Internal Medicine Curriculum
Critical Care Rotation

Contact Person:  Dr. John Gunter

Educational Purpose
The critical care rotation is a one-month rotation in which the principles of critical care medicine and evaluation and treatment of critically ill patients are emphasized. Residents are required to complete three rotations during their three years of training; ideally, one rotation each year. Critical illness does not respect socioeconomic boundaries, however, many critically ill patients do present with additional complications of substance abuse or lack of timely medical care. Ethical issues concerning the intensity of care are often encountered. The appropriate environmental precautions and hazards are frequently discussed when isolation of patients is required. Aspects of care unique to the intensive care unit are also emphasized.

Teaching Methods
The critical care team generally consists of an upper level resident as well as an intern allowing the team to structure different tasks according to individual team member skills. The upper level residents teach interns; the attending intensivist teaches the entire team during didactic sessions as well as during daily rounds. Reading assignments are distributed based on rotation goals as well as particular disease entities encountered. During these rounds and conferences, the pathogenesis of conditions is reviewed and the particular skills needed for evaluation and management of critically ill patients are reviewed. The importance of including family members in these discussions and compassionate care for individuals is emphasized.

Disease Mix
All aspects of critical illness may be evaluated and managed by residents on this rotation. Particular emphases include:
A. Consultation and management of critically ill patients.
B. Ventilator and airway management.
C. Management of acute respiratory failure, including adult respiratory distress syndrome.
D. Systemic inflammatory response states, including sepsis.
E. Nutrition in the critically ill patient.
F. Interventions to decrease the risk of secondary complications in the critically ill patient.

Patient Characteristics and Types of Clinical Encounters
In this rotation, residents evaluate patients for whom consultation is requested in intensive care units. These patients generally manifest high illness acuity in a wide range of pulmonary, cardiac, neurologic and infectious problems. During this rotation, residents are excused from their outpatient continuity clinic in order to be involved continuously in the care of their patients. Resident supervision is constantly present in the hospital for
interns; attending supervision likewise is constantly present within the hospital and through daily team rounds.

**Procedures and Services**
Often include central line placement, thoracentesis, chest tube placement, bronchoscopy, and tracheotomy management.

**Reading List**
2. Executive Summary: Global Strategy For The Diagnosis, Management And Prevention Of COPD. January 2008
6. Recommended Text: The ICU Book by Paul Marino
7. Current literature as assigned by the faculty supervisor

**Website Resources:**
Use the following website resources to review the following topics:
- Acute Respiratory failure
- Shock
- Sepsis
- Weaning from mechanical ventilation
1. [http://www.learnicu.org/Quick_Links/Pages/default.aspx](http://www.learnicu.org/Quick_Links/Pages/default.aspx)
2. [http://www.uptodateinc.com/online/content/topic.do?topicKey=cc_medi/2523&selectedTitle=19&source=search_results](http://www.uptodateinc.com/online/content/topic.do?topicKey=cc_medi/2523&selectedTitle=19&source=search_results)
4. [http://www.thoracic.org](http://www.thoracic.org)

**Pathological Material and Educational Resources**
Residents are encouraged to review the results of diagnostic biopsies and therapeutic procedures. If an autopsy is performed on a patient for whom they have been providing consultation, they are encouraged to view the autopsy.

**Method of Evaluation of Resident Performance**
A. Attending evaluation at the end of the month.
B. Required completion of required reading list.
C. Completion of assigned learning topics.
D. Demonstrated competence in basic ventilator and airway management.
E. Faculty member observation of resident obtained history and exam
PGY 1 Residents are responsible
   - for gathering relevant patient data
   - performing and interpreting physical examination findings
   - perform basic procedures and interpret data
   - interpret laboratory tests
   - interpret basic radiographic studies

PGY-2 will have improved competence and demonstrate
   - improved data gathering and physical examination skills
   - improved knowledge
   - improved decision making
   - enhanced ability to counseling

PGY-3 will approach mastery and demonstrate the ability to function as consultant

To complete the Critical Care rotation, the resident must:
A. Receive satisfactory end of rotation evaluation by the supervising faculty member.
B. Complete assigned readings.
C. Attend all outpatient clinic activities (excluding scheduled time away, required clinics and emergencies).
D. Complete required case report abstracts and/or posters assigned by the supervising faculty member.

Objectives
The curriculum is designed to address learning objectives of the following Accreditation Council on Graduate Medical Education core competencies. Reference:

http://www.acgme.org/Outcome

“Every competency can be taught with every patient.” B. Joyce, 2006

PATIENT CARE
Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
Residents are expected to:
1. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
2. Gather essential and accurate information about their patients
3. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
4. Develop and carry out patient management plans
5. Counsel and educate patients and their families
6. Use information technology to support patient care decisions and patient education
7. Perform competently all medical and invasive procedures considered essential for the area of practice
8. Provide health care services aimed at preventing health problems or maintaining health
9. Work with health care professionals, including those from other disciplines, to provide patient-focused care

MEDICAL KNOWLEDGE
Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. Residents are expected to:
- demonstrate an investigatory and analytic thinking approach to clinical situations
- know and apply the basic and clinically supportive sciences which are appropriate to their discipline

PRACTICE-BASED LEARNING AND IMPROVEMENT
Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices. Residents are expected to:
- analyze practice experience and perform practice-based improvement activities using a systematic methodology
- locate, appraise, and assimilate evidence from scientific studies related to their patients’ health problems
- obtain and use information about their own population of patients and the larger population from which their patients are drawn
- apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- use information technology to manage information, access on-line medical information; and support their own education
- facilitate the learning of students and other health care professionals

INTERPERSONAL AND COMMUNICATION SKILLS
Residents must be able to demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their patients families, and professional associates. Residents are expected to:
- create and sustain a therapeutic and ethically sound relationship with patients
- use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills
- work effectively with others as a member or leader of a health care team or other professional group

PROFESSIONALISM
Residents must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. Residents are expected to:
- demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession; and a commitment to excellence and on-going professional development
• demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices
• demonstrate sensitivity and responsiveness to patients’ culture, age, gender, and disabilities

SYSTEMS-BASED PRACTICE
Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value. Residents are expected to:
• understand how their patient care and other professional practices affect other health care professionals, the health care organization, and the larger society and how these elements of the system affect their own practice
• know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources
• practice cost-effective health care and resource allocation that does not compromise quality of care
• advocate for quality patient care and assist patients in dealing with system complexities
• know how to partner with health care managers and health care providers to assess, coordinate, and improve health care and know how these activities can affect system performance
Critical Care Rotation Checklist (PGY-1): First Year Residents

Intern/Resident____________________________________  Month:________________

Supervising Faculty_________________________________  

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<th>Rotation Check List</th>
<th>Yes</th>
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<td>Completed assigned readings.</td>
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<td>Completed required case reports/abstracts/posters</td>
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<td>Performed at or above the expected PGY level. Please check one.</td>
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<td><strong>PGY-3 will approach mastery and demonstrate the ability to function as consultant</strong></td>
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<td>- Residents will initiate initial management for shock</td>
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<td><strong>B. Medical Knowledge</strong></td>
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<td>- Recognize acute respiratory failure</td>
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D. Interpersonal and Communication Skills
- Residents will communicate diagnosis, treatment plan and follow up care to patients and their families.
- Residents will appropriately notify attending and supervising residents of changes in the clinical status of patients.

E. Professionalism
- Residents will recognize the importance of patient preferences when selecting diagnostic and therapeutic options.
- Demonstrate ongoing commitment to self-directed learning.
- Residents will communicate with staff, primary team and all other consultants on the case.

F. Systems-Based Practice
- Residents will be able to develop, implement and evaluate treatment plans for patients that include determining when to obtain consultations.
- Demonstrates constructive skepticism.
- Advocates for quality patient care and assists patients in dealing with health system complexity.

Resident Signature_____________________________ Date ____________

Supervising Faculty ________________________________ Date ____________


All items must be completed for rotation credit and checklist returned to the Department of Medicine.
Critical Care Rotation Checklist (PGY-2): Second Year Residents

Intern/Resident _____________________________________ Month: ________________

Supervising Faculty__________________________________

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**PGY 1 Residents are responsible**
- for gathering relevant patient data
- performing and interpreting physical examination findings
- perform basic procedures and interpret data
- interpret laboratory tests
- interpret basic radiographic studies

**PGY-2 will have improved competence and demonstrate**
- improved data gathering and physical examination skills
- improved knowledge
- improved decision making
- enhanced ability to counseling

**PGY-3 will approach mastery and demonstrate the ability to function as consultant**

Reviewed and met the core competencies as outlined. Please give at least one additional example.

**A. Patient Care**
- Residents will obtain and document appropriate history taking, physical exam and laboratory interpretation skills for patients presenting with critical illness

**B. Medical Knowledge**
- Applies clinical epidemiologic and social-behavioral science knowledge to the care of the patient
- Recognize acute respiratory failure
- Recognize signs and symptoms of shock and is able to differentiate and diagnose the different causes for shock
- Understands evaluation and management of septic shock
- Understands basic ventilator modes

__________________________________________________
### C. Practice Based Learning
- Residents will develop and implement treatment plans by utilizing appropriate information systems and resources to help manage critical illnesses
- Residents will organize clinical data of the critically ill patients
- Undertakes self-evaluation with insight and initiative

### D. Interpersonal and Communication Skills
- Residents will communicate diagnosis, treatment plan and follow up care to patients and their families
- Residents will appropriately notify attending physicians of changes in the clinical status of patients

### E. Professionalism
- Residents will recognize the importance of patient preferences when selecting diagnostic and therapeutic options.
- Demonstrate ongoing commitment to self-directed learning.
- Residents will communicate with staff, primary team and all other consultants on the case
- Commitment to ethical principles pertaining to the provision or withholding of care, patient confidentiality, informed consent, and business practices
- Organizes and supervises critical care teams appropriately

### F. Systems-Based Practice
- Residents will be able to develop, implement and evaluate treatment plans for patients that include determining when to obtain consultations
- Demonstrates constructive skepticism
- Advocates for quality patient care and assists patients in dealing with health system complexity
- Uses systematic approaches to reduce errors

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All items must be completed for rotation credit and checklist returned to the Department of Medicine.
Critical Care Rotation Checklist (PGY-3): Third Year Residents

Intern/Resident ____________________________ Month: __________

Supervising Faculty ____________________________

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<td>- Understands the nutritional needs of ICU patients</td>
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<td>- Spends time appropriate to the complexity of the problem</td>
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<td>- Recognize signs and symptoms of shock and is able to differentiate and diagnose the different causes for shock</td>
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<td>- Understands evaluation and management of septic shock</td>
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<td>- Understands basic principles of basic ventilator support</td>
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• Understands diagnostic and treatment principles of ventilator associated pneumonia
• Demonstrates competence in diagnosing and managing ARDS

C. Practice Based Learning
• Residents will develop and implement treatment plans by utilizing appropriate information systems and resources to help manage critical illnesses
• Residents will organize clinical data of the critically ill patients
• Undertakes self-evaluation with insight and initiative
• Displays initiative and leadership

D. Interpersonal and Communication Skills
• Residents will communicate diagnosis, treatment plan and follow up care to patients and their families
• Residents will appropriately notify attending physicians of changes in the clinical status of patients

E. Professionalism
• Residents will recognize the importance of patient preferences when selecting diagnostic and therapeutic options.
• Demonstrate ongoing commitment to self-directed learning.
• Residents will communicate with staff, primary team and all other consultants on the case
• Commitment to ethical principles pertaining to the provision or withholding of care, patient confidentiality, informed consent, and business practices

F. Systems-Based Practice
• Residents will be able to develop, implement and evaluate treatment plans for patients that include determining when to obtain consultations
• Demonstrates constructive skepticism
• Advocates for quality patient care and assists patients in dealing with health system complexity
• Uses systematic approaches to reduce errors
• Practices effective health care resource allocation that does not compromise the quality of care

| Resident Signature __________________________________________ | Date __________ |
| Supervising Faculty ________________________________________ | Date __________ |