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OVERVIEW

The main goal of this training program is to develop requisite knowledge, skills, and attitudes essential to demonstrate competence in patient care, knowledge, practice-based learning and improvement, systems-based practice, professionalism, and interpersonal and communication skills relevant to the combined discipline of pulmonary and critical care medicine. Evaluation of competencies is accomplished by a variety of instruments including global evaluations, direct observation, chart auditing, problem-based learning and teaching, and multisource feedback using patient and other health care provider input.

The UTMB PCCM Fellowship Program adopts the philosophy outlined in:
Fellows should take responsibility for learning. The fellowship program is designed to foster tools needed for life-long learning. This means fellows should be independent, self-motivated, and incorporate habits of self-directed learning.

The educational program must be 36 months in length. Fellows are required to rotate a minimum of 24-26 months through a variety of clinical services and electives to obtain the breadth and depth of exposure to disease states needed to form the base of knowledge and experience for a subspecialist in these fields. Electives are chosen by the fellow in areas of academic interest and approved by the program director.

Core clinical training:
1. Pulmonary (minimum 9 months):
   - consult and procedure service,
   - longitudinal continuity clinic (minimum of 30-36 months of weekly ½ day clinics),
   - outpatient pulmonary clinics (asthma allergy, TDC, sleep, interventional pulmonary, etc)
   - pulmonary function testing
2. Critical Care (minimum of 9 months):
   - 6 MICU/CCU,
   - 3 non-medical ICU (dedicated rotation and/or as consultants)
     - TDCJ ICU service,
     - surgical intensive care service and
     - neurology intensive care service
     - cardiac intensive care service

In addition, during this three year training program, fellows are required to participate in meaningful research and in at least one QI project. Research projects and faculty mentors will be selected by the fellow with the assistance and approval of the program director and/or division chief. Similarly, a QI project with a team leader will be assembled with assistance by the program director and completed before the end of the three year period.

All fellows are expected to behave in the most professional manner at all times in their interaction with all health care personnel.

Every six months, the Program Director and individual fellow will review the overall progress and performance of the trainee. See Evaluations section for more details. All formal and informal 360 evaluations will be reviewed with the fellow and available in New Innovation. Any
issues of concern will be brought up by the director and discussed. Fellows will have an
opportunity to voice concerns and to discuss their overall progress, career goals, and
opportunities for further training.

In the event a fellow feels that their concerns are not being appropriately addressed, their
evaluation is unfair, or other issues arise with the program leadership, they should contact the
Program Director, Dr. Shawn Nishi, or Division Chief, Dr. Gulshan Sharma, or Internal
Medicine Program Director, Dr. Lindsay Sonstein, or the Associate Dean for GME, Dr. Thomas
Blackwell to address their issues.

<table>
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<tr>
<th>Overall Goals and Objectives</th>
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| To make internists into specialists in **Pulmonary and Critical Care** by equipping them with
  requisite knowledge, skills, and attitudes essential for them to demonstrate competence in patient
care, knowledge, practice-based learning and improvement, systems-based practice,
professionalism, and interpersonal and communication skills relevant to the specialty of
**Pulmonary and Critical Care**. |

<table>
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<th>Patient Care</th>
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<td><strong>GOAL</strong></td>
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| Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the
  treatment of **pulmonary and critical care** problems and the promotion of health related to the diagnosis,
  prevention, and control of **pulmonary and critical care diseases**. |

<table>
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<th><strong>COMPETENCIES</strong></th>
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<td>Fellows are taught how to:</td>
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| • Demonstrate accurate, complete, and relevant history-taking, including family, genetic,
  psychosocial, and environmental histories. PTRMDPC, LSC/GA, CA (see pp8 for definitions) |
| • Demonstrate the ability to perform a comprehensive and accurate physical examination. PTRMDPC, LSC/GA, CA |
| • Demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for
  specific and targeted investigations pertaining to the patient’s complaints, and formulate a plan for
  management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA |
| • Demonstrate the ability to effectively present the results of a consultation orally and in writing and
to defend the clinical assessment, differential diagnosis, and diagnostic and management plans. PTRMDPC, LSC/GA, CA |
| • Demonstrate proficiency in the management of inpatients and outpatients with the following:
  obstructive lung diseases, including asthma, bronchitis, emphysema, bronchiectasis; pulmonary
  malignancy -- primary and metastatic; pulmonary infections, including tuberculous, fungal, and
  those in the immunocompromised host (e.g., human immunodeficiency virus-related infections);
diffuse interstitial lung disease; pulmonary embolism and pulmonary embolic disease; pulmonary
  vascular disease, including primary and secondary pulmonary hypertension and the vasculitis and
  pulmonary hemorrhage syndromes; occupational and environmental lung diseases; iatrogenic
  respiratory diseases, including drug-induced disease; acute lung injury, including radiation,
  inhalation, and trauma; circulatory failure; pulmonary manifestations of systemic diseases,
  including collagen vascular disease and diseases that are primary in other organs; respiratory
  failure, including the acute respiratory distress syndrome, acute and chronic respiratory failure in
  obstructive lung diseases, and neuromuscular respiratory drive disorders; disorders of the pleura
  and the mediastinum; sleep disorders (including the recognition and differential diagnosis of
  common sleep symptoms, the effects of sleep on pulmonary diseases and treatments, the utility
  and interpretation of cardiopulmonary monitoring, critical review of polysomnographic reports,
  and management of sleep-disordered breathing); and perioperative management of critically ill
  patients. PTRMDPC, LSC/GA, ITE, CSR |
| • Demonstrate proficiency in the evaluation and management of critically ill patients with |
circulatory disorders; shock syndromes; cardiovascular diseases; sepsis and sepsis syndrome; hypertensive emergencies; acute and chronic respiratory failure; acute metabolic disturbances (including over dosages and intoxication syndromes); multi-organ system failure; electrolyte and acid-base disorders; metabolic, nutritional, and endocrine effects of critical illness; and hematologic and coagulation disorders associated with critical illness. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the following critical care issues: management of the immunosuppressed patient; management of anaphylaxis and acute allergic reactions; hemodynamic and ventilatory support of patients with organ system damage in the post-operative period; the use of paralytic agents and sedative and analgesic drugs; detection and prevention ofiatrogenic and nosocomial problems in critical care medicine; psychosocial and emotional effects of critical illness on patients and their families; and management of end of life issues and palliative care. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the evaluation and management of the special issues related to patients: with genetic and developmental disorders of the respiratory system, including cystic fibrosis; in pulmonary rehabilitation; with trauma; with neurosurgical emergencies; with disorders of the cardiovascular, respiratory, renal, gastrointestinal, genitourinary, neurologic, endocrine, hematologic, musculoskeletal, and immune systems as well as of infectious diseases; with critical obstetric and gynecologic disorders; and after discharge from the critical care unit. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the following technical and interpretive skills: airway management; the use of a variety of positive pressure ventilatory modes, (including: initiation, maintenance, and weaning of ventilatory support; respiratory care techniques; and withdrawal of mechanical ventilatory support); the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; flexible fiberoptic bronchoscopy procedures (minimum 100); management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and cardiopulmonary exercise studies; diagnostic and therapeutic procedures, including the use of ultrasound techniques to perform thoracentesis and intravascular intracavitary tubes and catheters; endotracheal intubation, lumbar puncture, paracentesis and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and drainage systems; insertion of arterial, central venous, and pulmonary artery balloon flotation catheters; emergency cardioversion; transcutaneous pacemakers; interpretation of intracranial pressure monitoring; operation and interpretation of bedside hemodynamic monitoring systems; nutritional support; and quality improvement activities in the intensive care unit. PTRMDPC, LSC/DO, ITE

- Demonstrate experience (not proficiency) in the following: emergency cardioversion; inhalation challenge studies; percutaneous dilational tracheostomy; thoracostomy tube insertion and drainage; and the examination and interpretation of lung tissue for infectious agents, cytology, and histopathology. PTRMDPC, LSC/DO

### Medical Knowledge

**GOAL**

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of patients with pulmonary and critical care diseases.

**COMPETENCIES**

Fellows are taught how to:

- Demonstrate accurate, complete, and relevant history-taking, including family, genetic, psychosocial, and environmental histories. PTRMDPC, LSC/GA, CA
- Demonstrate the ability to perform a comprehensive and accurate physical examination. PTRMDPC, LSC/GA, CA
- Demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for specific and targeted investigations pertaining to the patient’s complaints, and formulate a plan for
management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA, Mini-CEX

- Demonstrate the ability to effectively present the results of a consultation orally and in writing and to defend the clinical assessment, differential diagnosis, and diagnostic and management plans. PTRMDPC, LSC/GA, CA

- Demonstrate proficiency in the management of inpatients and outpatients with the following: obstructive lung diseases, including asthma, bronchitis, emphysema, bronchiectasis; pulmonary malignancy -- primary and metastatic; pulmonary infections, including tuberculous, fungal, and those in the immunocompromised host (e.g., human immunodeficiency virus-related infections); diffuse interstitial lung disease; pulmonary embolism and pulmonary embolic disease; pulmonary vascular disease, including primary and secondary pulmonary hypertension and the vasculitides and pulmonary hemorrhage syndromes; occupational and environmental lung diseases; iatrogenic respiratory diseases, including drug-induced disease; acute lung injury, including radiation, inhalation, and trauma; circulatory failure; pulmonary manifestations of systemic diseases, including collagen vascular disease and diseases that are primary in other organs; respiratory failure, including the acute respiratory distress syndrome; acute and chronic respiratory failure in obstructive lung diseases, and neuromuscular respiratory drive disorders; disorders of the pleura and the mediastinum; sleep disorders (including the recognition and differential diagnosis of common sleep symptoms, the effects of sleep on pulmonary diseases and treatments, the utility and interpretation of cardiopulmonary monitoring, critical review of polysomnographic reports, and management of sleep-disordered breathing); and perioperative management of critically ill patients. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the evaluation and management of critically ill patients with circulatory disorders; shock syndromes; cardiovascular diseases; sepsis and sepsis syndrome; hypertensive emergencies; acute and chronic respiratory failure; acute metabolic disturbances (including over dosages and intoxication syndromes); multi-organ system failure; electrolyte and acid-base disorders; metabolic, nutritional, and endocrine effects of critical illness; and hematologic and coagulation disorders associated with critical illness. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the following critical care issues: management of the immunosuppressed patient; management of anaphylaxis and acute allergic reactions; hemodynamic and ventilatory support of patients with organ system damage in the post-operative period; the use of paralytic agents and sedative and analgesic drugs; detection and prevention of iatrogenic and nosocomial problems in critical care medicine; psychosocial and emotional effects of critical illness on patients and their families; and management of end of life issues and palliative care. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the evaluation and management of the special issues related to patients: with genetic and developmental disorders of the respiratory system, including cystic fibrosis; in pulmonary rehabilitation; with trauma; with neurosurgical emergencies; with disorders of the cardiovascular, respiratory, renal, gastrointestinal, genitourinary, neurologic, endocrine, hematologic, musculoskeletal, and immune systems as well as of infectious diseases; with critical obstetric and gynecologic disorders; and after discharge from the critical care unit. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the following technical and interpretive skills: airway management; the use of a variety of positive pressure ventilatory modes, (including: initiation, maintenance, and weaning of ventilatory support; respiratory care techniques; and withdrawal of mechanical ventilatory support); the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; flexible fiberoptic bronchoscopy procedures; management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and exercise studies; diagnostic and therapeutic procedures, including thoracentesis, endotracheal intubation, and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and drainage systems; insertion of arterial, central venous, and pulmonary artery balloon flotation catheters; emergency cardioversion; cardiopulmonary exercise; interpretation of intracranial pressure monitoring; operation and interpretation of bedside hemodynamic monitoring systems; nutritional support; and quality improvement activities in the intensive care unit. PTRMDPC, LSC/DO, ITE

- Demonstrate experience (not proficiency) in the following: emergency cardioversion;
Practice-Based Learning and Improvement

GOAL
Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation, life-long learning, and continuous quality or practice improvement. A formal evaluation of PBL will be conducted after presentation at divisional weekly conferences. Every six month period each fellow is expected to have 2 PBLs in their file prior to their six month evaluation with the program director.

Four Key Components: Self-Reflection; Practice Improvement; EBM; Teaching Skills

COMPETENCIES
Fellows are taught how to:

- Demonstrate the ability to investigate and evaluate their patient care practice by identifying strengths, deficiencies and limits in their knowledge and expertise. LSC, PBLM/GA, PBLM
- Demonstrate the ability to set learning improvement goals. LSC, PBLM/GA, PBLM
- Demonstrate the ability to improve their practice by analyzing and assimilating both scientific evidence as well as their own prior experience into their practice. LSC, PBLM/GA, PBLM
- Demonstrate their ability to use information technology to locate, appraise and assimilate evidence from scientific studies related to their patients’ health problems. LSC, PBLM/GA, PBLM
- Demonstrate the ability to apply knowledge of statistical methods to critically appraise clinical studies. LSC, PBLM/GA, PBLM
- Demonstrate their ability to teach and to facilitate the learning of other students and health care professionals. LSC, PBLM/GA, PBLM
- Demonstrate the ability to incorporate formative evaluation feedback into daily practice. PTRMDPC/GA
- Participate in the education of patients, families, students, fellows, and other health care professionals
- Obtain procedure-specific informed consent by competently educating patients about rationale, technique, alternatives and complications of procedures

Systems-Based Practice

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

Four Key Components: Know the Health Care Systems; Use Systems for Patients’ Good and Avoid Error; Be Cost-Effective.

COMPETENCIES
Fellows are taught how to:

- Demonstrate the ability to work effectively in various health care delivery settings and systems. PTRMDPC, LSC/GA, MSF
- Demonstrate the ability to coordinate patient care within the health care system. PTRMDPC, LSC/GA, MSF, CA, MSF
- Demonstrate the ability to incorporate considerations of cost awareness and risk-benefit analysis in
patient care. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate the ability to advocate for quality patient care and optimal patient care systems. PTRMDPC, LSC/GA, MSF
- Demonstrate the willingness to work in inter-professional teams to enhance patient safety and improve patient care quality. PTRMDPC, LSC/GA, MSF
- Demonstrate the ability to identify systems errors and in implement potential systems solutions. PTRMDPC, LSC/GA, MSF
- Demonstrate the ability to acquire skills to organize, administer and direct a critical care unit and respiratory care section

Professionalism

GOAL
Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles that they know.

Three Key Components: Professional Behavior; Ethical Principles; Cultural Competence.

COMPETENCIES
Fellows are taught how to:

- Demonstrate an understanding of and commitment to all elements of professionalism, including respect, compassion, integrity, and accountability for their patients, patient families, and other health care professionals that supersedes self-interest. PTRMDPC, LSC/GA, MSF
- Demonstrate adherence to ethical principles such as responsibility for continuity of care and the practice of patient-centered care that encompasses confidentiality, respect, autonomy via appropriate informed consent and shared decision making. PTRMDPC, LSC/GA, MSF
- Demonstrate sensitivity and responsiveness to a diverse patient population, including diversity in gender, age, culture, race, religion, disabilities, and sexual orientation. PTRMDPC, LSC/GA, MSF
- Demonstrate an ability to manage conflict while fulfilling the above ethical principles. PTRMDPC, LSC/GA, MSF
- Demonstrate high standards of ethical behavior, including maintaining appropriate professional boundaries and relationships with other physicians and other health care team members, and avoiding conflicts of interest.
- Demonstrate a commitment to lifelong learning, and an attitude of caring derived from humanistic and professional values.

Interpersonal and Communication Skills

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

Three Key Components: Communicate and Relate with Patients/Families; Communicate and Relate with Health Professionals; Scholarly Communication.

COMPETENCIES
Fellows are expected to:

- Demonstrate effective communication and relationships with patients and families across a broad range of socioeconomic and cultural backgrounds. PTRMDPC, LSC/GA, MSF
- Demonstrate effective communication and relationships with physicians, other health professionals, and health related agencies. PTRMDPC, LSC/GA, MSF, CA
- Demonstrate the ability to generate and maintain comprehensive, timely, and legible medical records, procedure reports, and other written communication. PTRMDPC, LSC/GA, CA
- Demonstrate the ability to work effectively as members and leaders of health care teams or professional groups. PTRMDPC, LSC/GA, MSF
- Demonstrate the ability to communicate with patients and families on specific topics such as
Teaching Methods

- DPC - Practical Teaching and Role Modeling During Direct Patient Care
- LSC - LECTURES/SEMINARS/CONFERENCES
  - Grand Rounds
  - Research Conference
  - Core Lecture Series
  - Fellows Clinical Case Conference
  - Radiology Conference
  - Pathology Conference
  - Journal Club
  - Morbidity and Mortality Conference
  - Thoracic Multidisciplinary Conference
  - Quality Improvement and Patient Safety
- SDL - Self-Directed Learning
- SGS - Small Group Sessions

Methods and Tools for Assessing Fellows

- DO - Direct observation by qualified faculty guided by explicitly stated performance criteria and standard for proficiency.
- GA - Global assessment by qualified faculty.
- ITE - In-Training Exam.
- LB - Log books for procedures.
- MSF – Multisource Feedback using formal evaluation forms given to nurses, allied health personnel, and patients who come into contact with the trainees (360° evaluation).
- CA – Chart Audit using a standard evaluation template.
- SIM - Simulations which assess direct patient care without submitting patients to the danger or inconvenience of the assessment. This can be done with patient management modules, computer clinical case simulations, role-playing, standardized patients, or anatomical models.
- PBLM - Satisfactory presentation and completion of Problem Based Learning and Improvement module arising from patient care and rounds.
- Objective Proficiency Assessment for Procedures and Skills (e.g. Bronchoscopy).
ROTATION SPECIFIC GOALS AND OBJECTIVES

PULMONARY CONSULTATION AND PROCEDURE ROTATION

Goals and Objectives
The pulmonary consultation rotation provides the primary setting for the fellow to demonstrate competence in patient care and medical knowledge of inpatient pulmonary medicine as part of the overall goals and objectives of the training program. Specific to this rotation:

Patient Care: Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of pulmonary problems and the promotion of health related to the diagnosis, prevention, and control of pulmonary diseases.

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of patients with pulmonary diseases.

Competencies:

- Demonstrate accurate, complete, and relevant history-taking, including family, genetic, psychosocial, and environmental histories. Demonstrate the ability to perform a comprehensive and accurate physical examination and demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for specific and targeted investigations pertaining to the patient’s complaints, and formulate a plan for management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA
- Demonstrate the ability to effectively present the results of a consultation orally and in writing and to defend the clinical assessment, differential diagnosis, and diagnostic and management plans. PTRMDPC, LSC/GA, CA
- Demonstrate proficiency in the management of inpatients with the following: obstructive lung diseases, including asthma, bronchitis, emphysema, bronchiectasis; pulmonary malignancy - primary and metastatic; pulmonary infections, including tuberculous, fungal, and those in the immunocompromised host (e.g., human immunodeficiency virus-related infections); diffuse interstitial lung disease; pulmonary embolism and pulmonary embolic disease; pulmonary vascular disease, including primary and secondary pulmonary hypertension and the vasculitis and pulmonary hemorrhage syndromes; occupational and environmental lung diseases; iatrogenic respiratory diseases, including drug-induced disease; acute lung injury, including radiation, inhalation, and trauma; circulatory failure; pulmonary manifestations of systemic diseases, including collagen vascular disease and diseases that are primary in other organs; respiratory failure, including the acute respiratory distress syndrome, acute and chronic respiratory failure in obstructive lung diseases, and neuromuscular respiratory drive disorders; disorders of the pleura and the mediastinum; sleep disorders (including the recognition and differential diagnosis of common sleep symptoms, the effects of sleep on pulmonary diseases and treatments. PTRMDPC, LSC/GA, ITE
- Demonstrate proficiency in the following technical and interpretive skills: airway management; respiratory care techniques; the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; flexible fiber-optic bronchoscopy procedures; management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry,
flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and exercise studies; diagnostic and therapeutic procedures, including thoracentesis, endotracheal intubation, and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and drainage systems

- Demonstrate experience (not proficiency) in the following: thoracostomy tube insertion and drainage; and the examination and interpretation of lung tissue for infectious agents, cytology, and histopathology. PTRMDPC, LSC/DO, ITE, LB, Objective Proficiency Assessment for Procedures

Teaching environment
The consult and procedure service is staffed by one faculty member and one fellow. There may be 1-2 third year medical students and 1 house officer. The fellow should see and evaluate each consult with or without resident/medical student. He/she performs all appropriate history, physical exams, and review of old charts and lab data. The case is then discussed with the faculty and findings confirmed at the bedside. The appropriate physiology, pathology, and data as well as diagnostic and therapeutic interventions are discussed and consultation finalized. The fellow is responsible for conveying the information to the referring team physicians including providing appropriate medical literature if required. Procedures are scheduled as needed by the fellow.

Evaluation
Supervising faculty utilizes direct observation and problem based learning modules to improve fellow performance. Objective Proficiency Assessment for Procedures are completed by faculty for common procedures (see evaluation forms and timeline section). Random Chart Audit is performed by the program directors on a quarterly basis. Global assessment is completed at the end of the month by the supervising faculty and reviewed with the fellow at the end of the month.

Expectations for Advancement
The first year of the training program focuses primarily on pulmonary diseases. Fellows are expected to increase their fund of subspecialty knowledge appropriately as assessed by the evaluation tools noted above as well as participation in the In Training Exam. Increased level of autonomy will be granted as a function of time and demonstrable competence. The second year of training will be focused on special areas such as pulmonary rehabilitation and sleep disorders. Similarly, fellows are expected to develop technical skills necessary to perform bronchoscopy and biopsies under the direct supervision of faculty during the first year of training. The second year of training is focused on broadening experience in bronchoscopy, developing more autonomy in developing the procedure plan, and experience in management of a bronchoscopy service. It is expected the fellow will be competent as a pulmonary disease specialist at the midpoint of the third year of training.

Operational Policies Consults:
The faculty supervisor is ultimately responsible for all aspects of the pulmonary service. The faculty will delegate more responsibility to the fellow consistent with demonstrable advancement in skills. Fellows are responsible for overseeing the activities of house officers and students on the service and insuring the faculty is well informed regarding important operations of the service.
• The consult fellow will be responsible for all aspects of organizing and running the consult service.

• The fellow’s note should be completed ASAP or on the same date as seeing the patient. Fellows are expected to personally communicate recommendations and answer questions with the consulting team.

• All patients being followed by the consult service must be seen every day with follow-up note by the student/house staff/fellow and a note by the faculty attending as appropriate.

• Consults placed before 10 am will be seen and a consult note written the same day. All other consults may be seen with consult note within 24 hours.

• Consults for transfer of care from another ICU to MICU or TDCJ ICU can be seen during normal business hours by the consult team to determine the appropriateness for transfer.

• Fellows are expected to maintain a scholarly approach at all times, including obtaining appropriate literature as necessary.

• Students and house officers on the consult service are expected to attend TDCJ clinics.

• The consult fellow is responsible for running the TDCJ clinic.

The fellow will be responsible for organizing and implementing all aspects of inpatient and outpatient procedures. Faculty will be expected to actively participate in the decision-making process and supervise the performance of procedures.

Operational Policies Bronchoscopy:

Bronchoscopy

• Pre-Operative
  All patients are to be evaluated by a pulmonary faculty, whether on the consult team, clinic, or ward service for appropriateness of the bronchoscopy.

Notify the procedure fellow for all procedures to be performed in the bronchoscopy suite OR as soon as possible (except those done by the ICU fellow) and discuss the case with the fellow. Schedule the procedure by placing a case request for the procedure and notify the procedure nurse coordinator of the details of the procedure. Provide pertinent information including the patient’s name, UH #, date and time of (procedure: bronchoscopy, EBUS, PleurX, thoracentesis, chest tube), planned procedure (e.g. transbronchial biopsy), respiratory/contact isolation status, use of fluoroscopy/US, and any special circumstances such as arranging an on-site cytopathologist if needed. Please give adequate notice for procedures. For after-hours scheduling or scheduling of same day or next day procedures in the bronchoscopy notify the procedure nurse coordinator.

Prior to all bronchoscopy and advanced pulmonary procedures, a Quality Procedure Form should be completed and given to the procedure nurse coordinator.

Bronchoscopy Suite procedure times are subject to change based on availability, number and type of procedure):
Monday 1:00 pm
Tuesday 8:30 am, 9:30 am, 10:30 am, 1:00 pm
Wednesday 9:00 am, 10:00 am, 11:00 am, 1:00 pm
Thursday 8:30 am, 9:30 am, 10:30 am, 1:00 pm
Friday: no outpatient bronchoscopy; 1:00 pm inpatient only
Operating room procedure times are subject to change based on availability, number and type of procedure:
Second and fourth Wednesday of the month.
First case start time is 9 am.
The following times should be entered for OR procedures: EBUS 40 min, EMN 60 min, rigid 60 min, BT 60 min.

The procedure fellow will interview and examine all patients, review the chart, laboratory, ASA and imaging results prior to performing bronchoscopy. He/she will then formulate a plan for medications and procedure sampling.

For outpatients the referring doctor will help obtain consent, write the pre-bronchoscopy orders and note.

All bronchoscopies must have procedure consent, preoperative note, and orders. CXR’s, CAT scans, and medical records are also needed in the bronchoscopy suite and OR. It will be the responsibility of the procedure fellow to ensure all necessary information is available and the paperwork prepared. All cases will be reviewed with the referring pulmonary faculty physician and attending procedure faculty prior to the bronchoscopy to assure a consensus agreement. Any disagreements on the planned procedure will be discussed with the Director of Bronchoscopy.

Outpatient TDC bronchoscopies are usually scheduled by the consult fellow and attending. They will discuss the case with the procedure fellow and arrange for the patient to be placed in “holding”. The patient’s total care will then be the responsibility of the procedure fellow and consult attending until discharge or transfer. The on-call fellow will take care of problems at night or on weekends. Any disagreements on the planned procedure will be discussed with the Director of Bronchoscopy Services.

- **Intra-operative**
  The faculty must be present and personally supervise every bronchoscopy.

  Scheduling bronchoscopies is completed by checking the procedure calendar or with the procedure nurse coordinator and booking via "case request" function in the EMR. For advanced pulmonary procedures, ensure a faculty is available and review the case for appropriateness prior to submitting a case request.

  Because of urgency or seriousness (such as active infection, cancer, etc.) of the diagnoses, fellows are responsible for hand-delivering samples as soon as possible to microbiology (5th floor CSB), cytopathology (9th floor JSA), and surgical pathology (2nd floor JSA). All procedure notes should be completed immediately after the procedure.

- **Post-operative and Follow-up**
  Official bronchoscopy reports are generated electronically in Provation and downloaded into the electronic medical record. Copies should be forwarded to the referring pulmonary physician.
Fellows must document the procedure in New Innovations procedure log within 48 hours. A detailed listing of **ALL** procedures performed by each fellow will be compiled every six months for discussion at the semiannual evaluation meeting with the program director.

For all major morbidities and mortalities, the Director of the Bronchoscopy Service should be notified immediately.

Patients receiving IV conscious sedation must be monitored after the bronchoscopy for at least **one** hour. Outpatients must have someone drive them home.

The fellow performing the procedure will follow-up on final results from microbiology, cytopathology, surgical pathology, or other sources. Abnormal results should be communicated to the patient’s physician as soon as possible.

**Other Procedures**

A formal pulmonary consult or pulmonary attending evaluation should precede all pulmonary procedures. Chest tube placement, central lines, paracentesis, LP, and thoracentesis may be performed without the personal presence of the faculty when it is determined that the fellow is adequately trained and competent in the technique.

Advanced Pulmonary Procedures (APPs) include: EBUS, PleurX, thoracoscopy, rigid bronchoscopy, navigation bronchoscopy, tracheostomy, or any procedure that the faculty deems beyond the fellows’ current ability to perform safely. While it is encouraged for fellows to learn and gain some experience observing APPs, these procedures are **not required** by ACGME for PCCM fellowship education. Participation is not a guaranteed and participation/observation of these procedures should not interfere in your assigned clinical duties or core education.

**LONGITUDINAL OUTPATIENT CLINIC**

**Goals and Objectives**

The longitudinal outpatient clinic provides the primary setting for the fellow to demonstrate competence in patient care and medical knowledge of outpatient pulmonary medicine as part of the overall goals and objectives of the training program. Specific to this rotation:

Fellows will have a ½ day weekly occurring clinic a minimum of 30-36 months. Each fellow is responsible for seeing >4 patients during each ½ day session. Ideally, each fellow should see on average >6 to up to 8 patients during each ½ day session.

Patient Care: Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of pulmonary problems and the promotion of health related to the diagnosis, prevention, and control of pulmonary diseases.
Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of patients with pulmonary diseases.

Competencies:

- Demonstrate accurate, complete, and relevant history-taking, including family, genetic, psychosocial, and environmental histories. Demonstrate the ability to perform a comprehensive and accurate physical examination and demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for specific and targeted investigations pertaining to the patient’s complaints, and formulate a plan for management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA

- Demonstrate the ability to effectively present the results of a consultation orally and in writing and to defend the clinical assessment, differential diagnosis, and diagnostic and management plans. PTRMDPC, LSC/GA, CA

- Demonstrate proficiency in the management of outpatients with the following: obstructive lung diseases, including asthma, bronchitis, emphysema, bronchiectasis; pulmonary malignancy -- primary and metastatic; pulmonary infections, including tuberculous, fungal, and those in the immunocompromised host (e.g., human immunodeficiency virus-related infections); diffuse interstitial lung disease; pulmonary embolism and pulmonary embolic disease; pulmonary vascular disease, including primary and secondary pulmonary hypertension and the vasculitis and pulmonary hemorrhage syndromes; occupational and environmental lung diseases; iatrogenic respiratory diseases, including drug-induced disease and radiation induced injury; inhalation injury; pulmonary manifestations of systemic diseases, including collagen vascular disease and diseases that are primary in other organs; acute and chronic respiratory failure in obstructive lung diseases, and neuromuscular respiratory drive disorders; disorders of the pleura and the mediastinum; sleep disorders (including the recognition and differential diagnosis of common sleep symptoms, the effects of sleep on pulmonary diseases and treatments; long term sequelae of critical illness. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the following technical and interpretive skills: airway management; respiratory care techniques; the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and exercise studies; diagnostic and therapeutic procedures, including thoracentesis, endotracheal intubation, and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and drainage systems PTRMDPC, LSC/DO, ITE, LB, Objective Proficiency Assessment for Procedures

Teaching Environment
The fellow evaluates patients independently and develops an evaluation and management plan, then presents the case to the supervising faculty member who confirms key details of the history, physical exam, and data, and discusses the appropriate differential diagnosis and management options. All facets of patient care including prescriptions, requests for ancillary help, durable medical equipment requests or miscellaneous needs are the responsibility of the fellow.
Evaluation
Faculty will provide global assessments of fellow performance every six months and discuss the results verbally with the fellow at that time. Problem based learning modules will be used to improve performance. Chart audits will be performed quarterly by the program directors. Written and verbal multisource feedback from patients and nursing staff will be obtained every six months. All evaluations will be reviewed at the semiannual evaluation between the program director and the fellow.

Expectations for Advancement
Fellows are expected to increase their fund of subspecialty knowledge appropriately as assessed by the evaluation tools noted above as well as participation in the In Training Exam. Increased level of autonomy will be granted as a function of time and demonstrable competence. Following the progression of chronic diseases requires extended time. It is expected the fellow will be competent as an outpatient pulmonary disease specialist by the middle of the third year of training.

Operative Policies
Each fellow sees patients in a continuity clinic one half day per week for the three years of training. Fellows are supervised by a clinic attending assigned for one year on a rotating basis. Fellows are responsible for following up an all testing, orders, procedures, paperwork and medication needs of the patient in addition to responding appropriately to patient or provider questions that are routed via the EMR in basket. Paperwork and questions that are routed via the EMR in-basket (MUST be taken care of in a timely fashion, usually less than 2 business days). All clinic notes should be completed within 24 hours of seeing patients for faculty attestation.

MEDICAL INTENSIVE CARE ROTATION/TDCJ ICU ROTATION

Goals and Objectives
The medical intensive care and TDCJ ICU rotation provide the main setting for the fellow to demonstrate competence in patient care and medical knowledge of critically ill patients including medical, cardiac and surgical populations as part of the over goals and objectives of the training program. The medical ICU is run as a traditional academic medical team with a faculty, students and house staff. The TDC ICU offers the unique ability to demonstrate graduated autonomy in managing patients with faculty and advanced care practice providers. Specific to these rotations:

Patient Care: Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of the critically ill patient.

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of critically ill patients.

Competencies
- Demonstrate accurate, complete, and relevant history-taking, including family, genetic, psychosocial, and environmental histories, demonstrate the ability to perform a comprehensive and accurate physical examination and demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for specific and targeted
investigations pertaining to the patient’s complaints, and formulate a plan for management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA

- Demonstrate proficiency in the evaluation and management of critically ill patients with circulatory disorders; shock syndromes; cardiovascular diseases; sepsis and sepsis syndrome; hypertensive emergencies; acute and chronic respiratory failure; acute lung injury, including radiation, inhalation, trauma and the acute respiratory distress syndrome; acute metabolic disturbances (including over dosages and intoxication syndromes); multi-organ system failure; electrolyte and acid-base disorders; metabolic, nutritional, and endocrine effects of critical illness; and hematologic and coagulation disorders associated with critical illness. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the following critical care issues: management of the immunosuppressed patient; management of anaphylaxis and acute allergic reactions; hemodynamic and ventilatory support of patients with organ system damage in the post-operative period; the use of paralytic agents and sedative and analgesic drugs; detection and prevention of iatrogenic and nosocomial problems in critical care medicine; psychosocial and emotional effects of critical illness on patients and their families; and management of end of life issues and palliative care. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the evaluation and management of the special issues related to patients: with trauma; with neurosurgical emergencies; with disorders of the cardiovascular, respiratory, renal, gastrointestinal, genitourinary, neurologic, endocrine, hematologic, musculoskeletal, and immune systems as well as of infectious diseases; with critical obstetric and gynecologic disorders; and after discharge from the critical care unit. PTRMDPC, LSC/GA, ITE, CA

- Demonstrate proficiency in the following technical and interpretive skills: airway management; the use of a variety of positive pressure ventilatory modes, (including: initiation, maintenance, and weaning of ventilatory support; respiratory care techniques; and withdrawal of mechanical ventilatory support); the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; flexible fiber-optic bronchoscopy procedures in intubated and nonintubated patients; management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, and arterial blood gas analysis; diagnostic and therapeutic procedures, including thoracentesis, endotracheal intubation, and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and drainage systems; insertion of arterial, central venous, and pulmonary artery balloon flotation catheters; emergency cardioversion; interpretation of intracranial pressure monitoring; operation and interpretation of bedside hemodynamic monitoring systems; nutritional support; and quality improvement activities in the intensive care unit. PTRMDPC, LSC/DO, ITE, SIM

- Demonstrate experience (not proficiency) in the following: emergency cardioversion; thoracostomy tube insertion and drainage; percutaneous dilational tracheostomy; renal replacement therapy; and the examination and interpretation of lung tissue for infectious agents, cytology, and histopathology. PTRMDPC, LSC/DO

**Teaching Environment**

The MICU team consists of one faculty supervisor, fellow and house officers. The fellow will round with the faculty and house staff each day in the Jennie Sealy MICU. The TDC ICU team consists of one faculty supervisor, one fellow and advanced practice providers. Patients in the
TDCJ ICU include medical and cardiac patients as well as co-management of selected post-surgical patients including but not limited to neurosurgery, trauma, and cardiothoracic patients. Evaluation of patients and plan of care is developed in a multidisciplinary fashion with input from bedside nursing, respiratory therapy and clinical pharmacist in addition to medical staff. The faculty and fellow will review pertinent X-rays with the house staff, including chest X-rays and CTs, abdominal films, and head CTs. Fellows are responsible for coordinating care, adjusting the plan throughout the day as information becomes available, and perform or supervise procedures as needed. Faculty will direct overall care in conjunction with the fellow and remains responsible for the service.

MICU Multidisciplinary Discharge Planning Rounds: These are held each Wednesday at 1:00 p.m. in the MICU conference room. The fellow is expected to attend and moderate these sessions. The fellow is also required to attend the monthly Adult ICU Care Committee and the MICU/TDCJ ICU Operations Committee.

Evaluation
Supervising faculty utilizes direct observation and problem based learning modules to improve fellow performance in the ICU. Objective Proficiency Assessment for Procedures form is utilized to evaluate the satisfactory acquisition of ICU skills such as ventilator management. Multisource feedback from ICU personnel is obtained. Global assessment is completed at the end of the month by the supervising faculty and verbally reviewed with the fellow at the end of the month.

Expectations for Advancement
Fellows are expected to increase their fund of subspecialty knowledge appropriately as assessed by the evaluation tools noted above as well as participation in the In Training Exam. Increased level of autonomy will be granted as a function of time and demonstrable competence. The first year of training is focused on obtaining basic ICU skills. The second year will focus on more extensive exposure to critically ill patients in a variety of non-medical settings. In the third and final year, fellows are expected to be operating as competent intensivists by the end of the training year.

MICU and TDC ICU SERVICE OPERATING POLICIES

Fellow (minimum) duties
- Personally supervise or perform pulmonary artery catheterizations, intubations, and tube thoracostomies.
- Perform bronchoscopies as indicated with faculty present.
- Critical care ultrasonography
- Direct ventilator management.
- Interpret hemodynamic (PA catheter) data.
- Provide clinical support to housestaff as needed.
- Obtain literature with emphasis on critical care issues.
- Rounds begin at 0800 daily.
SURGICAL ICU AND CRITICAL CARE ROTATIONS

Goals
These rotations are structured to expose the trainee to other aspects of critical care that can assist them in broadening their exposure to other disciplines. A minimum of three rotations in addition to the mandatory surgical intensive care unit must be selected from the following list: adult/pediatrics burns ICU, pediatric ICU, complicated OB unit, dialysis service, trauma services, anesthesiology/O.R., cardiac catheterization, transplant, and ECMO rotations. Other rotations including infectious diseases service, nutrition service, thoracic imaging and echocardiography are encouraged. Goals and objectives are similar to the Medical ICU rotation and are topic specific related to the rotation.

Objectives
The specific objectives are determined by the individual service. Where possible, particularly in the ICU setting, the fellow is expected to participate in providing direct clinical care.

Teaching Environment
Teaching environment is service dependent and consist of a variety of techniques. Team approach is most common with daily rounds consisting of faculty, and house officers. Consult services are similar to the pulmonary service.

Evaluation
Rotation faculty evaluates fellows via global assessment and discusses the results at the end of the rotation. Chart review is utilized where possible. Acquisition of medical knowledge is assessed via the in training examination and board certification information where available. Fellows are required to fill out faculty and rotation evaluations as they do for divisional based rotations.

PULMONARY FUNCTION LABORATORY ROTATION

Goals and Objectives

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences as applied to the field of pulmonary function testing.

Competencies
- Demonstrate proficiency in the following technical and interpretive skills: pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and exercise studies.
- Demonstrate experience in inhalational challenge studies.

Teaching Environment
All fellows (with particular emphasis on first year fellows) will be provided access to formal American Thoracic Society guidelines for the performance and interpretation of all categories of pulmonary function testing (www.thoracic.org). During the assigned rotation, fellows will be expected to directly observe at least 30 spirometries; 20 lung volume measurements; and 20
diffusing capacity measurements in the American College of Pathology accredited Pulmonary Function Laboratory. Furthermore, the fellow on PF rotation is expected to be readily available during all non-invasive and invasive pulmonary exercise studies and inhalational challenge studies. Preliminary interpretation of PFTs will be performed by the fellow using the computer based Breeze software program. Fellows will then review their interpretation with the supervising faculty for feedback and corrections prior to finalization.

**Evaluation**

Evaluation is primarily through objective proficiency assessment for procedures form (DO) for PFT rotation. Problem based learning module will be used as the need arises. The total number of PFTs interpreted by the fellow will be tabulated by the software every six months for review at the semiannual evaluation. Global assessment will be utilized at the end of the rotation with verbal feedback to the fellow.

**SLEEP MEDICINE ROTATION**

**Goals and Objectives**

**Patient Care:** Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of sleep disorders and the promotion of health related to the diagnosis, prevention, and control of respiratory related sleep disorders.

**Medical Knowledge:** Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of patients with sleep disorders.

**Competencies**

- Demonstrate proficiency in the evaluation and management of the outpatient with sleep disorders (including the recognition and differential diagnosis of common sleep symptoms, the effects of sleep on pulmonary diseases and treatments, the utility and interpretation of cardiopulmonary monitoring, critical review of polysomnographic reports, and management of sleep-disordered breathing).

**Teaching Environment**

Fellows participate in the delivery of care under the clinical director of the Sleep laboratories and clinics. Fellows are expected to attend sleep clinics and participate in the interpretation of polysomnographies with the attending physician. Fellows are also expected to observe the performance of polysomnographies. Multiple sleep latency tests (MSLTs) are to be observed if possible.

**Evaluation**

Problem based learning module, and global assessment are the primary means of evaluation.
OTHER CLINIC ROTATIONS

Goals and Objectives

Patient Care: Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of pulmonary problems and the promotion of health related to the diagnosis, prevention, and control of pulmonary diseases in the outpatient setting.

Medical Knowledge: Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to the care of patients with pulmonary diseases.

Competencies:

- Demonstrate accurate, complete, and relevant history-taking, including family, genetic, psychosocial, and environmental histories. Demonstrate the ability to perform a comprehensive and accurate physical examination and demonstrate the ability to arrive at an appropriate differential diagnosis, outline a logical plan for specific and targeted investigations pertaining to the patient’s complaints, and formulate a plan for management and follow-up treatment of the patient. PTRMDPC, LSC/GA, CA

- Demonstrate the ability to effectively present the results of a consultation orally and in writing and to defend the clinical assessment, differential diagnosis, and diagnostic and management plans. PTRMDPC, LSC/GA, CA

- Demonstrate proficiency in the management of outpatients with the following: obstructive lung diseases, including asthma, bronchitis, emphysema, bronchiectasis; pulmonary malignancy -- primary and metastatic; pulmonary infections, including tuberculous, fungal, and those in the immunocompromised host (e.g., human immunodeficiency virus-related infections); diffuse interstitial lung disease; pulmonary embolism and pulmonary embolic disease; pulmonary vascular disease, including primary and secondary pulmonary hypertension and the vasculitis and pulmonary hemorrhage syndromes; occupational and environmental lung diseases; iatrogenic respiratory diseases, including drug-induced disease and radiation induced injury; inhalation injury; pulmonary manifestations of systemic diseases, including collagen vascular disease and diseases that are primary in other organs; acute and chronic respiratory failure in obstructive lung diseases, and neuromuscular respiratory drive disorders; disorders of the pleura and the mediastinum; sleep disorders (including the recognition and differential diagnosis of common sleep symptoms, the effects of sleep on pulmonary diseases and treatments; long term sequela of critical illness. PTRMDPC, LSC/GA, ITE

- Demonstrate proficiency in the following technical and interpretive skills: airway management; respiratory care techniques; the use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers, and incentive spirometry; management of pneumothorax (needle insertion and drainage system); pulmonary function tests to assess respiratory mechanics and gas exchange, including spirometry, flow volume studies, lung volumes, diffusing capacity, arterial blood gas analysis, and exercise studies; diagnostic and therapeutic procedures, including thoracentesis, endotracheal intubation, and related procedures; the examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid; chest tubes and
Teaching Environment
The goal of this rotation is to allow fellows an opportunity for focused exposure to outpatient populations in areas of interest to the trainee. On this rotation the fellow is available for urgent outpatient consults and spends one half day each week in the following clinics

**Texas Department of Criminal Justice Pulmonary Consult & Telemedicine Clinic.** This clinic provides tertiary Pulmonary diagnostic and treatment services to the TDCJ prison population. Common diagnoses encountered include pulmonary complications of AIDS, TB, COPD, sarcoidosis, and lung cancer.

**Pulmonary Vascular Disease Clinic:** Fellow will increase exposure to patients with pulmonary hypertension and other vascular diseases.

**Severe Asthma Clinic:** Fellow will have increased exposure to patients with severe asthma as well as difficult to treat asthma.

**Cardiothoracic Surgery Clinic:** Fellow will have increased exposure to patients with cardiothoracic conditions in need of evaluation for surgical intervention or post-surgical follow up.

**Interventional Pulmonary Clinic:** Fellows will have exposure to patients seen who require advanced pulmonary procedures for the diagnosis, evaluation and treatment of lung nodules/masses, pleural effusions, malignancy, pleural disease. (e.g. thoracoscopy, rigid bronchoscopy, and airway stents).

**Sleep Clinic**
As in the longitudinal clinics, teaching is done individually with a faculty member, on a case-by-case basis. The fellow evaluates patients independently and develops an evaluation and management plan, then presents the case to the supervising faculty member who confirms key details of the history, physical exam, and data, and discusses the appropriate differential diagnosis and management options. In the TDCJ clinics the fellow is also given the opportunity to share in the supervision and teaching of interns, residents, and medical students.

**Evaluation**
Supervising faculty will utilize global assessment and problem based learning module as needed. Acquisition of medical knowledge will be monitored via the in training examination and board certification scores when available. Chart audits will be performed when available. The global assessment will be filled out by the supervising faculty and reviewed with the fellow at the end of the rotation.
EVALUATION

See Evaluation Timeline for schedule of when and what evaluations are due.

See Evaluation Forms for specific information regarding expectations of fellows for each educational task.

See 6 month Feedback card used at each 6 month evaluation of fellows with the program director to discuss individual progress and future educational goals/needs and to assist with performance improvement plans.

Clinical Competency Committee (CCC)

Appointments: Drs. Zaidan, Duarte, Cardenas
Administrative attendance: Leslie Elgin, Program Coordinator
Description: committee appointed by the program director of clinical up of 3-4 faculty that act as an essential component of the evaluation process in graduate medical education. The CCC acts as advisory to the program director.

Responsibilities of the Clinical Competency Committee

- review all fellow evaluations semi-annually. These include multiple evaluator objective assessments of competence in patient care and procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice based;
- prepare and ensure the reporting of Milestones evaluations of each fellow semi-annually to ACGME; and
- advise the program director regarding fellow progress, including promotion, remediation, and dismissal

More detailed information can be found at
http://www.acgme.org/Portals/0/ACGMEClinicalCompetencyCommitteeGuidebook.pdf

Program Evaluation Committee (PEC) – Undertakes the Annual Program Evaluation

Members appointed by the program director but usually consists:
Chief fellow
Any fellow willing to participate
Program director and Associate program director,
Division Chief and at least 1 other Key Clinical Faculty

Responsibilities include meeting at least annually for:

- Review of annual faculty and fellow performance (current and graduate)
  - clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities, exams, written confidential evaluations by the fellows
- planning, developing, implementing, and evaluating educational activities of the program
• reviewing and making recommendations for revision of competency-based curriculum
goals and objectives
• addressing areas of non-compliance with ACGME standards; and
• reviewing the program annually using evaluations of faculty, fellows
• review graduating fellows % taking boards and first time pass rate (80% standard)
• Use the above information to document formal, systematic evaluation of the curriculum
at least annually, and is responsible for rendering a written, annual program evaluation
• annual program evaluation: a written plan of action to document initiatives to improve
performance, delineate how they will be measured and monitored; monitor progress in
achieving goals set forth in previous year’s action plan

FELLOWS’ SUMMATIVE EVALUATION – UPON PROGRAM COMPLETION

Provided by program director
- part of the fellow's permanent record; located and viewable via New Innovations
- documents the fellow's performance during the final period of education
- used to verify that the fellow has demonstrated sufficient competence to enter practice without
direct supervision
- completed at final annual review by PD with fellow, each will sign to acknowledge

The following are areas used by the clinical competency committee, program evaluation
committee, and program director to evaluate the program.

Competencies
1. **Patient Care** - Gather data; order diagnostic tests; interpret data; make
decisions; perform procedures; manage patient therapies; work with others to
provide patient-focused care.

2. **Medical Knowledge** - Fund of knowledge; active use of knowledge to solve
medical problems.

3. **Practice-Based Learning & Improvement** - Analyze practice performance and
carry out needed improvements; locate and apply scientific evidence to the care of
patients; critically appraise the scientific literature; use the computer to support
learning and patient care; facilitate the learning of other health care professionals.

4. **Interpersonal & Communication Skills** - Develop a therapeutic relationship
with patients and their families; use verbal and non-verbal skills to communicate
effectively with patients and their families; work effectively as a team member or
leader.

5. **Professionalism** - Demonstrate integrity and honesty; accept responsibility; act
in the best interest of the patient; demonstrate sensitivity to patients’ ethnicity, age,
and disabilities.
6. **Systems-Based Practice** - Demonstrate awareness of interdependencies in the health care system that affect quality of care; provide cost-effective care; advocate for quality patient care; work with hospital management and interdisciplinary teams to improve patient care.

**Assessment Methods**

1. **Clinical Performance Ratings** - Monthly, rotation, semi-annual and annual ratings of fellow performance

2. **Focused Observation and Evaluation** - Supervisor/attending observation of individual fellow-patient encounters, operations, specimen preparation, etc., and concurrent (same day) evaluation

3. **360 Assessments** - Evaluation by MDs (supervisors, fellows, medical students) and non-MDs (nurses, technicians, social workers, PAs) using the same or similar evaluation forms

4. **Evaluation Committee** - Evaluation of fellow performance in a small group discussion format, e.g., Evaluation Committee

5. **Structured Case Discussions** - An informal socratic methodology occurs during a fellow’s case presentation to his/her faculty to ascertain medical knowledge.

6. **Chart Audit** - Uses a fellow’s patient records to explore decisions made and patient management and documentation adequacy; is conducted "after the fact".

7. **Simulators/Simulations** - Fellows' performance of procedures on a simulator is evaluated; this may involve built-in evaluation by the simulator or observation and concurrent evaluation.

8. **Anatomic Models** - Fellows' performance of procedures on non-computerized, 3-dimensional models that replicate the properties of human anatomical structures is observed and evaluated concurrently

9. **Direct observation in clinical care** - Fellows are evaluated based on their performance on assigned responsibilities in patient care settings

10. **In-training Exams** - A multiple-choice exam developed by an external vendor

11. **Review of Case or Procedure Log** - Review of number of cases or procedures performed and comparison against minimum numbers required

12. **Fellow Project Report (Portfolio)** - Evaluation of fellow work products, such as reports of research studies, practice improvement, or systems-based improvement

13. **Other Portfolio** - Evaluation of fellow performance based on other work/performance products not included above, e.g., audiotapes, slide presentation
14. **Procedure skill evaluation** – checklist to evaluate basic procedure skills have been demonstrated.

15. **Educational presentations** - standardized evaluation of problem based learning cases and journal club presentations

**Educational Activities**

1. **Clinical Teaching** - teaching that occurs in the clinic, EDs, ORs, laboratories, or other medical settings and addresses issues related to fellows; current patient cases or clinical responsibilities.

2. **Clinical Experiences** - direct, hands-on clinical or patient care activities. This may include procedures, patient exams - both inpatient and outpatient.

3. **Performance Feedback** - information provided to a fellow that describes what (s)he has done well or poorly and provides specific guidance as to how performance might be improved; rotation specific, immediate after procedure or encounter, semi-annual and annual.

4. **Departmental Conferences, Lectures or Discussions** - formal, classroom instruction on a specific topic or method, led by one or more faculty, fellows, or staff, etc.

5. **Institutional Conferences, Lectures, or Discussions** - formal educational event involving institution-sponsored grand rounds, lectures, discussions, or workshops for fellows and/or faculty from multiple specialties; may be part of an institutional core curriculum (i.e. a set or course of learning activities arranged to impart knowledge and skills in fundamental domains, for example, communication skills, legal issues, ethics).

6. **Online Conferences, Lectures, or Discussions** - educational event involving non-institution-sponsored grand rounds, lectures, discussions, or workshops for fellows and/or faculty from multiple specialties; may be part of an institutional core curriculum (i.e. a set or course of learning activities arranged to impart knowledge and skills in fundamental domains, for example, communication skills, legal issues, ethics).

7. **Individual or Group Projects** - multi-step, multi-component tasks performed as vehicles for learning and applying knowledge and skills. Projects should result in a product. Examples are literature reviews, research, clinical quality improvement projects, and community health advocacy work.

8. **Computer Modules** - computer-based instructional units that present medical knowledge or clinical tasks, etc, that fellows work through independently. These modules are developed either by the institution/program or purchased from commercial vendors (SonoSim, Simbionix bronch mentor).
9. **Simulators/Simulations** - 3-dimensional, high tech, computerized devices that represent human anatomy and physiological responses (simulators) are used by fellows to learn procedures and operations. Or realistic patient care scenarios are generated using high tech/virtual reality devices (simulations). Fellows engage in the scenario as in real life to learn or apply clinical or teamwork skills.

10. **Anatomic Models** - non-computerized, 3-dimensional devices that replicate the properties of human anatomical structures are used by fellows to learn procedures.

11. **Role Modeling** - portrayal of desired professional behaviors, communication skills, or clinical skills, etc. by attending/supervising physician with the expectation that fellows will learn these behaviors and skills by observing the role models.

12. **Faculty Development** - formal educational activities in the form of workshops, discussions, or lectures which have as their goal improving faculty knowledge about the General Competencies and their ability to teach and assess the competencies
**ELECTIVE**

- The fellow will submit learning objectives that are **measurable** outcomes.

- Additionally, the fellow must present these objectives for feedback to a faculty member who will agree and is responsible for evaluating the fellow on the agreed upon outcomes at the rotation end.

- This must be completed **>2 weeks** in advance of the rotation start date and submitted to the program coordinator and director for approval.

Some past elective rotations:
- Echocardiography
- Anesthesia/Burns ICU
- Nephrology
- Research
- Sleep
- External rotations (see the program coordinator for how to apply and timeline)
SCHOLARLY ACTIVITIES

RESEARCH

Goals
The purpose is to provide extended exposure to research, either clinical or basic, to the trainee. The environment should be conducive to scholarly work with the ultimate goal of a publication in a peer-reviewed journal. This phase of training should be equally appropriate to the clinician as well as an aspiring academician/scientist. Research is conducted during rotations which are “clinically light” i.e. non-MICU. This comprises nearly 50% of the months during the fellowship program.

Objectives
The trainee is to fully participate in a collaborative research project. The fellow will submit learning objectives that are measurable outcomes. Additionally, the fellow must present these objectives for feedback to a faculty member who will agree and is responsible for evaluating the fellow on the agreed upon outcomes at the rotation end. This must be completed >2 weeks in advance of the rotation start date and submitted to the program coordinator and director for approval. The project is selected by the trainee in conjunction with the program director from a list of approved ongoing research. Duties will depend on the nature of the research and may include submission of institutional review board forms (human and animal), data gathering, statistical analysis and manuscript preparation. Submission of an abstract to the annual American Thoracic Society International Conference is expected. Accepted abstracts will be presented by the fellow with travel expenses paid by the division. A completed manuscript will be submitted for publication prior to completion of the fellowship.

Teaching Methods
Principle method is through the mentor student relationship with the primary investigator. In addition, extensive literature review (SDL) will be required to familiarize the trainee with the area of investigation. Supplemental instruction in experimental techniques is optional and available by enrolling in the General Clinical Research Center (GCRC) Tools and Techniques course.

Evaluation
The fellow will be required to review his/her research with the program directors at the semiannual evaluation and to present results of the research project at one of the monthly research conferences if appropriate. The Program Director will meet with each individual fellow to evaluate and review his/her research every six months. This will also be documented and placed in new innovations.

Guidelines regarding research projects

1. Fellows must meet with each divisional faculty member with an active research program to review available projects by January 1 of the second year of fellowship.

2. Fellows may wish to consider working with faculty who are not members of the Pulmonary Division. Prior to speaking with non-Pulmonary faculty about possible
participation in a research project, the Fellow must receive approval from the Program Director.

3. The Fellow must notify the Program Director and prospective research sponsor of his/her decision to work on a specific project by May 1st of their second year of Pulmonary Fellowship.

4. A detailed research protocol should be submitted to the Program Director at the start of the research.

5. All fellows are required to submit at least one abstract of their research to a national scientific meeting, preferably the American Thoracic Society International Conference. The Division will provide a stipend for travel expenses for fellows whose abstracts are accepted.

6. Fellows are encouraged to submit a manuscript for publication prior to finishing the program.

**QI PROJECT**

QI project will be identified during annual faculty and fellows meeting. These projects will be aligned with the expressed deficiencies in fellows’ education or patient care. The major objective of this project is to understand and apply the tools and techniques to make system changes and improve the process whether its fellows education or patient care. The faculty mentor will assist the fellow in identifying the project and team members. The team will meet on monthly basis to review the progress. Most projects should be completed in a 6-9 month cycle. Fellows will learn cause and effect analyses, process flow charts, pareto charts, how to implement interventions and measures outcomes. Each QI project will go through PDSA cycle. **All fellows must complete the 6 IHI modules on QI and patient safety.**
EDUCATION & EDUCATIONAL RESOURCES

DIVISION OF PULMONARY AND CRITICAL CARE MEDICINE CONFERENCES

Through conferences, fellows are expected to expand their knowledge of all aspects of pulmonary & critical care medicine, both practical and theoretical. Attendance >90% is expected and evaluated through sign in and participation. Divisional conferences are held 12-1pm Monday, Tuesday and Friday as part of the PCCM Fellowship Symposium. The symposium is held in the Pulmonary Conference Room 5.140 John Sealy Annex. Wednesday 12-1 pm is devoted to Thoracic Multidisciplinary Committee and Thursday 12-1 pm is devoted to internal medicine Grand Rounds. Computer with internet access and LCD projection is available on site.

The conferences will consist of the following:

1. **PULMONARY/CRITICAL CARE EDUCATIONAL CONFERENCE**

   This conference will cover core curriculum topics as required by ACGME guidelines, Multispecialty Task Force Recommendations on PCCM Competencies, and additional topics as selected by divisional faculty and fellows.

2. **CLINICAL CASE CONFERENCE**

   This conference has a variety of format including.
   
   a. **Radiology/Thoracic Imaging Conference:**
      
      Presentation, review and discussion of interesting CXRs, CT scans, V/Q scans and other imaging encountered on the clinical services.

   b. **Problem Based Learning Conference:**
      
      Presentation and discussion of 1) interesting case(s) seen on the Pulmonary Consult/Outpatient/ICU Service, 2) controversial issues, or 3) selected reviews. A fellow according to a predetermined schedule will present a PBL. PBLs will be presented in standard format with a specific PICO question. The fellow is responsible for obtaining formal evaluation by a faculty of their choosing who is present and given the evaluation form at the time of presentation. Submission of outstanding cases to journals for possible publication is encouraged. See PBL evaluation form.

   c. **Pathology Conference**
      
      Review of pathological materials/slides (TBB, TBNA, BAL pleural biopsy, etc.) by cytopathology faculty and/or surgical pathology faculty. Specimens obtained on the pulmonary consult/procedure service over the previous month as well as autopsy studies from the MICU will be reviewed. Material will be supplemented by slides from teaching files. Emphasis is on learning the important histopathological and cytopathological features of various disease entities. It also provides feedback regarding the adequacy of diagnostic biopsies.

   The fellow assigned to that conference will select cases. A list of cases to be reviewed should be limited to six or less and be provided to the pathologists between
one to two weeks prior to conference. Each case will be presented with a short history, and imaging studies if available.

d. **Morbidity and Mortality**

In morbidity and mortality conference complications, adverse outcomes and deaths on the clinical services will be discussed by the involved fellow. The etiology and causality of the adverse event along with the actions taken prior to, during and after the event will be reviewed and analyzed by the pulmonary staff. Where appropriate, areas for improvement will be identified and Quality Improvement processes initiated. Ongoing improvement projects will be reviewed.

e. **Monthly Mortality Review** - a multidisciplinary Monthly Mortality Review will take place. This will be to discuss ICU inpatient deaths during the month focusing on system failures and how to improve patient care. This conference will be the responsibility of the fellow that just completes monthly rotation on ICU inpatient service. This conference will be held at the end of a 4-week rotation or on the week after the 4-week rotation ends.

3. **RESEARCH CONFERENCE**

Presentation of ongoing research projects in the division. Presentations will be by faculty researchers (divisional or allied collaborators), research fellows, or invited speakers.

4. **PULMONARY/CRITICAL CARE JOURNAL CLUB**

Review of the current literature with emphasis on topics in pulmonary and critical care medicine from *Chest, Annals of Internal Medicine, the New England Journal of Medicine, Critical Care Medicine, the Journal of Applied Physiology, and the American Journal of Respiratory and Critical Care Medicine* among others. Fellows present articles with goals of literature review and critical appraisal of study design, methodology, and appropriateness of statistical analysis. Articles will be selected in coordination with the associate program director and distributed at least one week in advance of the conference via email.

5. **PROGRAM DIRECTOR AND FELLOW MEETING**

Monthly meeting with the program director to discuss issues related to the training program including adequacy of rotations, problems, opportunities or any area of concern.

6. **THORACIC MULTIDISCIPLINARY CONFERENCE**

Review of thoracic oncology cases submitted by faculty, fellows, and fellows. The goal is to work as a multidisciplinary team to discuss optimal diagnostic, management and treatment plans of care for each individual case.
DEPARTMENT OF INTERNAL MEDICINE CONFERENCES

1. INTERNAL MEDICINE GRAND ROUNDS

   Fellows are encouraged to attend at least 50% of the above conferences each academic year for three years while in the Pulmonary & Critical Care Fellowship Training Program.

2. DEPARTMENTAL M&M CONFERENCES

   Fellows are encouraged to attend at least 50% of the above conferences each academic year for three years while in the Pulmonary & Critical Care Fellowship Training Program.

MISCELLANEOUS EDUCATIONAL RESOURCES for PCCSM Fellows

UTMB PCCSM librarian webpage - http://guides.utmb.edu/pulmonary
   One stop location to access the most prominent PCCSM specific journals, textbooks, guidelines, multimedia and online resources. This is a free service available 24/7 by internet access. These are up to date subscriptions of the most recent publications.

UTMB librarian – webpage access. Provides assistance for study, research, manuscript preparation via literature search and reference management, etc.

EndNote Reference manager available online.

UTDOL - This is a free service available 24/7 by internet access.

PCCSM online learning dropbox – https://www.dropbox.com/sh/ro7iidt7vuk1kxk/AADnDsRMAZgvelwrGR48upGTa?dl=0
   Online video lectures, reading lists, and references for key articles viewed and vetted by faculty reviewing topics high yield for clinical practice and board review.

Brow zine for laptop/desktop, mobile device (phone or tablet)
   Free service to create, save, view journals available through the UTMB library for online or offline viewing.

Board review-
   Videos (2 sources) and questions (>500) available on the S: drive

CHEST and ATS membership dues provided
   Monthly online and print access to journals, podcasts, daily news headlines in PCCM.

IHI quality and patient safety online modules

SonoSim – comprehensive US curriculum, virtual US and case studies

ICU physiology in 1000 words series, podcasts of case discussions, lectures, learning modules http://www.heart-lung.org/1000.html
SUPERVISION, DUTY HOURS & ALERTNESS MANAGEMENT & FATIGUE MITIGATION

POLICY ON SUPERVISION

I. PURPOSE – To specify the supervision policy for fellows in pulmonary & critical care medicine at UTMB.

PCCM fellows are part of a team of providers caring for patients. The team includes an attending and may include other licensed independent practitioners, other trainees and medical students. PCCM fellows provide care in both the inpatient and outpatient setting. They may serve on a team providing direct patient care, or be part of a team providing consultative or diagnostic services. Each member of the team is dedicated to providing excellent patient care.

PCCM fellows evaluate patients, obtain the medical history and perform physical examinations. They are expected to develop a differential diagnosis and problem list. Using this information, they arrive at a plan of care or a set of recommendations in conjunction with the attending. They will document the provision of patient care as required by hospital/clinic policy. Fellows may write orders for diagnostic studies and therapeutic interventions as specified in the medical center bylaws and rules/regulations. They may interpret the results of laboratory and other diagnostic testing. They may request consultation for diagnostic studies, the evaluation by other physicians, physical/rehabilitation therapy, specialized nursing care, and social services. They may participate in procedures performed in the intensive care units or procedure suite under appropriate supervision. Fellows may initiate and coordinate hospital admission and discharge planning. Fellows discuss the patient's status and plan of care with the attending and the team regularly. Fellows help provide for the educational needs and supervision of any junior residents, non-physician providers and medical students. This includes supervision of residents and non-physician providers in the performance of appropriate procedures.

Fellows in Pulmonary and Critical Care Medicine provide direct patient care for patients in the intensive care unit, on the general hospital wards and in outpatient clinics. Fellows always provide care under the supervision of a single, clearly identified, attending physician.

As part of their training program, fellows are given graded and progressive responsibility according to the individual fellow’s clinical experience, judgment, knowledge, and technical skill. Each fellow will know the limits of his/her scope of authority and the circumstances under which he/she is permitted to act with conditional independence. Fellows are responsible for asking for help from the supervising physician (or other appropriate licensed practitioner) for the service they are rotating on when they are uncertain of diagnosis, how to perform a diagnostic or therapeutic procedure, or how to implement an appropriate plan of care.

II. DEFINITIONS - SUPERVISION TYPE

- **Direct Supervision**: on-site, shoulder-to-shoulder supervision, i.e. staff member is physically present and directly observes and guides fellow during patient care.

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• **Indirect Supervision:** a) with direct supervision immediately available – the supervising physician is physically within the hospital or other site of patient care and is immediately available to provide Direct Supervision. (within 10 – 15 minutes) b) with direct supervision available – the supervising physician is not physically present within the hospital or other site of patient care, but is immediately available by means of telephonic and/or electronic modalities and is available to come to the site of care in order to provide Direct Supervision.

• **Oversight** – the supervising physician is available to provide review of procedures/encounters with feedback provided after care is delivered.

COMPETENCIES are procedures or activities that the fellow can usually perform without direct supervision. The underlying patient condition and complexity of the procedure might dictate the need for direct supervision and physical presence of the attending physician.

ATTENDING PHYSICIAN: In the clinical learning environment, each patient will have an identifiable, appropriately-credentialed and privileged primary attending physician who is ultimately responsible for that patient’s care. The attending physician is responsible for assuring the quality of care provided and for addressing any problems that occur in the care of patients. The attending physician will be available to provide direct supervision when appropriate for optimal care of the patient and/or as indicated by this program policy. The availability and direct supervision provided by the attending to the fellow is expected to be greater with less experienced fellows and with increased acuity of the patient’s illness. The attending will notify the fellow he or she should be called regarding a patient’s status. In addition to situations the individual attending would like to be notified, the attending will include in his or her notification to residents all situations that require attending notification per program or hospital policy. The primary attending physician may at times delegate supervisory responsibility to a consulting attending physician if the consultant recommends and performs a procedure. The attending may specifically delegate portions of care to fellows based on the needs of the patient and the skills of the fellows and in accordance with hospital and/or departmental policies. The attending may also delegate partial responsibility for supervision of junior and senior residents to fellows assigned to the service, but the attending will assure the competence of the fellow before supervisory responsibility is delegated. Over time, the fellow is expected to assume an increasingly larger role in patient care decision making. The attending remains responsible for assuring that appropriate supervision is occurring and is ultimately responsible for the patient’s care. Fellows and attendings should inform patients of their respective roles in each patient’s care. The attending and fellow are expected to monitor competence of more junior residents through direct observation, formal ward rounds and review of the medical records of patients under their care. Faculty supervision assignments will be of sufficient duration to assess the knowledge and skills of each fellow and delegate to him/her the appropriate level of patient care authority and responsibility.

III. POLICY

The fellowship program in pulmonary critical care medicine at UTMB complies with policies on supervision as outlined by the ACGME (http://www.h2e-online.org/regsandstandards/jcahotoc.html#HR), ACGME (http://www.acgme.org/acWebsite/navPages/nav_320.asp). UTMB PCCM requires that attending
physicians (members of the Attending Medical Staff) actively supervise all residents and fellows. Supervision is documented in the medical record.

**Supervision of invasive procedures**
In a training program, as in any clinical practice, it is incumbent upon the fellow to be aware of his/her own limitations in managing a given patient and to consult a physician with more expertise when necessary. When a fellow requires supervision, this may be provided by a qualified member of the medical staff or by a resident who is authorized to perform the procedure independently. In all cases, the attending physician is ultimately responsible for the provision of care by residents and fellows. When there is any doubt about the need for supervision, the attending should be contacted.

The attending physician must:
1. Be available to the fellow in person or by telephone
2. Direct the care of the patient and provide supervision.
   a. The degree to which direct supervision is provided depends on the nature of the patient’s condition, the likelihood of major changes in the management plan, the complexity of care and the experience and judgment of the fellow being supervised.
   b. Direct supervision is always required for Pulmonary artery catheterization, Percutaneous tracheotomy, elective Endotracheal intubation, elective bronchoscopy, PleurX, EBUS, rigid and navigational bronchoscopy, pleural biopsy and percutaneous biopsy.
3. Fellows can (with Staff Member approval) perform certain procedures without direct supervision if they are among the procedures of fellows’ competencies such as:
   - Elective cardioversion, Paracentesis, Thoracentesis, Arterial line placement, Lumbar puncture, Central venous catheter insertion, Thoracostomy tube placement

**Emergency Procedures**

It is recognized that in the provision of medical care, unanticipated and life-threatening events may occur. The fellow may attempt any of the procedures normally requiring supervision in a case where death or irreversible loss of function in a patient is imminent, and an appropriate supervisory physician is not immediately available, and to wait for the availability of an appropriate supervisory physician would likely result in death or significant harm. The assistance of more qualified individuals should be requested as soon as practically possible. The appropriate supervising practitioner will be contacted and apprised of the situation as soon as possible.

**Supervision of Consults**
PCCM fellows provide consultation services. The attending of record is ultimately responsible for the care of the patient and thus will be available to provide supervision when for optimal care. The availability of the attending and supervisory fellows will be appropriate to the level of
training, experience and competence of the consult resident and is expected to be greater with increasing acuity of the patient’s illness. Information regarding the availability of attendings and supervisory fellows is available to residents, faculty members, and patients. PCCM fellows performing consultations on patients are expected to communicate verbally with their supervising attending at the time of the initial consultation and at least once daily for the duration of consulting services. Any fellow performing a consultation where there is credible concern for patient’s life or limb requiring the need for immediate invasive intervention MUST communicate directly with the supervising attending as soon as possible prior to intervention or discharge from the hospital, clinic or emergency department so long as this does not place the patient at risk. If the communication with the supervising attending is delayed due to ensuring patient safety, the fellow will communicate with the supervising attending as soon as possible. Fellows performing consultations will communicate the name of their supervising attending to the services requesting consultation.

**Supervision of Hand-Offs**
Hand-offs between clinicians occur in a variety of fashions depending upon the specific service. For all hand-offs involving the fellow, the fellow will be responsible for ensuring that the communication regarding each patient is sufficient. The fellow-fellow will have efficient hand-offs. Attending physicians will ensure that fellows are competent in communicating with team members in the handoff process and will provide either direct or indirect supervision depending upon the fellow’s level of training and communication skills.

**Circumstances in which Supervising Physician MUST be Contacted**
There are specific circumstances and events in which fellows must communicate with appropriate supervising faculty members. These circumstances vary depending on the specific rotation that the fellow is assigned to and are explicitly described on most. At a minimum, fellows will communicate with faculty members about decisions to implement comfort care or withdraw invasive support, news about unexpected patient deaths or decompensation, decisions about transfer of patients to another service or hospital, and prior to performing any invasive procedures that require direct or indirect supervision. If the attending physician does not respond in a timely fashion, the fellow may contact the program director or division chief.

**Fellow Competence & Delegated Authority**
The privilege of progressive authority and responsibility, conditional independence, and a supervisory role in patient care delegated to each resident will be assigned by the program director and faculty members. The PCCM supervising faculty and program director will evaluate each fellow’s abilities based on competency-based criteria. Competencies will be evaluated by direct faculty observation during clinical rotations, and the fellow will be rated as “needs attention”, “developing as expected”, or “ready for independent practice”. Areas that need attention will be identified by the program director and discussed with the fellow, and a remediation plan will be created.

**PROCEDURES/RESPONSIBILITIES**
A. Divisions must publish call schedules, and these must be prominently available, indicating the responsible faculty member.
B. Fellows as individuals must be aware of their limitations and are expected to function within graduated levels of responsibility and to communicate significant patient care issues to the
responsible attending faculty physician. Failure to do so may result in the removal of the fellow from patient care activities.

C. The Program Director is responsible for adequate supervision as outlined in this policy and is responsible for implementation of changes if needed.

**DUTY HOURS**

1. UTMB and all residency programs it sponsors are committed to abiding by Duty Hour Standards set by ACGME and responsible for:
   a. Promoting patient safety and Fellow well-being and to providing a supportive educational environment;
   b. Ensuring that the learning objectives of the programs are not compromised by excessive reliance on Fellows to fulfill service obligations;
   c. Ensuring that Fellows’ education and clinical training have priority in the allotment of Fellow’s time and energy;
   d. Ensuring that duty hour assignments recognize that faculty and Fellows;
   e. Providing guidelines for Alertness Management and Fatigue Mitigation to all fellows/fellows at the annual house staff orientation and located also on the GME web site.

2. The House Staff Sleep Rooms are available at all times for fellows too fatigued to drive home. If they choose to use the sleep rooms after completion of duty, it will not count towards their duty hours.

The ACGME Policy on Fellow Supervision and Duty Hours is as follows. Fellows are also to refer to the program specific policies on Fellow Supervision, Duty Hours, and Alertness Management and Fatigue Mitigation, where applicable.

**Fellow Duty Hours**

1. **Maximum Hours of Work per Week:**

   Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities and all moonlighting.

1a) **Duty Hour Exceptions:**

   A Review Committee may grant exceptions for up to 10% or a maximum of 88 hours to individual programs based on a sound educational rationale.

1a.1) In preparing a request for an exception, the program director must follow the duty hour exception policy from the ACGME Manual on Policies and Procedures.

1a.2) Prior to submitting the request to the Review Committee, the program director must obtain approval of the institution’s GMEC and DIO.
2. **Moonlighting:**

2a) Moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational program. Fellows must report all moonlight shifts to the PD.

2b) Time spent by fellows in Internal and External Moonlighting (as defined in the ACGME Glossary of Terms) must be counted towards the 80-hour Maximum Weekly Hour Limit.

3. **Mandatory Time Free of Duty:**
Fellows must be scheduled for a minimum of one day free of duty every week (when averaged over four weeks). At-home call cannot be assigned on these free days.

4. **Maximum Duty Period Length:**
Duty periods of fellows may be scheduled to a maximum of 24 hours of continuous duty in the hospital. Programs must encourage fellows to use alertness management strategies in the context of patient care responsibilities. Strategic napping, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m., is strongly suggested.

It is essential for patient safety and fellow education that effective transitions in care occur. Fellows may be allowed to remain on-site in order to accomplish these tasks; however, this period must be no longer than an additional four hours.

Fellows must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.

In unusual circumstances, fellows, on their own initiative, may remain beyond their scheduled period of duty to continue to provide care to a single patient. Justifications for such extensions of duty are limited to reasons of required continuity for a severely ill or unstable patient, academic importance of the events transpiring, or humanistic attention to the needs of a patient or family.

Under those circumstances, the fellow must:

- appropriately hand over the care of all other patients to the team responsible for their continuing care; and,
- document the reasons for remaining to care for the patient in question and submit that documentation in every circumstance to the program director.

The program director must review each submission of additional service, and track both individual fellow and program-wide episodes of additional duty.
5. **Minimum Time Off between Scheduled Duty Periods:**
Fellows must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods.

This preparation must occur within the context of the 80-hour, maximum duty period length, and one-day-off-in-seven standards. While it is desirable that fellows have eight hours free of duty between scheduled duty periods, there may be circumstances [as defined by the Review Committee] when these fellows must stay on duty to care for their patients or return to the hospital with fewer than eight hours free of duty.

Circumstances of return-to-hospital activities with fewer than eight hours away from the hospital by fellows must be monitored by the program director.

6. **Maximum In-House On-Call Frequency**
Fellows must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period).

7. **At-Home Call**

7a) Time spent in the hospital by fellows on at-home call must count towards the 80-hour maximum weekly hour limit. The frequency of at-home call is not subject to the every-third-night limitation, but must satisfy the requirement for one-day-in-seven free of duty, when averaged over four weeks.

At-home call must not be so frequent or taxing as to preclude rest or reasonable personal time for each fellow.

7b) Fellows are permitted to return to the hospital while on at-home call to care for new or established patients. Each episode of this type of care, while it must be included in the 80-hour weekly maximum, will not initiate a new “off-duty period”.

8. **Transitions of Care**

- Programs must design clinical assignments to minimize the number of transitions in patient care.
- Sponsoring institutions and programs must ensure and monitor effective, structured hand-over processes to facilitate both continuity of care and patient safety.
- Programs must ensure that fellows are competent in communicating with team members in the hand-over process.
• The sponsoring institution must ensure the availability of schedules that inform all members of the health care team of attending physicians and fellows currently responsible for each patient’s care.

• To ensure quality and safety of patient care when transfer of responsibility occurs during duty hour shift changes and other scheduled or unexpected circumstances, fellows participate in face to face hand-off process. All patient sign-outs are conducted in an area to ensure patient confidentiality and lack of distraction. No transitions are performed in public areas where patient confidentiality may be compromised. This is an interactive process of passing specific, essential patient information from one caregiver to another and occurs regularly under the following conditions:
  • Change in level of patient care, including inpatient admission from an outpatient procedure or diagnostic area or ER and transfer to or from a critical care unit.
  • Temporary transfer of care to other healthcare professionals within procedure or diagnostic areas
  • Discharge, including discharge to home or another facility such as skilled nursing care
  • Change in provider or service change, including change of shift for nurses, resident sign-out, and rotation changes for residents. The use of an electronic or sign-out board located in the resident work room are always referred to during the hand over process. They are used to facilitate the transition of care as well as to provide visibility of the sign-out process to senior residents, fellows and attendings.

The transition process should include, at a minimum, the following information:
  • Identification of patient, diagnosis and current status/condition of patient
  • Recent events, including changes in condition or treatment, current medication status, recent lab tests, allergies, anticipated procedures and actions to be taken.
  • Changes in patient condition that may occur requiring interventions or contingency plans

Professionalism, Person Responsibility/Well Being and Patient Safety

1. Programs and sponsoring institutions must educate fellows and faculty members concerning the professional responsibilities of physicians to appear for duty appropriately rested and fit to provide the services required by their patients.

2. The program must be committed to and responsible for promoting patient safety and fellow well-being in a supportive educational environment.

3. The program director must ensure that fellows are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs.

4. The learning objectives of the program must:

  4a) be accomplished through an appropriate blend of supervised patient care responsibilities, clinical teaching, and didactic educational events; and,

  4b) not be compromised by excessive reliance on fellows to fulfill non-physician service obligations.
5. The program director and institution must ensure a culture of professionalism that supports patient safety and personal responsibility. Fellows and faculty members must demonstrate an understanding and acceptance of their personal role in the following:

   5a) assurance of the safety and welfare of patients entrusted to their care;
   5b) provision of patient- and family-centered care;
   5c) assurance of their fitness for duty;
   5d) management of their time before, during, and after clinical assignments;
   5e) recognition of impairment, including illness and fatigue, in themselves and in their peers;
   5f) attention to lifelong learning;
   5g) the monitoring of their patient care performance improvement indicators; and,
   5h) honest and accurate reporting of duty hours, patient outcomes, and clinical experience data.

6. All fellows and faculty members must demonstrate responsiveness to patient needs that supersedes self-interest. Physicians must recognize that under certain circumstances, the best interests of the patient may be served by transitioning that patient’s care to another qualified and rested provider.

**Alertness Management/Fatigue Mitigation**

1. Faculty and Fellows must attend a conference dedicated to the following:

   1a) recognize the signs of fatigue and sleep deprivation;
   1b) alertness management and fatigue mitigation processes; and,
   1c) adopting fatigue mitigation processes to manage the potential negative effects of fatigue on patient care and learning, such as naps or back-up call schedules.

   - examples of such processes include a lottery system for backup call or service duties and utilizing power naps

2. The program has a process through effective transitions of care to ensure continuity of patient care in the event that a fellow may be unable to perform his/her patient care duties

3. The sponsoring institution provides adequate sleep facilities for fellows who may be too fatigued to safely return home.
GENERAL DIVISIONAL POLICIES

LEAVE POLICY

1. NON-CONFERENCE LEAVE: Fellows must obtain prior approval from the program director for planned leave, conferences, courses, or any “Out of Office” activity that is UTMB work-related. Leave requests must be completed and approved by the program director at least 1 week prior to scheduled date of leave. All clinical duties (call, rotation, clinics etc.) must be covered by another fellow. Vacation/elective leave can be taken in non-core rotations. Core rotations are: MICU, consult/procedures. In the event vacation needs to be taken during these rotation times, it is the fellows’ responsibility to switch rotation with another fellow so that leave is not occurring during a core rotation.

2. CONFERENCE/EDUCATIONAL LEAVE: Fellows must obtain approval >30 days prior to any conferences the fellow is requesting division academic support/reimbursement (see ACADEMIC SUPPORT section below). Any travel arrangement/expenses (airfare, hotel, leave, etc.) made before obtaining prior written leave approval by the program director is the responsibility of the fellow.

3. VACATION/ELECTIVE TIME OFF

During the first two years of fellowship, if new to UTMB, a fellow will earn 8 hours of vacation and 8 hours of sick leave each month. During the third year of fellowship, you will earn 9 hours of vacation and 8 hours of sick leave per month. If you are a transfer from another area at UTMB then vacation and sick leave hours earned will vary depending upon the number of years you have been here at UTMB.

Per ABIM policy, if in a three-year fellowship program, you are allowed to take 30 days each year of fellowship (if work schedule permits) which include vacation and sick time. Holidays worked and holidays taken on actual holiday as well as attending outside UTMB conferences are not counted towards this 30 day allowance. Fellows will also be allowed to take six days to interview for future employment which usually begins towards the end of their 2nd year and during 3rd year of fellowship. These interview days will not be counted against you. These will be counted as a UTMB working day. If you exceed the six days allowed for future job interviews, you will need to use your own vacation or holiday time earned if available.

4. ALTERNATE HOLIDAY

See IHOP for requesting approved alternate holiday. This must be submitted at least 1 week prior to taking the holiday and include the approved proposed work on an alternate holiday. This must be approved by the Program Director.
5. TERMINAL LEAVE

Terminal Leave is a vacation type that can be granted at the end of training that allows the fellow to use vacation/holiday earned for the last few days of training. The Program Director will determine if Terminal Leave will be permitted and the number of fellows that can utilize Terminal Leave is at the sole discretion of the Program Director. Once it has been determined if the fellow qualifies for Terminal Leave, the maximum number of work days that can be granted is up to 5 working days. This will depend on leave balance status and possible other factors as well. UTMB and GME Exit requirements must be met prior to taking Terminal Leave.

ACADEMIC SUPPORT

The division will pay for two national society dues. e.g. American Thoracic Society and American College of Chest Physicians (Chest). The division will help with funding support up to $1500/year maximum based on funding availability for presentation of research at approved national meeting.

CALL SCHEDULE

Call is on average every fourth night, home call, for first year fellows. Second and third year call is divided evenly and is approximately every 7 days. Fellows will be contacted by ICU residents with all ICU admissions. Fellows will come in for unstable ICU patients or emergency pulmonary consultation. Back up will be the on-call faculty. If unable to contact the on-call faculty, Dr. Gulshan Sharma is available at home or on cell phone (832-221-3377).

MOONLIGHTING

1. Because residency education is a full-time endeavor, the program director ensures that moonlighting does not interfere with the ability of the fellow to achieve the goals and objectives of the educational program. All moonlighting activity must be approved by the program director. The director can disallow moonlighting if it is felt to interfere with the fellow’s education.

2. The program director complies with the sponsoring institutions written policies and procedures regarding moonlighting, in compliance with institutional Requirements.

3. Moonlighting that occurs within the residency program and/or the sponsoring institution or the non-hospital sponsor’s primary clinical site(s), i.e., internal moonlighting, is counted toward the 80-hour weekly limit on duty hours.

4. DIVISION SPECIFIC: Moonlighting is authorized only from Friday evening to Sunday afternoon unless the following day is a holiday or vacation day. This needs to be monitored. Moonlight shifts should be reported to the PD.
5. **DIVISION SPECIFIC:** Under no circumstances is a person allowed to moonlight while assigned to any duty including home call or research. Violation will result in immediate suspension of moonlighting privileges and possible further disciplinary action.

**OVERSIGHT**

1. Back-up support systems are provided when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create fellow fatigue sufficient to jeopardize patient care. If these issues arise, the chief fellow should be notified. The chief fellow in coordination with the division director will mobilize resources to mitigate the problem.

**PROFESSIONALISM**

1. Members of the Division are expected to conduct themselves in a professional manner at all times.
2. All fellows are expected to be on campus at 0800 and remain on site until at least 1700, M-F.
3. Faculty and fellows are responsible for ensuring appropriate coverage of all their clinical duties during absences such as vacation, administrative leave, and illness.
4. Scheduled presentations/lectures should be canceled or delayed only under **extraordinary** circumstances.
5. Divisional members are expected to arrive on time for scheduled conferences unless an emergency occurs.

**SUGGESTED GUIDELINES: APPROPRIATE USE OF SOCIAL NETWORKING SITES**

Social networking websites provide unique opportunities for colleagues to get to know each other, share experiences, and keep in contact. As with any public forum, it is important that users of these sites are aware of the risks of using these sites and act in a manner that does not embarrass them or their employer and that does not make patient information publicly available. Following are guidelines to assist house staff in safely using these sites.

**Personal Privacy:**

Recommendations are:

Set your profiles on social networking sites so that only those individuals whom you have provided access may see your personal information. “Untag” yourself in photos that are posted to these sites by other individuals, especially if these photos depict you in what may be construed as compromising situations.

Consider having a personal page for your friends and a professional page for colleagues to use; inform those people with access to your professional page that this is not a forum for “personal” photos or comments.
Be aware of the security and privacy options available to you at any site where you post personal information.

**Protection of Patient Information:**

Comments made on social networking sites should be considered the same as if they were made in a public place in the hospital (i.e. cafeteria, elevator, nurse’s station). This being said, it is recommend only using these sites in private areas such as the resident’s/fellow’s room, etc. and avoiding using these sites at the nurses station and other public areas

HIPAA rules apply online, and house staff may be held criminally liable for comments that violate HIPAA.

Remember that simply removing the name of a patient does not make them anonymous. Family members or friends of that patient or of other patients you are caring for may be able to determine to whom you are referring based on the context.

**Professionalism:**

Use of these sites can have legal ramifications. Comments made regarding the care of patients or that portray you or a colleague in an unprofessional manner can be used in court or other disciplinary proceedings.

It is recommended using discretion when choosing to log onto a social networking site at work. By no means should using these sites ever postpone or delay patient care needs (i.e. procedures, admissions, nurse calls).

Statements made under your profile are attributable to you and are treated as if you verbally made that statement in a public place.
Keep in mind that photographs and statements made are potentially viewable by future employers and fellowships.

House staff is encouraged to feel empowered to alert colleagues to unprofessional or potentially offensive comments made online to avoid future indiscretions. House staff may be subject to disciplinary actions within the department for comments that are either unprofessional or violate patient privacy.

It is discouraged to provide patients with access to your site.

Recall that you are representing your program when you log on to a site and make a comment or post a photograph.

**PCCM and GME Institutional Handbooks:**

In correlation with the PCCM Handbook, the PCCM Fellowship also abides by the GME Institutional Handbook that is distributed once a year to fellows. In addition, if institution or ACGME updates are added throughout the year, the revised GME Institutional Handbook will be
distributed to all fellows to review. The fellows will electronically sign that they have received the updated handbooks.

**DURATION OF FELLOWSHIP PROGRAM:** Three-Year Program

EVALUATION FORMS START ON NEXT PAGE
### EVALUATION FORMS

<table>
<thead>
<tr>
<th>Months</th>
<th>Bedside Procedure Skills</th>
<th>Bronchoscopy</th>
<th>Conference</th>
<th>Clinic</th>
<th>Scholarly Activity</th>
<th>Program Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>thoracentesis</td>
<td>novice cognitive assessment</td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>ITE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>central line</td>
<td>novice skills assessment</td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-12</td>
<td>tube thoracostomy</td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>ACGME annual eval</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td>Internal annual program eval</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-18</td>
<td>advanced beginner skills</td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>PLAN:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>assessment</td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td>Scholarly activity report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-24</td>
<td>endotracheal intubation</td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>QI Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-30</td>
<td>EBUS cognitive assessment</td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>UPDATE/FINAL:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EBUS skill assessment</td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td>Scholarly activity final</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-36</td>
<td></td>
<td>JC x 1</td>
<td>Clinic Chart audit x 1</td>
<td>QI Report- final</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PBL x 2</td>
<td>Clinic performance eval</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ongoing:**
- Up-to-date procedure logs (NI)
- Rotation specific evaluations (NI)
- Up-to-date duty or logs (NI)
Fellow Clinic Performance Evaluation

Fellow: ___________________________ Date of Review: ___________________________

Section 1: Quality of Patient Care *(to be completed by fellow)*

<table>
<thead>
<tr>
<th>Adherence to QA standards in COPD pts: List 10 COPD pts</th>
<th>Initials</th>
<th>DOV</th>
</tr>
</thead>
<tbody>
<tr>
<td>______________________________________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>______________________________________________________</td>
<td></td>
<td></td>
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<tr>
<td>______________________________________________________</td>
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<td>______________________________________________________</td>
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<tr>
<td>______________________________________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>______________________________________________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Of patients above, how many had the following completed and documented on the date of visit:

<table>
<thead>
<tr>
<th>Spirometry</th>
<th>/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhaler education</td>
<td>/10</td>
</tr>
<tr>
<td>CAT score</td>
<td>/10</td>
</tr>
<tr>
<td>Pulmonary rehabilitation participation addressed</td>
<td>/10</td>
</tr>
</tbody>
</table>

Section 2: Communication and Interaction *(to be completed by a clinic staff member)*

<table>
<thead>
<tr>
<th>Communication and interaction with fellow:</th>
<th>1  2  3  4  5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication and interaction with patients and families:</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>Patient satisfaction:</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>Timeliness:</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>Completion of administrative tasks:</td>
<td>1  2  3  4  5</td>
</tr>
</tbody>
</table>
Based on all of your encounters with her doctor, but he feels like her doctors attitude and behavior towards you? My doctor:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Unable to assess</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Spent enough time with me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Shows interest in my problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Asks details about my personal life, when appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Answers my questions well</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Examines me appropriately for my problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Treats me with respect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Helps me with my fears and worries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Talks with me about treatment plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I would be happy to be cared for by this doctor again</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I would like this doctor to care for my family member or close friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pulmonary Fellowship
Research/Scholarly Project Report

Project title: ______________________________

Fellow participants: ______________________________

Faculty Mentor: ______________________________

Date: ____________________

1. State the type of scholarly project (book chapter, outcomes research, original research, etc)?

2. Define the focus of the project.
   Select key areas/question(s) and select indicators/outcomes

3. Define how you collect data and/or sources.

4. Describe your timeline for project completion.

5. Briefly state what you found related to the question you were studying:

6. Describe the limitations of your project.

7. What did you gain from your project?
Pulmonary Fellowship
QI Project
Final Report

Project title: _____________________________

Fellow participants: ______________________________

Faculty Mentor: ________________________________

Date: __________________

1. State the practice based question that you evaluated in your project?

2. Define the parameters (who, what, time period) of your evaluation.

3. Attach data collection tool that you used to record data.

4. Briefly state what you found related to the question you were studying:

5. State what changes you implemented (or recommended) based on these finding.

6. What were the outcomes of your changes and conclusions?

7. Based on the above:
   a. Did you answer your question?
      
   b. If not, is there anything else you would do differently in your next practice based improvement study?

8. Briefly summarize what additional things could be done to improve your practice and how you would implement these changes.
<table>
<thead>
<tr>
<th>ID:</th>
<th>Name:</th>
<th>Age:</th>
<th>MRN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Admission:</td>
<td></td>
<td></td>
<td>Admitted From:</td>
</tr>
<tr>
<td>Date of Death:</td>
<td></td>
<td></td>
<td>D/C Unit:</td>
</tr>
<tr>
<td>Admit Dx:</td>
<td></td>
<td></td>
<td>D/C Service:</td>
</tr>
<tr>
<td>D/C Dx:</td>
<td></td>
<td></td>
<td>Admit Code Status:</td>
</tr>
<tr>
<td>Dx of Sepsis?</td>
<td>Y</td>
<td>N</td>
<td>Was pt transferred to a higher level of care? (at any point during admission)</td>
</tr>
<tr>
<td>Brief Synopsis of Case/Findings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category of Death:</td>
<td>Expected w/o opportunity (A)</td>
<td>Expected w/ opportunity (B)</td>
<td>Unexpected (C)</td>
</tr>
</tbody>
</table>

**Opportunities for Improvement**
- Appropriateness of transfer or admission
- Failure of treatment at outside facility
- Delay or error in diagnosis
- Delay or error in treatment
- Delay or issue with consultation
- Deterioration/death within 48 hrs of admission (appropriate level of care)
- Healthcare Associated Infection/Patient Safety Indicator
- Timely discussion of goals of therapy
- Inpatient hospice candidate
- Communication
- Other: ____________________________

**Disposition of Case**
- No further review necessary
- Refer to Peer Review
  - Dept/Division: ____________________________
  - Practitioner: ____________________________
  - Referral for: ____________________________
- Referral to other committee/dept
  - Specify: ____________________________
# Journal Club Evaluation

**Fellow: ___________________________  Date: ___________________________**

**Article Title: ___________________________**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Comment/Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description of Relevance:</strong></td>
<td></td>
</tr>
<tr>
<td>□ Appropriately lists article citation</td>
<td></td>
</tr>
<tr>
<td>□ Provides sufficient background information</td>
<td></td>
</tr>
<tr>
<td>□ Identifies trial purpose/importance</td>
<td></td>
</tr>
<tr>
<td>□ Identifies study question/objective(s)</td>
<td></td>
</tr>
<tr>
<td><strong>Overview &amp; Explanation of Methods:</strong></td>
<td></td>
</tr>
<tr>
<td>Appropriately explains:</td>
<td></td>
</tr>
<tr>
<td>□ Study design</td>
<td></td>
</tr>
<tr>
<td>□ Exclusion/inclusion criteria</td>
<td></td>
</tr>
<tr>
<td>□ Primary Outcome(s)</td>
<td></td>
</tr>
<tr>
<td>□ Study groups (if applicable)</td>
<td></td>
</tr>
<tr>
<td>□ Baseline characteristics</td>
<td></td>
</tr>
<tr>
<td><strong>Explanation of Discussion &amp; Analysis:</strong></td>
<td></td>
</tr>
<tr>
<td>Appropriately explains:</td>
<td></td>
</tr>
<tr>
<td>□ Statistical Analysis</td>
<td></td>
</tr>
<tr>
<td>□ Results</td>
<td></td>
</tr>
<tr>
<td>□ Conclusions</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Trial Evaluation &amp; Practice Application</strong></td>
<td></td>
</tr>
<tr>
<td>□ Critique of:</td>
<td></td>
</tr>
<tr>
<td>○ Strengths &amp; Limitations</td>
<td></td>
</tr>
<tr>
<td>○ Statistics</td>
<td></td>
</tr>
<tr>
<td>□ Addressed author’s conclusion, but formulates own conclusion as well</td>
<td></td>
</tr>
<tr>
<td>□ Explains impact and/or application to current clinical practice</td>
<td></td>
</tr>
<tr>
<td>□ Identifies further studies needed</td>
<td></td>
</tr>
<tr>
<td><strong>Ability to Answer Questions</strong></td>
<td></td>
</tr>
<tr>
<td>□ Answers logically and accurately</td>
<td></td>
</tr>
<tr>
<td>□ Ability to think under pressure</td>
<td></td>
</tr>
<tr>
<td>□ May attempt to answer if unsure, but clearly specifies uncertainty if necessary</td>
<td></td>
</tr>
<tr>
<td><strong>Overall Presentation Delivery:</strong></td>
<td></td>
</tr>
<tr>
<td>Organization and Preparedness</td>
<td></td>
</tr>
<tr>
<td>□ Accurate, concise, organized</td>
<td></td>
</tr>
<tr>
<td>□ Information delivered logically</td>
<td></td>
</tr>
<tr>
<td>Communication and Presentation</td>
<td></td>
</tr>
<tr>
<td>□ Enunciation</td>
<td></td>
</tr>
<tr>
<td>□ Confidence</td>
<td></td>
</tr>
<tr>
<td>□ Eye contact &amp; Rate of speech</td>
<td></td>
</tr>
<tr>
<td>□ Transitions</td>
<td></td>
</tr>
</tbody>
</table>

### Grading Scale

<table>
<thead>
<tr>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accomplished</strong></td>
<td><strong>Developing</strong></td>
<td><strong>Acceptable, but Needs Development</strong></td>
<td><strong>Needs Significant Development</strong></td>
<td><strong>Unacceptable</strong></td>
</tr>
<tr>
<td>□ Requires no prompting</td>
<td>□ Clarification needed with minor prompt</td>
<td>□ Clarification needed on several prompts</td>
<td>□ Requires directed questioning to prompt Information</td>
<td>□ Extensive clarification needed</td>
</tr>
<tr>
<td>□ Detailed discussion and highest level of understanding</td>
<td>□ Above average detail and understanding</td>
<td>□ Average detail and understanding</td>
<td>□ Detail with some understanding</td>
<td>□ Limited detail and minimal understanding</td>
</tr>
<tr>
<td>□ Organized, proficient delivery</td>
<td>□ Mostly organized &amp; clear delivery</td>
<td>□ Average delivery</td>
<td>□ Delivery below average</td>
<td>□ Instructor has to intervene for accuracy of information</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Delivery entirely inappropriate</td>
</tr>
</tbody>
</table>

**Evaluator: ___________________________**
Journal Club Why and How (Template)

11/2017
Why?

- longstanding tradition in residency training, dating back to William Osler in 1875.
- Improved reading habits
- Expands body of knowledge
- Facilitates acquisition of new skills
- Review, discuss and critique literature as a group
- improve residents’ critical appraisal of the literature *
- improve patient care by incorporating evidence into practice
Simple Do’s and Don’ts when starting

- Plan well ahead of time
- Develop a timeline to get read and think about your article (10 times!), background reading, methods research, preparing the actual presentation
- Send out journal article well in advance
- Choose your format: ppt, chalk and talk, etc
How to pick a paper for journal club

The paper should:

- interest you
- interest your colleagues
- not be a draft, in publication, or just published yesterday
- have been cited “a bunch” (check Google Scholar)
- report a new or improved informatics method, or be a novel application of an existing method
- not be too long
- not be too “domain heavy” because your audience may not be nearly as interested in this as you are
General thoughts/plan

- Plan your 30 minutes: roughly 20-25 minutes of talk with slides
- 5+ minutes of questions and discussion.
The journal club presentation has three parts

1. Background information and context
2. Their aims, methods, results, and conclusions
3. Your assessment and conclusions

Note that in parts 1-2 you adopt the authors’ perspective. You present your own views in part 3. Don’t mix part 3 with part 2.
Outline

1. Why this paper?
2. General description of medical/biological problem
3. Informatics issues that come up in solving this problem
4. Additional medical/biological/informatics background
5. Aims of paper
6. Methods employed
7. Results
8. Comparison/evaluation of methods
9. Conclusions (of author)
10. Assessment of paper
11. Concerns
12. Summary/Conclusions (by you)
Part 1: Why this paper?

- Why is this a good paper to read for journal club?
- How/why did you pick it?
Part 1: Describe the problem

- What is the application area of biology or medicine in which this work is presented?
- Discuss the biological or medical problem that drove the researchers to recognize potential for innovation?
- What is the significance of this problem?
Part 1: What informatics issues come up in solving these problems?

- **briefly describe the background of the study, prior literature, and the question the paper was intended to address**

- **What is the general problem being solved/evaluated?**

- **Review what others have done to solve it. This may require some background reading.**

- **Why did the authors decide to write this paper on this topic now?**

- **Review what the audience needs to know to understand the key contributions of the paper.**

- **In particular, don’t assume they know all the biomedical jargon, or the content of key databases.**
Part 2: Aims of the paper

• List the specific aims of the paper.
• Typically, there are three or fewer.
Part 2: Methods employed

- This is your central message, so will involve several slides.
- Describe the method in sufficient technical detail so that the audience can discuss and evaluate it.
  - Really emphasize/focus on the study design, analysis, and other key points that address the validity and generalizability of the results (e.g., participant selection, treatment of potential confounders, and other issues that are specific to each study design).
- It may be helpful to start with an overall “flow” slide that shows how data move through the various modules.
- Avoid slides filled with equations unless critical to the discussion.
Part 2: Results

• Show their main results slide(s).
• You may want to extract part of a complex figure/table, especially if the text or figure labels are in a small font.
Part 2: Comparison/Evaluation of Methods

- How did they evaluate their method?
- What reference standards did they use?
Part 2: What did the authors conclude?

- This is typically 1-3 bullet points.
- How did they summarize their key findings?
- Restate the research question.
Part 3: Your assessment of the paper-methodology

- Note that until this point in the talk, you have withheld your own comments and criticisms. Now you can shift to discussing:
- What are the major methodological (informatics, engineering) innovations in the paper?
- Are the methods described in sufficient detail?
- Could you figure out how to implement it from what they wrote?
- Did they evaluate the method appropriately?
- How general are the methods?
- Can they be used to solve other problems?
Part 3: Your assessment of the paper – significance

- Does their method actually solve at least part of the problem?
- Has the paper helped make a new contribution of knowledge?
- What is the significance of this solution?
- Was this paper published in the right journal to find the audience who should care the most about it?
- The study results should also be discussed in the context of prior literature and current clinical practice.
Part 3: Problems/concerns

- What do you like about the method, implementation, and evaluation, especially with reference to the content?
- Focus on factors that can affect the validity of the findings
- What are potential biases, confounders, and other issues that affect the validity or generalizability of the findings to clinical practice?
- What don’t you like?
- Did the authors make unrealistic simplifying assumptions?
- Address/bring up questions that remain unanswered
- Consider potential next steps: What might come next?
Part 3: Summary

- Do you accept all of the authors’ conclusions?
- Which ones do you accept?
References and recommended reading

- List citations for this paper and related background reading pertinent for understanding the context of the paper or its conclusions
Some general advice

- Imagine your typical audience member, and address the talk to them.
- Look for on-line reviews of the paper (e.g., Faculty of 1000).
- Look at papers that cited this paper; see what they did with the results.
- Put your critiques in your assessment section, not when you first present the method.
- Consider contacting the paper’s authors to clarify issues.
- Authors are usually flattered that someone bothered to read their paper. Also, this is an important networking skill.
Problem Based Learning Presentation Evaluation Form

Fellow: ____________________________ Date: __________________

PBL topic: __________________________

<table>
<thead>
<tr>
<th>Assess: Case presentation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accurately states the patient’s CC, HPI, ROS, PE, relevant results as available</td>
<td></td>
</tr>
<tr>
<td>• Details chronological course effectively</td>
<td></td>
</tr>
</tbody>
</table>

| Asks/Formulates a well-built, clinical, clear and answerable question. |
| Elements should include:                                      |
| • directly relevant to the problem at hand                     |
| • Phrase to facilitate searching for precise answer             |
| • Focused and well articulated                                   |
| • Contains all 4 PICO elements:                                |
|   o Population                                                   |
|   o Intervention                                                 |
|   o Comparison                                                   |
|   o Outcome                                                     |

| Acquires evidence |
| Elements should be identified:                                  |
| • search source/databases                                      |
| • parameters used to search question (MeSH, boolean, etc)      |
| • define any limits to search (age, language, etc)             |
| • evidence type (original research, systematic review, clinical practice guidelines, EBM journal articles, textbooks, etc.) |

| Appraises the evidence. Identifies:                            |
| • Level of evidence                                            |
| • How well study was performed (How Strengths & Limitations)   |
| • Addressed author’s conclusion, but formulates own conclusion as well |

| Application to case presentation |
| • Can the results from the evidence be applied to the individual patient |
| • Does the research include patient populations and treatments or interventions that are comparable to the patient’s setting? |
| • Effectively summarizes and applies information from the primary literature as it relates to the patient case |
| • Does the fellow combine the evidence and clinical expertise with compassion and patient values? |

<p>| Handout and/or Presentation Quality |
| • Delivers the presentation in a logical, organized sequence speaking clearly and making eye contact with audience. |
| • Includes at least 2 primary references and meets minimum criteria for presentation. |
| • Handout is properly referenced, professionally prepared, and free of errors. |
| • Responds to questions accurately and completely. |</p>
<table>
<thead>
<tr>
<th>Accomplished</th>
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<th>Needs Significant Development</th>
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<td>☐ Average detail and understanding</td>
<td>☐ Detail with some understanding</td>
<td>☐ Limited detail and minimal understanding</td>
</tr>
<tr>
<td>☐ Highest level of achievement</td>
<td>☐ Mostly organized &amp; clear delivery</td>
<td>☐ Average delivery</td>
<td>☐ Delivery below average</td>
<td>☐ Instructor has to intervene for accuracy of information</td>
</tr>
<tr>
<td>☐ Organized, proficient delivery</td>
<td></td>
<td></td>
<td></td>
<td>☐ Delivery entirely inappropriate</td>
</tr>
</tbody>
</table>

Faculty Signature ___________________________________________ Date ____________________
History of Present Illness
PMH, PSH, FH, SH, Meds, ROS, allergies
## Work-up?

- Hematology
- Chemistries
- LFTs
- Microbiology
- Serology
- Other Misc.

- Plain Films
- Other Radiology
- Endoscopy
- Biopsy
- Other Misc. Studies

Continue to Hospital Course
Liver Function Test
Biopsy
# 6 month Fellow Feedback and Report

**FELLOW:**

<table>
<thead>
<tr>
<th>PROFESSIONALISM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duty hours 1. NI completion _____ 2. violations: _____</td>
</tr>
<tr>
<td>Administrative responsibilities (timely, no complaints filed)</td>
</tr>
<tr>
<td>Moonlighting (no requirement, does not interfere with fellowship responsibilities)</td>
</tr>
</tbody>
</table>

**MEDICAL KNOWLEDGE**

<table>
<thead>
<tr>
<th>Board review questions (85% completion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITE scores/rank (national average or predicted pass)</td>
</tr>
<tr>
<td>Fellow participation in Scholarly Activity/Research (publication and/or presentation)</td>
</tr>
</tbody>
</table>

**PATIENT CARE**

<table>
<thead>
<tr>
<th>Procedure log numbers (100 bronchoscopies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill set questionnaire (CVC, intro bronch, thora yr1; advanced bronch, chest tube yr 2; EBUS yr3)</td>
</tr>
<tr>
<td>Average clinic patients seen per ½ day clinic (4-8)</td>
</tr>
<tr>
<td>Faculty rotation specific evaluations</td>
</tr>
</tbody>
</table>

**PRACTICE-BASED LEARNING & IMPROVEMENT/INTERPERSONAL/COMMUNICATION SKILLS**

<table>
<thead>
<tr>
<th>Clinic patient evaluation (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic chart note audits (2)</td>
</tr>
<tr>
<td>PBL evaluations (2)</td>
</tr>
<tr>
<td>Journal Club evaluations (2)</td>
</tr>
<tr>
<td>Milestones/CCC summative evaluation</td>
</tr>
<tr>
<td>Division Conference attendance M/T/F (85%)</td>
</tr>
<tr>
<td>Grand Rounds attendance- Th (85%)</td>
</tr>
<tr>
<td>MDC attendance-W (85%)</td>
</tr>
<tr>
<td>360 evaluations</td>
</tr>
</tbody>
</table>

**SYSTEMS-BASED PRACTICE**

| Fellow participation in Quality project/Patient Safety (publication and/or presentation) |
| Fellow stress including mental, emotional, or physical conditions which may be inhibiting fellow’s performance or learning |
| Future goals/career |

<table>
<thead>
<tr>
<th>Issues that need resolved before promotion</th>
<th>Issues that need resolved before graduation from fellowship</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
Fellow’s assessment of clinical training and goals.

Fellow’s assessment of education program/conferences.

Fellow’s global satisfaction with program.

Fellow suggestions

I acknowledge I received feedback on performance based and the information is accurate.

Fellow: ___________________________ Date: ________________

Program Director: ______________________ Date: ________________