

# The Scope of Practice of Nurse Anesthetists

American Society of Anesthesiologists — January 2004



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**T**he views of the American Society of Anesthesiologists (ASA) and the American Association of Nurse Anesthetists (AANA) vary widely as to the scope of anesthesia-related services that nurse anesthetists are qualified to perform. In essence, AANA takes the position that a nurse anesthetist is qualified independently to perform, without supervision by an anesthesiologist or other physician, all the services that an anesthesiologist can perform. ASA, by contrast, believes that nurse anesthetists are qualified to perform some, but not all, of these services, and only under the supervision of a physician, preferably an anesthesiologist.

**This paper will document the reasons underlying ASA's position. In turn, it will:**

- consider the relative education and training of the two anesthesia disciplines;
- describe the current state of physician involvement in delivery of anesthesia care;
- report the results of comparative anesthesia outcomes studies;
- document state nurse anesthetist licensure requirements;
- review state prescriptive authority requirements applicable to nurse anesthetists;
- review federal regulatory requirements relating to supervision of nurse anesthetists; and
- compare cost-effectiveness of delivery of care by the two anesthesia disciplines.

**ASA's formal position on the scope of practice of nurse anesthetists, as well as anesthesiologist assistants, is set forth as Attachment A. Supporting ASA policy statements, approved by its House of Delegates, appear as Attachments B through G.**

## Education and Training

The education and training of nurse anesthetists are vastly different from those of physician anesthesiologists and thus prepare nurse anesthetists for a more limited role in the delivery of anesthesia care that requires physician oversight.

### **Anesthesiologists must complete 12 years of formal education:**

- four years of science-intensive pre-medical undergraduate education;
- four years of medical school in which the individual gains knowledge of the fundamental science of the human condition (biochemistry, biophysics, anatomy, pharmacology, physiology and pathology) and receives extensive clinical instruction and experience in medical diagnosis and therapy; and
- four years of residency training that includes one year of clinical medicine, two years of clinical anesthesiology and one year of concentrated study and experience in connection with the most serious complications.

Anesthesiologists receive extended training in pharmacokinetics — the quantitative study of the action of drugs in the body over a period of time, including the processes of absorption, distribution, localization in tissues, biotransformation and excretion, and the factors that affect these processes. In addition, many anesthesiologists choose to receive training in subspecialties such as pediatric anesthesia, critical care medicine or pain management.

### **Nurse anesthetist training does not compare to the four years of medical school and four years of residency required of anesthesiologists.**

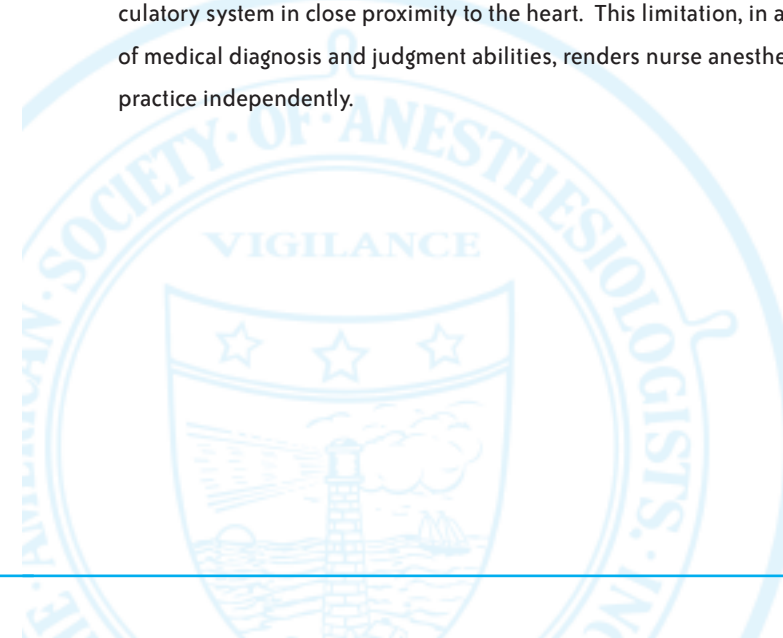
Only since 1989 have nurse anesthesia training programs required a Bachelor of Science degree in nursing or equivalent undergraduate degree as a prerequisite. Undergraduate nursing programs do not include training in the sciences equivalent or even comparable to that of a pre-medical program. Nurse anesthesia training programs consist of two to three years of didactic and clinical training in the techniques of administration of anesthetics; as of 1998, this training must lead to a master's degree to qualify the trainee for certification as a nurse anesthetist.

### **Nurse anesthetists are not trained to perform all aspects of an anesthetic procedure independently.**

Most importantly, nurse anesthetists are not trained to make a medical assessment of the patient's condition. However, they are qualified to perform certain functions in connection with the patient's treatment, such as monitoring and technical delivery, provided that an anesthesiologist or other physician remains available to the patient.

For example, once the basic parameters of the anesthesia plan are prescribed by the anesthesiologist, a nurse anesthetist is competent to take various steps to implement the plan (such as administering anesthetic agents and monitoring the patient's vital signs). Despite this technical proficiency, however, nonphysician providers are generally not qualified to perform the most demanding procedures such as the administration of regional blocks or placement of invasive monitoring devices.

Also, the technical and interpretive skills of nurse anesthetists are inadequate with regard to the insertion and reading of certain monitoring mechanisms such as pulmonary artery catheters, which are miniature monitoring devices placed inside the circulatory system in close proximity to the heart. This limitation, in addition to their lack of medical diagnosis and judgment abilities, renders nurse anesthetists ill-equipped to practice independently.



## Physician Involvement in the Delivery of Anesthesia Care

AANA promotional literature claims that nurse anesthetists administer 65 percent of the anesthetics in the United States, falsely suggesting that nurse anesthetists are the sole provider of anesthesia in these cases and that anesthesiologists are involved only in a minority of anesthetics.

**Anesthesiologists provide or directly participate in more than 90 percent of the estimated 25 million anesthetic procedures performed annually in this country**

According to Medicare claims data for 1999, approximately 55 percent of total Medicare surgical cases involve the services of nurse anesthetists, but in almost three-quarters of those cases, an anesthesiologist medically directs or supervises the nurse anesthetist; in about 9.7 percent of the total cases, a nonanesthesiologist physician supervises the nurse anesthetist. In the balance of the cases, an anesthesiologist personally performs the anesthesia procedure without involvement of a nurse anesthetist.

When an anesthesiologist is involved, the anesthesiologist functions as the perioperative physician, meaning that the anesthesiologist is the one medical doctor responsible for providing comprehensive care to a patient at all stages of the patient's experience. This includes medically evaluating the patient before surgery, consulting with the surgical team, providing pain control and life support during surgery, supervising care after surgery and determining after the surgery when a patient may safely be discharged from the recovery unit. Only a trained medical doctor possesses the knowledge and unrestricted license necessary to evaluate competently all aspects of a particular patient's condition to ensure that all risks to the patient are minimized through an appropriate, tailored, comprehensive anesthesia plan.

## Comparative Outcome Studies

Since 1982, estimates of the number of deaths attributed to anesthesia have dropped 25-fold from 1 in 10,000 anesthetics to 1 in more than 250,000. ASA believes this remarkable improvement stems in major part from the increased involvement of anesthesiologists in virtually all deliveries of anesthesia care in the surgical or obstetrical suite, either through personal performance of the procedure by the anesthesiologist or through hands-on medical direction of nurse anesthetists.

Nurse anesthetists claim there is "no evidence" of a difference in care provided by an anesthesiologist and a nurse anesthetist.

**In fact, all anesthesia outcome studies to date have clearly suggested that physician involvement (either an anesthesiologist or other physician) improves patient outcomes.**

The most comprehensive of these studies was published in the July 2000 issue of *Anesthesiology*, a peer-reviewed medical journal widely regarded as the premier scientific publication related to anesthesiology. The University of Pennsylvania study compared those cases where an anesthesiologist directed the care against those cases where he or she did not. Many of the nondirected cases involved supervision of a nurse anesthetist by the surgeon or some other physician. The study reflects 25 excess deaths per 10,000 Medicare surgical cases when a physician anesthesiologist is not directly involved in the case. An abstract of the article is included as Attachment H.

A study published in the *AANA Journal* in 2003 reported results consistent with the Pennsylvania study: there were 38 deaths per 10,000 cases in hospitals where all anesthetics were administered by an anesthesiologist or anesthesiologist/anesthesia nurse care team, but 45 deaths per 10,000 cases when anesthesia was administered by anesthesia nurses supervised by a nonanesthesiologist physician.

## Licensure Requirements

Licensure requirements for nurse anesthetists exist in every state. In addition, a variety of statutory and regulatory schemes affect nurse anesthesia practice, including the nurse practice act, medical practice act, pharmacy act, regulations and statutes regarding hospital licensure, and perhaps others, depending on the state.

At a minimum, all states require licensure as a registered nurse. In some states, no additional licensure requirements exist because nurse anesthetist practice is not specifically recognized. In other states, nurse anesthetists are licensed under the nurse practice act as advanced registered nurse practitioners, but the authorization to medically diagnose and treat a patient or to prescribe controlled substances is not within their scope of practice.

A summary chart titled “Nurse Anesthetist Scope of Practice,” Attachment I, categorizes the authorized scope of practice for nurse anesthetists by state. This chart contains generalized information and should be read in conjunction with the detailed explanatory notes provided in the appendices to the full report that address the statutory and regulatory provisions in each state. A copy of the full report is available upon request from the ASA Washington Office.

Nurse anesthetist promotional literature, claiming the right to independent practice in many states, simply ignores state laws and regulations other than those dealing with the practice of nursing. As shown by the summary chart, only a handful of states do not require physician participation in the delivery of anesthesia care by nurse anesthetists. Even in those states, most hospital bylaws require physician participation in the administration of anesthesia by nurse anesthetists.

State statutes and regulations specify the requirements for medical direction or supervision of nurse anesthetists by a physician, dentist or other independent licensed practitioner legally authorized to deliver anesthesia services within the scope of the practitioner’s discipline. State regulations generally require either direct and immediate

supervision of nurse anesthetists by a qualified physician or performance under a protocol/collaboration arrangement with such a physician. A majority of state health and/or hospital regulatory codes require physician supervision of nurse anesthetists.

**ASA opposes the independent practice of nurse anesthetists and views legislation and regulations designed to grant independent practice authority — mostly regulations promulgated by state nursing boards without concurrence by state medical boards — as efforts to confer a medical degree by political means rather than by educational means.**



## Prescriptive Authority

Some states have granted nonphysician providers, including nurse anesthetists, limited authority to prescribe controlled substances. ASA opposes these efforts, on the grounds that nurse anesthetists' education and training are insufficient to warrant such a step. Moreover, since nurse anesthetists work under the supervision of a physician, either an anesthesiologist or the operating physician, they do not in any event require prescriptive authority.

**Attachment I: "Nurse Anesthetist Scope of Practice" identifies the limits on the prescriptive authority of nurse anesthetists by state. All but five states limit the prescriptive authority of nurse anesthetists.**

Anesthetic drugs are generally classified under the Controlled Substances Act as Schedule II or Schedule III drugs. Schedule II drugs have been approved for medical use but also have high potential for abuse. Schedule III drugs are less likely to be subject to abuse. Schedule II and III drugs are more profound in the degree of physiologic consequences produced than are many other types of prescription drugs. These drugs are often combined during anesthesia, thereby increasing the physiologic complexity of administration and the risk to the patient.

Nurse anesthetists tend to be most successful in obtaining prescriptive authority when they are licensed as advanced registered nurse practitioners. Certain categories of advanced registered nurse practitioners are permitted to prescribe drugs that pose minimal risk for patients' most common illnesses. ASA believes a distinction must be made between nurse anesthetists who have no need for prescriptive authority and whose practice requires the use of Schedule II and III drugs, and those nurse practitioners, acting as physician extenders, who are prescribing drugs that are far less likely to cause dangerous complications to patients.

## Federal Supervision Requirements Relating to Anesthesia Care

In addition to state licensure requirements, federal regulations for accreditation of hospital facilities under the Medicare and Medicaid programs require that a nurse anesthetist must be under the supervision of the operating practitioner or an anesthesiologist who is immediately available if needed (42 CFR 482.52). A similar requirement is contained in the regulations relating to ambulatory surgical centers (ASCs) (42 CFR 416.42) and critical access hospitals (CAHs) (42 CFR 485.639).

This requirement was reinforced on November 13, 2001, when the Centers for Medicare & Medicaid Services (CMS) issued a regulation maintaining the requirement of physician supervision of nurse anesthetists in Medicare-approved hospitals, ASCs and CAHs. However, the regulation provides governors with an opportunity to opt one or more hospitals, ASCs or CAHs out of the federal supervision requirement in certain circumstances. A governor may, after consultation with the state boards of medicine and nursing, opt an institution out of the physician supervision requirement, to the extent consistent with state law, if the governor finds such action to be in the best interest of the citizens of the state. The gubernatorial "opt-out" action becomes effective when the governor files a letter with CMS. A governor is able to retract this action in the same manner at any time. To date, 11 governors have filed "opt-out" letters, but in the vast majority of these states, state law requires that a nurse anesthetist be supervised by or collaborate with a physician. Gubernatorial action, moreover, has no impact on hospital and ASC bylaws requiring physician participation in anesthesia care.

The federal Medicare program also requires, in medical direction of nurse anesthetists, that an anesthesiologist be involved in specific functions of the case in order to be reimbursed under Part B (42 CFR 415.110). These conditions include:

- Performs a preanesthetic examination and evaluation;
- Prescribes the anesthesia plan;

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## Federal Supervision Requirements Relating to Anesthesia Care

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- Personally participates in the most demanding aspects of the anesthesia plan, including, if applicable, induction and emergence;
- Ensures that any procedures in the anesthesia plan that he or she does not perform are performed by a qualified individual as defined in program operating instructions;
- Monitors the course of anesthesia administration at frequent intervals;
- Remains physically present and available for immediate diagnosis and treatment of emergencies; and
- Provides indicated postanesthesia care.

In order to be reimbursed for medical direction under Medicare, an anesthesiologist may not medically direct more than four anesthesia procedures concurrently and, with limited exceptions, is not allowed to perform any other service while he or she is directing the anesthesia care team. This required participation and medical involvement underscores the importance of medical direction.

In some institutions, nurse anesthetists are supervised by the operating practitioner who assumes responsibility for satisfying the requirement found in most state health codes and federal Medicare regulations that nurse anesthetists be supervised by a physician. The operating practitioner rarely, if ever, is able to assume all of the supervision involved in medical direction. The operating practitioner's supervision of nurse anesthetist activities therefore involves a lesser application of physician judgment or skills for anesthesia care and thus involves greater reliance on the training and capabilities of the individual nurse anesthetist.

## Comparative Cost-Effectiveness

Under Medicare, a nurse anesthetist who is supervised by the operating physician is reimbursed at the same rate as an anesthesiologist. The anesthesiologist, however, is capable of providing additional medical services for the patient, eliminating the need for an intraoperative specialty consultation with another physician and making the anesthesiologist a more cost-effective choice for the patient.

For example, a patient often requires invasive monitoring, such as a pulmonary artery (Swan-Ganz) catheter, during surgery. When inserted by the anesthesiologist administering the anesthesia, the patient is charged only for the insertion of the catheter. Most nurse anesthetists are not formally trained in the insertion of Swan-Ganz catheters and have varying degrees of experience with other monitoring procedures and devices. Their use of state-of-the-art technologies, in the absence of an anesthesiologist, would require the services of a physician with experience and training in this area. When a physician other than the anesthesiologist is asked to conduct the invasive monitoring, the patient is charged for the consultation and monitoring associated with the procedure as well as the insertion of the catheter.

The cost-effectiveness of anesthesiologists also extends to the recovery room where after surgery, the diagnosis and treatment of pain, nausea, vomiting, blood pressure problems and chest pain can be complex. Such a medical diagnosis requires a physician; the services of an anesthesiologist in the recovery room are provided at no charge to the patient.

## Attachment A: Recommended Scope of Practice of Nurse Anesthetists and Anesthesiologist Assistants

Because nurse anesthetists and anesthesiologist assistants are not trained to make medical judgments, virtually all states require direct physician participation in care provided by these anesthesia providers. State statutes and regulations specify the requirements for medical direction or supervision of nurse anesthetists by a physician, dentist or other independently licensed practitioner legally authorized to deliver anesthesia services; state statutes and regulations that license anesthesiologist assistants, or permit them to practice pursuant to delegated anesthesiologist authority, require direct anesthesiologist participation in the care provided by them.

State regulations generally require either direct and immediate supervision of nurse anesthetists by a qualified physician or the existence of a protocol/collaboration arrangement with such a physician. State regulations dealing with anesthesiologist assistants all require that they be directed or supervised by an anesthesiologist.

The following principles related to nurse anesthetist/anesthesiologist assistant scope of practice are supported by the American Society of Anesthesiologists (ASA):

In many situations, anesthesia care is rendered through use of an anesthesia care team in which an anesthesiologist concurrently medically directs two, three or four nurse anesthetists and/or anesthesiologist assistants in the performance of the technical aspects of anesthesia care. Anesthesiologists engaged in medical direction are responsible for the preanesthetic medical evaluation of the patient, prescription and implementation of the anesthesia plan, personal participation in the most demanding procedures of the plan (including induction and emergence), following the course of anesthesia administration at frequent intervals, remaining physically available for the immediate treatment of emergencies and providing indicated postanesthesia care.

In some institutions, nurse anesthetist performance is supervised by the operating practitioner who assumes responsibility for satisfying the requirement found in most state health codes and federal Medicare regulations that nurse anesthetists be supervised by

a physician. The operating practitioner rarely, if ever, is able to assume all of the supervision involved in medical direction. The operating practitioner's supervision of nurse anesthetist activities therefore involves a lesser application of physician judgment or skills for anesthesia care and thus involves greater reliance on the training and capabilities of the individual nurse anesthetist.

A qualified nurse anesthetist is a licensed registered nurse who has satisfactorily completed an accredited nurse anesthesia training program and who has been credentialed by the institution on recommendation of the anesthesiology staff or, in the absence of an anesthesiologist, by the active medical staff. Credentialing of nurse anesthetists should take into account whether the nurse anesthetist will provide care under medical direction by an anesthesiologist or under supervision by the operating practitioner.

A qualified anesthesiologist assistant is a physician extender who has satisfactorily completed an anesthesiologist assistant program granting a master's degree, has been certified by the National Commission for the Certification of Anesthesiologist Assistants (NCCAA) and has been credentialed by the institution.

Subject to the foregoing limitations, a nurse anesthetist or an anesthesiologist assistant may, under medical direction by an anesthesiologist, or in the case of a nurse anesthetist, under supervision of an operating practitioner who has assumed responsibility for the performance of anesthesia care (collectively, the "responsible physician"):

1. Provide nonmedical assessment of the patient's health status as it relates to the relative risks involved with anesthetic management of the patient during performance of the operative procedure;
2. Based on the health status of the patient, determine, in consultation with the responsible physician, and administer the appropriate anesthesia plan

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## Attachment A: Recommended Scope of Practice of Nurse Anesthetists and Anesthesiologist Assistants

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(i.e., selection and administration of anesthetic agents, airway management, monitoring and recording of vital signs, support of life functions, use of mechanical support devices and management of fluid, electrolyte and blood component balance);

3. Recognize and, in consultation with the responsible physician, take appropriate corrective action to counteract problems that may develop during implementation of the anesthesia plan;
4. Provide necessary, normal postanesthesia nonmedical care in consultation with the responsible physician; and
5. Provide such other services as may be determined by the responsible physician.

Nurse anesthetists and anesthesiologist assistants should not be credentialed to perform procedures that involve medical diagnostic assessment, indications, contraindications and treatment in response to complications that require the application of medical skill and judgment. ASA's position on participation by nonphysicians in regional anesthesia and invasive monitoring procedures is respectively set forth in its Statement on Regional Anesthesia and its Practice Guidelines for Pulmonary Artery Catheterization, which can be found on the ASA Web site <[www.ASAhq.org](http://www.ASAhq.org)>.

## Attachment B: The Anesthesia Care Team

*(Approved by House of Delegates on October 26, 1982, and last amended on October 17, 2001)*

Anesthesiology is a recognized specialty of medicine. Anesthesia care personally performed or medically directed by an anesthesiologist, a physician who has successfully completed a training program in anesthesiology, accredited by ACGME or equivalent organizations or the American Osteopathic Association, constitutes the practice of medicine. Certain aspects of anesthesia care may be delegated to other properly trained and credentialed professionals. These professionals, medically directed by the anesthesiologist, comprise the Anesthesia Care Team.

Such delegation and direction should be specifically defined by the anesthesiologist director of the Anesthesia Care Team and approved by the hospital medical staff. Although selected functions of overall anesthesia care may be delegated to appropriate members of the Anesthesia Care Team, responsibility and direction of the Anesthesia Care Team rest with the anesthesiologist.

The Society believes that the involvement of an anesthesiologist in the care of every patient undergoing anesthesia is optimally desirable. This may be accomplished through personal provision of anesthesia care or by medical direction of the anesthesia care team.

Members of the medically directed Anesthesia Care Team may include physicians and nonphysician personnel.

### **A. Those who assist in providing direct patient care during the perioperative period, for example:**

Anesthesiology Resident — a physician who is presently in an approved anesthesiology residency program.

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## Attachment B: The Anesthesia Care Team

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**Nurse Anesthetist** — a registered nurse who has satisfactorily completed an approved nurse anesthesia training program.

**Anesthesiologist Assistant** — a graduate physician's assistant who has satisfactorily completed an approved anesthesiologist's assistant training program.

### **B. Others who have patient care functions during the perioperative period include:**

**Postanesthesia Nurse** — a nurse who cares for patients recovering from anesthesia.

**Critical Care Nurse** — a nurse who cares for patients in a special care area such as the intensive care unit.

**Respiratory Therapist** — an allied health professional who provides respiratory care to patients.

### **C. Support personnel whose efforts deal with technical expertise, supply and maintenance, for example:**

Anesthesia technologists and technicians

Anesthesia aides

Blood gas technicians

Respiratory technicians

Monitoring technicians

In order to apply the Anesthesia Care Team concept in a manner consistent with the highest standards of patient care, the following essentials should be observed:

#### **1. Medical Direction:**

Anesthesia direction, management or instruction provided by an anesthesiologist whose responsibilities include:

- a. Preanesthetic evaluation of the patient.

- b. Prescription of the anesthesia plan.

- c. Personal participation in the most demanding procedures in this plan, especially those of induction and emergence, if applicable.

- d. Following the course of anesthesia administration at frequent intervals.

- e. Remaining physically available for the immediate diagnosis and treatment of emergencies.

- f. Providing indicated postanesthesia care.

An anesthesiologist engaged in medical direction should not personally be administering another anesthetic and should use sound judgment in initiating other concurrent anesthetic and emergency procedures.

#### **2. Delegation of any part of anesthesia care by an anesthesiologist to a member of the Anesthesia Care Team under that anesthesiologist's medical direction should be fully disclosed to all concerned.**

#### **3. Exploitation of patients, institutions, Anesthesia Care Team members, colleagues or payers is unethical.**

# Attachment C: Guidelines for Patient Care in Anesthesiology

*(Approved by House of Delegates on October 3, 1967, and last amended on October 17, 2001)*

## **I. Definition of Anesthesiology:**

Anesthesiology is a discipline within the practice of medicine specializing in:

- A. The medical management of patients who are rendered unconscious and/or insensible to pain and emotional stress during surgical, obstetrical and certain other medical procedures (involves preoperative, intraoperative and postoperative evaluation and treatment of these patients);
- B. The protection of life functions and vital organs (e.g., brain, heart, lungs, kidneys, liver) under the stress of anesthetic, surgical and other medical procedures;
- C. The management of problems in pain relief;
- D. The management of cardiopulmonary resuscitation;
- E. The management of problems in pulmonary care;
- F. The management of critically ill patients in special care units.

## **II. Anesthesiologist's Responsibilities:**

Anesthesiologists are physicians who, after college, have graduated from an accredited medical school and have successfully completed an approved residency in anesthesiology, and, in addition, may have had additional training in critical care medicine and pain management. Anesthesiologists' responsibilities to patients should include:

- A. Preanesthetic evaluation and treatment;
- B. Medical management of patients and their anesthetic procedures;
- C. Postanesthetic evaluation and treatment;
- D. On-site medical direction of any nonphysician who participates in the delivery of anesthesia care to the patient.

## **III. Guidelines for Anesthesia Care:**

- A. The same quality of anesthetic care should be available for all patients:
  1. 24 hours a day, seven days a week;
  2. Emergency as well as elective patients;
  3. Obstetrical, medical and surgical patients.

- B. Preanesthetic evaluation and preparation means that an anesthesiologist:
  1. Reviews the chart.
  2. Interviews the patient to:
    - a. Discuss medical history, including anesthetic experiences and drug therapy.
    - b. Perform any examinations that would provide information that might assist in decisions regarding risk and management.
  3. Orders necessary tests and medications essential to the conduct of anesthesia.
  4. Obtains consultations as necessary.
  5. Records impressions on the patient's chart.
- C. Perianesthetic care means:
  1. Re-evaluation of patient immediately prior to induction.
  2. Preparation and check of equipment, drugs, fluids and gas supplies.
  3. Appropriate monitoring of the patient.
  4. Selection and administration of anesthetic agents to render the patient insensible to pain during the procedure.
  5. Support of life functions under the stress of anesthetic, surgical and obstetrical manipulations.
  6. Recording the events of the procedure.
- D. Postanesthetic care means:
  1. A member of the anesthesia care team remains with the patient as long as medically necessary.
  2. Availability of adequate nursing personnel and equipment necessary for safe postanesthetic care.
  3. Informing personnel caring for patients in the immediate postanesthetic period of any specific problems presented by each patient.

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## Attachment C: Guidelines for Patient Care in Anesthesiology

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4. Assurance that the patient is discharged in accordance with policies established by the Department of Anesthesiology.
5. The period of postanesthetic surveillance is determined by the status of the patient and the judgment of the anesthesiologist.  
(Ordinarily, when a patient remains in the hospital postoperatively for 48 hours or longer, one or more notes should appear in addition to the discharge note from the postanesthesia care unit.)

### IV. Additional Areas of Expertise:

- A. Resuscitation procedures.
- B. Pulmonary care.
- C. Critical (intensive) care.
- D. Diagnosis and management of pain.
- E. Trauma and emergency care.

### V. Quality Assurance:

The anesthesiologist should participate in a planned program for evaluation of quality and appropriateness of patient care and resolving identified problems.

## Attachment D: Guidelines for Regional Anesthesia in Obstetrics

*(Approved by House of Delegates on October 12, 1988, and last amended on October 18, 2000)*

These guidelines apply to the use of regional anesthesia or analgesia in which local anesthetics are administered to the parturient during labor and delivery. They are intended to encourage quality patient care but cannot guarantee any specific patient outcome. Because the availability of anesthesia resources may vary, members are responsible for interpreting and establishing the guidelines for their own institutions and practices. These guidelines are subject to revision from time to time as warranted by the evolution of technology and practice.

### GUIDELINE I

**Regional anesthesia should be initiated and maintained only in locations in which appropriate resuscitation equipment and drugs are immediately available to manage procedurally related problems.**

Resuscitation equipment should include, but is not limited to: sources of oxygen and suction, equipment to maintain an airway and perform endotracheal intubation, a means to provide positive pressure ventilation, and drugs and equipment for cardiopulmonary resuscitation.

### GUIDELINE II

**Regional anesthesia should be initiated by a physician with appropriate privileges and maintained by or under the medical direction<sup>1</sup> of such an individual.**

Physicians should be approved through the institutional credentialing process to initiate and direct the maintenance of obstetric anesthesia and to manage procedurally related complications.

### GUIDELINE III

**Regional anesthesia should not be administered until: 1) The patient has been examined by a qualified individual<sup>2</sup>; and 2) a physician with obstetrical privileges**

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## Attachment D: Guidelines for Regional Anesthesia in Obstetrics

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**to perform operative vaginal or cesarean delivery, who has knowledge of the maternal and fetal status and the progress of labor and who approves the initiation of labor anesthesia, is readily available to supervise the labor and manage any obstetric complications that may arise.**

Under circumstances defined by department protocol, qualified personnel may perform the initial pelvic examination. The physician responsible for the patient's obstetrical care should be informed of her status so that a decision can be made regarding present risk and further management.<sup>2</sup>

### GUIDELINE IV

**An intravenous infusion should be established before the initiation of regional anesthesia and maintained throughout the duration of the regional anesthetic.**

### GUIDELINE V

**Regional anesthesia for labor and/or vaginal delivery requires that the parturient's vital signs and the fetal heart rate be monitored and documented by a qualified individual. Additional monitoring appropriate to the clinical condition of the parturient and the fetus should be employed when indicated. When extensive regional blockade is administered for complicated vaginal delivery, the standards for basic anesthetic monitoring<sup>3</sup> should be applied.**

### GUIDELINE VI

**Regional anesthesia for cesarean delivery requires that the standards for basic anesthetic monitoring<sup>3</sup> be applied and that a physician with privileges in obstetrics be immediately available.**

### GUIDELINE VII

**Qualified personnel, other than the anesthesiologist attending the mother, should be immediately available to assume responsibility for resuscitation of the newborn.<sup>3</sup>**

The primary responsibility of the anesthesiologist is to provide care to the mother. If

the anesthesiologist is also requested to provide brief assistance in the care of the newborn, the benefit to the child must be compared to the risk to the mother.

### GUIDELINE VIII

**A physician with appropriate privileges should remain readily available during the regional anesthetic to manage anesthetic complications until the patient's postanesthesia condition is satisfactory and stable.**

### GUIDELINE IX

**All patients recovering from regional anesthesia should receive appropriate postanesthesia care. Following cesarean delivery and/or extensive regional blockade, the standards for postanesthesia care<sup>4</sup> should be applied.**

- A postanesthesia care unit (PACU) should be available to receive patients. The design, equipment and staffing should meet requirements of the facility's accrediting and licensing bodies.
- When a site other than the PACU is used, equivalent postanesthesia care should be provided.

### GUIDELINE X

**There should be a policy to assure the availability in the facility of a physician to manage complications and to provide cardiopulmonary resuscitation for patients receiving postanesthesia care.**

### References:

1. The Anesthesia Care Team (Approved by ASA House of Delegates 10/26/82, and last amended 10/17/01).
2. Guidelines for Perinatal Care (American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1988).
3. Standards for Basic Anesthetic Monitoring (Approved by ASA House of Delegates 10/21/86, and last amended 10/21/98).
4. Standards for Postanesthesia Care (Approved by ASA House of Delegates 10/12/88, and last amended 10/19/94).

## Attachment E: Statement on Regional Anesthesia

*(Approved by House of Delegates on October 12, 1983, and last amended on October 16, 2002)*

While scope of practice is a matter to be decided by appropriate licensing and credentialing authorities, the American Society of Anesthesiologists, as an organization of physicians dedicated to enhancing the safety and quality of anesthesia care, believes it is appropriate to state its views concerning the provision of regional anesthesia. These views are founded on the premise that patient safety is the most important goal in the provision of anesthesia care.

Anesthesiology, in all of its forms, including regional anesthesia, is the practice of medicine. Regional anesthesia involves diagnostic assessment, the consideration of indications and contraindications, the prescription of drugs, and the institution of corrective measures and treatment in response to complications. Therefore, the successful performance of regional anesthesia requires medical as well as technical expertise. The medical component generally comprises the elements of medical direction and includes:

- a. Preanesthetic evaluation of the patient.
- b. Prescription of the anesthetic plan.
- c. Personal participation in the technical aspects of the regional anesthetic when appropriate.
- d. Following the course of the anesthetic.
- e. Remaining physically available for the immediate diagnosis and treatment of emergencies.
- f. Providing indicated postanesthesia care.

The technical requirements for regional anesthesia will vary with the procedure to be performed.

The decision as to the most appropriate anesthetic technique for a particular patient is a judgment of medical practice that must consider all patient factors, procedure requirements, risks and benefits, consent issues, surgeon preferences and competencies of the

practitioners involved. The decision to perform a specific regional anesthetic technique is best made by a physician trained in the medical specialty of anesthesiology. The decision to interrupt or abort a technically difficult procedure, recognition of complications and changing medical conditions, and provision of appropriate postprocedure care is the duty of a physician. Regional anesthetic techniques are best performed by an anesthesiologist who possesses the competence and skills necessary for safe and effective performance.



## Attachment F: Guidelines for Ambulatory Anesthesia and Surgery

*(Approved by House of Delegates on October 11, 1973, and last affirmed on October 15, 2003)*

The American Society of Anesthesiologists (ASA) endorses and supports the concept of Ambulatory Anesthesia and Surgery. ASA encourages the anesthesiologist to play a leadership role as the perioperative physician in all hospitals, ambulatory surgical facilities and office-based settings.

These guidelines apply to all care involving anesthesiology personnel administering ambulatory anesthesia in all settings. These are minimal guidelines which may be exceeded at any time based on the judgment of the involved anesthesia personnel. These guidelines encourage high quality patient care, but observing them cannot guarantee any specific patient outcome. These guidelines are subject to periodic revision, as warranted by the evolution of technology and practice.

- I. ASA Standards, Guidelines and Policies should be adhered to in all settings except where they are not applicable to outpatient care.
- II. A licensed physician should be in attendance in the facility, or in the case of overnight care, immediately available by telephone, at all times during patient treatment and recovery and until the patients are medically discharged.
- III. The facility must be established, constructed, equipped and operated in accordance with applicable local, state and federal laws and regulations. At a minimum, all settings should have a reliable source of oxygen, suction, resuscitation equipment and emergency drugs. (Specific reference is made to the ASA "Guidelines for Nonoperating Room Anesthetizing Locations.")
- IV. Staff should be adequate to meet patient and facility needs for all procedures performed in the setting and should consist of:
  - A. Professional Staff

1. Physicians and other practitioners who hold a valid license or certificate are duly qualified.
  2. Nurses who are duly licensed and qualified.
- B. Administrative Staff
  - C. Housekeeping and Maintenance Staff

- V. Physicians providing medical care in the facility should assume responsibility for credentials review, delineation of privileges, quality assurance and peer review.
- VI. Qualified personnel and equipment should be on hand to manage emergencies. There should be established policies and procedures to respond to emergencies and unanticipated patient transfer to an acute care facility.
- VII. Minimal patient care should include:
  - A. Preoperative instructions and preparation.
  - B. An appropriate preanesthesia evaluation and examination by an anesthesiologist prior to anesthesia and surgery. In the event that nonphysician personnel are utilized in the process, the anesthesiologist must verify the information and repeat and record essential key elements of the evaluation.
  - C. Preoperative studies and consultations as medically indicated.
  - D. An anesthesia plan developed by an anesthesiologist and discussed with and accepted by the patient.
  - E. Administration of anesthesia by anesthesiologists, other qualified physicians or nonphysician anesthesia personnel medically directed by an anesthesiologist.
  - F. Discharge of the patient is a physician responsibility.
  - G. Patients who receive other than unsupplemented local anesthesia must be discharged with a responsible adult.
  - H. Written postoperative and follow-up care instructions.
  - I. Accurate, confidential and current medical records.

## Attachment G: Guidelines for Office-Based Anesthesia

*(Approved by the House of Delegates, October 13, 1999)*

These guidelines are intended to assist ASA members who are considering the practice of ambulatory anesthesia in the office setting: office-based anesthesia (OBA). These recommendations focus on quality anesthesia care and patient safety in the office. These are minimal guidelines and may be exceeded at any time based on the judgment of the involved anesthesia personnel. Compliance with these guidelines cannot guarantee any specific outcome. These guidelines are subject to periodic revision as warranted by the evolution of federal, state and local laws as well as technology and practice.

ASA recognizes the unique needs of this growing practice and the increased requests for ASA members to provide OBA for health care practitioners\* who have developed their own office operatories. Since OBA is a subset of ambulatory anesthesia, the ASA "Guidelines for Ambulatory Anesthesia and Surgery" should be followed in the office setting as well as all other ASA standards and guidelines that are applicable.

There are special problems that ASA members must recognize when administering anesthesia in the office setting. Compared with acute care hospitals and licensed ambulatory surgical facilities, office operatories currently have little or no regulation, oversight or control by federal, state or local laws. Therefore, ASA members must satisfactorily investigate areas taken for granted in the hospital or ambulatory surgical facility such as governance, organization, construction and equipment as well as policies and procedures, including fire, safety, drugs, emergencies, staffing, training and unanticipated patient transfers.

ASA members should be confident that the following issues are addressed in an office setting to provide patient safety and to reduce risk and liability to the anesthesiologist.

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\*defined herein as physicians, dentists and podiatrists

### ADMINISTRATION AND FACILITY

#### Quality of Care

- The facility should have a medical director or governing body that establishes policy and is responsible for the activities of the facility and its staff. The medical director or governing body is responsible for ensuring that facilities and personnel are adequate and appropriate for the type of procedures performed.
- Policies and procedures should be written for the orderly conduct of the facility and reviewed on an annual basis.
- The medical director or governing body should ensure that all applicable local, state and federal regulations are observed.
- All health care practitioners\* and nurses should hold a valid license or certificate to perform their assigned duties.
- All operating room personnel who provide clinical care in the office should be qualified to perform services commensurate with appropriate levels of education, training and experience.
- The anesthesiologist should participate in ongoing continuous quality improvement and risk management activities.
- The medical director or governing body should recognize the basic human rights of its patients, and a written document that describes this policy should be available for patients to review.

#### Facility and Safety

- Facilities should comply with all applicable federal, state and local laws, codes and regulations pertaining to fire prevention, building construction and occupancy, accommodations for the disabled, occupational safety and health, and disposal of medical waste and hazardous waste.
- Policies and procedures should comply with laws and regulations pertaining to controlled drug supply, storage and administration.

*Continued on page 30*



# Attachment G: Guidelines for Office-Based Anesthesia

Continued from page 29

## CLINICAL CARE

### Patient and Procedure Selection

- The anesthesiologist should be satisfied that the procedure to be undertaken is within the scope of practice of the health care practitioners and the capabilities of the facility.
- The procedure should be of a duration and degree of complexity that will permit the patient to recover and be discharged from the facility.
- Patients who by reason of pre-existing medical or other conditions may be at undue risk for complications should be referred to an appropriate facility for performance of the procedure and the administration of anesthesia.

### Perioperative Care

- The anesthesiologist should adhere to the "Basic Standards for Preanesthesia Care," "Standards for Basic Anesthetic Monitoring," "Standards for Postanesthesia Care" and "Guidelines for Ambulatory Anesthesia and Surgery" as currently promulgated by ASA.
- The anesthesiologist should be physically present during the intraoperative period and immediately available until the patient has been discharged from anesthesia care.
- Discharge of the patient is a physician responsibility. This decision should be documented in the medical record.
- Personnel with training in advanced resuscitative techniques (e.g., ACLS, PALS) should be immediately available until all patients are discharged home.

### Monitoring and Equipment

- At a minimum, all facilities should have a reliable source of oxygen, suction, resuscitation equipment and emergency drugs. Specific reference is made to the ASA "Guidelines for Nonoperating Room Anesthetizing Locations."

- There should be sufficient space to accommodate all necessary equipment and personnel and to allow for expeditious access to the patient, anesthesia machine (when present) and all monitoring equipment.
- All equipment should be maintained, tested and inspected according to the manufacturer's specifications.
- Back-up power sufficient to ensure patient protection in the event of an emergency should be available.
- In any location in which anesthesia is administered, there should be appropriate anesthesia apparatus and equipment which allow monitoring consistent with ASA "Standards for Basic Anesthetic Monitoring" and documentation of regular preventive maintenance as recommended by the manufacturer.
- In an office where anesthesia services are to be provided to infants and children, the required equipment, medication and resuscitative capabilities should be appropriately sized for a pediatric population.

### Emergencies and Transfers

- All facility personnel should be appropriately trained in and regularly review the facility's written emergency protocols.
- There should be written protocols for cardiopulmonary emergencies and other internal and external disasters such as fire.
- The facility should have medications, equipment and written protocols available to treat malignant hyperthermia when triggering agents are used.
- The facility should have a written protocol in place for the safe and timely transfer of patients to a prespecified alternate care facility when extended or emergency services are needed to protect the health or well-being of the patient.

### **Anesthesiology**

2000;93:152-163

**TITLE:** Anesthesiologist Direction and Patient Outcomes  
**AUTHORS:** Jeffrey H. Silber, M.D., Ph.D.\*; Sean K. Kennedy, M.D.†; Orit Even-Shoshan, M.S.‡; Wei Chen, M.S.§; Laurie F. Koziol, M.S.||; Ann M. Showan, M.D.#; David E. Longnecker, M.D.\*\*

**Background:** Anesthesia services for surgical procedures may or may not be personally performed or medically directed by anesthesiologists. This study compares the outcomes of surgical patients whose anesthesia care was personally performed or medically directed by an anesthesiologist with the outcomes of patients whose anesthesia care was not personally performed or medically directed by an anesthesiologist.

**Methods:** Cases were defined as being either “directed” or “undirected,” depending on the type of involvement of the anesthesiologist, as determined by Health Care Financing Administration billing records. Outcome rates were adjusted to account for severity of disease and other provider characteristics using logistic regression models that included 64 patient and 42 procedure covariates plus an additional 11 hospital characteristics often associated with quality of care. Medicare claims records were analyzed for all elderly patients in Pennsylvania who underwent general surgical or orthopedic procedures between 1991–1994. The study involved 194,430 directed and 23,010 undirected patients among 245 hospitals. Outcomes studied included death rate within 30 days of admission, in-hospital complication rate, and the failure-to-rescue rate (defined as the rate of death after complications).

**Results:** Adjusted odds ratios for death and failure-to-rescue were greater when care was not directed by anesthesiologists (odds ratio for death = 1.08,  $P < 0.04$ ; odds ratio for failure-to-rescue = 1.10,  $P < 0.01$ ), whereas complications were not increased (odds ratio for complication = 1.00,  $P < 0.79$ ). This corresponds to 2.5 excess deaths/1,000

patients and 6.9 excess failures-to-rescue (deaths) per 1,000 patients with complications.

**Conclusions:** Both 30-day mortality rate and mortality rate after complications (failure-to-rescue) were lower when anesthesiologists directed anesthesia care. These results suggest that surgical outcomes in Medicare patients are associated with anesthesiologist direction and may provide insight regarding potential approaches for improving surgical outcomes. (Key words: Anesthesiologists; anesthesia care team; quality of care; mortality; failure-to-rescue; complication; Medicare; general surgery; orthopedics.)

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# Attachment I: Nurse Anesthetist Scope of Practice

## Analysis of the Laws of the 50 States and the District of Columbia<sup>1</sup>

State	Nurse Type <i>(RN, APN, ARNP, CRNA, NA, etc.)</i>	Supervision or Direction Required <sup>2</sup> <i>(For all activities or for medical functions)</i>	Collaboration, Protocols, Guidelines or Policies and Procedures Required	Additional Requirements Found in Statutory or Regulatory Provisions Pertaining to Hospitals			Additional Requirements Found in Statutory or Regulatory Provisions Pertaining to Ambulatory Surgical Centers			Limits on Prescriptive Authority <i>(Subcategories not nec. mutually exclusive)</i>	
				Physician must in effect supervise or direct each service	Hospital may define or narrow scope of practice	Physician must oversee anesthesia service at departmental level	Physician must in effect supervise or direct each service <sup>3</sup>	ASC may define or narrow scope of practice	Physician must oversee anesthesia service at departmental level	Supervision, direction, collaboration, protocols, facility policies, etc. required <sup>4</sup>	Either no authority, or sharply limited authority <sup>5</sup>
Alabama	CRNA (APN)	X					X				X
Alaska	RNA (RN)		X			X		X	X	X	
Arizona	CRNA/RN	X								X	
Arkansas	CRNA (APN)	X			X	X	X			X	X
California	CRNA (RN)	X				X					X
Colorado	CRNA (APN)	X								X	
Connecticut	CRNA (APRN)		X			X			X	X	
Delaware	CRNA (APN)	X	X				X		X	X	
Dist. of Columbia	ARNA (APRN)		X		X					X	
Florida	CRNA (ARNP)	X	X		X	X	X			X	
Georgia	CRNA (APRN)	X			X	X	X				X
Hawaii	CRNA (APRN)					X	X				
Idaho	RNA (APPN)		X			X				X	
Illinois	CRNA (APN)	X			X	X	X		X	X	
Indiana	CRNA (RN)	X			X		X				X
Iowa	CRNA (ARNP)		X			X				X	
Kansas	RNA (ARNP)	X				X	X				X
Kentucky	CRNA (ARNP)		X		X		X			X	X
Louisiana	CRNA (APRN)				X	X					
Maine	CRNA (APRN)	X			X	X	X				X
Maryland	CRNA (RN)	X	X				X				X
Massachusetts	CRNA (RN)	X	X		X	X				X	
Michigan	NA (RN)	X									X
Minnesota	RNA (APRN)		X							X	
Mississippi	CRNA (NP)		X				X		X	X	
Missouri	CRNA (APN)	X				X	X	X	X	X	X

<sup>1</sup>Important qualifying material has been included in additional explanatory notes. Contact the ASA Washington Office.

<sup>2</sup>For some states, the supervision or direction is required in the form of a physician's patient-specific order, request or prescription of treatment for anesthesia services.

<sup>3</sup>For some states, the supervision or direction is required in the form of a physician's pre- or post-anesthetic examination or in the form of on-site medical direction by a physician for nurse anesthetists.

<sup>4</sup>States featuring supervision, collaboration or similar requirements for the overall practice of nurse anesthesia feature an "X" in this category.

<sup>5</sup>Authority may be limited to a restrictive formulary or may exclude certain controlled substances. (Exclusion of Schedule I controlled substances has been ignored for purposes of this column.) For purposes of this column, authority to "select" or "order" anesthesia has been treated as tantamount to prescriptive authority, except where a state draws a meaningful distinction.

Chart continued on page 36

# Attachment I: Nurse Anesthetist Scope of Practice

## Analysis of the Laws of the 50 States and the District of Columbia<sup>1</sup>

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				Physician must in effect supervise or direct each service	Hospital may define or narrow scope of practice	Physician must oversee anesthesia service at departmental level	Physician must in effect supervise or direct each service <sup>3</sup>	ASC may define or narrow scope of practice	Physician must oversee anesthesia service at departmental level	Supervision, direction, collaboration, protocols, facility policies, etc. required <sup>4</sup>	Either no authority, or sharply limited authority <sup>5</sup>
Montana	NA (APRN)			X		X				X	
Nebraska	CRNA (ARNP)		X		X	X				X	
Nevada	CRNA/NPA (RN)	X		X	X	X	X			X	
New Hampshire	CRNA (ARNP)										
New Jersey	NA (PN)		X	X	X	X	X				X
New Mexico	CRNA (APN)		X		X		X				
New York	CRNA (RN)	X		X	X	X	X				X
North Carolina	CRNA (APRN)	X	X			X	X <sup>6</sup>			X	
North Dakota	CRNA (APRN)			X	X	X				X	
Ohio	CRNA (RN)	X									X
Oklahoma	CRNA (APN)	X		X					X	X	
Oregon	CRNA		X		X			X		X	
Pennsylvania	CRNA (RN)		X	X	X	X		X	X		X
Rhode Island	CRNA (RN)	X		X	X		X	X			X
South Carolina	CRNA (RN)		X	X			X <sup>6</sup>				X
South Dakota	CRNA (RN)		X		X		X		X		X
Tennessee	CRNA (RN)	X		X						X	
Texas	CRNA (APN)		X	X	X	X	X	X	X	X	X
Utah	CRNA			X	X	X		X			
Vermont	CRNA (APRN)		X							X	
Virginia	CRNA (LNP)	X	X	X	X	X	X				X
Washington	CRNA (ARNP)				X	X				X	
West Virginia	RN	X				X					X
Wisconsin	CRNA (APN)	X	X	X	X	X				X	X
Wyoming	CRNA (APN)		X	X	X	X	X			X	

<sup>1</sup>Important qualifying material has been included in additional explanatory notes. Contact the ASA Washington Office.

<sup>2</sup>For some states, the supervision or direction is required in the form of a physician's patient-specific order, request or prescription of treatment for anesthesia services.

<sup>3</sup>For some states, the supervision or direction is required in the form of a physician's pre- or post-anesthetic examination or in the form of on-site medical direction by a physician for nurse anesthetists.

<sup>4</sup>States featuring supervision, collaboration or similar requirements for the overall practice of nurse anesthesia feature an "X" in this category.

<sup>5</sup>Authority may be limited to a restrictive formulary or may exclude certain controlled substances. (Exclusion of Schedule I controlled substances has been ignored for purposes of this column.) For purposes of this column, authority to "select" or "order" anesthesia has been treated as tantamount to prescriptive authority, except where a state draws a meaningful distinction.

<sup>6</sup>Requirement pertains to patients undergoing general anesthesia.