

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL

ANESTHESIOLOGY RESIDENCY PROGRAM

INTRODUCTION

Aims:

The aims of this manual are to:

- Provide detailed information concerning the policies and procedures, structure and operation of the University of Massachusetts Medical School Anesthesiology Residency Program.
- Define both the RRC and the UMMS Anesthesiology Residency program requirements. (See Index)
- Outline the American Board of Anesthesiology (ABA) criteria for entering the ABA examination and completing training in Anesthesia. (See Index)

This manual is updated annually or as program requirements change. Residents are expected to review the resident manual as it is updated. It is distributed to all new residents and faculty, and is available on the Department of Anesthesiology website.

Residents may also review all Graduate Medical Education policies of the University of Massachusetts Medical School at: <http://residents.umassmed.edu>. Username and password will be provided at the OGME Orientation.

DEPARTMENT INFORMATION

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Other UMass Anesthesiology Residency Program Required Rotation Sites:

UMass Memorial Memorial Campus
119 Belmont Street, Worcester, MA
Site Director of Residents - David Drexler, M.D.
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David.drexler@umassmemorial.org

UMass Memorial – Hahnemann Campus,
281 Lincoln Street, Worcester, MA
Chief – Sudershan Singla M.D.
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PROGRAM GOALS

The UMMS Anesthesiology Residency Program is proud to have been a fully accredited program since its inception in 1979. We follow closely the standards set by the American Board of Anesthesiology, as well as all requirements of the ACGME. Our Department's primary educational mission is to assist our residents in becoming accomplished and professional clinicians and consultants in Anesthesiology, who meet the requirements to become certified by the ABA, and who are proficient to practice anesthesiology in either academic or private practice settings.

This mission will be achieved through both formal teaching programs and daily clinical teaching and experience, all the while continuing to stress education over service. Our residents are invaluable in the delivery of anesthesia care at all of our campuses, and are appreciated for all of their efforts. As such, we will continue to provide venues for open communication between residents and faculty not only to foster collegiality, but also to encourage discussion, presentation of ideas, and departmental involvement.

The program was approved for, and began accepting residents into, a Clinical Base Year program in July 2009. Two PGY-1 residents were accepted into the program at that time, with four additional PGY-1 residents accepted into the class beginning July 2010. That plan of 6 categorical positions and 2 advanced positions will remain for the foreseeable future. The goal of the PGY-1 Clinical Base Year is to provide our interns with a solid medical foundation upon which to build their anesthesia knowledge. The year incorporates training in Internal Medicine and Critical Care Medicine; the Surgical Specialties of colorectal, vascular and trauma surgery; the Medical Specialties of Cardiology, Pulmonary and Renal Medicine; Transfusion Medicine; Emergency Medicine and Anesthesiology.

The three clinical anesthesia years (CA-1 through CA-3) are organized to allow you to progress to more complex and demanding cases with increasing independence in decision-making and performance. Experience in such a wide variety of patient and case complexities is met by incorporating rotations at all campuses of UMassMemorial HealthCare. Although the focus of the clinical anesthesia years is predominantly clinical anesthesia training, we encourage an interest and participation in on-going Departmental research projects, or the institution of new projects if desired.

Detailed educational goals and objectives for each rotation that residents undertake during their 3 years of clinical anesthesia training are defined and updated regularly. They are distributed by the Residency Program Coordinator prior to each rotation. Rotation directors are expected to review the particular rotation's goals with the resident at the beginning of each rotation. All goals and objectives are in the format designated by the ACGME, incorporating the six Core Competencies : *Patient Care; Medical Knowledge; Practice-Based Learning and Improvement; Interpersonal and Communication Skills; Professionalism; and Systems-Based Practice.*

DEFINITION OF AN ABA DIPLOMATE

(ABA BOOKLET OF INFORMATION, FEBRUARY 2015)

http://www.theaba.org/PDFs/BOI/BOI_PrimaryCertification

A Board-certified anesthesiologist is a physician who provides medical management and consultation during the perioperative period, in pain medicine and in critical care medicine. A diplomate of the Board must possess knowledge, judgment, adaptability, clinical skills, technical facility and personal characteristics sufficient to carry out the entire scope of anesthesiology practice. An ABA diplomate must logically organize and effectively present rational diagnoses and appropriate treatment protocols to peers, patients, their families and others involved in the medical community. A diplomate of the Board can serve as an expert in matters related to anesthesiology, deliberate with others and provide advice and defend opinions in all aspects of the specialty of anesthesiology. A Board-certified anesthesiologist is able to function as the leader of the anesthesiology care team.

AMERICAN BOARD OF ANESTHESIOLOGY TECHNICAL STANDARDS

(ABA BOOKLET OF INFORMATION, FEBRUARY 2015)

Because of the nature of anesthesiology, the ABA diplomate must be able to manage emergent life-threatening situations in an independent and timely fashion. The ability to independently acquire and process information in a timely manner is central to assure individual responsibility for all aspects of anesthesiology care. Adequate physical and sensory faculties, such as eyesight, hearing, speech and coordinated function of the extremities are essential to the independent performance of the Board-certified anesthesiologist. Freedom from the influence of or dependency on chemical substances that impair cognitive, physical, sensory or motor function also is an essential characteristic of the Board-certified anesthesiologist.

From a practical standpoint, the UMass Anesthesiology Residency Program believes an anesthesiology resident should be capable of:

- Being on call and working in-house for up to 30 hour shifts, utilizing appropriate fatigue mitigating strategies as necessary (naps, etc.)
- Performing modest lifting at the height of a typical operating room stretcher (e.g. *controlling a patients head during patient transfer from operating room table to transport bed, lifting bags of intravenous fluid and blood to the top of an IV pole, lifting infusion pumps, portable ventilators and other transport equipment*).

- Standing for prolonged periods at a time (*e.g. inducing anesthesia, observing surgery over the surgical drapes at critical points in the surgery*)
- Walking and pushing a patient stretcher for long distances alone (*e.g. moving patients from patient holding areas to the operating rooms and back to the post-anesthesia care facility, moving patients to and from critical care units which may be distant from the OR, pushing stretchers around corners*).
- Reaching to a height of 6-7 feet (*e.g. to place intravenous fluid bags on IV poles*)
Kneeling, bending, stooping, and crouching (*e.g. to check lines below the level of the operating room table*).
- Reading patient monitors from a distance of 6-8 feet.
- Hearing and understanding spoken requests and being able to detect and discriminate patient monitor alarms.
- Hearing adequately enough to assess the lung and heart sounds of patients.
- Comprehending and speaking English fluently (including medical terminology).
- Responding to cardiac arrests and urgent calls in a timely fashion (*e.g. running or walking quickly to any floor in the hospital, at times without the aid of the elevators, if that would cause an undue delay.*)
- Assuming unusual positions while caring for patients on the wards and in the ICU (*e.g. lying on the floor to intubate patients who have experienced cardiac arrest, leaning over equipment at the head of the patient beds to intubate patients or place central lines*)
- Reporting to work promptly, and maintaining a high level of personal hygiene.
- Responding to all pager or telephone calls promptly during a period of duty.
- Refraining from the use of alcohol, sedatives and narcotics prior to reporting to work and throughout the clinical shift.

RESIDENT SELECTION

The goal of resident selection is the admission of residents who will, subsequent to their training, become successful, conscientious and compassionate independent medical consultants in the fields of anesthesiology, critical care and pain medicine. Over 800 applications are received each year for the 8 PGY-2/CA-1 positions. Approximately 100 applicants are invited for interview.

The Department of Anesthesiology selects candidates for resident physicians who have demonstrated outstanding academic performance and/or research abilities. Applicants may enter the program at the PGY-1 or PGY-2 level through the National Resident Match Program.

HOW TO APPLY

The following documentation should be submitted through ERAS
<http://www.aamc.org/students/eras.html/>.

- 1. Common application form and personal statement**
- 2. Transcripts**
- 3. MSPE**
- 4. Three letters of recommendation from faculty or clinicians, at least one of which should be from a clinician with whom a student worked during their anesthesia rotation**
- 5. For those applying for an advanced position, we require a certificate of completion of a clinical base year or a letter from the applicant's current program director indicating when he/she will satisfactorily complete clinical base training**
- 6. USMLE transcript (please note our policy that all Osteopathic students seeking consideration for a residency position must provide USMLE scores)**
- 7. ECFMG Status Report if applicable**

After review of the submitted application, individuals will be invited for interviews at the discretion of the Program Director. Applicants are selected for interview based on both their academic and non academic achievements, their medical school Dean's letter and letters of recommendation from various other individuals. Interviews are conducted on specific weekdays and Saturdays at UMass between the months of November and January. Additionally, candidates may be interviewed outside of the main interview dates, often as a convenience for students from distant locations undertaking an elective month in the anesthesiology department.

The interview process includes individual conversations with the Chairman, the Academic Vice-Chair and the Program Director, as well as one chief or senior resident. Residents are an integral component of the interview process, as they can provide important information about the program to the interviewees and valuable insights about candidates to the committee. Two to three residents host a dinner the evening prior to the interview day for interviewees and their partners. This is an excellent way for candidates to discover more about the program in a relaxed and informal manner. Candidates who wish to learn more about the facilities and style

of practice are offered tours of the hospitals, operating rooms and other locations by current residents. Applicants expressing an interest in specialty training and research activity can arrange to meet particular faculty members with similar interests. Complete information about the program is available on the department website or from Lisa Nicholson in the anesthesia residency office, 508-856-3821.

Evaluations gathered from the evaluation process are then reviewed by the Chair, Academic Vice-Chair, and Program Director in order to develop a rank-order list for the NRMP process.

Appointment to the Residency Program

Students must meet all the requirements outlined in the University of Massachusetts Medical School Anesthesiology Department's and OGME's Technical Standards to be eligible for initial appointment and annual reappointment to the residency program.

See Institutional Policies Section - Primary Verification of Credentials for Applicants to Residency and Fellowship Training Programs.

Entry into the CA-1 year

All residents who enter the anesthesiology training program in the CA-1 year must successfully complete either the clinical base year (CBY) as part of the UMass Anesthesiology Residency Program or an accredited preliminary internship program at another institution. As per the requirements of the ACGME Anesthesia Residency Review Committee, "at least six months of the Clinical Base Year rotations must include experience in caring for inpatients in internal medicine, pediatrics, surgery, or any of the surgical specialties, obstetrics and gynecology, neurology, family medicine, or any combination of these. In addition, there should be rotations in critical care and emergency medicine, with at least one month, but no more than two months, devoted to each. Up to one month may be taken in anesthesiology. The CBY training must include at least 10 months of clinical rotations, of which at most 1 month may involve training in anesthesiology. Clinical Base Year rotations include training in internal medicine or emergency medicine, pediatrics, surgery or any of the surgical specialties, critical care medicine, obstetrics and gynecology, neurology, family practice, or any combination of these. At most, 2 months of the Clinical Base Year may be taken in electives or in specialties other than those listed above". www.acgme.org

The Anesthesiology Residency Program Director will review evaluations of all CBY residents at 3 monthly intervals. All CBY residents are responsible for making sure their evaluations are submitted to the Anesthesiology Program coordinator in a timely way. Residents who receive a significant number of unsatisfactory evaluations during their CBY year or who fail to submit evaluations may not be permitted to progress with their CA1 year training in the UMMC residency program. In this instance the Anesthesiology Program will write to the NMRP and request a waiver of the match commitment to that particular resident.

CLINICAL CURRICULUM

The clinical curriculum is designed to help the resident achieve excellence as a consultant in Anesthesiology. Emphasis is placed on the pre-operative assessment of the patient: development of the ability to elicit a complete history and perform an appropriate physical exam, development of a solid and extensive knowledge base for understanding of the patient's co-morbidities as well as the underlying surgical issues, and incorporation of an evidence-based medicine approach to the utilization and interpretation of pre-operative labs and studies. The appropriate involvement of consultants is also taught.

These goals will be achieved through a varied and extensive clinical experience. The success of this experience relies in part on good communication between resident and faculty. Residents are expected to present their patients, discuss their cases and their choice of anesthetic technique and monitoring (as well as reasons for such decisions) with their Anesthesia faculty member the night prior to the case being performed. A post-operative visit is also a valuable learning experience, and must be performed within 24-48 hours of the completion of the case. Documentation of the visit must be placed in the chart at the time of the visit. If at all possible, Day Surgery patients should be seen and evaluated in the Post-Anesthesia Care Unit prior to their discharge.

CLINICAL BASE YEAR

The Clinical Base Year (CBY) is a PGY-1 experience designed to offer the intern a solid experience and foundation in medical and surgical specialties. The current composition of the year is divided into 4-week block rotations including 3 blocks of Ward Medicine; 1 block of Critical Care Medicine; 3 blocks of Medicine subspecialties (Cardiology, Pulmonary and Renal); 3 blocks of Surgical specialties (Vascular, Colorectal and Trauma); 1 block of Emergency Medicine and 1 block of Anesthesiology (all PGY-1 interns will rotate together during June). The 13th block is currently split into two weeks in Radiology reviewing Adult and Pedi Chest, and two weeks on the Transfusion Medicine service. Please note that when you are on an elective rotation, you may be requested to cover for a fellow Anesthesia PGY-1 on a ward medicine, MICU or surgical rotation that may call in sick.

The PGY-1 is expected to attend all didactics as included within the curriculum of the specialty upon which they are rotating. In addition, if time allows, they are also invited to attend the Anesthesiology Grand Rounds on Wednesday morning at 7:00am and the resident sessions immediately following Grand Rounds from 8:05am-12:30pm.

Evaluations will be through the E*value system, and will be made available to the Anesthesiology Program Director on a quarterly basis, or more frequently as needed. Successful entry into the CA-1 year is dependent upon positive evaluations and successful completion of the PGY-1 year.

Dr. Spiro Spanakis serves as the Director of the Clinical Base Year. He may be reached at 774-285-5348 (hospital cell). All questions or concerns may be addressed to either Dr. Spanakis or Dr. Lucas at any time.

CA-1 YEAR

During the first 12 months of training the emphasis is on the fundamental aspects of anesthesia, including basic physiology and pharmacology, as well as the skills involved in the administration of anesthesia and associated invasive and non-invasive monitoring. Rotations during the CA-1 year include:

- General OR - 2 months Memorial Campus. This rotation provides a significant amount of experience in providing anesthesia for primarily GU, GYN and Endocrine procedures
- Ambulatory Anesthesia -1 month, Hahnemann Campus
- Pre-testing/Pre-Surgical Evaluation Clinic (PSE) - 2 weeks, Memorial Campus
- Post-Anesthesia Care Unit (PACU) - 2 weeks, University Campus
- Anesthesia Consult Service/Acute Pain Service - 1 month, University Campus
- Surgical ICU - 1 month, Memorial Campus
- OB Anesthesia – 1 month, Memorial Campus
- General OR - 5 months, University Campus. The resident will gain experience providing anesthesia for intra-abdominal, basic vascular, basic neurosurgical, orthopedic, trauma, ENT and transplant procedures under close supervision

This experience begins with a **two month orientation through July and August**, during which each resident will work under close 1:1 supervision of either a senior resident or attending faculty member. Didactic conference schedule and clinical teaching is coordinated to facilitate timely achievement of the basic skill and knowledge sets. Entry into the daily work and call schedule in September will be dependent upon positive evaluations of faculty and residents with whom the CA-1 resident works. Please see the **Orientation Packet** for specific details and expectations.

All residents are required to have an updated Basic Life Support certificate. CA-1 residents are also required to take the ACLS certification course, and maintain subsequent recertification.

CA-2 YEAR

The CA-2 year concentrates almost exclusively in subspecialty rotations. Residents will be introduced to the unique anesthetic issues associated with the following anesthesia specialty areas (all rotations at University Campus unless otherwise specified):

- Cardiac Anesthesia - 1 month University Campus
- OB Anesthesia: Memorial Campus - 1 month Memorial Campus
- Neuroanesthesia -1 month University Campus
- Vascular Anesthesia -1 month University Campus
- Thoracic Anesthesia - 1 month shared between Memorial and University Campuses
- Surgical Intensive Care -1 month University Campus (3ICU)
- General OR - 2 months University Campus
- Chronic Pain Clinic - 1 month Memorial Campus
- General OR - 1 month Memorial Campus. This rotation has a focus on more complex colorectal and oncologic surgical procedures.
- Pediatric Anesthesia -1 month University Campus
- Regional Anesthesia – 1 month Hahnemann Campus

Incorporated into the above rotations is experience in special techniques such as fiberoptic bronchoscopy and intubation and placement of double lumen tubes, as well as experience managing patients requiring deliberate hypotension, hemodilution, deliberate hypothermia, intra-aortic balloon pumps and cardiopulmonary bypass. Residents also become more familiar with techniques and physics of monitoring i.e. transducer set-up and use, cardiac output determination and interpretation of arterial blood gases.

CA-3 YEAR

The CA-3 year is designed to allow the resident to gain experience in advanced and complex clinical anesthesia assignments while also meeting the requirements of the ACGME Residency Review Committee.

Required CA-3 rotations include:

- OB Anesthesia - 1 month Memorial Campus
- Neuroanesthesia - 1 month University Campus

- Pediatric Anesthesia – 1 month University Campus
- SICU – 1 month University Campus (2 weeks Lakeside 2ICU Trauma/Neuro advanced resident, 2 weeks 3 ICU as Junior Fellow)
- AIC/PSE – two weeks as the Anesthesiologist-in-Charge in the University O.R. & two weeks at the Pre-Surgical Evaluation Clinic (PSE) at the Memorial Campus.

Residents may elect to pursue specific rotations in the resident's areas of interest including multiple various opportunities at the UMMHC campuses (Critical Care, cardiovascular, pain management, transplant, ambulatory etc.), as well as additional elective rotations outside the UMass system. Outside electives are limited to **two months**, and are often used to "audition" for fellowship positions or employment positions. The residency program currently has the following electives through affiliation agreements:

- Pediatric, Thoracic or Regional Anesthesia at Rhode Island Hospital
- Children's Hospital in Boston – 2 month requirement
- ENT at Mass. Eye and Ear Infirmary in Boston
- Pain Management at UMMHC and/or Brigham and Women's Hospital/Boston (BWH)
- OB Anesthesia at Brigham and Women's Hospital, Boston

Other clinical interests at different sites may also be pursued with the approval of the Program Director. Rotation selection is made at the end of the CA-2 year, at which time residents are asked to provide their elective selection in rank order. Dr. Lucas will make the final assignments, taking into account the requirements and choices of other residents in the class.

Residents may also choose to pursue a 6-month Clinical Scientist Track. Applicants are required to submit a research proposal to the Chair, Dr. Kaur. Dr. Kaur and/or Dr. Heard are available to offer information about ongoing Departmental and Institutional research projects, as well as suggestions or advice. The Clinical Competence Committee will make the final decision, with input from the Program Director, as to the resident's suitability for the Scientist track. The decision will be based upon academic and clinical performances.

CA-3 residents may also take PALS and ATLS courses.

Please be aware that additional rotations may be required by the Program Director and Clinical Competence Committee, based upon an individual resident's performance or extent of experience in a particular rotation.

EXPECTATIONS FOR PROGRESSION IN TRAINING IN ANESTHESIA

PGY-2 (or CA-1)

The PGY-2/CA-1 resident is expected to achieve a certain level of competence in the categories of knowledge, case management and procedural and oral skills that are needed in order to fully understand the basics of a safe anesthetic.

Knowledge: The resident is expected to gain an appreciation of the physiologic changes in an anesthetized patient, as well as the pharmacology of all anesthetics and resuscitative agents. The resident will be able to manage accurately the fluid status in all anesthetized patients. They are also expected to understand the physiology of significant cardiovascular and pulmonary events, as well as the basic aspects of anesthesia for neurosurgical, vascular, orthopedic and pediatric procedures and the accompanying need for invasive monitoring.

Case Management: The resident will, at the end of the CA-1 year, be able to perform an efficient and thorough pre-operative patient assessment (including the ability to recognize the need for appropriate testing), explain the anesthetic options and form an anesthetic plan optimized to the specific surgical procedure and patient. They will be able to provide general and regional anesthesia for ASA I and II patients having uncomplicated surgery with minimal assistance, and all other patients and procedures with significant assistance. They will be able to initiate management of trauma and emergency cases in proper sequence, as well as develop and implement a plan for tracheal intubation of patients requiring airway assistance throughout the hospital. Finally, the resident will be able to manage all aspects of PACU patients with minimal assistance.

Procedural Skills: The resident will be able to manage airways of patients requiring assistance, utilizing mask ventilation, orotracheal and nasotracheal intubation and use of laryngeal mask airways. They will be able to manage patients with difficult airways with assistance, including use of fiberoptic and awake intubation, as well as use of LMA, fast-track LMA and Glidescope. They will be able to perform all other general and regional anesthesia techniques with minimal amounts of assistance. Invasive monitoring techniques, including placement of arterial and central venous pressure lines, as well as pulmonary artery catheter placement will be performed with minimal to moderate assistance.

Oral Skills: The resident will gain experience in the oral-board style examination with at least one mock oral exam given during the CA-1 year. The resident will be able to present at least one seminar in a clear, concise and organized manner with appropriate handouts and references. Adequate presentation of cases at Quality Assurance conferences will also be required.

PGY-3 (or CA-2)

The second year is a time when the resident is expected to undertake more responsibility and develop more sophisticated and in-depth knowledge of the care of patients under anesthesia, as well as patients in the ICU.

Knowledge: The resident is expected to build upon the knowledge gained in the first year, as well as gain an understanding of the anesthetic concerns and physiology of the pediatric and obstetric populations. The resident will also become familiar with routine cardiac surgical procedures, including the pharmacology of vasoactive drugs and the mechanics and complications of cardiopulmonary bypass.

Case Management: The resident will be able to manage medical diseases in surgical patients, manage routine pediatric, vascular, thoracic and neurosurgical cases with minimal assistance, provide anesthesia for cardiac and neonatal cases with assistance, manage all PACU issues of post-op patients, manage ICU patients with faculty guidance, manage acute post-operative pain issues with minimal assistance and chronic pain issues with some assistance. The resident at this level will demonstrate ability to function appropriately in emergency situations.

Procedural Skills: The resident will be able to perform most general anesthesia and monitoring techniques without assistance, while performing all regional anesthetic techniques with minimal guidance. The resident will become increasingly adept at managing airways while learning how to perform emergency procedures, such as cricothyroidotomy and jet ventilation.

Oral Skills: The resident will gain experience in the oral-board style examination, present two lectures to peers (including QA) and act as a teacher in the O.R. to medical students. The resident will also begin to gain experience in communication skills critical to becoming a peri-operative consultant.

PGY-4 (or CA-3)

The third year is a period of time when the resident may elect to pursue further subspecialty training, more in-depth specialty experience in complex case management and/or in research. Two residents will be chosen to act as chief resident, with the responsibility of assuring adequate resident coverage, fair scheduling and management of resident issues

OBJECTIVES FOR CLINICAL ANESTHESIA YEAR III

The CA-3 resident must

1. Demonstrate independent ability to set-up the room, manage technical skills, and provide comprehensive perioperative care.
2. Be able to effectively communicate with all members of the health care team.
3. Establish rapport with the patient in a comfortable manner. Be able to effectively communicate in a professional empathetic manner the anesthesia plan, risks, and benefits and obtain informed consent.

4. Exhibit professionalism, as exemplified by possessing the skills of a consultant in anesthesiology. The CA-3 resident will be able to interact and communicate with the surgeons as well as other members of the health care team in a professional manner to develop and implement an appropriate patient care anesthetic plan.

5. Show improvements in knowledge base that are sufficient to achieve board certification by the ABA.

Subspecialty rotations are encouraged, but cumulative time in any one subspecialty may not exceed six months for the entire training period.

The resident will collaborate with the program director to design the CA-3 year. All resident assignments in the CA-3 year will involve the more difficult and complex anesthetic procedures, as well as care for the most seriously ill patients.

All CA-3 residents will be required to participate in all departmental conferences and meetings. Each CA-3 resident will also be required to deliver a Grand Rounds presentation during the senior year on a subject matter agreed upon by the Program Director. Each CA-3 resident will be required to have a

completed scholarly “work product” by the end of the training period as described in the section on Scholarly Activity.

Knowledge: The resident will learn to read the literature critically and to know the important anesthesia literature, both current and historical. They will further their understanding of the principles of all major subspecialties in depth.

Case Management: The resident will manage independently with close staff availability all classes of patients for both simple and complex elective and emergent surgical procedures. They will also manage all post-op anesthesia issues, including those of acute and chronic pain.

Procedural Skills: The resident will perform all aforementioned anesthetic and monitoring procedures independently with guidance as needed by faculty.

Oral Skills: The resident will fine-tune the qualities and attributes fundamental to performing as a consultant anesthesiologist, as defined by the American Board of Anesthesiology, including: 1) the ability to organize...; 2) the use of sound judgment and evidence based medicine in decision-making and application; 3) the ability to apply...; and 4) the ability to adapt to rapidly changing clinical situations. The resident will also be required to supervise and mentor medical students, as well as actively participate in teaching fellow residents.

PGY-5 (or CA-4)

On occasion, a resident will undertake an advanced clinical year in order to gain further experience and competence in the aforementioned skills. Knowledge of the literature, management of complex cases, facility with all manner of invasive monitoring and ability to communicate well with anesthesia and surgical colleagues will be expected, as will instruction of junior residents and students.

RESIDENT RESPONSIBILITIES AND EXPECTATIONS

CODES OF CONDUCT

- **Dress**

Residents will be neatly and professionally attired and groomed when interacting with patients and their families. This means a white coat with shirt and tie for men and a white coat with tasteful, professional attire for women. This is especially important in the Pain Clinic, ICU and Pre-surgical Evaluation Clinic. Identification badges with photographic ID must be worn at all times. As access to all areas of the University hospital requires card swipe, it is imperative that you carry your ID card everywhere.

Scrubs must NOT be worn outside the hospital. They must be changed every day, or more often if necessary due to contamination. A white coat must be worn over scrubs when not in the OR, such as when performing pre-operative evaluations in the hospital on in-patients, going to the cafeteria and leaving the OR area. **Emergency intubations, codes and STAT calls are exceptions.**

In the O.R., eye protection is required, either a mask with a face shield; goggles; or glasses and plastic side shields. Shoes or sneakers may be worn in the O.R., but not sandals. If you do not have a dedicated pair of shoes for the O.R., then shoe covers must be worn. Hair on head and beard must be covered in the O.R. with caps/hats provided by the institution. If cloth caps are worn, they must be covered by a disposable cap. Only disposable jackets (provided by the institution) may be worn i.e. no personal cloth jackets. Gloves must ALWAYS be worn for direct patient contact. No long-sleeve shirts under scrubs may be worn. No backpacks may be carried into the O.R.

- **Patient Communication**

Residents must introduce themselves to the patient (and family when appropriate).

Patients should be addressed by their surnames (Dr., Mrs., Mr., Ms.) unless the patient specifically requests otherwise. Pediatric patients may, of course, be called by their first name.

When transporting a patient through the hospital, please make sure the patient is properly covered and the monitors are visible to you.

- **Reading**

Texting or reading of ANYTHING (cellphone, iPad, anesthesia literature, textbooks, board review books, journals, newspapers) IS NOT PERMITTED DURING THE ADMINISTRATION OF ANESTHESIA (GA, REGIONAL, MAC). One-page summaries from any of the recommended reading texts, written notes regarding the technique of

anesthesia administration directly related to the present case, reference materials of medications (PDR, package insert, MGH Handbook) is allowed. **Brief** consultation from a technology aide is allowed. In certain cases, residents may be allowed to read literature related to cardiac anesthesia, during cardiac cases when patients are on cardiopulmonary bypass. This perquisite is granted to residents who have had adequate experience on the cardiac service, show and demonstrate an understanding of the preparations necessary to come-off bypass and discuss with his/her attending his/her desire to "read" during bypass.

- **Confidentiality**

When speaking to other residents, surgeons, attendings, nurses and ancillary staff, professional conduct must be maintained, always. When disagreements, disputes or misunderstandings arise, they must be discussed in private, away from patients' sight and hearing ranges. Strict **confidentiality** of all patients must be guarded. Discussions of patients and their medical conditions are never permitted in elevators, hallways, cafeteria, etc. Never discuss one patient in the presence of other patients or visitors. Patient confidentiality is a hospital-wide and federal legal issue (HIPAA) and part of the Hippocratic Oath. Please refer to the medical staff/resident bylaws for additional information.

COMMUNICATION

- Residents must be reachable throughout their clinical day, whether at the University campus or on away clinical rotations. Residents are provided pagers with both local and long distance pager numbers. They are also provided with Nextel cell phones. These phones and pagers must be on and carried throughout the day while on the University campus, as they are the primary means of communication within the Operating Room suite. We ask that all residents carry their phones while on rotations at other institutions as well, as it allows for easier communication between the program and the resident. Pagers must also be kept on at all times, as immediate mass communications are done through text pages.
- Residents will be assigned an email address; this will be used to communicate vital information about the academic program, including changes to schedules and other information about general professional duties. Residents must check their email regularly to avoid missing important information. Residents will be held accountable for missing information sent out by the residency office if they do not check their email.
- Residents are required to inform the Department of home address and telephone numbers, which is used in part to formulate a departmental phone list. This information is not released to any individuals external to the institution. Residents must inform the Residency Coordinator immediately of any changes to this information.

CLINICAL

Residents are expected to set up their cases and prepare their patients in time for the scheduled time. Patients must be in the OR by 0730 (0845 on Wednesdays after Grand Rounds). Residents should start preparation for the day by 0600-0630 at the latest, and earlier for complex cases. Residents are responsible for checking their anesthesia machine and monitors and setting up before each case. They should check the carts to make sure the necessary equipment and drugs are available.

The residents going off call must discuss add-on cases, pain patients, and overnight PACU patients with the Anesthesiologist in Charge by 0700. Post-call residents may not leave before sign-out is complete and the code beeper given to the AIC in person.

Residents will attempt to make pre-operative rounds on their own patients, unless patient arrival is delayed or the resident is post-call. If the case is complex, it may warrant a post-call resident returning to see the patient, but only after meeting the ACGME work hours requirement of a 10 hour duty free period (i.e. leave UMMHC at 0700, you may not return until 1700). Otherwise such patients will be seen by the resident on-call for a post-call resident. If the patient's arrival is delayed, the resident is expected to make his or her own arrangements with the call team for preoperative evaluation of the patient.

Pre-operative rounds include history and physical examination, review of laboratory work, review of old records, and completion of the pre-anesthesia review form. Appropriate orders must also be written for inpatients and informed consent must also be obtained. **Each resident is expected to know the details of their patient, whether or not they personally evaluated them. Each case must be discussed with the attending anesthesiologist beforehand.** Traditionally, this is done the evening before, in person or by telephone. Resident and attending dialogue before the morning of surgery has many advantages. Residents will have a solid "plan" to work with, which facilitates room set-up and medication preparation in the morning. Cases, in general, proceed more smoothly when anesthetics, techniques, preferences and special requirements are discussed. All residents should contact their attendings the night/afternoon before surgery, unless otherwise instructed. The faculty member's preferred mode of contact is listed on the Departmental Phone List (updated regularly). **Being post-call or having a fellow resident perform the pre-operative anesthesia evaluation is NOT an excuse for inadequate patient knowledge or poor preparation.**

Residents will make post-operative rounds on all of their own patients. A post-operative note must be written with date and time in the patient's charts within 48 hours of the anesthetic. Patients who have had an epidural or spinal anesthetic should be seen on the first post-operative day. Because a significant number of patients are discharged before 10AM on POD #1, it is advisable to see those patients in the evening, when reasonable, or early the next morning. Follow-up visits should be made to any patient with an anesthesia-related problem and appropriate notes written in the Progress notes.

In order to ensure the efficient running of the OR schedule, the Anesthesia Clinical Director must know the whereabouts of each resident at all times. **Therefore, before leaving the OR, residents must check with the Clinical Director.** Residents must have their beepers on at all times while in the hospital. Additionally, residents are required to lunch in the OR lounge so that they are readily available when needed.

PROPER DOCUMENTATION

- The perioperative paperwork that is completed for each patient is important not only because it becomes part of a patient's permanent medical record, but also because it provides the necessary information for billing purposes. If this paperwork is not completed accurately, completely, and in a timely fashion, the billing department cannot collect fees for the services rendered. Uncollected fees make administrators and accountants unhappy, and ultimately effect faculty and residents. It is the dual responsibility of the resident and the attending to correctly complete all required paperwork, so please ask if you have any questions! The person in the department who follows documentation and billing compliance is Susan St. Martin, the Data Manager (6-5581). She reviews all paperwork, and will find you if yours is incomplete or missing. In addition, she maintains monthly records of resident, faculty and CRNA compliance.
- The top third of the Anesthesia Record provides the minimum information needed by the billing department. All items need to be completed in a very neat and readable way. The patient's name and medical record number must be CLEARLY stamped or written in the appropriate place. If this is not legible then stamp a new record or write it neatly. The date and times must be crystal clear.

Example: Date: MONTH/DAY/YEAR
 Time: 24 Hour Clock

- The DATE is the date during which the case begins. The Start Time is the time from which you are continually in attendance with the patient. The Stop Time is the time immediately after you have given report to the receiving staff (PACU, ICU etc.) and prepare physically to leave the presence of the patient. If you stay in the ICU/PACU to stabilize, monitor, assess, or recover a patient, this time should be included in the anesthesia time. This extended time must be monitored on the record. The time ends when you physically leave the side of a patient to start another task. Please use a 24-hour clock. Example: 1:00PM is 1300, 6:00PM is 1800, 10:00PM is 2200. This way, if a case is started at 2315 and ends at 0335, it is very clear to the billing processor that the case extended from one day (24-hour cycle) into the next.
- The Operative Diagnosis must match the surgeon's diagnosis exactly. The best way to get this when it is not obvious is to ask the surgical attending and/or the circulating nurse, who is responsible for entering the same information into the OR Information System. Diagnoses are nouns: Cholelithiasis, crush injury to the hand, tibia fracture, ruptured spleen, end stage renal disease, etc. NOT s/p MVA, s/p EXP LAP.
- The Surgical Procedure, as well, must be identical to that indicated on the Operative Record. When in doubt, ask your attending.
- Antibiotics must be administered within the hour prior to incision. Please make sure you record all antibiotics and times on the record. In addition, notify the circulating RN so that she may enter the information in the OR data collection system.

- Your signature must be legible. All documents requiring your signature must also include your degree (M.D., D.O. etc.) and your pager number. You will be provided a name stamp which includes all this information. Please use it if your handwriting is not legible! And remember, when stamping a record with multiple copies, you must stamp each copy separately.

CALL DUTIES

All call residents will take call in the hospital. A call room (H4-552 B,C,D at University) is assigned and meal tickets are issued for each resident monthly. Every attempt will be made to allow the first call resident to arrive at 10 a.m. on the day of call. This is not always possible, so it is imperative that you check the OR schedule the night before (check the website at www.umassmed.edu/anes, click on intranet to view appropriate password protected O.R. work schedule) to ascertain the time at which you are expected to arrive. Password will be provided to you upon your arrival to UMass.

Call residents are responsible for responding to emergency calls for resuscitation, trauma or emergency surgery. The first and senior call residents will carry the code beeper unless he/she/they are in the O.R. in which case the second call resident will carry the code beeper. If all call residents are doing cases, the on call staff will carry the beeper. **The staff anesthesiologist must be notified promptly whenever an emergency operation is planned and must be present in the OR for all emergent/urgent/elective surgery.**

On-call resident from off-site integrated rotations must be available for University OR duties by 5PM, at which time they must confer with the on-call staff. **If you have been relieved of your duties at an outside site, you are to return promptly to University campus to start your call. DO NOT WAIT until 1700 to arrive.** Every effort should be made to allow the on-call resident time to take sign out from the PACU resident re: acute pain patients.

The residents on call will share the on-call duties. These will fall into two major categories, 1. the completion of all OR cases, and 2. The coverage of the PACU and ward-related work, such as evaluation and pre-operative preparation of all add-on cases (and CRNA cases when applicable) for the next day, responding to acute pain management calls, injection of epidural catheters (see below) and emergency intubations. The senior resident is responsible for the accurate completion of all duties.

When responsibilities remain both in the OR and on the ward, it will be at the discretion of the on-call attending to determine which duties the residents will fulfill. It is expected that the residents will work as a team and together fulfill all on-call responsibilities. Once responsibilities remain only in one area (OR or ward), the first call resident, in general, will cover the responsibility. If several ward issues remain, such as several pre-ops, pain management issues, etc., the second call resident will assist the first call resident in completing these duties. When there is only a single remaining OR case, without active ward issues in general, the first call resident will cover the case and the second call resident will take the code/floor/pain beeper.

The workroom should be kept as neat as possible during the overnight/weekend hours.

The residents on call are responsible for managing any acute pain issues during the evening and on weekends and holidays. Residents are expected to receive sign out at the end of each day from the Anesthesia Consult Service, and to provide signout the following morning to the service.

Residents coming on call and those going off call on weekends must confer with each other **in person** before the residents going off call leave the hospital (First call to first call and second call to second call). Change-over time on weekends is 7AM.

The chief resident is responsible for producing the call schedule for the residents by the 15th of the month. Requests (not demands) for on-call/off-call should be made through the chief resident **by the 10th of the preceding month**. Approved vacation time must also be communicated to the Chief Resident. Once the schedule is printed, **no changes** will be made in the published resident call schedule without informing the Anesthesiologist in Charge, the hospital operator and staff involved. Residents are expected to arrange for alternate coverage in the event that they cannot take call. If arrangements are made that are not on the printed schedule, you must notify the Residency Coordinator Lisa Nicholson, as well as the hospital operator.

If you are sick and unable to work, you must first call the OR and speak with either the AIC or the on-call anesthesiologist. You must call no later than 0630. In addition, you are also responsible for informing the Chief Resident if you are on call so that coverage may be found. Also inform Lisa Nicholson (508-856-3821) of your absence.

The residents who have been on call are excused from OR duties the next day. All residents must check with the AIC in person before leaving. The code beepers must be handed to the AIC in person. The residents must report the add-on cases to the AIC, and any pain management issues to the Anesthesia Consult Service attending.

CASE LOGS

- Residents are required by the RRC to keep an accurate record of their clinical experience and to log the procedures they undertake during their residency. As case logs are required by most hospitals for credentialing processes, it is advantageous that residents maintain accurate case logs. The Anesthesia Record includes a paper copy that residents may keep and maintain confidentially in their files. Records may also be kept electronically utilizing any of the commercially available anesthesia-specific software for handheld devices.
- Case logs must be electronically entered on the ACGME website at <https://www.acgme.org/residentdatacollection> on a regular basis. It is extremely important that case log data be entered as soon as possible – do not wait until the last minute to add your cases. It becomes overwhelming. Case logs are reviewed by the Program Director quarterly and reviewed by the RRC annually. The accuracy of these case logs is essential to ensure that residents successfully complete their training. Minimum numbers of cases are required in many areas (see below).

- The UMass anesthesia residency program provides a large number of cases in all areas of anesthesia and pain management such that residents always exceed the minimum requirements. If a resident finds he/she is falling behind in his/her requirements in a particular area, every effort will be made to assign them to particular operating rooms to make up the deficit. Any concerns about case numbers should be addressed to the Program Director.
- Death reports must be written for every patient who has received an anesthetic and who dies within 24 hours of the anesthetic. POSR (Perioperative Occurrence Screening Report) forms must be completed on all patients who have had intra-operative and/or recovery room complications and placed in the appropriate lock box located in the PACU. This sheet will be found attached to each Anesthesia Record. The reports are reviewed for discussion at the Quality Improvement Conferences.

RRC / ABA Case Requirements for the Anesthesia Resident During the 3-year Residency:

- 40 anesthetics for vaginal delivery, with evidence of direct resident involvement in cases involving high-risk obstetrics
- 20 cesarean sections.
- Anesthesia for 100 children <12yrs. Within the group, 20 must be less than three yrs., including 5 less than 3 months of age
- 20 patients undergoing cardiac surgery; the majority must involve use of cardiopulmonary bypass
- 20 patients undergoing open or endovascular procedures on major vessels (excludes vascular access or repair of vascular access)
- 20 patients undergoing non-cardiac intrathoracic surgery (pulmonary, surgery of great vessels, esophagus, mediastinum and its structures)
- 20 patients undergoing intracerebral procedures, including intracerebral endovascular procedures. Majority of procedures must involve an open cranium
- 40 patients undergoing surgical procedures, including c-sections, in whom epidural anesthetics are used. Use of a combined spinal/epidural technique may be counted as both
- 20 patients undergoing procedures for complex, life-threatening injuries (trauma, penetrating wounds, burns > 20% of body surface area).
- 40 patients undergoing surgical procedures, including c-sections, with spinal anesthetics

- 40 patients undergoing surgical procedures in whom peripheral nerve blocks are used as part of the anesthetic technique or perioperative analgesic management
- 20 new patients who are evaluated for management of acute, chronic or cancer pain
- Documented involvement with acute pain management, including familiarity with patient-controlled intravenous techniques, neuraxial blockade or other pain-control modalities
- Documented involvement with preoperative evaluation for at least 4 weeks
- Significant experience with a broad spectrum of airway management techniques (performance of FOI, LMA, DLT, endobronchial blockers); significant experience with central line and pulmonary artery catheter placement, and the use of TEE and evoked potentials. The resident must either participate in cases in which EEG or processed EEG monitoring is used (not BIS), or have adequate didactic instruction to ensure familiarity with EEG use and interpretation.
- 2 weeks continuous post anesthetic care experience
- Critical care training. (4 months distributed throughout the curriculum in order to provide progressive responsibility)
- Experience in providing anesthesia for patients undergoing diagnostic or therapeutic procedures outside of the surgical suites.

For further details see the ACGME website <http://www.acgme.org>, follow the drop down menu to Anesthesiology Review Committee and follow the link to the Program Requirements.

DUTY HOURS

Residents are expected to comply with the ACGME and Anesthesiology RRC Duty Hours regulations. The Anesthesiology Program Director will educate residents and faculty about such duty hours and will monitor compliance. It is the responsibility of the resident to inform the chief resident and Program Director of concerns relative to non-compliance, whether in monthly scheduling or daily work hours, so that they may be addressed promptly and appropriately. The resident is expected to log their duty hours regularly in the E*Value system, as well as inform immediate supervising faculty if, at any time, they believe they are approaching a violation in the Duty Hours regulations.

Duty hours are defined as all clinical and academic activities related to the residency program, ie. patient care (both inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled academic activities such as conferences. Duty hours do not include reading and preparation time spent away from the duty site.

Please note the ACGME delineation between PGY-1, intermediate and final year resident. The program requirements specify several core experiences that must be completed by all residents (e.g., at least four months of critical care medicine), as well as several minimum numbers of cases that must be performed by each resident (e.g., care provided for at least 20 patients undergoing cardiac surgery). **The resident remains an intermediate resident until all core experiences and the minimum number of cases required for the core rotations are completed.** Thereafter, the Review Committee will consider the resident to be in the final year of education and preparing for the transition to the unsupervised practice of medicine. This transition can happen as early as the CA-2 year or as late as the end of the CA-3 year, and is dependent on several factors that include the scheduled order of rotations, leaves of absence, and competency assessment.

Duty Hours Regulations as they pertain to Anesthesia residents are as follows:

Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities. The Residency Program Director must be notified each time duty hours are violated.

Residents must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4 week period, inclusive of call. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities

On-Call Activities

The objective of on-call activities is to provide residents with continuity of patient care experiences throughout a 24-hour period. In-house call is defined as those duty hours beyond the normal work day when residents are required to be immediately available in the assigned institution.

- Duty periods of PGY-1 residents must not exceed 16 hours in duration. PGY-1 residents may therefore not take 24 hour call.
- Duty periods of PGY-2 residents and above may be scheduled to a maximum of 24 hours of continuous duty in the hospital. Residents are encouraged to use strategic napping, when possible, especially after 16 hours of continuous duty and between the hours of 10:00 p.m. and 8:00 a.m. All call faculty are asked to be cognizant of the each resident's work responsibilities while on call at night, and are encouraged to rotate the use of residents so that each may sleep for some period.
- PGY-2 residents and above must be scheduled for in-house call no more frequently than every-third-night (when averaged over a four-week period).

- It is essential for patient safety and resident education that effective transitions in care occur. Residents may be allowed to remain on-site in order to accomplish these tasks; however, this period of time must be no longer than an additional four hours.
- Residents must not be assigned additional clinical responsibilities after 24 hours of continuous in-house duty.
- In unusual circumstances, residents, **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 anesthesia resident must document the reasons for remaining to care for the patient in question with an email explaining the specifics to the program director.***
- The program director will review each submission of additional service, and track both individual resident and program-wide episodes of additional duty.

Minimum Time Off between Scheduled Duty Periods

- PGY-1 residents should have 10 hours, and must have 8 hours, free of duty between scheduled duty periods.
- Intermediate-level residents should have 10 hours free of duty, and must have 8 hours between scheduled duty periods. They must have at least 14 hours free of duty after 24 hours of in-house duty. Residents in the final years of education must be prepared to enter the unsupervised practice of medicine and care for patients over irregular or extended periods. While it is desirable that residents in their final years of education have 8 hours free of duty between scheduled duty periods, there may be circumstances when these residents must stay on duty to care for their patients or return to the hospital with fewer than 8 hours free of duty. Circumstances of return-to-hospital activities with fewer than eight hours away from the residents in their final years of education must be monitored by the program director.

Maximum Frequency of In-House Night Float

- Residents must not be scheduled for more than six consecutive nights of night float. The maximum number of consecutive weeks of night float, and maximum number of months of night float per year may be further specified by the Review Committee.

At Home Call

- Time spent in the hospital by residents 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 resident.
- Residents 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”.

TRACKING DUTY HOURS

Anesthesiology residents are required to use the E*value system to document their work hours. Compliance is monitored by both the Department and the Office of GME. Resident hours are calculated automatically from the data that is input. Please remember to input your data accurately. Concerns that duty hours are being exceeded must be addressed to the Program Director **immediately**.

The requirement to update work hours is considered part of one's professional responsibilities.

EVALUATIONS

- Residents are responsible for reviewing their evaluations quarterly in meetings with their advisors
- Residents are responsible for completing the yearly Program Evaluation, as well as the end-of-month rotation and site evaluations.
- Residents are responsible for completing the confidential Faculty Evaluation form each year, as well as the confidential monthly rotation faculty evaluation.
- Residents are responsible for developing an individualized study plan with the assistance of their advisor.

*All evaluations are done through the web-based E*value system. Residents will receive reminder emails with a link to the system. A username will be provided, and a password selected by the resident. Residents may access the system anytime in order to read their own evaluations or to complete evaluations of program/faculty/rotations: <http://www.e-value.net>.*

ACGME RECOMMENDATIONS

The ACGME (Accreditation Council for Graduate Medical Education) recommends the following Resident Responsibilities. In addition to those outlined by the Department, residents should:

- Develop a personal program of self-study and professional growth with guidance from the teaching staff.
- Participate in safe, effective and compassionate patient care under supervision, commensurate with their level of advancement and responsibility.
- Participate fully in the educational activities of their program and, as required, assume responsibilities for teaching and supervising other residents and students.
- Participate in institutional programs and activities involving the medical staff and adhere to established practices, policies and procedures of the institutions.
- Participate in institutional committees and councils; especially those which refer to patient care review.

DIDACTIC CURRICULUM

The didactic curriculum is comprised of a 2 year rotating curriculum designed to help the residents increase their knowledge through lectures and independent study, and to develop their clinical judgment skills through case studies and discussion. Sessions follow the content outline of the ABA/ASA Joint Council on In-Training Exams with modification by the Department of Anesthesiology Education Committee. All didactic sessions are held Wednesday mornings from 8:05am-12:30pm, most commonly in the University Anesthesia Library, with the exception of the Quality Improvement Conferences and Grand Rounds, which are held Wednesdays at 6:45AM in Amphitheater II of the Medical School. **Sign-in sheets are provided at each conference. You must sign in for each lecture or you will be marked as absent, which will negatively affect your overall attendance compliance rate. All residents, with the exception of post-call, ICU, residents on away, external non-UMMHC locations (Boston, Rhode Island, etc.) or vacationing residents must attend.** The schedule includes:

Orientation Lectures

Orientation lectures are given during the first two months of the resident's training in the program. One hour a day is devoted to teaching residents the essentials of pre-operative preparation and safe practice of anesthesia. Written exams are given (Anesthesia Knowledge Test Pre-test on day 1, Post-test on day 30 and AKT-6 after 6 months of training).

Resident Lectures

The topics of the session will cover areas of the curriculum as it relates to the rotation in which a resident is participating. The sessions are prepared and presented by the resident with the guidance of a faculty member. This assignment encourages the resident to become more familiar with the techniques of independent research, as well as to teach the resident to organize the material, to practice oral presentation and use appropriate audio-visual aids. This session incorporates the Competencies of Practice-Based Learning, Patient Care, Medical Knowledge, Professionalism and Interpersonal/Communication Skills.

Department of Anesthesiology Conferences/Workshops

These educational sessions are presented by Department faculty, although on occasion may be given by other UMMS/UMMHC faculty. Its purpose is to serve as a continuing education lecture and, therefore, topics of current interest in anesthesia and subjects related to the core curriculum are reviewed, including Difficult Airway and serial ABG and EKG workshops. These sessions incorporate the Competencies of Patient Care and Medical Knowledge.

Guest Lecture Program

Throughout the year, guest lecturers from the U.S. and abroad are invited to visit the Department and lecture on a topic of their special interest, thereby providing residents exposure to both national and international practices. These occur on Wednesday mornings during Grand Rounds. This session incorporates the Competencies of Medical Knowledge and Patient Care.

Quality Improvement Conference

Two hours per month are devoted to one of the above conferences. All complications, deaths and cases of special interest are discussed. The resident presents the case and the staff or Chief Resident involved leads the discussion. This provides the resident with the opportunity to present cases in detail and in logical fashion. The Quality Improvement Conference is credited for Category 1 CME and may be used for Risk Management Credit. It is a wonderful educational experience for the resident, as pertinent events in the case are related, discussion ensues and opinions are expressed. Exposure to such discussion presents a learning opportunity for the resident, in which both facts and 'pearls' of clinical wisdom and judgment are expressed. When appropriate, a combined Anesthesia/Surgical Quality Improvement Conference is held in lieu of a Departmental meeting.

For each presentation the resident is required to complete a root cause analysis (format will be provided), review the completion of the form with the Director of Quality Improvement, and enter it into their portfolio.

The session incorporates the Competencies of Patient Care, Medical Knowledge, Professionalism, Interpersonal and Communication Skills and Practice-Based Learning. The conference meets requirements for Quality Assurance and Peer Review.

Journal Club

Two residents present papers at each month's Journal Club. Journals of Anesthesiology and its subspecialties are surveyed and recent papers on topics of interest are presented by the residents and discussed critically with the staff moderator. Special attention during the session is paid to the statistical analysis used, utilizing the expertise of a Department researcher who participates monthly in each session. This session incorporates the Competencies of Practice-Based Learning.

Practice-Based Learning

A one-hour review of a clinical topic with question/answer period in oral board format is held once or twice per month.

Written Board Review

These are held throughout the year, using multiple-choice questions from published texts and review conferences, as well as in-training exam keywords as topics of discussion.

Clinical Anatomy

Every 3 months residents gather in the Anatomy Lab for 2 hours to review Clinical Anatomy via cadaver studies. An anatomist presents anatomy relevant to anesthesiologists, with review with the responsible anesthesiology faculty member. A variety of topics are addressed: including Anatomy of the Head and Neck, Airway, Cardiac, Thorax, Cervical Plexus and Stellate Ganglion, Lumbar & Thoracolumbar space for paravertebral blocks, Upper Extremity & Brachial Plexus, Lower Extremity & Lumbosacral Plexus.

Attendance

Residents must sign in for each conference. Residents are expected to attend regularly within the confines of the Duty Hours requirements, regardless of which site or rotation they are on*. A minimum attendance of 70% of all lectures which an individual resident is allowed to attend (given work hours regulations) is expected. If the expected minimum of 70% is not met, then a remediation period may be required for that particular resident. While on rotation at Memorial Campus, the resident may choose to attend the educational conferences there in lieu of University-based meetings, but must notify the program coordinator of such. Similarly, residents rotating in the SICU will be expected to attend SICU conferences preferentially. Grand Rounds are telecast to Hahnemann Campus to allow residents to proceed directly to Hahnemann on Wednesday mornings. Residents on “away” rotations, including those in Rhode Island and Boston, are not expected to return for meetings.

****Exceptions to attendance include vacation, illness, SICU and away (external to the UMMHC system) rotations. Residents may choose to remain in a case if by determination of both resident and attending the case is of equal or greater educational value.***

Required Basic Texts

Clinical Anesthesiology – Morgan & Mikhail
Massachusetts General Hospital - Clinical Anesthesia Procedures
Principles and Practices of Anesthesiology - Longnecker
Anesthesia and Co-existing Diseases - Stoelting, et al.
ASA Refresher Course Lectures
<http://www.AccessAnesthesiology.com/index>

Additional Educational Resources

There are a wide variety of educational opportunities and resources available at UMass. Traditional lectures can be supplemented with electronic resources. The departmental anesthesia library has additional computers with simulation software, color printers, educational CD-ROMs, and headphones for individual study. All journals are available electronically through the UMMS library. Library is available 24/7 and has a combination lock (1-5-2). We also provide START and START Prep (recently renamed Learnly), an on-line curriculum developed by Stanford University (with the assistance of some of our faculty, as well) for all PGY-1 & 2 residents to help them in preparation for their Anesthesiology training. Additionally, we also purchase Pass Machine for each clinical anesthesia resident to assist them in preparation for their Board Exams. There is a basic version for the CA-1 residents to assist them in preparation for their Basic Exams and an Advanced version for CA-2 and 3 residents to assist them in preparation for their Advanced Exams.

Question of the Day – Website: <http://www.theanswerpage.com/>

- This site provides a question relative to Anesthesiology – check it out!

EVALUATIONS

It is expected that all residents will demonstrate a steady maturation in clinical skills and competence throughout their training. It is important that residents receive timely feedback on their performance from the faculty. Residents who are not making satisfactory progress will be informed of the situation promptly by their advisor and/or program director, with discussion and implementation of remediation efforts. Residents who demonstrate exceptional ability will be recognized and encouraged to continue such exemplary behavior. In order to maintain the standards of the Anesthesiology Residency Program, a process for evaluating the resident's performance and Department teaching has been established. All evaluations are done via a web-based evaluation tool referred to as E*value, with monthly reminders to both faculty and residents re: pending evaluations. E*value provides numeric quantification of a variety of specific skills, as well as space for written comments. Comments should identify areas of strength or weakness, along with suggestions for improvement if necessary. All residents are expected to demonstrate a steady maturation in clinical skills and academic ability throughout their training.

The purpose of these evaluations is to:

- Assess
- Monitor the progress of the resident's knowledge, judgment and skills.
- Assess the resident's ability to effectively communicate both clinical and didactic material, whether oral or written.
- Recommend promotion.
- Provide remedial work when necessary.
- Recommend remediation/dismissal
- Use as a basis for appropriate changes in the curriculum and clinical teaching.

The evaluation process is based on a resident's performance in all of the following measures;

- ACGME general competencies
- Essential Attributes as defined by the American Board of Anesthesiology
- Essential Requirements for the University of Washington Anesthesiology Residency Program

MECHANISMS FOR EVALUATION

Daily Verbal Feedback

All attendings are asked to provide residents with informal feedback and commentary about their performance on a daily basis. Ideally this should take the form of a brief conversation at the end of the day (formative evaluation). Residents are expected to ask their attending to provide feedback at the end of each day.

Faculty are strongly encouraged to report any concerns (verbally or in writing), however minor, to the program director or chair of the CCC so that patterns of behavior can be recognized promptly. The program director will make a written notation of any verbally reported concerns, and will confer with the resident advisor. If the situation is deemed significant, the PD and/or advisor will speak with the resident.

Clinical Rotations

Supervising faculty are encouraged to perform daily or per/case written (E*value on-the-fly) or verbal resident feedback and evaluation. In addition a monthly evaluation is required from either the general faculty, or those involved in a particular resident's specialty rotation. The E*value system permits numeric quantification of specific skills, as well as providing space for written comments. Comments should identify areas of good or poor performance specific to the resident, along with suggestions on how improvement might be achieved. These evaluations are directly accessible to the resident. The E*value data is collated every three months and distributed to each resident and the resident's advisor as part of the quarterly advisor-advisee

meetings. Written summary evaluations are available on the E*value website (<http://e-value.net>) to residents at the end of each rotation.

Advisors

Each resident has an advisor who is a member of the clinical faculty, and who meets with the resident formally at least quarterly. The assignment of an advisor is made by the Academic Vice-Chair in conjunction with the Program Director. The advisor for the resident usually remains the same for the three years of Residency, but may readily be changed by request of either the resident or faculty member. The advisor assists the resident in formulating a study plan and recommends texts and other reading. The advisor is also available for problems the resident may encounter during residency, in addition to reviewing the quarterly evaluations with their advisee.

Topics for discussion at the quarterly advisor/advisee meetings include review of the resident portfolio; the evaluations for the individual rotations; scores on standardized tests such as the In-Training Exam and the AKT; progress at satisfying the ABA case-log requirements; reading materials. At these meetings the resident's future plans may be discussed, as well as a plan for independent study. This meeting will provide the residents with the opportunity to give direct feedback on how the program is meeting the resident's needs. A written summary of each meeting will be submitted to the resident's portfolio.

Learning Portfolio

Residents are required to maintain an experience and learning portfolio. These portfolios are not only of benefit during training, but also serve as documentation of experience when applying for employment, medical licenses, and medical staff credentials following residency. There are a number of sections, which the residents are asked to keep up to date with the assistance of Lisa Nicholson, the Residency Coordinator. These sections include evaluations, case logs, records of academic assignments, presentations, self-assessments from Mock Oral Exams and QIC presentations. As portfolios are developed, residents will be asked to bring their up-to-date portfolio to each advisor-advisee meeting and review of this will form the basis for that meeting, together with the written form completed by the advisor.

Clinical Competence Evaluation

All new residents have their first general evaluation by the Clinical Competence Committee at the end of August to assess readiness to complete Orientation and enter the regular resident work schedule. Subsequent evaluations are at three-month intervals.

If a resident has an unsatisfactory evaluation or problems are anticipated, the resident is evaluated formally on a monthly basis for at least three months. After this time, the Clinical Competence Committee will decide the frequency of evaluation.

The evaluations are discussed by the Department Clinical Competence Committee, which is currently chaired by Dr. Elifce Cosar. The voting members of the committee include the Department Chair, Academic and Clinical Vice-Chairs, Program Director, and PGY-1 Director, as well as Drs. Ellie Duduch, Jen Smith and Laura Cohen. All other faculty are considered an

Advisory Committee, which meets quarterly to provide information and opinion to the members of the Clinical Competence Committee. On the basis of discussion, the Committee decides

whether a resident may continue in training, requires a remediation program, or must be dismissed from the program.

The Clinical Competence Committee meets every 3 months to review all evaluations. Every 6 months, a CCC report must be filed with the ABA (January 31st and July 31st) certifying that each resident displays the ABA Essential Attributes, as well as to provide Milestones reporting to the ACGME.

The resident's advisor discusses individual evaluations with the resident during the quarterly advisor/advisee meetings. When issues exist, the Residency Program Director will also discuss the evaluations with the resident. A summary of the discussion is written and signed by both resident and faculty advisor. The signed summary is kept in the resident's portfolio.

Residents experiencing problems must understand that faculty members will be notified of the nature of the problems if appropriate, so that proper supervision can be maintained at all times. This must be done to ensure patient safety.

Examples of problems that result in actions by the CCC are outlined below:

- Problems that have frequently been a cause for concern as indicated in faculty evaluations
- Failure to pass the USMLE step 3 prior to starting the PGY-3 year
- An unsatisfactory or marginal report at the conclusion of a rotation
- Inability to provide appropriate clinical care such as poor judgment; lack of vigilance; poor
- Inability to multitask and/or lack of situational awareness
- Failure to call for help in an appropriate and timely manner
- Failure to respond to constructive criticism and feedback in an appropriate manner
- Poor attendance at lectures, conferences and didactic teaching
- Failure to complete required training exercises and comply with hospital and program requirements (licensing, mandatory curriculum, etc)
- Failure to report duty hours and follow other departmental or hospital policies and procedures
- Complaints either verbal or written from patients, other physicians or members of staff. The minimum level of response to any substantiated written complaint by a patient, member of staff or any risk management issue will be Focus of Concern status.

CRITERIA FOR EVALUATION/ACGME CORE COMPETENCIES

These encompass six broad areas: patient care; medical knowledge; practice-based learning and improvement; interpersonal and communication skills; professionalism and systems-based practice. Broad examples of expected performance include, but are not limited to the following:

Patient Care

- Provides complete and thorough preoperative evaluation and optimization of all patients
- Develops an appropriate anesthetic plan including selection of monitors, anesthetic agents and plan for postoperative analgesia for every patient;
- Pays attention to intraoperative course and adjusts care appropriately (e.g. fluid balance, level of anesthesia and analgesia)
- Responds appropriately and in a timely manner to critical events (e.g. unexpected difficult airway / hypotension / hypertension / arrhythmias / decreased O₂ sats / high airway pressures / failed block / anaphylaxis / hypovolemia etc, etc)
- Demonstrates good judgment and calls attending appropriately
- Maintains a safe environment –(proper labeling of syringes / ordered lay out of anesthesia cart)
- Evaluates patients postoperatively
- Adequately documents all aspects of care provided

Medical Knowledge

- Understands physiology, pathophysiology and pharmacology as it applies to anesthesia
- Understands the basics of evaluation and treatment of common medical and surgical diseases
- Is able to interpret laboratory and diagnostic tests.
- Is capable of appropriately modifying anesthetic care based on the status of the patient's medical conditions.
- Properly utilizes and interprets monitoring and other medical equipment.

Technical Skills

- Performs technical procedures with dexterity (e.g. intubation, line placement, and regional anesthetic techniques)
- Always well prepared for technical procedures, (cart set up, appropriate pt monitoring etc)
- Performs technical skills with regard for patient safety and comfort
- Demonstrates ability to explain procedures and possible complications to patients using appropriate language
- Asks for assistance appropriately
- Understands complications of procedures and proper management of complications
- Demonstrates organizational skills such as efficient case turnover and case starts.

Practice-based Learning and Improvement

- Reads about unfamiliar patient care situations
- Formulates questions when unclear how to integrate knowledge into clinical practice
- Learns from clinical experiences and direct teaching
- Recognizes and corrects gaps in knowledge & expertise
- Locates, appraises & applies scientific evidence to patient care
- Actively teaches and mentors other learners
- Regularly attends conferences, didactic teaching and grand rounds

Interpersonal and Communication Skills

- Develops a therapeutic relationship with patients and families
- Considers cultural and language differences in interpersonal interactions
- Keeps clear and concise preoperative, intraoperative & postoperative records (writes legibly)
- Communicates and establishes good relationships with peers; attendings; surgeons; nurses; and other health professionals
- Maintains composure in stressful situations
- Projects competence and confidence
- Provides therapeutic direction and leadership, where appropriate

Professionalism

- Demonstrates appropriate concern for patients
- Shows a commitment to excellence
- Behaves in an ethical manner
- Shows honesty and integrity
- Is reliable and conscientious
- Demonstrates respect for coworkers
- Is punctual
- Is diligent in completion of documentation
- Functions appropriately in a team

Systems Based Practice

- Demonstrates effective operating room management
- Understands cost-effective practice
- Provides efficient and safe turnover of cases.
- Consults and delegates effectively
- Appreciates the role of other Units in providing patient care (pre-anesthesia clinic, PACU, ICU)
- Functions as a team member with health care providers from other disciplines (surgeons, nurses)
- Participates fully in quality improvement (CQI) activities

AMERICAN BOARD OF ANESTHESIOLOGY ESSENTIAL ATTRIBUTES

ABA Clinical Competence Report

Every 6 months the residency program submits a clinical competency report to the ABA. This may be satisfactory or unsatisfactory. The attributes reported to the ABA in this report are described below. If a resident receives an unsatisfactory report for the last 6 months of training, or 2 consecutive unsatisfactory reports the ABA requires that the resident completes additional training before a satisfactory certificate of clinical competence is awarded.

Essential Attributes *(Must all be satisfactory for an over all satisfactory report)*

1. Demonstrates high standards of ethical and moral behavior
2. Demonstrates honesty, integrity, reliability, and responsibility.
3. Learns from experience; knows limits.
4. Reacts to stressful situations in an appropriate manner
5. Has no documented abuse of alcohol or illegal use of drugs during this report period
6. Has no cognitive, physical, sensory or motor impairment that precludes acquiring and processing information in an independent and timely manner.
7. Demonstrates respect for the dignity of patients and colleagues, and sensitivity to a diverse patient population.

Professional Skills

1. Demonstrates patient care that is compassionate, appropriate and effective
2. Respects patient privacy.
3. Demonstrates effective interpersonal and communication skills with patients, their families and other healthcare professionals.
4. Demonstrates appropriate concern for patients and a commitment to carrying out professional responsibilities.
5. Has a commitment to practice-based learning and improvement.
6. Is adaptable and flexible.
7. Is careful, and thorough.
8. Is complete and accurate in record keeping.
9. Possesses business skills important for effective practice management.
10. Uses information technology to optimize patient care.
11. Is an advocate for quality care.
12. Is appropriately self-confident; recognizes gaps in knowledge and expertise.
13. Demonstrates an understanding of the healthcare system and the ability to effectively call on system resources to provide optimal care.

Knowledge

1. Possesses an appropriate fund of medical knowledge.
2. Critically evaluates and applies this medical knowledge to patient care.

Judgment

1. Demonstrates use of a sound background in general medicine in the management of problems relevant to the specialty of anesthesiology.
2. Recognizes the adequacy of preoperative preparation of patients for anesthesia and surgery, and recommends appropriate steps when preparation is inadequate.
3. Selects anesthetic and adjuvant drugs and techniques for rational, appropriate, patient-centered and cost-effective anesthetic management.
4. Recognizes and responds appropriately to significant changes in the anesthetic course.
5. Provides appropriate post-anesthetic care.
6. Provides appropriate consultative support for patients who are critically ill.
7. Evaluates, diagnoses, and selects appropriate therapy for acute and chronic pain disorders.

Clinical Skills

1. General preparation
2. General Anesthesia
3. Regional anesthesia and pain management
4. Special procedures

UMASS DEPARTMENT OF ANESTHESIOLOGY RESIDENCY PROGRAM PROMOTION, DISMISSAL & DUE PROCESS

Remediation

If there is an unsatisfactory evaluation, the resident is provided the opportunity for remediation. The resident will be informed by the Director of Education/Program Director or Chair verbally and in writing, that his/her work is unsatisfactory, with the plan for a remediation program. The length and type of remediation will be determined by the area of weakness (i.e. medical knowledge, clinical or technical skills, communication etc.) At the time of the unsatisfactory evaluation, the resident's advisor will discuss the issues with the resident and help with remedial work. A structured remediation program will be set up and documented in writing.

The resident on remediation will be evaluated frequently throughout the remediation period. Again the frequency will vary depending upon the issues involved. Evaluation will be monthly at the minimum, and may be weekly if deemed necessary. If a resident shows no or minimal improvement within the initial remediation period, a second period will be offered. The resident may be dismissed from the Program after six months from the start of the first remediation period. The resident is informed of the above by the Director of Education/Program Director or Chair verbally and in writing. If the resident's work improves to satisfactory after the remediation period, the resident will be taken off remediation and allowed to continue in the Program.

Dismissal

The ABA's policy is that a Clinical Competence Report is filed with them for each resident every 6 months. If a resident receives an "unsatisfactory" for 6 months, this unsatisfactory can be changed with a "satisfactory" evaluation for the following 6-month evaluation period. If another "unsatisfactory" is received for the following 6 months, then the resident will be required to repeat that full year of training, or be dismissed as per the training program. All evaluations and documentation of the discussions are in the resident's personal file in the Anesthesiology Residency Office. If a resident continues to have unsatisfactory evaluations and is considered by the Clinical Competence Committee not to meet the standards set by the Program, the resident will be dismissed from the Program.

Due Process

The steps leading up to dismissal and the mechanisms for grievance are outlined in the Institutional Residency Personnel Policies on the website of the Office of Graduate Medical Education. Residents are advised to make themselves familiar with the contents, and will be so advised as well by the Program Director if it becomes apparent that a resident may warrant dismissal. The Associate Dean of GME will also be notified of any pending actions.

EXAMINATIONS AND EXAM PREPARATION

**Please read the ABA Booklet of Information concerning the
exam process toward certification carefully!!**

<http://www.theaba.org/PDFs/BOI/StagedExaminations-BOI>

- A. The BASIC Examination**, which will be administered at the end of a resident's CA-1 year, focuses on the scientific basis of clinical anesthetic practice including content areas such as pharmacology, physiology, anatomy, anesthesia equipment and monitoring. The content outline available at [www.theABA.org](http://www.theaba.org) provides a detailed description of the covered topics. Starting in 2015, the examination will be offered twice each year. Residents **must pass the BASIC Examination** to qualify for the ADVANCED Examination. The Board strongly encourages residents to register and take the BASIC Examination as soon as they meet the eligibility requirements. (FYI - A resident who fails the exam may retake it every 6 months; however, after 3 consecutive failures, the resident must repeat an entire year of training, if allowed by the program. It is up to each program to determine if a resident will be continued in the program after two consecutive failures).
- B. The ADVANCED Examination**, which will be administered after graduation from residency training, focuses on clinical aspects of anesthetic practice including subspecialty-based practice and advanced clinical issues. The content outline provides a detailed description of the topics covered, which is inclusive of the topics covered in the BASIC Examination. The first examination will be administered in July 2016. Starting in 2017, it will be offered twice each year. Candidates must pass the ADVANCED Examination to qualify for the APPLIED Examination.
- C. The APPLIED Examination** is designed to assess the candidate's ability to demonstrate the attributes of an ABA diplomate when managing patients presented in clinical scenarios, with an emphasis on the rationale underlying clinical management decisions. These attributes include sound judgment in making decisions, proper management of surgical and anesthetic complications, appropriate application of scientific principles to clinical problems, adaptability to unexpected changes in the clinical situations, and logical organization and effective presentation of information.

The APPLIED Examination includes two components: a Standardized Oral Examination (SOE) and an Objective Structured Clinical Examination (OSCE). The SOE is an oral assessment using realistic patient cases with two Board-certified anesthesiologist examiners questioning an examinee in a standardized manner. These examinations assess clinical decision-making and the application or use of medical knowledge with realistic patient scenarios. The OSCE is a series of short, simulated clinical situations in which a candidate is evaluated on skills such as history taking, physical exam, procedural skills, clinical decision-making, counseling, professionalism and interpersonal skills. Both components are administered by Directors of the Board and other ABA diplomates who assist as associate examiners.

Beginning in 2017, the APPLIED Examination will be administered as many as eight times each year. Candidates will receive a separate score for each component of the APPLIED Examination - the SOE and the OSCE. If one component is failed, the candidate will retake only the failed component. Candidates must pass both components of the APPLIED Examination to become Board certified.

In-Training Examination

All CA-1, CA-1 and CA-2 residents are expected to take the ABA/ASA In-Training Exam given every year. Currently the exam is given over several days in January. Most residents will take the exam on a Saturday within the defined dates. Residents on call Friday night will be relieved of their duties at 2100 hours in order that they may have sufficient rest prior to the exam. Residents on call Saturday will be expected to resume their work duties upon completion of the exam. The Program will assist the resident with the application and will be responsible for the fee. **The exam is only given once per year. All residents are expected to take the exam.**

Anesthesia Knowledge Test (AKT)

CA-1 residents will take the AKT Pre-Test during orientation lecture time, the Post-Test after 30 days of training and the AKT-6 test after their first six months of training. In addition, they will be required to take the AKT-24 exam after 24 months of training. The results of these exams are for the resident's self-evaluation, and are not used to make any advancement decisions.

Department Mock Oral Examinations

Mock oral exams are given during a time protected session each Tuesday afternoon. Each resident in the program is examined twice per academic year. Exams are digitally recorded. One resident is given a 35 minute mock oral exam by two of our attending faculty under exacting conditions. The recording is then viewed immediately by the group, with verbal feedback from the examiners provided throughout the viewing, sometimes sentence by sentence. Each session lasts approximately 1.5-2 hours. At the end of each session, the resident is asked to complete a self-assessment of his performance, including areas of strength, weakness, and knowledge deficits. The resident is then provided the DVD of his/her performance to be used in review and as a teaching tool.

Written Board Review

Once a week, there is a written Board Review using questions already compiled or from a Board Review Course. Key words are also reviewed using an Anesthesia Review Book as well lists of keyword topics of questions answered incorrectly by our program's residents.

USMLE EXAMS

To enter into this residency program, the resident candidate must possess USMLE Steps 1 and 2. A resident becomes eligible to take the Step 3 exam after their first year of residency training (PGY-1) or in their CA-1 year. It is recommended that the resident take Step 3 as soon as they become eligible. It is the policy of the institution that a CA-1 resident cannot proceed on to his CA-2 year unless he/she has passed Step 3. In direct relation, a resident cannot acquire a full medical license without the Step 3 exam and cannot sit for the Boards without Step 3 and a full medical license.

RESIDENCY COMMITTEES/MEETINGS

Clinical Competence Committee

The clinical competence of the residents is monitored by the Clinical Competence Committee (CCC), which is chaired by Dr. Elifce Cosar and composed of the Program Director, the Chairman, the Academic Vice-Chair, and appointed faculty members). The Committee meets at least quarterly in order to review the residents' clinical evaluations, provide Milestones reporting to the ACGME, and suggest remedial work where necessary. The Committee may meet more frequently to evaluate a resident on remediation program or where problems are anticipated. The Committee is also responsible for the submission of the required six-month ABA Clinical Competence Evaluations.

The resident's advisor is provided a summary of the resident's evaluation and CCC discussion. A quarterly meeting between both faculty advisor and resident is scheduled so that the resident may receive feedback and discuss any concerns with the advisor.

Education Committee

The Education Committee of the Department meets four times a year and is chaired by the Residency Program Director. Members of the Committee include the Department Chair, the Academic and Clinical Vice-Chairs, representatives of all rotation integrated sites, and the Chief Residents. Meetings are open to any and all faculty who choose to attend. The residents' Didactic Curriculum, Department Conferences and other Educational Activities are discussed and updated. The type and number of resident cases, techniques used, etc., are reviewed so that clinical directors may make adjustments in case assignment where necessary.

Residency Selection Committee

The Residency Selection Committee is composed of the Residency Program Director, the Department Chair and Academic and Clinical Vice-Chairs, the Chief Residents as well as volunteer faculty members who may be called upon to interview candidates. The Committee meets several times throughout interview season to review the selection criteria and process and also to review and select candidates for Residency positions.

Chief Residents Meeting

The Chief Residents will meet with the residents once a month. The residents have their own agenda and discussion without faculty present. Chiefs are responsible for bringing forward to the Program Director any issues which they believe need to be addressed.

Residents and Chair/Program Director Meeting

The residents have a combined meeting with the Chair and Program Director once a month. This is an informal forum in which both resident issues and pertinent events in the Department and Institution are discussed.

Quality Assurance, Peer Review and Value Added Committees

The Chief Residents, as well as any other interested residents, participate in the QA/PR and Value Added Committees.

BENEFITS AND CONTRACTS

<http://residents.umassmed.edu>

Financial Support

- All residents will receive an annual salary from the Institution.
- Emergency loans for residents are available through the Office of Graduate Medical Education. These loans are for up to \$300 and must be paid back through payroll deduction within a 90 day period.
- All residents receive educational allowances: CBY, CA-1 and CA-2 residents receive \$1000/year, CA-3 residents receive \$1500. Funds may be used to offset costs of certifying exams, attending a meeting, or the purchase of books, software or handheld devices with the exception of iPhones and iPads, as they get tagged and become property of the medical school, which would require them to be left behind when the resident leaves the program.
- Anesthesia resident loans are available from the **Anesthesia Foundation**, with applications available from them. Please contact Dr. Lucas for more information, or the ASA directly at:

Anesthesia Foundation
1061 American Lane
Schaumburg, IL 60173-4973
telephone: (847) 825-5586
fax: (847) 825-1692

Vacation/Sick/Meeting/Personal Time Guidelines

As per ABA guidelines, the 2015 Booklet of Information states

The total of any and all absences may not exceed 60 working days (12 weeks) during the CA 1-3 years of training. Attendance at scientific meetings, not to exceed five working days per year, shall be considered a part of the training program. Duration of absence during the clinical base year may conform to the policy of the institution and department in which that portion of the training is served. Absences in excess of those specified will require lengthening of the total training time to the extent of the additional absence. A lengthy interruption in training may have a deleterious effect upon the resident's knowledge or clinical competence. Therefore, when there is an absence for a period in excess of six months, the Credentials Committee of the ABA shall determine the number of months of training the resident will have to complete subsequent

to resumption of the residency program to satisfy the training required for admission to the ABA examination system.

In the University of Massachusetts Anesthesiology Residency Program, each resident receives 15 working days of vacation and 5 sick days per year. Three personal days are provided to residents to use in either their CA-2 or CA-3 year for necessary interviews. In addition, CA-3 residents are allowed up to 5 additional days to attend one meeting. Time absent in excess of 60 days must be made up at the end of training. Please be aware that your paycheck will show a greater accumulation of sick time, based upon the benefits provided to UMass Medical School employees. Given the ABA restriction of time away from the training program, if that additional sick time is utilized, then the resident must make up that time at the end of their training.

All requests for time off must be in writing on Departmental Request Forms available in the Residency Office. Vacations will be awarded on a first come, first served basis and, in unusual cases, seniority. Vacation time is **not** cumulative.

In general, vacation requests from CA-3s during rotations away from UMMHC are not accepted. Special circumstances may be considered on an individual basis.

Residents should try to space out their vacations over the year. In order to be fair to others, please request only one holiday weekend off during the ever-popular Christmas and New Year's holidays. If you celebrate a religious holiday other than Christmas, you may request time in lieu of Christmas (one holiday).

If your request is not passed in by July 31st, it may NOT be honored OR if no requests for time off are received, you will then be assigned time.

All requests must be APPROVED by the Program Director and/or Clinical Director involved. Please check the VACATION BOOK in the Residency Office for FINAL APPROVAL of your time. As a general rule, no more than 2 residents are allowed out of the OR to be on vacation on any one given day.

No vacations are allowed in July and August for any residents. If extraordinary circumstances arise, discussion with the Program Director is advisable.

No vacation is allowed during PACU rotation (CA-1 year)

No vacations allowed during SICU or Thoracic Rotations

No vacations are allowed during ASA Meeting time (mid October), as all requests by residents approved to present at the ASA take priority.

Pain rotation – CA-2's can take long weekend, CA-3's may take a vacation/meeting week. The Director of the Pain Clinic must approve any time off from the Pain Clinic.

Bereavement – 4 days for immediate family members (parents, grandparents, siblings children), 3 days for non-immediate family (aunts, uncles, cousins, etc.)

PGY-1 residents can only take vacation time during their elective time, i.e. Anesthesia, Pulmonary, Cardiology or Nephrology/Renal. They also can only be taken one week at a time as so not to diminish the rotation. Time off during any other rotation must be approved by both the rotation director and our program director well in advance.

Meeting Guidelines (CA-3's ONLY)

CA-3 residents may attend one meeting in the Continental USA or Canada (i.e. NOT Hawaii, Alaska and Puerto Rico). The Program Director and/or the Clinical Director must approve meetings in writing. **It is suggested that all meeting requests be submitted by JULY 31st, so start NOW!!!** Requests submitted after this date will be by availability only and vacation time will take precedence.

The meeting that you request may be no longer than 5 days, which includes meeting time and travel time. For example: If your meeting is 1, 2, 3, 4 or 5 days and is close by, you get the 1, 2, 3, 4 or 5 days and no travel time. If your meeting is 3 days and you need 2 travel days, you get the 5 days. If your meeting is 5 days and you need 2 travel days, you make take the travel days out of your vacation time.

In all cases, investigate your travel arrangements before submitting your request **with brochure**. You may use your \$1,500 educational allowance for your meeting expenses. Anything above that amount is YOUR responsibility.

If the brochure is unavailable, please submit approximate dates. When the brochure with the exact dates is available, the dates you requested will be adjusted according to the information on the brochure. Make your travel arrangements as early as possible to get the best rates.

Please note that car rental and room service is not reimbursable. Additionally, you must submit original documentation/receipts in order to be reimbursed for meeting expenses.

Meetings for Presentation

Residents at any level will be allowed to attend meetings in which they are scheduled to present posters, abstracts etc. Time will be limited to that which is necessary, and all appropriate costs will be reimbursed. Please note that not all residents may present at ASA at one time, as we can only let so many go at the same time. So, requests will be honored based on submittal date and ASA acceptance.

Jury Duty

You are obliged by law to fulfill this duty when asked and will be granted the time away as necessary. The resident should fill out the "Vacation Request Form" in order to keep track of the days that he/she is off. If the resident needs to be away longer than the originally requested time, he/she must inform the Residency Office and Clinical Coordinator immediately. The resident will continue to be paid by the Hospital (the Office of Graduate Medical Education – OGME) at his/her regular salary. If the resident is still on duty after four days, the State pays

\$50/day starting on the fourth day. The resident must turn this money over to OGME to avoid “double-dipping”. If Jury Duty occupies a significant portion of the residency training, it may be necessary for the resident to make up this time.

Liability Insurance

The UMass Memorial Medical Center will provide malpractice insurance coverage for all residents on all rotations.

Health and Life Insurance

Health and Life Insurance is available to all residents. The University of Massachusetts Medical School has several package plans from which the resident may choose.

Disability Insurance

Disability Insurance is available through the University of Massachusetts Medical School as an added benefit. You are STRONGLY ADVISED to consider DISABILITY INSURANCE. All information is provided to you at the GME Orientation.

Living Quarters\Call Rooms

Living quarters are not provided by UMMS. However, housing information is available to all residents through the OGME. Secure on-call rooms are provided by the hospital. The call rooms for anesthesia residents on call in the University OR are located in H4-522B, C, and D. Call rooms for residents covering the ICUs are located within each Unit. A call room for residents rotating at Memorial is situated within the OB suite.

Meals

Meals cards are provided for all residents for each on-call period.

Laundry

The Institution provides lab coats and two pairs of scrubs for residents. The resident is responsible for cleaning his or her own coats.

Contracts

The residents’ contract is renewed annually. If the resident performs satisfactorily, he/she will be expected to complete three years of Anesthesia Residency training (CA-1, CA-2 and CA-3) as required by the ABA, as well as the Clinical Base Year if applicable.

“Moonlighting”

Moonlighting is allowed by the Institution, and is **occasionally** allowed by the Department of Anesthesiology. Guidelines for Moonlighting:

Residents on J-1 Visa's are not allowed to moonlight.

Moonlighting will not be allowed to interfere with the resident's training

Allowed only after satisfactory completion of the CA-2 year, and with approval of the Program Director

Prohibited if there is a history of academically marginal performance

Prohibited if there is a history of unsatisfactory resident CCC evaluation or probation

Must be pre-approved by the Program Director, Office of Graduate Medical Education and the Medical Staff Office of UMMHC. All proper approvals must be in place before any check will be issued.

Resident must have full Massachusetts license, per OGME

Resident must have own personal DEA license

Moonlighting within the institution must be included in the resident's duty hours total, and must not violate any work hours rules. The Program Director receives a monthly log of the residents' moonlighting hours, and will use these reports to approve or withdraw approval of moonlighting privileges. Those residents that do moonlight often choose to do so on their vacations or during free long weekends.

Permission will be withdrawn if there is a decline in resident performance

Maternity/Paternity Leave

A Maternity Leave of Absence without pay will be granted for up to eight weeks. Available accrued paid benefits (vacation time, sick time and personal time) may be used to cover all or part of the approved absence of eight weeks or less. A special form should be obtained from Employee Benefits and completed before leaving for Maternity Leave. This leave must be made up if over the allotted 20 days per year. The ABA has its own guidelines concerning time away from anesthesia training. **Paternity Leave** is also allowed, but at this time must be taken as vacation time (or unpaid leave) only.

Licenses

The Program will obtain temporary Massachusetts licenses for all residents, and need to be renewed yearly. The Program will also reimburse for permanent Massachusetts licenses as soon as residents are eligible. Residents are encouraged to obtain their own DEA numbers as well. Each resident is encouraged to obtain these as soon as they become eligible.

Sick Leave Bank Enrollment Period

The purpose of the Sick Leave Bank is to provide UMassMedical School employees some financial support during medical leaves of absence, which would otherwise be unpaid due to a lack of accrued sick days. Its intention is for use during a short-term disability and when an employee has reasonable expectation of returning to work. It is not meant as a substitute for long-term disability income protection. Each year, during the months of January and July, employees may become members of the Sick Leave Bank by assigning to the Bank a minimum of 2 full days from their accumulated personal sick leave.

Five (5) working days after an employee's sick, personal and vacation leave and any compensatory time is totally used, a member of the Sick Leave Bank may draw upon the Bank by presenting verifiable documentation, satisfactory to the Sick Leave Bank Committee. The Sick Leave Bank Committee may require additional medical documentation and/or consultation at any time during the employee's sick leave, including a review of past attendance. Leave from the Sick Leave Bank may only be used for the illness or disability of the employee; it may not be used for family sick leave.

The Sick Leave Bank was developed to assist employees in weathering short-term illnesses. Therefore, the maximum number of days an employee may draw from the Bank for any one illness is 65. This benefit should carry an employee through the required waiting period prior to the commencement of long-term disability insurance benefits.

Maternity leave is of 8-week duration and all accrued time must be used prior to drawing the time from the Bank. In addition, you must fulfill the 5-day leave-without-pay requirement prior to drawing from the Bank.

Stress Management / Mental Health Consultation

If for any reason, personal or academic, a resident feels that counseling might be helpful, the department encourages the resident to contact his/her advisor, the Residency Program Director, or the Department Chairman. Residents can also contact Dr. Daniel Kirsch of the House Officer Counseling Program at 508-856-7702.

DUTIES OF THE CHIEF RESIDENT

General

The Chief Resident is a CA-3 resident, with two chosen by the Department Chair after consultation with appropriate faculty. Each Chief Resident serves a 6-month term.

Clinical Responsibilities

The Chief Resident is required to develop all on-call schedules, as well as a working mechanism for back-up arrangements (i.e. sick calls).

The Chief Resident is ultimately responsible for the on-call schedule for the residents on a monthly basis. The Chief Resident will coordinate all call requests. These must be submitted in writing to the Chief Resident by the 10th of the preceding month. The call schedule will be available for the Program Director's review by the 15th of the month. After approval, it will go to the Residency Coordinator for final input and distribution. A reminder that requests are not demands and may not all be granted, although every effort will be made to accommodate all requests. It is suggested that, if a request is particularly important, you note that on the request form. In the event there are multiple requests for the same period, the Chief Resident will have the information necessary to be better able to make appropriate decisions.

In the event a resident is unable to take call, that resident must inform the Clinical Coordinator and the Chief Resident. If the resident cannot find someone to take his/her call, the Chief Resident is then responsible for covering on-call duty, as he/she deems appropriate.

The Chief Resident is expected to participate in the interview process for resident applicants as needed. The Chief Resident is expected to participate in orientation of new residents.

Administrative

The Chief Resident is expected to participate in the Program's administrative and advisory committees, to include:

- **Chief Resident Meeting** – the Chief Resident will schedule, and develop an agenda for, the monthly Chief Resident Meetings
- **Resident Meeting with the Program Director**
- **Resident Meeting with the Chairman**
- **Education Committee**
- **Resident Selection Committee**
- **Quality Assurance Committee**

- **Quality Improvement Conference** – the Chief Resident will help organize this conference and is responsible for taking notes and dictating the summary. He/she is also responsible for the attendance sheets.

Additional responsibilities include:

- Attend UMMS OGME Chief Resident retreats
- Chief Resident Committee meetings and retreats.
- Advise on, interpret and foster implementation of hospital policies.
- Communicate with Chief Residents of other Programs.
- Advise and assist in recruitment and orientation activities.
- Facilitate evaluations of program by residents.
- Responsible for Anesthesiology representation to other committees and meetings, as required or requested by Drs. Kaur or Lucas.

Supervision

The Chief Resident is expected to:

Assist in conflict resolution among Program residents, between Program residents and residents of other departments, and other health care providers.

Represent the interests of the residents in clinical and administrative matters.

Provide assistance to residents in need of counseling services and in need of remedial training and education.

Act as a mentor and an additional resource to junior residents.

**UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL
DEPARTMENT OF ANESTHESIOLOGY
RESIDENCY PROGRAM**

POLICY ON RESIDENT FATIGUE

The University of Massachusetts Medical School Anesthesiology Residency Program supports the ACGME Standards on Resident Duty Hours, as its premise of decreasing resident fatigue is a positive step toward improved patient care as well as improved safety for both patient and resident. The department recognizes that there can be multiple etiologies for resident fatigue, not the least of which are difficult or excessive patient care responsibilities. The program also understands that unexpected personal circumstances may cause resident fatigue sufficient enough to jeopardize patient care. As such, the residency program is committed to the following steps in order to prevent excessive resident fatigue and its adverse effects:

1. Strict compliance with the ACGME Standards on Resident Duty Hours (see attached policy)
2. Continuous monitoring by the Program Director of compliance with the 80 hour work week guidelines, accomplished by resident input of hours into the web-based E*value system
3. Continuous monitoring of resident behavior by chief residents, faculty and the Program Director as well as monitoring of performance via faculty-generated web-based evaluations

We are also committed to assisting a resident who is experiencing difficulty due to fatigue. Residents who feel they are unable to carry out their patient care duties due to fatigue during the elective schedule are asked to speak with the Anesthesia Clinical Director, who is then expected to find relief for the resident while s/he is either sent to the call room to nap (if early in the day), or sent home. That decision rests with the Clinical Director. If a resident is concerned about the ability to function secondary to fatigue while on-call, s/he is expected to speak with the call attending who must then send that resident to the call room to nap as soon as feasible. In the event all residents are busy providing anesthesia, and are unable to relieve the fatigued resident, then the second call attending must be called in to provide such relief.

As stated above, the program understands that unavoidable situations do occur which may cause excess resident fatigue. If a resident has ongoing difficulties in this area, however, the residency program will recommend that the resident seek evaluation in order to gain an understanding of the cause and preventive measures. The program will assist the resident toward this goal using all reasonable means possible.

UMASS MEMORIAL MEDICAL CENTER RESIDENT SUPERVISION POLICY OFFICE OF GRADUATE MEDICAL EDUCATION

PURPOSE:

To ensure that an appropriate level of clinical supervision is provided to all residents during clinically relevant educational activities.

SCOPE:

This policy will apply to all house staff and all attending physicians at UMass Memorial Medical Center.

DEFINITIONS:

House Staff: Practitioners appointed to an organized residency or clinical fellowship program. Intern, PGY, resident and fellow are all House Staff designations.

Attending Physician (or his/her coverage): An appropriately licensed and credentialed physician practicing within UMass Memorial Medical Center.

Medical Student: A student enrolled in the UMass Medical School.

POLICY:

Attending physicians are expected to provide an appropriate level of clinical supervision required of all residents during clinically relevant educational activities. UMass Memorial Medical Center subscribes to a philosophy that the most effective learning environment for post-graduate medical trainees is one that provides (a) sufficient freedom and graded responsibility for house staff to share responsibility for decision-making in patient care under adequate faculty supervision, (b) supervising faculty feedback to house staff concerning their diagnostic and management decisions, and (c) patient's right to expect a healthy, alert, responsible and responsive physician dedicated to delivering safe, effective and appropriate care. In order to create this type of learning environment, ensure appropriate levels of house staff supervision, and compliance with the *Essentials of Accredited Residencies*, the Medical Center strives to ensure that the principles set forth in this policy and these procedures are followed by the residency training programs sponsored by the University of Massachusetts Medical School with participation by UMass Memorial Medical Center.

PRINCIPLES:

All inpatients at UMass Memorial Medical Center will be under the continuous care of a member of the medical staff. Understanding that our mission includes education, we hold the patient's interests as primary. Our care, and the educational processes coincident with that care, will be patient centered.

Clinical responsibilities must be conducted in a supervised and graduated manner, allowing house staff to assume progressively increasing responsibility in accordance with their level of education, ability, and experience.

Attending physician supervision must include timely and appropriate feedback, and methods for effectively communicating with supervising faculty. House staff must always request guidance or supervision whenever there is a question about patient assessment or conduct of care that the house officer does not feel he/she can answer or undertake. Residents will never be criticized for asking for help, only for failing to do so when necessary

To ensure effective communication, each department is responsible for providing an on call roster of attending physicians that can accurately designate the coverage for every service at all times. Departments are responsible for updating the list with any appropriate changes.

At the time of admission, the name of each patient's attending physician and residents (if appropriate) must be entered into the information system and updated as necessary throughout the patient's hospitalization

Attending physician supervision of house staff must support each program's written educational curriculum.

Attending physician supervision of house staff should foster humanistic values by demonstrating a concern for each house staff member's well being and professional development.

All house staff activities are supervised by attending physicians who have overall responsibility for patient care rendered and the ultimate authority for final decision-making.

The particular house staff-attending relationship and the structure of attending supervision will vary according to patient care setting.

Attending physician schedules must be structured to provide house staff with continuous supervision and consultation. Attending physician call schedules are structured to ensure that support and supervision are readily available to house staff on duty.

PROGRAM AND GENERAL (SITE-SPECIFIC) HOUSESTAFF SUPERVISION

Program Specific House staff Supervision:

Each program sponsored by The University of Massachusetts Medical School shall develop and maintain appropriate supervision policies, compliant with ACGME Program Requirements.

The following Supervision requirements are applicable to the site specified in subsections a through h.

a. Housestaff Supervision on Inpatient Services:

A patient care team that may include medical students, interns, residents and fellows, under the supervision of a faculty physician will care for patients admitted to the service. Decisions regarding diagnostic tests and therapeutics, although initiated by house staff, will be reviewed with the responsible attending during patient care rounds, or through verbal communication.

Patients will be seen daily by the responsible attending and their care will be reviewed with the attending at appropriate intervals. At minimum, the attending will document his/her involvement in the care of the patient in the medical record on a daily basis and more often as required by the clinical situation.

House staff are required to promptly notify the patient's attending physician in the event of any controversy regarding patient care or any serious change in the patient's condition. Examples of serious change would be an unexpected change in a patient's condition that would require admission to an intensive care unit or the need for an urgent diagnostic procedure or the need for an emergency consultation.

Attending physicians are expected to be available by telephone or pager, for house staff consultation and for on-site consultation 24 hours per day for their term on service, on-call day or for their specific patients. Attending physicians must see patients admitted to their service within twenty four hours or sooner if necessary based on the patient's clinical condition on admission.

b. Supervision of House Staff in Emergency Medicine:

Each Emergency Medicine site, adult and pediatric, will have attending physicians on-site 24 hours per day supervising patient care.

c. Supervision of House Staff in Ambulatory Services:

In Ambulatory Services, responsible attending physician must review overall patient care rendered by house staff.

d. Supervision of House Staff in Intensive Care Units:

In intensive care units, house staff decisions regarding patient care, including admission, discharge, treatment decisions, performance of invasive procedures and end-of-life decisions are to be discussed and agreed to by attending physicians.

e. Supervision of House Staff in Operating Suites:

In the operating suites, surgical attendings are responsible for the supervision of all operative cases. Surgical attendings are present in the operating room with house staff during critical parts of the procedure. For less critical parts of the procedure, surgical attendings must be immediately available for direct participation.

Anesthesia attendings are responsible for the supervision of anesthesia and must be present in the operating room with house staff during critical parts of the administration of anesthesia. For less critical parts, Anesthesia attendings must be immediately available for direct participation.

f. Supervision of House Staff Participating in Consultation Requests:

Requests for consultation should be approved by the patient's attending physician. Residents may be part of the consultation process, but the attending physician covering the service that is consulted, must approve in writing, any recommendations made by the resident staff. In addition, the attending consultant must agree in writing with any physical findings documented by the resident participating in the consult.

g. Supervision of House Staff with Respect to Urgent/Emergent Admissions

All admissions to attending physicians will be discussed directly with the admitting service. House staff may not admit patients to the responsible attending physician without his/her knowledge of the clinical situation. Any conflict regarding patient admission will be resolved by direct communication between the Emergency department attending and the admitting service attending as outlined in the Bed Assignment Policy.

h. Supervision of House Staff in Radiology

In Adult and Pediatric Radiology, the responsible attending Radiologist must be available for house staff supervision and for interpretation of current radiologic studies 24 hours per day. This responsibility includes the ability to electronically view radiologic studies from remote sites such as home.

MONITORING COMPLIANCE

The quality of house staff supervision and adherence to supervision guidelines and policies shall be monitored to ensure proper supervision in the program's clinical settings (including nights and weekends). Each Department will provide a description of how its programs monitor compliance with supervision policies, a description as to how the programs become aware of and respond to exceptions or critical instances of breakdown of supervision and the mechanisms the programs have in place to ensure accessibility and availability of attending physicians. Each Department will provide these written descriptions to the Chief Medical Officer and to the Chair of the Graduate Medical Education Committee. This information will be presented annually to the MSEC and the GMEC

For any significant concerns regarding house staff supervision, the respective program director shall submit a plan for its remediation approved by the Department Chair, to the Chief Medical Officer for review and approval by the Medical Staff Executive Committee. This will also be forwarded to the GMEC for review and the program director may be required to submit progress reports to the GMEC (through the Chair of the GMEC) and to the MSEC (through the Chief Medical Officer) until the issue is resolved.

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL ANESTHESIOLOGY RESIDENCY PROGRAM

DEPARTMENTAL SUPERVISION POLICY

Purpose: To set departmental standards for faculty supervision of anesthesiology residents that assures their education and our compliance with ACGME and institutional standards.

[Note: These standards are not meant to comply with standards required for billing purposes.]

Standards

All patient care performed by residents during training will be under the supervision of a physician faculty member qualified to provide the appropriate level of care. This supervision must be documented in the medical record by the supervising physician or resident. Residents, fellows, and faculty members should inform their patients of their respective roles in each patient's care.

Levels of Supervision: Appropriate supervision of residents must be available at all times. Levels of supervision may vary depending on circumstances or skill and experience of the resident. Definitions relative to levels of supervision are:

- **Direct Supervision:** The supervising physician is physically present with both the resident and the patient
- **Indirect Supervision**
 - **Direct supervision immediately available:** The supervising physician is physically within the confines of the site of the patient care and immediately available to provide DIRECT supervision. (example: although eICU team may be monitoring your patient care, a trauma surgeon is in house at all times for back-up in the ICU)
 - **Direct supervision available.** The supervising physician is not physically present within the confines of the site of patient care, but is immediately available by phone, and is available to come in and provide DIRECT supervision.
- **Oversight:** The supervising physician is available to provide review of procedures/encounters with feedback provided after the care has been delivered.

All patient care must be supervised by qualified attending anesthesiologists. The Program Director ensures adequate supervision of residents at all times. Faculty daily work schedules are structured to provide residents with continuous supervision and ready consultation at all times. An attending anesthesiologist is assigned to supervise a resident in all facets of patient care, including preoperative assessment, intraoperative management, and immediate postoperative care. An anesthesiology faculty attending is always in-house 24 hours per day.

Non-physician personnel do not participate in the clinical instruction or supervision of anesthesia residents. Residents do not supervise other anesthesia personnel.

The responsible attending anesthesiologist must be present and immediately available throughout all anesthetics, whether general anesthesia, regional anesthesia or monitored anesthesia care. The responsible anesthesiologist **must be present at**, and document in the anesthesia record, his/her presence at induction, key portions of the case, and emergence, as well as periodic monitoring. On call general faculty must remain in-house at night and on weekends. Subspecialty faculty (cardiac, pediatric and transplant) are on call from home but must be able to reach the institution expeditiously. In the event of a critical emergency requiring an immediate case start, the call resident may begin a case with the general call staff until the subspecialty call faculty arrives.

By virtue of its level One Trauma and tertiary care status, UMass Memorial Medical Center has a surgical patient population with multiple co-morbidities often requiring anesthesia for complex procedures. It is the expectation that teaching staff will supervise residents in such a way that the resident assumes progressively increasing responsibility according to their level of training, ability and experience. The philosophy of the department is that faculty will supervise junior or inexperienced residents on a 1:1 ratio for all complex cases, in particular complex neuro/vascular/thoracic and pediatric cases, as well as all cardiac cases. For those cases not requiring such intense supervision and teaching, faculty will not supervise more than two anesthetizing locations if at least one location is staffed by a resident, unless an unforeseen situation (i.e. emergency case at night etc.) arises.

The provision of anesthesia services occurs within a team model. At times there may be personnel changes (either resident or supervising attending) through the course of an anesthetic. Proper levels of care via proper hand-off communication and supervision must be maintained and documented in the anesthesia record.

Daily case management

Each resident must discuss the preoperative evaluation of the patient and the anesthetic plan for the patient with the faculty member who is assigned to supervise the resident. If the resident knows the assignment on the evening before the day of surgery, the resident is required to contact the faculty member that evening to discuss the case.

On-Call

When on call, residents can use the faculty call schedule to identify the supervising physician who is immediately available at night. The clipboard with all anesthesia call faculty and residents can be found with the secretary at the front desk of the Operating Room. The schedules include all contact information, including pager and telephone number. The schedule assignments for each day are also at this desk

The on-call attending physician must clearly communicate to the residents when and under which circumstances they expect to be contacted by the resident concerning patients. The resident must contact the attending prior to the start of the anesthetic to review the patient's history and physical examination and to discuss the anesthetic plan. At a minimum, during an anesthetic, the resident must notify the attending of any significant changes in the patient's condition. The resident must notify the attending when the patient is in the room at the start of the anesthetic so that the attending can be present for induction and when the surgery has finished so that the attending can be present for emergence. The resident must contact the attending regarding any emergent problems in the post anesthesia care unit.

Supervision of consultations: The supervising attending must communicate with the resident and obtain a presentation of the history, physical exam and proposed decisions for each referral. This must be done within an appropriate time but no longer than 24 hours after notification of the consultation request. All required supervision must be documented in the medical record by the resident and/or the supervising faculty member.

Supervision of procedures: At times residents will be called upon either by their house staff colleagues or attending physicians to provide services throughout the hospital (arterial or central line placement, intubations, ETT changes, lumbar punctures etc.). **Unless called upon to perform a procedure in an emergent situation ("Code", respiratory arrest, critical patient condition), residents may not proceed with any procedure until notifying their attending, obtaining proper consent from the patient or family member, and arranging an appropriate time when an attending faculty anesthesiologist is free to supervise them.** The supervising faculty physician must be certain that procedures performed by the resident are warranted, that adequate informed consent has been obtained and that the resident has appropriate supervision during the procedure to include sedation. Whenever there is more than minor risk to the patient, the supervising physician must be present during the key part of the procedure. All required supervision must be documented in the medical record by the resident and/or the supervising faculty member. Please see the supervision matrix below, which is also available on OurNet.

Supervision of emergencies: During emergencies, the resident should provide care for the patient and notify the supervising physician as soon as possible. All required supervision must be documented in the medical record by the resident and/or the supervising faculty member.

To reiterate, residents may not perform any procedure in a non-emergent situation, either during provision of anesthesia in the Operating Room or technical consult within the institution, unless supervised by an anesthesiology attending. Resident supervision guidelines for all housestaff are posted on the UMMHC OurNet. A copy of the posted Anesthesia Resident Guidelines is included in the appendix of this manual.

ANESTHESIA RESIDENTS PROCEDURAL SUPERVISION MATRIX

Procedure	PGY-2 (CA1)	PGY-3 (CA2)	PGY-4 (CA-3)	PGY-5 (CA-4)
Arterial line placement	X	X	X	X
Central line placement*		X	X	X
Swan Ganz*		X	X	X
Endotracheal tube placement (emergent, non-OR setting)	X	X	X	X
Intubation (as part of anesthetic in OR)*	X	X	X	X
Nasogastric tube insertion	X	X	X	X
Spinal or Lumbar Puncture*		X	X	X
Epidural*		X	X	X
Fiberoptic Bronchoscopy to confirm ETT placement	X	X	X	X
Emergent LMA placement	X	X	X	X
IV placement	X	X	X	X
Needle placement for tension pneumothorax*	X	X	X	X
Acute pain consult**	X	X	X	X

*Attending MUST be notified prior to procedure and must be present for procedure unless an EMERGENT situation.

**Residents at all levels can perform initial preliminary consult, but then must discuss their plan of treatment with their attending before initiating treatment.

An attending anesthesiologist is ALWAYS available in the OR suite and able to be paged at all times.

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL

DEPARTMENT OF ANESTHESIOLOGY

SUBSTANCE ABUSE POLICY

PHYSICIAN IMPAIRMENT

Impairment is defined as “the inability to practice medicine with reasonable skill and safety due to physical or mental illness, loss of motor skills, or abuse of drugs including alcohol” (American Medical Association). Impairment of performance by physicians can put patients at significant risk. The University of Massachusetts has therefore developed a policy of management of physician impairment and substance abuse following the guidelines of federal and state laws, as well as local ordinances and regulations relative to controlled substances or alcohol. The policies are contained within the Resident Manual of the Office of Graduate Medical Education.

The Department of Anesthesiology at the University of Massachusetts has chosen to expand upon those policies of both substance abuse and chemical dependency due to the well-documented increased risk of substance abuse in the specialty of Anesthesiology.

- A physician's risk for addictive disease equals that of the general population
- Anesthesiologists are over-represented in addiction treatment programs at a rate about three times higher that would be expected based upon percentage of physicians in the specialty
- Drugs of abuse are more readily accessible
- Highly addictive potential of drugs commonly abused by anesthesiologists
- High rate of mortality for anesthesia providers with addictive disease (due either to intentional or accidental drug overdose)

GOALS OF POLICY

The goals of this policy are:

To prevent or minimize the occurrence of impairment among members of the Department of Anesthesiology via education, early recognition, and treatment

To protect patients from risks associated with care given by an impaired anesthesiologist

To confront issues of impairment with understanding, such that appropriate diagnosis, treatment and rehabilitation may be instituted

Several principles will be involved in the achievement of these goals:

The recognition that addiction to either drugs or alcohol is a medical disease

The safety of both the impaired individual and patients is of primary importance

All reasonable attempts will be taken to protect the confidentiality of the individual with the legal constraints and provisions of the institutional policy

The UMassMemorial Healthcare Committee for Physician Health and Well-Being will manage issues of chemical dependency, mental illness, and physical impairment on an initial basis

EXPECTATIONS

Residents are expected to be free of the influence of alcohol while on duty, whether on-site in the institution, or while taking call from home. This correlates with the expectation that residents refrain from the use of alcohol while on duty, as well as when taking call from home.

Residents may not engage in the unlawful distribution, manufacture, dispensing, possession or use of illegal drugs.

The legal use of prescribed controlled substances is permitted on the job only if it does not impair the resident's ability to perform all essential functions of an anesthesiology resident in a safe and effective manner, and does not endanger other individuals in the workplace. It is recommended that the resident notify the Program Director if use of potentially performance-affecting prescription drugs will be necessary.

Signs and Symptoms of Addictive Disease

Symptoms of Opioid Addiction in the Hospital re: Anesthesiologists:

- Sign-out increasing quantities of narcotics and frequent breakage of narcotic vials
- Inappropriately high doses for procedure being performed
- Increasingly sloppy and unreadable charting
- Desire to work alone
- Refusal of lunch relief or breaks
- Frequent offers of relief for others
- Volunteer for extra call, extra cases (especially high narcotic cases-i.e. cardiac), longer shifts
- Difficulty finding individual between cases, unexplained absences
- Unusual changes in behavior
- Desire to administer narcotics personally in PACU
- Patients' pain out of proportion to narcotic record
- Wearing of long-sleeved jackets/gowns to hide needle marks
- Quality of care issues
-

Signs of Opioid Addiction Outside the Hospital re: All Physicians:

- Those addicted to opioids spend increasing amount of time at hospital.
- Alcoholics exhibit frequent absenteeism.
- Unusual changes in behavior

- Frequent smell of alcohol on breath (alcohol alleviates withdrawal symptoms in narcotic addiction)
- Increased loneliness and isolation
- Unexplained legal or work problems
- Frequent accidents
- Deterioration in personal appearance and physical health
- Withdrawal signs and symptoms

POLICY IMPLEMENTATION

Education: In order to minimize the incidence and enhance the awareness of impairment, a program is in place to educate anesthesia residents and faculty about physician impairment and counseling options available. The problem of substance abuse (especially as it pertains to the unique situation of anesthesia providers), its incidence and nature, as well as risks both to the involved individual, colleagues and patients are addressed. Education will also include information re: signs and symptoms of impairment, the importance of early detection of abnormal behavior associated with the use of psychoactive drugs and alcohol abuse, and the methods of reporting.

Counseling: A confidential counseling service is available for all residents through the Office of Graduate Medical Education. Information from resident encounters is preserved to the limits that are legally permissible. However, the Anesthesiology Program Director may require resident assessment or participation in counseling if there is sufficient evidence of impairment.

Assessment: Residents may be asked to provide body substance samples (i.e. blood, hair, urine) to determine the illicit use of drugs or the presence of alcohol. Such drug tests may be conducted in the following situations, and under the auspices of the UMMHC Committee for Physician Health and Well-Being.

Reasonable Suspicion testing: This may be required if significant and observable changes in an anesthesia resident's performance, appearance, behavior, speech, etc. provide reasonable suspicion that s/he is under the influence of drugs and/or alcohol

Post-incident testing: Any anesthesia resident who is involved in a serious incident or accident while on duty may be asked to provide a body substance sample if the circumstances surrounding the incident appear to be the results of an impaired physician.

Subject to limitations imposed by law, a refusal to provide a body substance sample, under the conditions described above, may result in corrective/disciplinary action as described in the policy of the OGME. Before any such corrective action is taken, the resident will be given the opportunity to explain any positive results.

Reporting: All medical personnel possess a duty, both ethical and legal, to report in confidence concerns about possible impairment both in themselves and in others. If an anesthesia resident gives the appearance of being impaired/disabled while engaged in the performance of his or her duties, the course of action should be as follows:

- The observer shall report his/her concern immediately to either the Operating Room Clinical Director of the Day, the Program Director, Vice-Chair for Education, or the Department Chair.
- When substance abuse is suspected, the assistance of the UMMHC Committee for Physician Health and Well-Being will be sought. The program and its members will ascertain the need for and help facilitate an intervention leading to further professional evaluation and management if needed.
- If substance abuse is confirmed, the resident will be relieved of all clinical responsibilities, with ultimate resumption of training and clinical responsibilities determined by the Program Director and Department Chair
- The Massachusetts Medical Society Physician Health Service will monitor residents subsequently after completion of intervention.
- If substance abuse is not confirmed, mention of any concern will be removed from any records, and the resident will be allowed to return to work without prejudice.

CONTROLLED SUBSTANCE ACCOUNTABILITY

A consistent process of controlled substance accountability has been developed by the Pharmacy Department in conjunction with the Department of Anesthesiology. Crucial components of this process include:

- Use of the PYXIS machine for all controlled substance transactions
- Maintenance of confidentiality of one's PYXIS password
- The withdrawal of controlled substances specific to an individual patient (splitting of substances between patients is not allowed)
- The documentation of waste of controlled substances at the end of each case, with all wastes returned to the 'waste safe'
- Daily Anesthesia Controlled Substance Waste Reconciliation performed by both the Pharmacy and the departmental compliance officer, with all discrepancies documented and follow-up with individuals involved.
- Assays of wasted samples will be performed daily, and more often if suspicion warrants, by two members of the Pharmacy, with immediate follow-up and response required of any discrepancy in syringe content

- Audits of ten percent of anesthesia records are performed daily by the Anesthesia departmental compliance officer

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL DEPARTMENT OF ANESTHESIOLOGY

TRANSITIONS OF CARE DEPARTMENTAL POLICY

PURPOSE: To establish protocol and standards within the Department of Anesthesiology at the University of Massachusetts to ensure the quality and safety of patient care when transfer of responsibility occurs during duty hour shift changes and other scheduled or unexpected circumstances.

STANDARDS: The department designs schedules and clinical assignments to maximize the learning experience for anesthesiology residents as well as ensure quality care and patient safety, and adhere to general institutional policies concerning transitions of patient care. Transitions of care are necessary in the hospital setting for various reasons. The transition/hand-off process is an interactive communication process of passing specific, essential patient information from one caregiver to another. Transition of care occurs regularly under the following conditions:

- Change in level of patient care, including inpatient admission from an outpatient procedure or diagnostic area or ER, transfer to or from a critical care unit, transfer to the nursing staff in the post anesthesia care unit (PACU).
- Temporary transfer of care to other healthcare professionals when provided with relief during an anesthetic for a surgical or diagnostic procedure, including shift changes, meal breaks, or changes in On-call status
- Discharge, including discharge to home from the PACU
- Change in provider or service change, including rotation changes for residents.

POLICY/PROCEDURE: The transition/hand-off process must involve face-to-face interaction with both verbal and written communication. **The transition process between anesthesia providers in the O.R. should include, at a minimum, the following information in a standardized format that is universal across all services:**

- Identification of patient, including name and date of birth
- Identification of attending surgeon or primary physician
- 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.
- Review of patient history and physical exam
- Review of written anesthetic record to include:

SITUATION

Patient's diagnosis, procedure, notable past history, allergies, abnormal lab values, chest film, ECG
Anesthetic technique

STATUS

Anesthetic course, antibiotic doses
Progress of surgical procedure
Fluids and blood products given; estimated blood loss, urine output
IV lines, a. lines, ports, etc.
Present level of anesthesia – stable or requiring more or less
Labeling of drugs and concentrations on administration apparatus and syringes
Controlled substances status; availability and accurate recording for administration thus far
Current gas flows, anesthetic concentration, reading of oxygen analyzer, cylinder and pipeline supply pressures
Clinical signs and vital signs before original anesthesia provider exits

FUTURE

Need for anesthetics, fluids, other medications
Availability of blood products
Plan for post-operative respiratory and medication support
Time when the relieved anesthesia provider will return
Pending tests and studies which require follow up
Changes in patient condition that may occur requiring interventions or contingency plans

RECORD

Time of relief exchange and reliever's name on anesthetic record
If the transition is for permanent relief, the "patient status board" and all other OR personnel should be updated to the personnel change

POLICY/PROCEDURE: The transition process which occurs outside of the OR should include, as applicable, the following information presented in an organized fashion:

Identification of patient, including name, medical record number, date of birth, allergies
Identification of attending surgeon or primary physician
Diagnosis and current status/condition of patient
Important prior medical history, DNR status and advanced directives
Recent events, including changes in condition or treatment, current medication/fluid/diet status, recent lab tests and results, anticipated procedures and actions to be taken
Specific protocols/resources/treatments in place (DVT prophylaxis, insulin, anticoagulation, restraints, etc.)
Pending tests and studies which require follow up
Important items planned between now and discharge

The Anesthesiology program has developed scheduling and transition/hand-off procedures to ensure that:

Faculty members are scheduled and available for appropriate supervision levels according to the requirements for the scheduled residents.

All parties involved in a particular program and/or transition process have access to one another's schedules and contact information. All call schedules are available on the UMMHC OurNet website and with the hospital operator.

Patients are not inconvenienced or endangered in any way by frequent transitions in their care. All parties directly involved in the patient's care before, during, and after the transition have opportunity for communication, consultation, and clarification of information.

Safeguards exist for coverage when unexpected changes in patient care may occur due to circumstances such as resident illness, fatigue, or emergency.

The Anesthesiology program will include the transition of care process in its curriculum.

CA-1 residents during their orientation in July and August are instructed in proper handoff procedures for transferring a patient to the nurse's care in the PACU and for accepting relief from other anesthesia providers in the operating room.

The CA-1 residents specifically receive departmental instruction and the opportunity to model proper handoff procedures for transferring a patient to the nurse's care in the PACU and for accepting relief from another anesthesia provider in the operating room during their first several weeks of experience in the ORs.

Each CA-1 resident will be evaluated in the simulation lab for his/her ability to complete a proper patient transfer of care (hand-off) and/or will be observed individually by their faculty supervisor to assess their hand-off skills. Each resident will receive feedback regarding the proper technique to ensure that necessary information is transferred and understood by the team member who is receiving the patient. Intrinsic to the on-going faculty supervision of patient care during anesthesiology resident training, feedback, albeit frequently completed informally, about patient care, including hand-off skills, will be on-going.

Transfer of care report forms are utilized in the transfer of cardiac surgery patients to L3ICU, and pediatric patients on transfer to the Pediatric ICU (see attached)

Every anesthesiology resident involved in a transfer of care in the above situations will be observed individually by their faculty supervisor to assess their hand-over skills. The Anesthesia Report Form must be completed accurately, and reviewed with the receiving nurse in the ICU. The resident will receive feedback regarding the proper technique to assure that necessary information is transferred to the team member who is receiving the patient.