Internal Medicine Curriculum
Anesthesiology Rotation

A one-month rotation in anesthesiology is offered to internal medicine residents under the direct supervision of Erlanger’s Department of Anesthesia faculty. The goal and objective of this rotation is to provide the resident with the general introduction to the field of Anesthesiology, primarily with general anesthesia but also with some exposure to regional blocks.

Teaching Methods
The resident will be assigned to work with one of the anesthesiologists Monday through Friday. The resident will be free from call responsibilities allowing additional reading opportunities.

Patient Characteristics, Clinical Encounters and Disease Mix
The resident will be responsible for making pre-operative rounds on patients to whose cases he/she is assigned and will assist the anesthesiologist during the cases.

Method of Evaluation
A written evaluation will be submitted. The primary method will be direct observation of performance. Residents will be evaluated by the attending faculty. Prior to the rotation, both resident and faculty will receive a copy of the goals and objectives. The assigned faculty will be encouraged to meet with the resident for a mid-month evaluation. A written evaluation will be performed by the attending at the completion of the rotation. A verbal evaluation will be given by the attending during the rotation. The evaluation will be based on fulfillment of rotation requirements and observations by the attending physicians. The resident will evaluate the rotation and attending which will be kept confidential and shared with the attending faculty maintaining anonymity.

Procedures and Services
The resident will have understanding of the basic principals of pre-operative consultation and management and obtain competence in endotracheal intubation and insertion of central venous lines.

Reading List and Conferences
During the month, the resident should attend the Department of Anesthesia Mortality and Morbidity Conference and In-Service meetings each conducted once a month. The topics included in the curriculum include:
Anatomy
A. Head and Neck: The resident will review the anatomy of the airway, larynx, pharynx, trachea; anatomy of the brain and spinal cord and the 12 cranial nerves, cervical plexus and stellate ganglion; thyroid and parathyroid innervation and blood flow.
B. Thorax: The resident will review the anatomy of the heart, coronary arteries and valves and arterial and venous branches; lungs, tracheobronchial tree and alveoli.
C. Abdomen: The resident will review about the anatomy of the stomach and intestines; abdominal aorta, mesenteric, renal and iliac arteries; kidneys, liver, and hepatic blood flow; sympathetic ganglions-celiac and lumbar; lumbar spine anatomy.
D. Extremities: The resident will review the anatomy of the brachial plexus, axillary sheeth, median, radial, and ulnar nerves; axillary, brachial, radial, and ulnar arteries brachiocephalic and subclavian veinous systems; lumbo sacral plexus, sciatic, femoral, peroneal and sural nerves femoral, popleteal, dorsalis pedis and posterior tibial arteries, saphenous, superficial and deep femoral and iliac veins.

Physiology
A. Cardiovascular: The resident will review the concept of Starlings law of contractility, afterload and preload; the use of pulmonary artery catheter, arterial line and transduction of pressures.
B. Respiratory: The resident will understand pulmonary functions, respiratory physiology, dead space ventilation and shunting.
C. Neurological: The resident will review neuronal conduction, the blood brain barrier, brain and spinal cord reflexes; evaluation of the comatose patient; neuromuscular junction physiology.
D. Genitourinary: The resident will review uterine contractility, stages of labor and delivery, fetal circulation, fetal resuscitation, management of the pregnant patient; renate physiology.
E. GI-Hepatic: The resident will review GI motility and blood flow; hepatic metabolism and blood flow; pancreatic and gall bladder function.

Pharmacology
A. Anesthetics: The resident will learn about inhalational agents such as nitrous oxide, iso and sevoforane, etherane and halothane; about intravenous agents such as pentathol, propofol, etomidate and others muscle relaxants such as succinylcholine, vecuronium, mivacron and others; conscious sedation with benzodiazepines and narcotics.
B. Cardiovascular drips: The resident will review inotropes such as dopamine, dobutamine and epinephrine; vasoconstrictors such as ephedrine, phenylephrine and norepinephrine; vasodilators such as nitroglycerine, nitropruside and apresoline; use of short acting beta blockers such as labetalol and esmolol.
C. Respiratory: The resident will review the use of brochodilators, aerosols and intravenous and antisialogs.
D. GI: The resident will review the use of antiemetics and antacids to reduce the risk of aspiration during anesthesia.
ACGME Core Competencies
Residents are required to obtain competence in the six areas (patient care, medical knowledge, practice-based learning and improvement, interpersonal skills and communication, professionalism and systems-based practice). Methods to achieve the competencies are outlined above.

<table>
<thead>
<tr>
<th>Core Competencies</th>
<th>¹Patient Care</th>
<th>²Medical Knowledge</th>
<th>³Practice-based Learning</th>
<th>⁴Interpersonal and Communication Skills</th>
<th>⁵Professionalism</th>
<th>⁶Systems-based practice</th>
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<tbody>
<tr>
<td>Anesthesiology</td>
<td>X</td>
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<tr>
<td>Teaching Methods</td>
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<td>Disease Mix</td>
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<td>Patient Characteristics</td>
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<td>Clinical Encounters</td>
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<td>Procedures and Services</td>
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<td>Reading List</td>
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<td>Performance Evaluation</td>
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1. **Patient care** that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

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

3. **Practice-based learning and improvement** that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care.

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

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

6. **Systems-based practice**, as manifested by action that demonstrate 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.

Revised: 4-18-08
Accreditation Council on Graduate Medical Education

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

http://www.acgme.org/Outcome

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:

- communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families
- gather essential and accurate information about their patients
- make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment
- develop and carry out patient management plans
- counsel and educate patients and their families
- use information technology to support patient care decisions and patient education
- perform competently all medical and invasive procedures considered essential for the area of practice
- provide health care services aimed at preventing health problems or maintaining health
- 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
Anesthesiology

Intern/Resident ______________________           PGY (circle one)  1        2        3

Supervising Faculty__________________  Month:________________________

<table>
<thead>
<tr>
<th>Rotation Check List</th>
<th>Yes</th>
<th>No</th>
<th>Comments</th>
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<tr>
<td>Reviewed the goals and objectives at the beginning of the rotation</td>
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<td>Evaluation and feedback mid month</td>
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<td>Evaluation and feedback at the end of rotation</td>
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<td>Completed assigned readings</td>
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<td>Attended all assigned clinical activities (excluding approved time off)</td>
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<td>Completed required case reports/abstracts/posters</td>
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<tr>
<td>Reviewed and met the core competencies as outlined above</td>
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<td>Submit signed procedure logs to Program Coordinator</td>
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<td>Worked with an interdisciplinary team</td>
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<td>Demonstrated understanding of the basic principals of pre-operative consultation and management</td>
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<td>Attended the Department of Anesthesia Mortality and Mortality Conference and In-Service meetings each conducted once a month</td>
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<td>Has acquired competence in endotracheal intubation</td>
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Intern/Resident Signature _________________________ Date ___________________

Supervising Faculty _________________________ Date ______________________

All items must be completed for rotation credit and checklist returned to the Department of Medicine at six month evaluation.

Revised: August 2008