I) Rotation Goals
   A) To manage the scope of critical care patients in the Intensive Care Unit
   B) To become an effective bedside and telemedicine Intensivist consultant

II) Education Objectives

A) Patient Care
   1) Demonstrate effective communication through the informed consent process for minor procedures
   2) Demonstrate caring and respectful behaviors when interacting with patients
   3) Gather essential and accurate information to evaluate patients with a variety of critical illnesses
      a) Obtain a comprehensive and accurate history of present illness for a variety of presentations of critical illness.
      b) In a comatose patient, the fellow should demonstrate the resourcefulness to utilize a number of information sources including patient’s family, friends and other health care providers.
      c) Identify historical facts that suggest an immediate threat to survival and be able to prioritize those needing immediate attention.
      d) Demonstrate physical examination skills appropriate to the presentation.
   4) Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment specifically required for the diagnosis and treatment of critical illness
      a) Interpret an electrocardiogram and appropriate laboratory tests that demand immediate attention.
      b) Integrate an interpretation of radiographic tests related to pulmonary diseases including chest roentgenograms, computed axial tomography scans, ventilation/perfusion studies and pulmonary angiograms to provide a therapeutic plan for the patient.
   5) Develop and carry out patient management plans in association with the supervising physician
      a) Apply the skills listed above to provide or confirm a clear and concise admission note including an assessment and therapeutic plan. If the evaluation is made as the result of a consult, a consultation note, which directly answers the question asked by the primary care provider, is required.
   6) Counsel and educate patients and their families
   7) Use information technology to support patient care decisions and patient education
   8) Demonstrate competency in all medical and invasive procedures performed on this rotation
9) Demonstrate an ability to work with a variety of health care professionals to provide patient-focused care

10) Evaluation methods for this competency
   (a) Attending evaluation
   (b) Mini-CEX (to be arranged with attending)

B) Medical Knowledge
   1) Demonstrate an investigatory and analytic thinking approach to clinical situations by applying an evidence-based medicine principles
   2) Demonstrate a fundamental knowledge of the care of critical care medicine patients
      (a) The fellow will acquire knowledge (indications, contraindications, complications and limitations) of and competency in the performance of the following procedural skills:
         (i) Establishment of airway
         (ii) Maintenance of an open airway in a non-intubated, unconscious patient
         (iii) Ventilation by bag and mask
         (iv) Oral and/or nasotracheal intubation
         (v) Oxygen delivery and augmented ventilation
         (vi) Mechanical ventilation using pressure-cycled, volume-cycled and negative pressure mechanical ventilation
         (vii) Use of reservoir masks and continuous positive airway pressure masks for delivery of supplemental oxygen, humidifiers, nebulizers and incentive spirometry
         (viii) Ventilator support, liberation from the ventilator and respiratory care techniques
         (ix) Management of pneumothorax (needle aspiration and drainage systems)
         (x) Maintenance of circulation
         (xi) Arterial puncture and blood sampling
         (xii) Insertion of central venous, arterial and pulmonary artery catheters
         (xiii) Basic and advanced cardiopulmonary resuscitation
         (xiv) Cardioversion
         (xv) Diagnostic and therapeutic procedures including thoracentesis, pleural biopsy, flexible fiberoptic bronchoscopy and related procedures
         (xvi) Calibration, operation and interpretation of data from hemodynamic recording systems
         (xvii) Examination and interpretation of sputum, bronchopulmonary secretions, pleural fluid/tissue, and lung tissue for infectious agents; cytology and histopathology
   
3) Evaluation methods for this competency
   (a) Attending evaluation
   (b) Chart-stimulated recall sessions

C) Practice-based Learning and Improvement
   1) Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
2) Use information technology to manage information, access on-line medical information and support their own education
3) Demonstrate teaching of students, residents and other health care professionals
4) Evaluation methods for this competency
   (a) Attending evaluation
   (b) Chart-stimulated recall sessions
   (c) Performance on presentation at conference during the month

D) Interpersonal & Communication Skills
1) Create and sustain a therapeutic and ethically sound relationship with patients
2) Demonstrate effective listening skills
3) Elicit and provide information using effective nonverbal, explanatory, questioning and writing skills
4) Work effectively with others as a member or leader of a health care team
5) Demonstrate an ability to develop professional relationships with residents, students and other members of the health care team
6) Evaluation methods for this competency
   (a) Attending evaluation
   (b) Mini-CEX

E) Professionalism
1) Demonstrate respect, compassion, and integrity
2) Demonstrate a responsiveness to the needs of patients and society that supercedes self-interest
3) Demonstrate accountability to patients, society and the profession
4) Demonstrates a commitment to excellence and on-going professional development
5) Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent and business practices
6) Demonstrate sensitivity and responsiveness to patients’ culture, age, gender and disabilities
7) Evaluation methods for this competency
   (a) Attending evaluation
   (b) Evaluations from key consultants
   (c) Evaluations from ICU nurses, physician assistants and members of the multidisciplinary team
   (d) Mini-CEX

F) System-based Practice
1) Understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society
2) Practice cost-effective health care and resource allocation that does not compromise quality of care
3) Advocate for quality patient care and assist patients in dealing with system complexities
4) Evaluation methods for this competency
(a) Attending evaluation
(b) Evaluations from key consultants
(c) Evaluations from ICU nurses, physician assistants and members of the multidisciplinary team

III) Teaching Methods

A) Clinical experience
   1) Evaluate and manage all patients in the ICU
      (a) (Need definition of patients on the service and those not on the service)
   2) Write a daily progress note on all critical care patients on the ICU service
   3) Perform those ICU procedures expected of an intensivist, e.g.; chest tube placement, central line and arterial line placement, and intubation for mechanical ventilation
      (a) All invasive procedures require documentation in the medical record of procedural preparations including the consent process, confirmation that appropriate preparations have been made (Time Out), findings and complications.
   4) Perform all bronchoscopic procedures on patients on the ICU service.

B) Clinical Teaching
   1) Present or supervise resident presentation of clinical findings to the ICU attending daily on rounds
   2) Review ICU patient management daily

C) Performance Feedback
   1) Fellow and ICU attending physician will review these goals and objectives at the beginning of the rotation
   2) ICU attending physician will provide ad hoc feedback on a regular basis
   3) Fellow and ICU attending physician will meet and provide written and verbal feedback at the completion of the rotation.

D) Didactic Sessions
   1) Attend all conferences required of the intensivist program.
   2) The fellow will provide at least one didactic session to students and residents on the service covering a critical care medicine topic.

E) Self-Learning
   1) The fellow is expected to read the primary literature to gather evidence in regards to current ICU problems
   2) The fellow is expected to complete any readings assigned by the ICU attending physician
      (a) Read the appropriate material from a Critical Care Medicine source covering airway management, central line placement, hemodynamic monitoring and sedation and paralysis.

IV) Responsibilities
A) Fellow
   1) First Year
      (a) This rotation may be taken as a Critical Care elective
      (b) Supervise the evaluation and management including mechanical ventilation of each patient on the ICU service daily and confirm appropriate documentation.
         (i) Review daily all the primary findings for each new admission such as the physical exam, laboratory, consultations and x-ray studies with the residents and/or students. This process should be completed prior to Attending rounds. As the designee of the ICU Attending, the fellow will be expected to initiate discussion and decisions regarding patient care during this time, with emphasis on new or unstable patients, or those for whom an early decision is required for patient care.
         (ii) The fellow is responsible for supervision of care, and emphasis should be placed upon direct supervision when diagnosis, treatment or patient stability is unclear.
         (iii) Ensure that a critical care note is written each day prior to rounds on all patients on the ICU team. Use the pre-formatted progress note designed for this.
         (iv) Alert the ICU Attending about any changes in patients who are critically ill, for all deaths and for any potential problems with staff or with interactions with patients and their families.
         (v) Review all of the patients who are on the service with the nurses and residents. This can be accomplished by reviewing the daily goal sheet with the nurses and resident responsible for the individual patient.
         (vi) The fellow should have in-depth knowledge regarding the daily assessment and plan for each patient and should discuss these plans with the patients’ nurse, resident and student prior to Attending rounds. The fellow is not expected to anticipate what the Attending would do but is expected to formulate a reasonable plan and review it with the Attending if necessary prior to implementation.
         (vii) The fellow must expedite intervention if necessary and help the residents and students think through the reasoning behind the plan.
         (viii) Assure continuity of care during resident absences. This will include resident obligations such as clinic, in-service exams or illness. When necessary the fellow must assume or reassign the responsibility for the care of the resident’s patients in consultation with the attending.
         (ix) Facilitate ICU Attending Rounds. The fellow should work with the Attending to provide high quality teaching in a small group format. The fellow will organize, facilitate and co-direct the presentation and discussion of patients with the ICU Attending. The format for these rounds may vary, depending upon the team size, number and type of patients, and experience of the fellow and ICU Attending.
         (x) Communicate with patients and families about diagnoses and prognoses on an ongoing basis.
Alert the attending physician about patients who qualify for ongoing research protocols and participate in ongoing trials when possible.

(c) Be available when on-call, within five minutes, to respond to ICU staff (residents, nurses and/or respiratory care practitioners) regarding care for ICU patients

(d) Night Call to be determined by Rotation Director
   (i) Fellows will take at home call according to the schedule.
   (ii) The fellow will not be required to come in for all admissions, however, they must be called by the resident about all new admissions and on any unstable patients and will have to decide whether they need to come in based on the stability of the patient and the experience of the resident on call for the ICU.
   (iii) The only exceptions to these availability rules are illness, outpatient clinic obligations, or other arrangements previously made with the ICU Attending

(e) Perform all procedures on the ICU service or supervise those done by residents
   (i) Perform or directly supervise all invasive procedures and make sure that a time out is taken and documented. These include but are not limited to intubation, arterial line placement, central line catheter placement, chest tube placement and pulmonary artery catheter placement. If for some reason the fellow is not able to perform these duties, they must alert the Attending so that the Attending can come to supervise or arrange a surrogate. All bronchoscopies, chest tube placements and pulmonary artery catheter placements must be performed with the faculty in attendance at the bedside. The fellow must dictate a note for all procedures they perform. When a pulmonary artery catheter is placed, the fellow is responsible for dictating a procedure note that includes all pertinent pulmonary artery catheter data from the procedure. All notes and forms must be timed and dated. The fellow needs to document all procedures performed or supervised in their procedure log on New Innovations.
   (f) Obtain informed consent for all fellow-level procedures, eg bronchoscopy, chest tube thoracostomy, etc. and arrange for any ancillary support for the procedure.
      (i) Percutaneous tracheostomies must be scheduled with an ICU attending who has privileges for the procedure. The fellow should ensure that all necessary supplies are available in the patient’s room at the scheduled time of the procedure.
   (g) Provide didactic session(s) to students and residents on the ICU service
   (h) Conduct check-out rounds with the fellow and resident on-call each weekday and report off to the ICU attending physician
   (i) At the end of the month, the fellow will complete an evaluation of each ICU attending physician and one of the rotation

2) Third Year
   (a) The third year fellow has greater ICU experience than a first year fellow and is therefore expected to take on greater responsibility commensurate with that experience.
(i) The third year fellow should demonstrate leadership of the multidisciplinary ICU team, taking the initiative in solving system problems and anticipating necessary interventions to expedite patient care.

(ii) The third year fellow should take on a greater role in directing work rounds and contributing to teaching rounds with the attending.

(b) Supervise the evaluation and management including mechanical ventilation of each patient on the ICU service daily and confirm appropriate documentation.

(i) Review daily all the primary findings for each new admission such as the physical exam, laboratory, consultations and x-ray studies with any Residents and/or Students on the service. This process should be completed prior to Attending rounds. As the designee of the ICU Attending, the fellow will be expected to initiate discussion and decisions regarding patient care during this time, with emphasis on new or unstable patients, or those for whom an early decision is required for patient care.

(ii) The fellow is responsible for supervision of care, and emphasis should be placed upon direct supervision when diagnosis, treatment or patient stability is unclear.

(iii) Ensure that a critical care note is written each day prior to rounds on all patients on the ICU team. Use the pre-formatted progress note designed for this.

(iv) Alert the ICU Attending about any changes in patients who are critically ill, for all deaths and for any potential problems with staff or with interactions with patients and their families.

(v) Review all of the patients who are on the service with the nurses, and house officers. This can be accomplished by reviewing the daily goal sheet with the nurses and resident responsible for the individual patient.

(vi) The fellow should have in depth knowledge regarding the daily assessment and plan for each patient and should discuss these plans with the patients’ nurse, resident and student prior to Attending rounds. The third year fellow should be able to anticipate what the Attending would do and is expected to formulate a reasonable plan and review it with the Attending if necessary prior to implementation.

(vii) The fellow must expedite intervention if necessary and help the residents and students think through the reasoning behind the plan.

(viii) Assure continuity of care during resident absences if applicable. This will include resident obligations such as clinic, in-service exams or illness. When necessary the fellow must assume or reassign the responsibility for the care of the resident’s patients in consultation with the attending.

(ix) Facilitate ICU Attending Rounds. The fellow should work with the Attending to provide high quality teaching in a small group format. The fellow will organize, facilitate and co-direct the presentation and discussion of patients with the ICU Attending. The format for these rounds may vary, depending upon the team size, number and type of patients, and experience of the fellow and ICU Attending.

(x) Communicate with patients and families about diagnoses and prognoses on an ongoing basis.
(xi) Alert the attending physician about patients who qualify for ongoing research protocols and participate in ongoing trials when possible.

c) Be available when on-call, within five minutes, to respond to ICU staff (residents, nurses and/or respiratory care practitioners) regarding care for ICU patients

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(g) Provide didactic session(s) to students and residents on the ICU service
(h) Conduct check-out rounds with the fellow and resident on-call each weekday and report off to the ICU attending physician
   (i) At the end of the month, the fellow will complete an evaluation of each ICU attending physician and one of the rotation

B) Critical Care Medicine Attending
   1) Review these goals and objectives with the fellow at the start of the rotation along with any other expectations
   2) Provide adequate supervision for procedures performed by the fellow
   3) Provide instruction in the evaluation and management of ICU patients
4) Be available to cover for the fellow when he/she is unavailable to supervise the residents on the service.
5) Provide timely verbal feedback on fellow performance on an ongoing basis
6) Complete a written evaluation and provide verbal feedback at the completion of the rotation

C) Service
1) On Call Responsibility
   (a) Be available, in house, from 8:00 am to 5:00 PM except for officially sanctioned events
      (i) It is recommended that the fellow arrive in the ICU earlier than that to evaluate the patients and attend to problems.
      (ii) For unstable or decompensating patients it is imperative that the resident, fellow and attending be readily available to come to the bedside so that the highest quality of care can be delivered.
   (b) Take after hours call as assigned by the Rotation Director. Call may be altered by mutual agreement with the ICU attending physician
   (c) The fellow will receive a check-out report on each patient on the service from the physician going off-call and will give an updated check-out report to the physician coming on-call.
   (d) Fellows will be expected to see all new consults that will require urgent intervention, even if initially seen and evaluated by the resident.

2) Vacation
   (a) Vacation time must be arranged with the Rotation director prior to the start of the rotation, in conjunction with the program director.
   (b) Emergency leave may be requested after discussion with the Rotation Director or surrogate (ICU attending physician)

V) Method of Evaluation

A) Formative

1) The Critical Care Medicine Attending should give feedback throughout the rotation and a formal verbal evaluation should be given at the mid-point and at the end of the rotation
2) The ICU attending physician or rotation director must prepare a written evaluation of the fellow at the conclusion of the attending’s rotation. This will be done through New Innovations and a link will be provided to the rotation director prior to the end of the month.
   (a) This evaluation will assess the six general competencies as outlined by the ACGME and on the form provided.
   (b) The fellow should review the assessment personally. This is best done in the presence of the ICU attending physician.
3) At the conclusion of the fellow’s service period, he/she should complete an evaluation form assessing the quality of the rotation.

4) The Fellow should complete evaluation(s) of the teaching undertaken by the attending physician(s).

VI) Readings

A) Readings are from the ATS Reading List found at:

1) http://www.thoracic.org/sections/career-development/fellows-and-fellowships/ats-reading-list-intro.html