to see patients with a variety of allergic and immunologic pathologies under the supervision of an allergy/immunology subspecialist, and to learn the principles of diagnosis and management of the common allergic and immunologic conditions.

• The primary objectives of the Allergy & Immunology rotation include achieving competence in

the following:

- Diagnose common immunodeficiencies.

- Know the indications for treatment and vaccinations for common immunodeficiencies

- Diagnose and treat allergic rhinitis.

- Manage anaphylaxis.

- Treat atopic dermatitis.

Teaching Method

1. Supervised Direct Patient Care Activities: a. Fellows will rotate with faculty allergist, Drs. Peppers, at both the University Town Center and Cheat Lake offices. The fellow will take a history and perform an exam and present their assessment and plan to the faculty. They will be given feedback by the faculty.

2. Didactics a. Fellows will attend daily conference from 12-1pm either in person or remotely via Teams.

3. Faculty will present various teaching topics as time permits.

4. Independent Study a. CHEST and ATS online resources relating to allergy and immunology

- Recommended readings by Allergy and Immunology Faculty

Fellows will be excused from Allergy & Immunology to attend fellow's own continuity clinic and conferences that take place as part of their fellowship. Fellows will go back to Allergy & Immunology after clinics to finish their shift.

Fellows must inform the above-mentioned Allergy & Immunology staff physicians about vacations and other commitments like clinics and conferences at the start of the rotation.

Fellows must attend half of working days in a block (can include weekends) to get the credit for the elective (approx. 80 hrs.)

Rheumatology

Faculty Representative: Jamie Latos, DO

Revision Date: March 2023

Educational Purpose

The rheumatology rotation educates the fellow to institute appropriate evaluation of patients in whom rheumatic disease is suspected. Thorough, systematic, respectful history taking, and physical exam skills are taught, enabling the fellow to formulate a broad differential diagnosis. Fellows learn screening and detailed musculoskeletal exam and appropriate diagnostic testing/interpretation. Fellows learn to

deferentially treat, educate and counsel patients about a variety of rheumatic syndromes. Special emphasis will be spent on pulmonary involvement of various connective tissue disorders, including evaluation with pulmonary function testing and chest imaging. Fellows learn appropriate evaluation including referral and multi-disciplinary co-management skills.

Content Based Goals and Objectives

1. Order appropriate serological testing to assess a rheumatologic problem, including interstitial lung diseases.
2. Become familiar with disease-modifying antirheumatic drugs (DMARDs).
3. Diagnose and initiate therapy for vasculitis in a hospitalized patient.
4. Identify and treat other connective tissue diseases that can impact respiratory health.
5. Search for the elusive diagnosis of "shrinking lung."

Process Based Goals and Objectives

1. Performs a hypothesis- driven physical exam
2. Identifies or interprets uncommon or complex findings
3. Uses shared decision-making to develop and implement value-based care plans
4. Explains the indications, contraindications, risks, and benefits of common therapies

Teaching Method

1. Supervised Direct Patient Care Activities:
    a. Outpatient: 95% of rheumatology takes place in the ambulatory setting. Clinic is currently located in the STC. For new consultations, the fellow will perform a complete history and physical on each new patient. The case is discussed and seen jointly by the fellow and the attending. For return patients, fellow and attending

will discuss each fellow-assigned case and the attending will assist in determining what diagnostic tests and procedures are needed and formulating a therapeutically useful assessment and plan.

   b. Inpatient: <5% of rheumatology takes place in the inpatient setting. Special emphasis on any critically ill patients. Fellows will write the history and physical. Attending will see the patient and discuss the history, physical and test data and assist the fellow in formulating the assessment and plan.

2. Structured didactics.
   a. Fellows will attend (or watch remotely) relevant noon conferences and Grand Rounds.
   b. If a multi-disciplinary ILD conference occurs during the rotation, the fellow is required to participate.
3. Procedure skill experiences.
   a. Fellows will review imaging with faculty.
4. Small Group Learning.
   a. If the schedule allows, the fellow will attend the monthly rheumatology journal club and present an article approved by the faculty.
   b. Participation in ILD conferences (journal club, mutli-disciplinary discussion, etc..)
5. Independent Study
   a. Primer for Rheumatic diseases: Chapters on the history and physical, diagnostic criteria for rheumatic diseases and all clinically based chapters. The basic science chapters are not required.
   b. MKSAP Rheumatology
   c. Other Resources
      i. Kelly, Textbook of Rheumatology
      ii. McCarty, Arthritis and Allied Conditions
      iii. Cupps and Fauci, The Vasculitides
      iv. Gatter, A Practical Handbook of Joint Fluid Analysis
      v. Hoppenfeld, Physical Examination of the Spine and Extremities
      vi. Resnick, Diagnosis of Bone and Joint Disorders

Rotation Schedule

1. This rotation is 95% ambulatory. There is no call or weekend responsibilities.
2. Workday is Monday through Friday 8 am to 5 pm.
3. Occasionally, the fellow will perform consultations on the inpatients at Ruby Memorial Hospital. These are discussed and seen with the rheumatology faculty on call. Number of consultations varies per week.
4. Fellow will have their regular pulmonary clinic as scheduled.

<u>Evaluation Methods</u>

1. Fellow Performance

   a. Faculty will provide formative feedback regarding resident knowledge, skills, and attitudes during clinic encounters.

   b. Faculty will complete e-value forms provided by the Pulmonary/Critical Care Fellowship office. The evaluation will be available for on-line review by the fellow at their convenience. The evaluation will become part of the fellow file and will be incorporated into the semiannual performance review for directed fellow feedback.

2. Program and Faculty Performance

   a. The fellow will complete a web-based service evaluation of the faculty, facilities and service experience at the end of the rotation. The program will review evaluations, and faculty will receive annual feedback. Collective evaluations will serve as a tool to assess faculty development needs. Program Education Committee reviews summative evaluations annually.

Anesthesia

In order to help the rotation, run smoothly, here is 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. 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. (
- 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.

Sleep medicine

Sleep topics represent a significant portion of the pulmonary boards. It is a required elective for at least one month of fellowship, but if there is a strong clinical interest it can be repeated. Additionally, WVU does have a sleep fellowship.

There is a regularly occurring sleep clinic on Thursday mornings at the POC, but on sleep elective the fellow will also participate in sleep clinic at the off-site sleep lab, learn to interpret PSG's, and evaluate inpatient sleep consults at Ruby Memorial. 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 technicians and the sleep medicine attending to gain insight of the different laboratory procedures, and the interpretation of sleep studies. Trainees will be able to observe a sleep studies and gain knowledge in the sleep laboratory equipment. Learning about the different pharmacologic treatment and mechanical devices used in the treatment sleep disturbances is also a goal of this rotation.

See course director Drs. Rob Stansbury or Dr. Edward Rojas for more details. In brief, time will be spent evaluating patients in clinic (POC and at the sleep lab) and in the hospital with sleep consults. The fellow should gain some preliminary skills interpreting PSG. A sample week could look like this:

Monday:

- First year fellow score the report with the sleep tech for half a day.
- Second- and third-year fellows review the sleep study which is already scored by the tech.

Tuesday AM:

- Sleep clinic with Dr Stansbury/Rojas at baker's ridge

Wednesday AM

- Sleep clinic with Dr Stansbury/Rojas at baker's ridge

Thursday AM

- POC sleep clinic

Friday:

- First year fellows score the report with the sleep tech for half a day.
- Second- and third-year fellows review the sleep study which is already scored by the tech.

Minimum of **2 sleep studies per week** should be read by second- and third-year fellows.

Get oriented with NIPPV (CPAP, bipap, AVAPS, Trilogy) and different kinds of face masks.

Fellows will do their own 2 half days of continuity clinics.

Incase Drs Stansbury/Rojas clinics are cancelled please check with them what they would like you to do.

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:

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: Obstructive Sleep Apnea, Central Sleep Apnea, Periodic

Limb Movements, Restless Legs Syndrome, Idiopathic Hypersomnolence, Upper Airways Resistance Syndrome, Insomnia, Narcolepsy, REM related disorders.

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.

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.

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.

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:
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, connective tissue diseases involving the lungs, pulmonary vasculitis, pulmonary neoplasm, pneumonias, bronchiectasis, cystic fibrosis and pulmonary embolism among others.

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.

Procedures: The fellow will participate in the reading process of radiographic studies.

LTACH

The trainees rotating at the LTACH Hospital will be directly supervised by the core faculty of the Fellowship. At the beginning of the rotation, Dr. Al-Jaroushi will discuss the schedule and goals for the rotation with the trainees.

The LTACH rotation is a one-month Pulmonary Medicine rotation divided into 2 weeks at a time. Patients are located inpatient at the Select Specialty LTACH facility on the 4th floor of Mon General Hospital. Fellows will participate in the care of all patients assigned to LTACH faculty.

- The workday starts at 8:00 AM and ends approximately by 11:00 AM.
- At the beginning of the shift, the fellow is expected to see all the nighttime admissions and review the progress of the already established patients before presenting them to the LTACH faculty.

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 (5 days a week) and write notes on all the service patients. In addition, the fellow will perform all pertinent pulmonary procedures (bronchoscopies, de-cannulations, thoracentesis, etc.) under the supervision of LTACH faculty. The LTACH faculty will always be available for communication and interaction with the trainee.

Formal feedback is encouraged on a weekly basis. At the end of the rotation, they will complete an evaluation in E-Value which will be reviewed by the program director.

Educational Purpose:
The goal and objectives of this rotation is to gain expertise in the evaluation, diagnosis and management of post-ICU patients, care of tracheostomies, ventilator and tracheostomy weaning, and neuromuscular weakness.

Teaching methods:

- Supervised direct patient care activities. The fellow will provide care for at least 6-8 patients each day. Number of patients seen in that month will be monitored.
- Didactic presentations in topics related to pulmonary diseases.
- Bedside discussions.
- Assigned readings to strengthen their knowledge, practice-based learning and improvement and provide them with copies of publications and didactic lectures.
- Review of radiologic studies and daily laboratory findings.

Educational content:
Mix of disease: During this rotation the fellow is expected to gain expertise in the management of a variety of pulmonary diseases: Post-ICU syndrome, Ventilator weaning, Pulmonary infections, Tracheostomy care

Patients Characteristics: Most patients admitted to the service are admitted from local hospitals from ICU or step-down units. Most patients have respiratory failure, and many have tracheostomies.

Type of clinical encounters: The LTACH gets approximately 1-2 new admissions per week which is expected to increase to 1-2 daily as the census increases. The fellow will round on these inpatients with the faculty in the morning. Rest of the day the fellow will be on the inpatient consult service at Ruby Memorial.

Procedures: During this rotation, fellows will review radiographic studies LTACH faculty. When needed, they also will participate in de-cannulations, bronchoscopies, and chest tube placement. They will review pathology slides from bronchoscopic procedures.

Educational tools: 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 LTACH.

Blue Service / Heart Failure Rotation

ROTATION INFORMATION	
Name of Rotation	Blue
Supervising Faculty Members	George Sokos, DO; Marco Caccamo, DO; Christopher Bianco, DO
Evaluating Faculty Members	George Sokos, DO; Marco Caccamo, DO; Christopher Bianco, DO
Facility / Location	WVU Medicine/ WVU Heart & Vascular Institute
Clinical Experience	Elective rotation for fellows (2 or 4 weeks)
Didactics	Regular Pulm/CC Lecture Series; **most days at noon.** **Continuity clinic: PCCM fellows have 2 half days of clinic every week** Additional heart failure related cases and topics are anticipated as a part of: • Grand Rounds; Friday, 7 AM • Multidisciplinary Conference/Structural Case Conference; Wednesday, 8 AM

Overview

The heart failure service rotation provides the opportunity to diagnose, evaluate, and treat patients who encompass a broad range of heart failure, pulmonary hypertension, and cardio-oncology disorders. The rotation will allow the trainee to acquire the appropriate fundamental tools to care for these unique populations, including: knowledge pertaining to medical management, procedural techniques, and advanced heart failure therapies including mechanical circulatory support and cardiac transplantation. The heart failure rotation is also a key component of the fellows' exposure to echocardiographic interpretation with routine review of inpatient studies.

Training Goals and Objectives

The blue rotation is designed to provide the fellow:

- Exposure to advanced heart failure diagnostics and treatments

- Exposure to and management of pulmonary hypertension including right-heart catheterization
- Practice obtaining and reviewing Echo studies
- Critical care environment related to advanced heart failure/support

Fellow Expectations and Responsibilities

- Daily evaluation, continuing care, and disposition of patients admitted to the blue heart failure service including:
- Present the history, physical examination, testing, and/or treatment plans to the attending physician.
    - When the presentation is provided by residents or medical students, provide supplementary information as necessary.
- Provide education to the patient and/or family about their disease process.
- Assist in the management of patients who are undergoing evaluation for or who have had cardiac transplantation or left ventricular assist device in conjunction with designated coordinator
- Serve as a team leader and role model for the heart failure service team.
    - Attend, supervise, or perform necessary bedside procedures based on the skill level of associated house staff team members.
    - Review patient care plans and directly supervise residents and medical students.
    - Provide education to residents, medical students, and other heart failure team members.

Vacation/CME Time

For elective rotations, pulmonary/critical care fellows are allowed to take time off for vacation or CME during this rotation.

Faculty Supervision and Responsibilities

- A cardiology faculty member, with heart failure and transplant expertise, will be assigned to the heart failure service at all times. This faculty member will:
    - Attend rounds with the fellow- approximately 8:15 am-12:00 pm.
    - Be available by pager for concerns, questions, or urgent matters.
    - Provide guidance for patient care, consults, and use of appropriate testing procedures.
    - Provide supervision during procedures when appropriate and indicated.
    - Provide consultative service with the fellow on advanced heart failure, pulmonary hypertension, cardio-oncology, mechanically-assisted, and heart transplant patients admitted to the hospital on non-heart failure services.
    - Review and interpret with the fellow relevant data on patients under their care.
    - Help facilitate detailed discussions with patients and family members and be present for family meetings regarding the patient’s condition, prognosis, and plan of care.
    - Provide opportunity for teaching and raise teaching points during rounds.
- Evaluate the fellow through standardized evaluations and direct feedback based on clinical, procedural, professional, and academic interactions.

Recommended Resources and Reading

- COCATS 4 Task Force 12: Training in Heart Failure
- Heart Failure Society of America: Guidelines
- International Society for Heart & Lung Transplantation: Standards, Guidelines, and Consensus Documents
- Braunwald's Heart Disease, 10th Ed., Mann, Zipes, Libby, Bonow

Fellows will be excused to attend continuity clinic and conferences that take place as part of their fellowship. Fellows will go back to cards blue service after conference/clinics to finish their shift.

Fellows will inform the above mentioned staff physicians about the vacations and other commitments like clinics and conferences at the start of the rotation.

Fellows must attend more than half of working days during 4 weeks rotation (can include weekend) to get the credit for the elective month.

Core Competency Components and Curricular Milestones for Training in Heart Failure

Medical Knowledge	1st Year	2nd Year	3rd Year
Goal – Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.			
1. Know the pathophysiology, differential diagnosis, stages, and natural history of heart failure.			
2. Know the characteristic history and physical exam findings, and their limitations, in evaluation of heart failure syndromes.			
3. Know the indications, contraindications, and clinical pharmacology for the drugs used for the treatment of heart failure of all etiologies and degrees of severity and in special populations.			
4. Know the appropriate use of laboratory studies and imaging modalities in evaluation and management of HF patients.			
5. Know the indications, contraindications, and clinical pharmacology for intravenous, vasoactive, and inotropic drugs used for cardiovascular support in advanced/refractory heart failure.			
6. Know the types and indications for mechanical circulatory support.			
7. Know the effects of interactions of heart failure with other organ systems (kidney, nutritional, metabolic) and in the setting of other systemic disease.			

8. Know the management of cardiac arrhythmias in heart failure patients, as well as the indications and risks of use of implantable cardioverter-defibrillator and cardiac resynchronization therapies.			
9. Know the indications for referral for cardiac transplantation or assist devices.			
Evaluation Methods: Attending evaluations, conference presentations, direct observation and feedback, in-training exam.			

Patient Care and Procedural Skills	**1st Year**	**2nd Year**	**3rd Year**
Goal – Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Competently perform all medical, diagnostic, and surgical procedures essential for the practice of the management of heart failure.			
1. Skill to evaluate and manage patients with new-onset, chronic, and acute decompensated heart failure.			
2. Skill to perform electrical cardioversion.			
3. Skills to recognize & treat cardiac arrest due to ventricular tachycardia and/or ventricular fibrillation.			
4. Skill to evaluate and manage patients with atrial fibrillation and flutter (including rate and rhythm control and anticoagulation strategies).			
5. Skill to evaluate and manage patients with syncope.			
6. Skill to evaluate and manage patients with supraventricular tachyarrhythmias.			
7. Skill to evaluate and manage patients with wide-QRS tachycardia.			
8. Skill to manage patients with nonsustained and sustained ventricular arrhythmias.			
9. Skill to evaluate and manage patients with bradycardia and/or heart block.			
10. Skill to perform tilt-table testing.			
11. Skill to perform temporary pacemaker placement.			
12. Skill to select and manage patients requiring a permanent pacemaker, implantable cardioverter-defibrillator, or biventricular pacing.			
13. Skill to manage complications following pacemaker & ICD implantation.			
Evaluation Methods: Attending evaluations, direct observation and feedback, procedure log, conference presentations			

Systems-Based Practice	**1st Year**	**2nd Year**	**3rd Year**
Goal – Demonstrate an awareness of and responsiveness to the larger context and system of healthcare, as well as the ability to call effectively on other resources in the system to provide optimal healthcare.			

1. Utilize appropriate care settings and teams for various levels and stages of heart failure.			
2. Incorporate risk/benefit analysis and cost considerations in diagnostic and treatment decisions.			
3. Identify and address financial, cultural, and social barriers to diagnostic and treatment recommendations.			
4. Utilize an interdisciplinary, coordinated, team approach for patient management, including care transitions, palliative care, and employment related issues.			
5. Effectively utilize an interdisciplinary approach to monitor the progress of ambulatory patients with heart failure to maintain stability and avoid preventable hospitalization.			
Evaluation Methods: Direct observation and feedback, conference presentations, 360 evaluations			

Practice-Based Learning and Improvement	**1st Year**	**2nd Year**	**3rd Year**
Goal – 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 life-long learning.			
1. Identify knowledge and performance gaps and engage in opportunities to achieve focused education and performance improvement.			
2. Utilize decision support tools for assessing guidelines and pharmacologic information at the point of care.			
Evaluation Methods: Attending evaluations, core competency committee, direct observation and feedback, intraining exam, self evaluation			

Professionalism	**1st Year**	**2nd Year**	**3rd Year**
Goal – Demonstrate a commitment to carrying out professional responsibilities and adherence to ethical principles.			
1. Show compassion and effective management of end-of-life issues, including family meetings across a spectrum of patients with heart failure.			
2. Interact respectfully with patients, families, and all members of the healthcare team, including ancillary and support staff.			
Evaluation Methods: attending evaluations, direct observation and feedback, self-evaluations, 360 reviews			

Interpersonal and Communication Skills	**1st Year**	**2nd Year**	**3rd Year**
Goal – Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.			
1. Communicate with and educate patients and families across a broad range of cultural, ethnic, and socioeconomic backgrounds.			

2. Engage in shared decision-making with patients, including options for diagnosis and treatment.			
Evaluation Methods: Attending evaluations, direct observation and feedback, self-evaluation			

(Revision Date 5/4/2023)

Call

Since the implementation of the night float system, the call burden is significantly reduced. All call is in-house. Call is limited to Friday nights and weekend days. This is as evenly distributed as possible (schedule made by the chief fellow), with any slight increase in call being directed at the more junior residents. This is subject to change with projected ICU expansion.

For the sake of example, under the 2 ICU system: Fellow 1 takes call from 7 PM Friday through 5 PM Saturday. During the night, Fellow 1 covers both ICU services. In the morning, Fellow 1 is responsible for just MICU 1. Fellow 2 arrives Saturday morning and assumes care for MICU 2 and sees consults. Fellow 2 cross covers MICU 1 from 5 PM to 7 PM so Fellow 1 can have enough time off between shifts. On Sunday, both weekend fellows are present during the day. On Monday, both Fellow 1 and Fellow 2 return to their regularly scheduled rotation.

Fellows on ICU service for the month are usually not assigned weekend call. Fellows on MICU service on a given month will take a few hours of coverage each evening (5 PM to 7 PM) until the night float fellow arrives. This is usually on alternating days. While on call, you may get contacted by a clinic patient or pharmacy with a prescription question. Try to be helpful, but if the issue is not urgent, feel free to direct it to the appropriate provider the next day. If you are unsure of what to do, please contact your faculty.

On night float, you may be contacted for pulmonary consults. If the patient is critically ill, please transfer them to the ICU. You do not need to independently see consults at night, but sometime guidance by phone can prevent ICU transfer (try some BiPAP) or facilitate care (NPO order for bronchoscopy the next day). You will also help to triage transfers to the ICU. Keep in mind that Ruby Memorial is a large referral center, and many of the outside facilities may be critical access with limited resources. As a group, our goal is to be helpful. The MARS transfer calls are recorded, so be sure to remain professional.

Clinical and Educational Work Hours (Duty Hours)

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, and 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. Duty hours will be limited to 80 hours per week averaged over a 4-week period, inclusive of call.

The fellow must be provided one day in seven free from all educational and clinical responsibilities averaged over a 4- week period. A day is defined as one continuous 24-hour period free of all clinical, educational, and administrative duties. Pulmonary and Critical Care Medicine fellows are off one day in seven when on clinical service and two days off in seven when on non-clinical services including research rotations. Adequate time for rest and personal activities will be provided. This should consist of 10-hour time period provided between all daily duty periods. Continuous on-site duty must not exceed 24 consecutive hours. Fellows may remain on duty up to six additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics, and maintain continuity of medical care. No new patients may be accepted after 24 hours of continuous duty.

More information on the 1 day off in 7 rule:
https://medicine.hsc.wvu.edu/media/368788/onedayinsevenguidelines.pdf

Logging Duty Hours

Fellows should be logging duty hours daily in the E*value system. Periodic reminders will be generated through the E*value system to the trainee, the program manager and program director. Failure to log duty hours within 13 days will result in mandatory meal card suspension on day 14. The meal card will be reactivated when duty hours are updated and current.

Please see the full WVU GME Policy “Logging of Trainee Duty Hours” on the GME Webpage:
https://medicine.wvu.edu/graduate-medical-education/gme-policies/

Illness/Disability

In the event that a fellow becomes sick or disabled during their training, they must notify the Program Manager, Program Director, and Chief Fellow. The PD will make proper arrangements with the Chief Fellow to designate a fellow to cover the clinical service that the sick or disabled fellow was covering. If there is a fellow taking a non-ICU elective rotation, he/she will be the first choice for substitution. If sickness or disability occurs during the weekends, the Program Director, Attending on Call, and Chief Fellow must be notified, and they will make proper arrangements to have coverage for the service the sick or disabled fellow was covering. In the event that the sickness or disability would last longer than a month, the Program Director in conjunction with the Chief Fellow would modify the rotation schedule in order that all primary medical services of the Section are covered adequately, and that the training requirements of the fellows are not affected.

Fatigue Prevention

https://medicine.hsc.wvu.edu/media/369320/fatiguepreventionpolicy2010-1.pdf
Fatigue and stress are taken very seriously. Fellows will participate in mandatory education about fatigue, often led by sleep medicine specialists (Fundamentals in Fatigue Prevention). This material is available for additional reference on the SOLE platform.

Sleep deprived fellows are prone to mistakes, and not just in the medical setting. The importance of getting regular, consistent sleep cannot be understated. Since implementation of a night float system, the majority of fellows should have a consistent nightly sleep opportunity.
https://medicine.hsc.wvu.edu/media/365666/alertness-management-fatigue-mitigation-2017-logo.pdf

GME and/or Institutional Policies

Academic Discipline/Dismissal

Some of this has been covered above in the section on Promotion/dismissal. The goal is to have a disciplinary system to ensure fellow physicians are competent, professional, and ethical within the standards of care.

The program 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 fellowship program, the School of Medicine, or other facilities where the 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; or unprofessional conduct.

Corrective or disciplinary actions may include but are 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 fellow physician's appointment; terminate, limit or suspend a trainee's appointment or privileges; non-renewal of a trainee's appointment; dismissal from the Program; or any other action that the Program or sponsoring institution deems is appropriate under the circumstances.

Level I Intervention: Oral and/or Written counseling or other adverse action:

Minor academic deficiencies that may be corrected at Level I include: unsatisfactory academic or clinical performance or failure to comply with the policies, rules, and regulations of the Program or University or other facilities where the fellow 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.

Level II Intervention: Probation/Remediation Plan or other Adverse Action:

Serious academic or professional deficiencies may lead to placement of a fellow 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 fellow 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 fellow to comply with the terms of the plan may result in termination or non-renewal of the trainee's appointment.

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:

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

- Insubordination by refusal to abide by legitimate reasonable directions of administrators or of the WVU Board of Governors
- 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.
- Substantial and manifest neglect of duty.
- Failure to return at the end of a leave of absence.
- Failure to comply with all policies of WVU Hospitals, Inc.

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

Grievance Policy

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.

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 termination of a resident/fellow during an annual contract period; alleged discrimination; sexual harassment; salary or benefit issues. These grievances are covered under the employment grievance procedures for employees of West Virginia University.

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.

Procedure:
Level 1 Resolution: A good faith effort will be made by an aggrieved fellow and the Program Director to resolve a grievance, which will begin with the aggrieved 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 working days after notice of the grievance is received by the Program Director, the 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 fellow in writing of the final decision. This should occur within 5 working days after the meeting between the 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 fellow is not entitled to legal representation during the Level 1 meeting.

Level 2 Resolution: If the Program Director's final written decision is not acceptable to the aggrieved fellow, the fellow may choose to proceed to a Level 2 resolution, which will begin with the aggrieved 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 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 working days of receipt of the grievance, the 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 fellow in writing of the final decision. This should occur within 5 working days of the meeting with the 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 fellow is not entitled to legal representation during the Level 2 meeting.

Level 3 Resolution: If the fellow disagrees with the Department Chair's final decision, he or she may pursue a Level 3 resolution of the grievance. The aggrieved 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 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 fellow to set a mutually convenient time to meet with them. The Grievance Committee will review and carefully consider all material presented by the fellow and his or her Program Director or the grieveable party at the scheduled meeting, following the protocol outlined below.

The Grievance Committee will provide the aggrieved 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.

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 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.

Grievance Committee Procedure:

1. Attendance: All committee members should be present throughout the hearing. The aggrieved 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 fellow may present any relevant information or testimony from any colleague or faculty member. The 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 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.

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.

Fit for Duty/Impaired Providers

https://medicine.hsc.wvu.edu/media/369159/fitfordutypolicyrevisions20210408updatecontactinfo.pdf

WVU Hospital Policy:

http://connect.wvuhealthcare.com/media/12687/uha-ffd-policy-final-01-2019.pdf

Diversity, Non-Discrimination

https://medicine.hsc.wvu.edu/media/365745/gme-policy-on-diversity.pdf

Professionalism

https://medicine.hsc.wvu.edu/media/365657/code-of-professionalism.pdf

Internet

Do not put any PHI on social media.
https://medicine.hsc.wvu.edu/media/365672/policy-for-appropriate-use-of-the-internet.pdf

Mistreatment

The Pulmonary and Critical Care Medicine program has a reasonable expectation that its fellows will be treated with both respect and professionalism throughout the course of their training. If a fellow does feel mistreated, they are encouraged to raise these concerns to their Program Director or Program Manager.
If this isn't the preferred route for the fellow, they are also welcome to utilize the West Virginia University Graduate Medical Education Program Buttons for reporting Mistreatment or Supervision Issues which can be found at the following address:
https://medicine.hsc.wvu.edu/gme/mistreatment-form/

Moonlighting

Because fellowship 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.

The ACGME requires Program Director pre-approval of all moonlighting activity by ACGME fellows.

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. 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 fellow 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 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, fellows are not to perform as independent practitioners. All 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 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 the following rules regarding moonlighting:

1. Moonlighting is not permitted during inpatient ward service rotations, MICU, and Consults. Therefore, moonlighting (both external and internal) is allowed only during elective months.
2. Fellows must limit moonlighting shifts to no more than two per month.
3. All hours accumulated during internal/external moonlighting must be logged into E*Value system.
4. Moonlighting, both internal and external, must comply with ALL the duty hour regulations per the training program, WVU and the ACGME.
5. If an in-training examination score falls below the 30th percentile, moonlighting will not be permitted and any existing moonlighting agreement already in place will be revoked by the Program Director.
6. If a fellow is found to be moonlighting without permission, during a blackout period as detailed in #1 or in excess of the amount of sessions permitted as detailed in #2, penalties can apply such as permanent revocation of moonlighting privileges for the duration of the fellowship, being placed on a professionalism watch, probation, and in extreme cases, termination.

https://medicine.hsc.wvu.edu/media/365744/gme-moonlighting-policy.pdf

License Requirements

https://medicine.hsc.wvu.edu/media/368924/final-resident-physician-licensure-requirements-policy-2_12_21.pdf

Vendor Interactions

https://medicine.hsc.wvu.edu/media/368924/final-resident-physician-licensure-requirements-policy-2_12_21.pdf

Work Environment

It is the responsibility of the program director and faculty to establish the best possible environment for both fellows and for patient care, while ensuring that undue stress and fatigue among fellows are avoided.

Patient support services will be provided in a manner appropriate and consistent with educational objectives and patient care such that the fellow does not spend an inordinate amount of time in non-educational activities that can be discharged properly to other personnel.
However, it is recognized that there is educational value in activity such as care coordination and communication with insurance companies. It is expected that the fellows will be involved to some degree in these types of activities.

An effective laboratory and medical records system will be provided in order to allow proper performance of the educational programs and timely, quality patient care.

Appropriate security and personal safety measures will be provided to fellows in all locations in which fellow activities occur.

Respectful, professional environments will be provided at all times in the location where the fellowship activities occur.

Disaster Response

https://medicine.hsc.wvu.edu/media/365668/disasterresponsepolicy2017logo.pdf