

DOCTORS HOSPITAL
DEPARTMENT OF ANESTHESIOLOGY
RESIDENCY TRAINING PROGRAM

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PROGRAM OBJECTIVES

The objective of this program is to train the anesthesia resident in the practice of anesthesiology as defined by the American Osteopathic Board of Anesthesiology. The Program will provide training for physicians at the postgraduate level, which will lead to an intelligent and knowledgeable application of basic principles involved in the practice of anesthesiology. These principles include:

- A. Consideration of normal and abnormal physiological processes and the effect of anesthetic drugs and techniques upon them.
- B. A review of gross anatomy and applied anatomy of the various parts of the body involved in various anesthetic methods.
- C. Detailed study of the pharmacological characteristics of anesthetic drugs and the biochemical changes in health and disease.
- D. Correlation of the basic science to the practice of anesthesiology.
- E. The teaching of the technique of anesthesia procedures and their proper application to the surgical or medical problems at hand. All acceptable methods of anesthesia will be presented.
- F. When suitable patients are available, instruction in patient care in ICU, CCU, and SICU units, and extended experience in pediatric, cardiovascular, thoracic, neurosurgical, obstetrical, and high risk anesthetic procedures.

Completion of the anesthesia program will provide the educational requirement to qualify the resident for membership in the American Osteopathic College of Anesthesiologists and for eventual examination by the American Osteopathic Board of Anesthesiology pursuant to certification in Anesthesiology.

PERSONAL QUALIFICATIONS OF THE RESIDENT

The resident must be temperamentally suited for the practice of this exacting art. She/he must have the ability to be calm in the face of emergency conditions, be able to make decisions rapidly and to maintain her/his interest in what superficially seems like the mundane. The resident shall conform to the standards set in the code of ethics of the American Osteopathic Association.

REQUIREMENTS FOR CANDIDATES FOR RESIDENCY

- A. Graduate of AOA accredited college of Osteopathic Medicine.
- B. Has completed an AOA approved internship (or is currently contracted in an internship).

- C. Be a member in good standing of the AOA and shall maintain membership during specialty training.
- D. Be licensed in or eligible for licensure in Ohio or shall be obligated to take the State Board Examination for licensure, or obtain licensure by reciprocity.
- E. Completed an application for residency at Doctors Hospital and supply all documents required prior to an interview.
 - 1. Letters of recommendation.
 - 2. Osteopathic College transcript.
 - 3. Internship certificate or letter from DME certifying presence in internship and anticipated date of completion.
- F. Present him/herself for an interview by the Department of Anesthesiology.
- G. If the applicant is requesting advanced status (i.e. 2nd or 3rd year, etc.) By transfer from another program, in addition to the above, the candidate must submit the following:
 - 1. A personal letter stating specifically why he/she wishes to transfer from present program to Doctors Hospital.
 - 2. A letter from his/her present Program Director and DME certifying his status and enrollment in the present program, his performance to date and their perception as to his/her reasons for requesting a transfer.
 - 3. Copies of logs, Program Director evaluations, Program Director annual reports (to AOA) and resident's annual report (to AOA). (These two AOA reports are available only if the resident has completed at least one year of residency at the time of application.)

SELECTION REQUIREMENTS

- A. The procedure shall be approved by the hospital and the committee on Hospitals of the American Osteopathic Association.
- B. Acceptance into the residency program is on the basis of medical school transcript, internship performance, recommendations, and presentation at the interview.

DURATION OF RESIDENCY

A residency is offered for a period of one year, subject to renewal upon application of the resident and upon approval of the Department of Anesthesia and the Board of Trustees. It is planned that the entire training period occupy a total of three years, but a resident shall not expect automatic renewal of this training program. It is necessary that the desire to continue his/her training and that the work performed by the resident during the year in question shall have met the standards required by the hospital. The resident must meet requirements in the following:

- A. His/her log is current and up-to-date and has had the approval of the Program Director.
- B. The requirement of writing a professional paper has been met, the paper completed and transmitted to the Program Director.

HOSPITAL RESIDENT CONTRACT

- A. The institution will provide the contract and a copy will be sent to the AOA.
- B. The contract is for a twelve-month period only.
- C. The stipend, meals, uniforms, liability insurance and health insurance are addressed specifically in the contract.

HOSPITAL REQUIREMENTS

- A. The institution shall be accredited by the AOA.
- B. An adequate medical library shall be maintained containing carefully selected texts, the latest editions of current medical journals, etc. in the various branches pertaining to the residency.
- C. The library shall be in the charge of a qualified person who shall act as custodian of its contents and arrange for proper cataloging and indexing that will facilitate investigative work by the resident.
- D. There shall be evidence that the management of the institution and the professional staff give thought and personal effort to provide proper teaching for residents.
- E. The institution must be approved for intern training by the AOA.
- F. Residency programs will commence on July 1st. Any change in starting dates must be approved by the Anesthesiology Department and the Medical Education committee.
- G. The institution will provide adequate funds for the residents to receive additional training outside the base hospital to include certain courses in postgraduate work. The courses will be approved by the Program Director. These funds are available only in the second and third years of the residency training.

HOSPITAL RESPONSIBILITIES

It is the desire of the Board of Trustees and of the hospital administrator to be tolerant and understanding of all problems pertaining to the resident's obligation to the hospital and the hospital's obligation to the resident. However, it must be understood that the rules governing the hospital procedures and the resident's responsibilities to the hospital were written for an express purpose. They were not written to be violated. The hospital assumes a tremendous responsibility and a financial cost when it takes residents into the hospital for training. The hospital recognizes its obligations to the profession to provide this type of training for graduate physicians. On the other hand the resident must also recognize his/her responsibility to the performance of duty and to his/her general attitude in the conduct of his/her duty and his/her relationship with the officers of the hospital and members of the medical staff. A resident always has the privilege of discussing his/her problems, personal or official, with the Director of Medical Education, Program Director, or Chairman of the Department of Anesthesia.

PROGRAM DIRECTOR REQUIREMENTS

The Program Director shall be an individual motivated to teach and will accept the responsibility that goes with such a position. The Program Director must be certified in anesthesiology by the American Osteopathic Board of Anesthesiology. The Program Director shall see that the residents adhere to the policies outlined in this manual and that they achieve satisfactory progress in the program. He shall report to the Department of Anesthesiology at their regularly scheduled monthly meeting. The Program Director may also be Chairman of the Department but this is not a requirement. A change of Program Directors must be reported to the Committee on Postdoctoral Training and the Evaluating Committee of the American Osteopathic College of Anesthesiologists. Trainers within the Department of Anesthesiology shall be individuals motivated to teach and who will accept the responsibility that goes with such a position. He must be in good standing in the department and by experience and teaching ability shall be qualified to participate as a trainer in the residency program. He should be in an active anesthesia practice.

GENERAL RESIDENT REGULATIONS

- A. Each resident enters the hospital with the understanding that he will devote his time to the hospital and the anesthesia department. Moonlighting by the resident will not be allowed during the first year. Moonlighting during the second and third years of residency will be at the discretion of the program director based upon the resident's performance.
- B. Good order and decorum must be maintained at all times. The dignity of the profession requires that the department or residents shall be exemplary.
- C. The resident is required to attend all meetings of the Department of Anesthesiology and such other committees as may be assigned to him/her.

ANESTHESIA RESIDENT WORKING HOURS

- A. The regular working hours for anesthesia residents will be 7am - 7pm. The attending anesthesia staff should release the resident to go home if that resident is not on call at 7pm (except in extreme emergency cases). If the working day finishes early (example 3pm) and the resident is sent home, he is subject to be called back in by the attending staff for any emergency case prior to 7pm.
- B. The anesthesia resident on call will be expected to relieve any resident not on call at 7pm. It is the responsibility of the resident on call to check in at 6:30pm to see if he/she is needed for any case which may still be in progress. If surgical cases are still continuing, the attending anesthesiologists will decide where the resident is needed most.
- C. The attending anesthesia staff will allow residents to make rounds while CRNA coverage is still available. This will allow the residents to be available when CRNA coverage may not be available. If the resident is working on an interesting case, he will be responsible for rounds after 7pm when he/she is relieved by the oncall resident.
- D. If more than one room is operating after 7pm, the attending staff person will make arrangements with other department members or CRNAs to continue operating these rooms. Residents who are not on call cannot be expected to stay to continue these rooms (except in dire emergencies).
- E. The anesthesia resident on call will be available for all emergency cases on weekends at Doctors Hospital. He/she is to report to the attending staff anesthesiologist who notifies him/her first of a surgical case. Again, if two cases will be in progress at the same time, the attending staff persons will decide where the resident is needed most.
- F. The resident on call is expected to wear his long range beeper at all times (even in the O.R.) so that he/she may be contacted if he/she is needed for a trauma case.
- G. If the resident on call receives a message regarding an emergency case from other hospital personnel (i.e. hospital operator, O.R. nurses, surgical residents) he is to report to that hospital immediately. He/she is not to call the attending staff anesthesiologist regarding the case unless specifically requested to do so.
- H. Rounds on inpatients on Sunday will be performed by the residents on call.
- I. If the resident on-call is called by other physicians, residents, or hospital personnel to assist with intubation or with extubation of a patient on the floor, he/she will be expected to do this on his/her own. The attending anesthesiologist on call does not need to be notified unless complications occur.
- J. Modification of the resident call schedule will be taken into account only when two residents are in the house. There will be some days of the week in which no resident coverage will be available after 7pm. In this event, additional coverage will be available from CRNAs or by prior arrangement with other department members. Residents will be available between 7am - 7pm weekdays and after 7pm when a resident is on-call.

- There will be resident coverage on the weekends.
- K. Anesthesia residents working hours are subject to change when deemed necessary by the Program Director or the Department of Anesthesiology.

RESIDENT VACATION TIME

All residents shall be granted a maximum of twenty (20) personal days; vacation, professional, sick or other leave, per contracted year. The Department of Medical Education defines personal days as working days occurring Monday through Friday. Should a resident take 5 consecutive personal days (Monday-Friday) the resident is entitled to an associated weekend prior to or following those days. The associated weekend, or weekends shall not be deducted from the total personal days allowed.

A resident may take no more than five personal days during any rotation. Personal days may not be taken during the following rotations: ICU/CCU, and elective or required rotations outside Doctors Hospital.

LEAVE OF ABSENCE

A leave of absence (i.e.-illness, family situations, etc.) will be considered on an individual basis between the resident, The Director of Medical Education, and the Program Director. All time off accrued during a leave of absence must be made up by the resident at the end of the residency.

RESIDENT EVALUATION

A review of each resident's anesthesia log will be done on a monthly basis by the Program Director. Quarterly resident evaluations will be completed by each member of the Department of Anesthesia for each resident. These evaluations will be summarized into a single resident evaluation by the Program Director. The Program Director will then review these evaluations with each individual resident. The evaluations will remain in the resident's file in the DME's office. A segment of the evaluation session will be devoted to the resident's reply. He may then provide comments, or additional facts that would clarify problems. He should also be prepared to provide a constructive analysis of the training program and any ideas he wishes the department to take under advisement to improve the program. The resident may also be complimented on work well done or perhaps criticized for serious mistakes. He will be encouraged in areas where improvement is needed. These sessions are intended to be positive experiences. It is hoped that each resident will gain insight as to where he/she needs to expand greater effort. The anesthesia staff is ready and willing to assist the resident at all times.

RESIDENT PROBATION AND DISMISSAL PROCEDURES

A resident may be placed on probationary status or suspended for several reasons. Periods of probation and suspension, their cause, and their final resolution will become a part of the permanent record of the resident. The office of DME must be notified of all such action by the department.

Academic Probation: A resident who fails to successfully complete a clinical rotation or who does not fulfill the resident requirements as documented in the manual shall be placed on probation for a period of not more than 3 months. At or before the end of three months, the Department of Anesthesia will meet and reevaluate the resident. If deficiencies still exist, the department may recommend termination of the hospital/resident contract and this

recommendation will be forwarded to the Director of Medical Education. The Department of Anesthesia may recommend no more than one additional 3 month period of probation at the time of initial review. At the end of this 3 month period, a decision to take the resident off of probation or recommend termination will be made.

Disciplinary Probation: A resident who violates the rules and regulations governing employees of Doctors Hospital, or the rules governing staff members of Doctors Hospital will be subject to the following protocol:

First offense - verbal counseling by the Program Director.

Second offense - disciplinary probation of a period not to exceed 3 months with re-evaluation by the Department of Anesthesiology. A decision about removal or probation or termination will be made at that time.

Third offense - Automatic suspension at the discretion of the Department of Anesthesiology.

Any violation that appears serious enough may warrant immediate suspension and the bypassing of the first and second offense steps. Such violations are to include but are not limited to the following:

- A. Unauthorized use or unauthorized possession of intoxicants, narcotics, or other drugs on the premises.
- B. Reporting to work under the influence of alcohol or drugs.
- C. Abuse or conduct detrimental to patients, patient care, hospital operation, visitor or employee of the hospital.
- D. Any other offense deemed serious enough to warrant dismissal.

RESIDENCY DESCRIPTION AND GOALS

- A. The purpose of the residency program of anesthesia is to instruct practitioners in the basic aspects of the specialty of anesthesia (osteopathic) and to provide the proficiency in the technical skills related to the specialty of anesthesia.
- B. The program is to be a three year residency, which will give exposure to the aspects of osteopathic medicine as, related to anesthesia. This is to include knowledge in pharmacology, physiology, physics and the clinical sciences of medicine including the cardiovascular system, respiratory system, central nervous system, and other body systems.
- C. The resident is required to observe, assist at, and administer per year a minimum of 500 (not to exceed 800) anesthetics in surgery and obstetrics under the supervision and guidance of members of the Department of Anesthesiology. It is understood that the third year anesthetic totals may not conform to the above guidelines set for the first two years, therefore, the total number of procedures for the third year of training may vary.
- D. In order to wisely choose an anesthetic approach to each individual patient, the resident becomes skilled in assessment of the patient's physiologic and psychological makeup. To achieve this end, the resident participates in the pre-anesthetic interview and physical examination. He becomes proficient in the interpretation of the pre-anesthetic chest x-ray, electrocardiogram, pertinent laboratory reports and consultation reports. The resident learns when to order additional investigations to have the necessary information thus choosing the proper anesthetic approach for the individual patient.

- E. Training is provided in the use of a large variety of accepted inhalation, intravenous, and conduction anesthetic agents and techniques. The use of experimental agents is expressly prohibited. However, the resident is required to keep abreast of the newly introduced agents and techniques and be conversant with their indications and contra-indications as they develop. When the Department of Anesthesiology decides a newer drug or technique has been sufficiently documented, the Department of Anesthesiology will act to introduce the drug or technique into this hospital.
- F. The resident participates in the care of the patient in the recovery room and in the surgical intensive care unit. He learns the diagnosis, treatment, and prevention of immediate post-anesthetic complications.
- G. The resident is expected to prepare at least one scientific paper before the end of the second year. The subject is approved by the Program Director.
- H. Members of the teaching staff assign specific reading to the residents. These readings are stimulated by questions that arise in the operating room and the recovery room. Following completion of the assignment, the resident discusses the subject with the staff member.
- I. Advantage is taken of the stimulating student-teacher relationship. The resident participates in the training of students and interns assigned to the Department of Anesthesiology.
- J. The residents have extensive library facilities available for individual study and research.
- K. The resident is required to submit monthly typewritten log reports to the Program Director. This report must state the number of anesthetics administered during that period, the anesthetic agents and techniques employed, and the surgical or obstetrical procedures performed. It must list meetings attended within the hospital and post-graduate programs attended outside the hospital. It must also contain summaries of any specific learning discussions between themselves and any attending anesthesiologists, as well as summaries of all materials covered in tapes, books, journals, or other medical sources.
- L. The first year is to be mainly the basic aspects of the specialty (basic sciences as related to anesthesiology) and beginning proficiency as first assistant under direct supervision, with the clinical application of the specialty:
 - Academic Goals:** The development of a basic working understanding of anesthetic drugs, working understanding of anesthetic drugs, delivery equipment and interactions between frequently prescribed general medications and medications in common use in the OR.
 - Clinical Goals:** The development of a basic style of preoperative assessment, including the ordering of appropriate medical consultations, formulation of basic guidelines for the care of a particular patient in the OR and making recommendations for post-operative follow-up where indicated. At the end of the first year, a resident will be expected to provide anesthesia care under supervision for relatively healthy patients including stable ASA III patients for general surgical procedures requiring routine monitoring.
- M. The second year is to be the application of the basic aspects of the specialty with clinical application under supervision enabling the resident to exercise mature, sophisticated judgement in his clinical experience. Also, there is to be an increased emphasis on special procedures, management of anesthetic problems, cardiac and respiratory resuscitation, inhalation therapy, pain relief, fluid electrolyte and blood replacement.
 - Clinical Goals:** Upon completion of the second year, residents will be expected to demonstrate reasonable competence in routine technical skills. These skills being:
 1. Arterial catheterization

2. Pulmonary artery catheterization
3. Lumbar spinal and epidural anesthesia
4. Regional analgesia for obstetrical patients
5. Anesthesia for cesarean section
6. Intentional hypotensive anesthesia
7. A general plan for organization and team management of emergency and trauma patients.
8. Manipulation of cardiovascular dynamics in patients with significant coronary artery or cardiac valvular diseases requiring non-cardiac surgery
9. General pediatric anesthesia for routine procedures (i.e. hernias, mask inductions and transport and management of neonates for general surgery)
10. A general plan for assessment of critically ill patients in the adult or pediatric intensive care unit.

Consultant Goals: The ability, when presented with a hypothetical patient management scenario, to develop a specific plan of anesthetic management including the need for further testing, the determination of proper timing, a discussion of likely intraoperative problems to be avoided or anticipated, and a plan for postoperative care. The anesthesiology oral board examination serves as model for this kind of consultative discussion. The resident will demonstrate under supervision the ability to organize others during [difficult] clinical situations (i.e. management of acutely injured trauma patients or hypotensive vascular surgical patients in the OR).

The needs and career decisions of the individual residents will largely determine the third year goals. The resident will be allowed to choose the anesthetic cases in those specialized areas that he/she feels they are deficient in. At the conclusion of the third year, the resident will be sufficiently knowledgeable and clinically experienced to provide excellent anesthesia care to routine and complex patients.

CLINICAL TRAINING

Curriculum:

First Year - rotation through Doctors Hospital.

Second Year - one month obstetrical anesthesia at Ohio State University, two months pediatric anesthesia at Columbus Children's Hospital, two months cardiovascular anesthesia at Doctors Hospital or other facility as approved by the program director.

Third Year - The third year of training will consist of 5-6 months of elective rotations outside Doctors Hospital. The individual resident will arrange these elective rotations with approval by the Program Director. After completion of these rotations, residents will be expected to present a lecture to department members regarding their educational experiences. This lecture will be held during one of the anesthesia department meetings. The remaining months will be spent at Doctors Hospital with the resident assigned to the more specialized anesthesia cases (i.e. cardiovascular, thoracic, neurosurgical, and high-risk anesthesia cases).

Didactic

The residents are encouraged to attend scheduled anesthesia lectures at Children's Hospital and Ohio State University while on rotation there.

The residents will attend formal lectures given at Doctors Hospital on a weekly basis. Residents will also participate in giving formal lectures.

The residents are encouraged to attend monthly meetings of the Columbus Society of Anesthesiologists if appropriate.

Educational Elements

During the three-year program the resident shall become familiar with the following:

History of anesthesiology

Record keeping, mortality and medico-legal considerations

Monitoring of the anesthetized patient

Fundamental physics

Anesthetic equipment and its maintenance

The physiology of posture

Positioning of patients

Complications of positioning

Preanesthetic medication

Preanesthetic evaluation, management, and preparation

General anesthesia, fundamentals, and clinical signs

Endotracheal and endobronchial intubation

Carbon dioxide absorption technique

Non-breathing systems

Closed system anesthetic techniques

Pulmonary and ventilatory management

Management of the airway

Cardiovascular physiology

The automatic nervous system

The endocrine system

Anatomical considerations in anesthesiology

Neurology and neurophysiology

Neonatal and pediatric anesthesiology

Fluid, electrolyte, and acid-base balance

Obstetrical anesthesia

Anesthesia for trauma and emergencies

Intravenous anesthetics

Dissociative anesthesia

Neuroanesthesia

Cardiovascular anesthesia

Critical care management

Neuromuscular blocking agents (pharmacology and clinical application)

Spinal anesthesia (physiological considerations techniques and complications)

Epidural anesthesia (physiological considerations, techniques, and complications)

Caudal anesthesia (physiological considerations, techniques and complications)

Major regional blocks

Local anesthetic agents (pharmacology and toxicity)

Diagnostic and therapeutic blocks

The management of pain

Cardiopulmonary resuscitation
Inhalation agents (pharmacology, uptake, distribution, and toxicity)
Resuscitation of the newborn infant
Controlled hypotensive anesthesia
Hypothermia anesthetic techniques
Management of patients in the recovery room
Outpatient anesthesia
Anesthesia as it relates to renal function
Anesthesia as it relates to hepatic function
Anesthesia for geriatric patients
Arterial catheterization
Central venous and pulmonary artery catheterization
Administration of an anesthesia department
Administration of the recovery room
Administration of a respiratory therapy department
Basic business aspects of anesthesiology practice

Criteria for Defining Clinical Competence of Anesthesiology Residents

Anesthesiology

80:663-665, 1994 Karin E. Madsen, M.D., Harvey Woehlck, Eugene Cheng, M.D.

No evaluation process is perfect. Assessment of human behavior is difficult to make objective. The achievement of specifically defined standard skills is by itself insufficient to determine promotion or retention of trainees. The following criteria will be used as a time frame to evaluate a resident's progress.

End of 1st 6 Months, CA1 Year

Knowledge

Understand basics of anesthesia machine and routine monitors (pulse oximetry, capnography, circuits, oscillometric blood pressure cuffs, electrocardiogram)

Understand basics of neuromuscular blockade (relaxants, train of four monitoring, reversal)

Understand use of routine vasoactive drugs

Understand the indication for commonly used anesthetic drugs

Understand major hemodynamic and respiratory effects of routine anesthetic agents and their indications

Understand comprehensive examination and classification of the airway

Understand key preoperative findings in history, physical, and laboratory work

Understand the application of "Universal Precautions" and aseptic technique

Advanced Cardiac Life Support Certification

Case Management

Manage ASA physical status 1 patients with minimal assistance for uncomplicated surgery, including induction, maintenance, emergence and transport to the post anesthesia care unit

Accurately estimate fluid (blood/colloid, crystalloid) requirements in routine cases

Identify basic intraoperative problems (hyper-/hypotension, hypoxia, hypercapnia, arrhythmias, anuria, acidosis, laryngospasm) and formulate differential diagnosis and treatment plan

Recognize key anatomic landmarks, indications/contraindications and potential

complications of regional blocks (spinal, epidural, axillary, intravenous regional)

Technical Skills

Set up a case in reasonable time (machine check, drugs, airway equipment)

Ventilate lungs via mask, and intubate trachea of patients with easy to moderately difficult airways

Place peripheral intravenous, arterial, and central catheters with minimal assistance

Perform aforementioned regional blocks in suitable patients with assistance

Keep legible and accurate intra-,pre-, and postoperative records

Operate basic technical monitors and pressure transducers and trouble-shoot simple technical malfunctions

Oral Skills

Communicate effectively with patients

Formulate and describe in detail a plan for anesthetic management of ASA physical status 1-3 patients including anticipated problems and their solutions

End of CA1 Year

Knowledge

Understanding physiology of significant cardiovascular events (compression of vena cava by physicians, hypovolemia, hypervolemia, pulmonary embolism, ischemia, myocardial depression)

Understand aspects of neuroanesthesia (management of increased intracranial pressure for craniotomy), vascular anesthesia (changes with aortic cross clamp), and orthopedic anesthesia (fat emboli)

Understand choice of regional versus general anesthesia and need for selective invasive monitoring

Understand basics of obstetric anesthesia (physiologic changes of pregnancy, technics for cesarean section, special precautions)

Understand how to obtain and apply information from a pulmonary artery catheter

Case Management

Manage, under supervision, patients with difficult airways who are undergoing elective surgery

Perform emergency airway management with reasonable skill (rapid sequence vs. awake intubation) in the operating room and the intensive care unit

Manage ASA physical status 3 patients for uncomplicated surgery with assistance

Initiate management of trauma cases and other emergencies in proper sequence (airway, intravenous access, monitoring)

Manage cesarean section by general or regional anesthesia with assistance

Manage patients in the post anesthesia care unit with assistance (assure adequacy of airway or adjust ventilation, manage pain, hemodynamics and fluids; and determine readiness for discharge)

Develop and implement a rational plan for tracheal intubation of patients in the intensive care unit

Technical Skills

Insert central and arterial catheters independently most of the time

Insert a pulmonary artery catheter with direction

Perform spinal and lumbar epidural anesthesia without assistance in most patients
Perform fiberoptic or awake tracheal intubation with assistance

Oral Skills

Cogently discuss management plan with anesthesiology staff or surgeon for ASA physical status 3 patients
Defend choice of monitoring
Defend choice of anesthetic technique and drugs used with discussion of options
Recognize when to proceed, investigate further, or cancel a case
Participate actively in teaching medical students

End of CA2 Year

Knowledge

Understand physiology and anesthetic concerns associated with pediatric anesthesia
Understand obstetric syndromes and their anesthetic implications
Understand routine heart procedures, including prebypass, bypass, and separation from cardiopulmonary bypass
Understand pharmacology of a variety of vasoactive and anesthetic drugs in depth
Know how to perform emergency airway maneuvers, including cricothyroidotomy

Case Management

Manage medical disease in surgical patients (pulmonary, cardiovascular, hepatorenal, endocrine)
Manage routine pediatric, vascular, thoracic, and neurosurgical cases with assistance

Technical Skills

Perform spinal and lumbar epidural anesthesia in patients with extremes of body habitus
Insert peripheral intravenous catheters in pediatric patients older than 2 yr.
Perform a variety of regional blocks with frequent success
Insert a pulmonary artery catheter with minimal assistance
Assemble and calibrate transducers without assistance
Manage acute postoperative pain (pain-controlled analgesia, continuous infusions of epidural opioids and /or local anesthetics)

Oral Skills

Cogently discuss management plan with attending and surgeon for ASA physical status 4 patients
Review literature and participate in discussions for □Journal Club□
Perform reasonably on oral board-style examination
Lecture to faculty and residents at teaching conferences
Actively teach medical students

End of CA3 Year

Knowledge

Understand principles of all major subspecialties (ambulatory, cardiac, critical care, endocrine, neurosurgical, obstetrics, pediatrics, acute and chronic pain,

thoracic, trauma, vascular) in depth
Know and address important articles in recent literature

Case Management

Manage independently, with staff availability:
ASA physical status 4 patients with multisystem diseases for complex elective and emergency surgery
Acute and chronic pain
Recovery room care

Technical Skills

Perform all aforementioned anesthetic and invasive monitoring procedures independently

Oral Skills

Attain the qualities and attributes fundamental to performance as a consultant anesthesiologist
Ability to organize and express thoughts clearly
Sound judgement in decision-making and application
Ability to apply basic science principles to clinical problems
Adaptability to rapidly changing clinical conditions
Supervise and mentor medical students
Participate actively in teaching fellow residents