

# **American Society of Anesthesia Technologists and Technicians**

## **Standards of Practice**

### **Introduction**

The following information declares the position of the American Society of Anesthesia Technologists and Technicians (ASATT). This will describe the standard of practice for the anesthesia technician, the certified anesthesia technician and the certified technologists.

The standards of practice are directions or recommendations that are intentionally presented in a broad manner in order that the standards of practice will address the vast variety of settings in which the anesthesia technical personnel are employed.

### ***The following information will identify three levels of practice:***

In September 1991, the Advisory committee on anesthesia technicians and technologists developed Training Guidelines and a functional Description of the Anesthesia Technician and Technologist.

In 1994, The ASATT developed an Advisory Committee for Certification of the Anesthesia Technicians/ Technologists.

In 1997, the Board of Directors of the American Society of Anesthesia Technologists and Technicians appointed a Scope of Practice Taskforce, which presented a Standards of Practice that was adopted by the Board of Directors.

With the growing demand for qualified anesthesia technical personnel, a task force reviewed the Standards of Practice in 2006 to include three levels of practice: anesthesia technician, certified anesthesia technician and certified anesthesia technologist.

### ***Functional description of the anesthesia technicians and technologist:***

Anesthesia technicians, certified anesthesia technicians and certified anesthesia technologists are integral members of the anesthesia patient care team. Their role is to assist licensed anesthesia providers in the acquisition, preparation and application of the equipment and supplies required for the administration of anesthesia. In this role, they contribute to safe efficient and cost-effective anesthesia care. Anesthesia technicians and technologists provide support in anesthesia for routine and complex surgical cases. They provide this service by preparing and maintaining patient monitoring devices and anesthesia delivery systems before, during and after anesthesia.

Depending on individual expertise and training, the task of the anesthesia technician, certified anesthesia technician and certified anesthesia technologist may include equipment maintenance and servicing such as cleaning, sterilizing, assembling,

calibrating and testing, troubleshooting, requisitioning and recording of inspections and maintenance. They may operate a variety of mechanical, pneumatic and electronic equipment used to monitor, evaluate and manage the patient undergoing anesthesia. The anesthesia technologist who has the appropriate training may perform inspection, maintenance of inventories and service records. They may also provide support in areas of pressure monitoring, autotransfusion and laboratory functions.

Individuals functioning as anesthesia technicians or technologists should be capable of a level of self direction and supervision that is commensurate with their training.

## **Definitions and Qualifications**

### ***Anesthesia Technician***

The anesthesia technician is an individual who has not met the requirements to apply for the American Society of Anesthesia Technologists and Technicians national certification examination, or has met the requirements but has opted to not pursue the credentials of becoming a Certified Anesthesia Technician.

The anesthesia technician is an integral member of the anesthesia patient care team.

- Assists the licensed anesthesia providers in various settings
- Performs duties under the direct supervision of a licensed anesthesia provider and/or Registered Nurse (RN)
- Provides support for routine surgical cases by assisting in the preparation and maintenance of patient equipment and anesthesia delivery systems before, during and after anesthesia
- Performs first level maintenance on anesthesia equipment
- Cleans, sterilizes, disinfects, stocks, orders and maintains the routine anesthesia equipment and supplies

### ***Education***

The preferred entry-level education is high school diploma or GED. Previous work experience may be reviewed.

Educational requirements to work in the role of an Anesthesia technician are at least a high school education. In some cases a two-year degree in healthcare may be required.

### ***Competencies***

The anesthesia technician demonstrates proficiency in:

- Basic life support
- Purpose, use and care of physiological monitors relating to the administration of anesthesia
- Ethical and legal issues and responsibilities
- Biologic hazards, infection control, and standard precautions

- Fire, electrical, laser and explosion hazards in the operating room and other anesthesia related areas
- Storage, use and safe handling of bulk and cylinder gases
- Structure, function and care of all components of anesthesia delivery systems
- Sterile technique and the principals of aseptic practice
- Usage of common anesthetic gases
- Type and indications for local, monitored anesthesia care (MAC), regional and general anesthesia
- Principles of purchasing and supply levels
- Communication skills

### ***Certified Anesthesia Technician (Cer.A.T.)***

The Cer.A.T. is a technician who has successfully completed the examination requirements established by the ASATT. The Cer.A.T. is an allied healthcare professional who is an essential member of the anesthesia patient care team, as observed by the American Society of Anesthesiologists (ASA), the American Association of Nurse Anesthetists (AANA) and the Association of periOperative Registered Nurses (AORN). The certified anesthesia technician performs duties under the supervision of the licensed anesthesia care providers.

The American Society of Anesthesia Technologists and Technicians is a member of the National Organization for Competency Assurance (NOCA), a nationally recognized organization that establishes standards for credentialing examination programs.

The functions of a Cer.A.T. may include:

- assisting the licensed anesthesia provider in clinical settings such as: the operating room (OR), obstetrics suite (OB), interventional and/or diagnostic radiology, Post anesthesia care unit (PACU), intensive care unit (ICU), CATH LAB, emergency room (ER), endoscopy, dental suites, ambulatory surgery suites, animal and research laboratories.
- demonstrating practical knowledge and expertise in all general areas of anesthesia. The certified anesthesia technician must have a thorough knowledge of the set-up, operation and troubleshooting of anesthesia delivery systems, monitors, and ancillary devices. The certified anesthesia technicians will maintain a sufficient inventory of all equipment and supplies.
- being knowledgeable of all guidelines, policies and safety requirements as determined by all relevant regulatory and standard setting agencies or organizations.
- possessing an understanding of anatomy and physiology as it applies to anesthesia care.

- performing effectively in the areas where anesthesia is provided, assist the licensed anesthesia provider with patient assessments, evaluations, transport, positioning, insertion of intravenous and other invasive lines, and airway management.
- performing administrative duties that include:
  - Employee scheduling, payroll, evaluations and program development
  - Reviewing job descriptions and service agreements
- actively participates in the development and/or administration of continuing education for the anesthesia technicians

### ***Education***

ASATT recommends that the candidate seeking certification should meet one of the following requirements:

- A minimum of two (2) years of experience as an anesthesia technician and high school diploma or GED
- A graduate of an ASATT two-year approved program
- A graduate of an ASATT approved program and completion of required clinical component

### ***Competencies***

The Cer.A.T. must demonstrate competency in the areas that apply to the anesthesia technician as well as the following:

- An understanding of advanced life support
- Demonstrates the ability to perform technical duties in complex clinical situations
- Understands medical terminology as it relates to anesthesia patient care
- Demonstrates an understanding of anesthesia equipment and related supplies
- Demonstrates knowledge and practice of basic patient care related to anesthesia
- Demonstrates the ability to coordinate the daily routine of the technical anesthesia staff
- Ability to delegate responsibilities to other members of the anesthesia team
- Ability to prioritize
- Understands the costs that are incurred for anesthesia procedures
- Understands limitations of roles or practice area
- Maintains professional confidentiality
- Protects and upholds the rights of the patient

## ***Certified Anesthesia Technologist (CER.A.T.T.)***

A Cer.A.T.T. is an individual who has successfully completed both the Certified Anesthesia Technician and Technologist Examinations per the requirements established by The ASATT. The Cer.A.T.T. is distinguished from the Cer.A.T. by additional levels of training and experience.

### **Competencies**

The Cer.A.T.T. must demonstrate competency and/or knowledge of the following:

- Assisting the anesthesia provider with intra-operative fluid management including volume resuscitation
- Operating the auto transfusion equipment
- Maintaining current basic cardiac life support (BCLS), and/or advanced cardiac life support (ACLS) and pediatric advanced life support (PALS)
- Performing inspection and maintenance of the anesthesia gas delivery systems
- Setting up and troubleshooting the intra-aortic balloon pump.

## **SCOPE OF PRACTICE IN ANESTHESIA TECHNOLOGY**

### **Introduction**

The American Society of Anesthesia Technologists and Technicians (ASATT), acknowledges the scope of practice for the anesthesia technical personnel.

The commitment of the ASATT is to ensure that efficient, safe, competent, and ethical practices are provided to society and maintaining professional standards of practice.

The ASATT acknowledges that the anesthesia technical personnel are a part of the anesthesia care team as listed in the practice guidelines of the American Society of Anesthesiologists (ASA).

### **Duties**

Maintains and organizes the anesthesia environment, equipment, supplies and personnel to facilitate department functions.

- Follows the guidelines of Joint Commission of Accredited Hospital Organizations (JCAHO) Environment of Care
- Maintains the sterile supplies within the expiration date
- Inventories, orders and maintains departmental supply stock consistent with departmental demand. Cognizant of where supplies are kept and is able to obtain or stock them accordingly

- Maintains records of or has access to all preventative maintenance records
- Recognizes and adheres to JCAHO National Safety Goals
- Maintains material safety data sheets (MSDS) sheets on hazardous materials and latex allergy items for all supplies under anesthesia cognizance
- Maintains an inventory of equipment used by anesthesia to track repairs; loaners and demos. Conducts any quality controls needed to return such items after repair to service. Aids in the preparation of the capital budget for the department of anesthesia
- Provides training and orientation to staff and new personnel. The Cer.A.T.T. is expected to be the preceptor for AT and Cer.A.T.'s.
- Maintains pharmacy drugs within their expiration date and properly disposes of used drugs.

Provides peri-operative technical support to the anesthesia professional staff for delivery of patient care.

- Is knowledgeable of JCAHO accreditation policies and procedures, sentinel events, National safety goals, environment of care and other JCAHO mandates directly related to anesthesia and patient safety
- Is knowledgeable of the College of American Pathologists (CAP) requirements for ancillary laboratories
- Maintains the availability of necessary equipment in each operating room
- Prepares and assembles transducer lines and equipment necessary for invasive pressure monitoring as necessary or requested. Has a working knowledge of hemodynamics and can perform cardiac calculations
- Demonstrates detailed technical knowledge and troubleshooting ability for anesthesia delivery system, scavenger system, gas analyzer, EKG, pulse oximeter and rapid infusion devices
- Completes hospital annual competency checklist which may include Autotransfusion; Stat lab; ACT; Waste Gas Survey; laser safety; Bronchoscope cleaning and sterilization and transfusion administration
- Makes available, assembles, and assists with operation of specialized equipment such as humidification units; fiberoptic endoscopic equipment; rapid infusion devices/blood warmers; patient warming devices; neuromuscular devices; infusion pumps and syringes; balloon pump initial setups and TEE setup
- Demonstrates speed and timeliness in all duties, particularly in preparation for emergencies and trauma procedures
- Assists anesthesia professional staff as requested:
  - a. Assists in preparation and draping of patient for invasive monitoring/ procedures by licensed anesthesia providers
  - b. Assists and anticipates needs of licensed anesthesia providers in invasive monitor insertion and procedures such as pulmonary artery catheter, central venous access, regional anesthesia, fiberoptic intubation and is familiar with the ASA Difficult Airway Algorithm

- c. Anticipates need for invasive monitoring according to daily OR schedule
- d. Aids in preparation of patients for major invasive monitoring and/or complex cases including but not limited to placement of BP cuff, ECG leads, Pulse Oximeter, positioning and prepping
- e. Sets up OR for cases according to licensing restrictions which may include the following: Preparation of laryngoscope and intubation equipment, IV solution and tubing set-up and set up of IV warming devices
- f. Completes EKG course and monitors EKG for dysrhythmias
- g. Assists licensed anesthesia providers with volume infusions as directed during intraoperative volume resuscitations
- Demonstrates dependability of participation in department technician call coverage

Participates in a system to support and continually improve the quality of anesthesia services provided to patients and their families, fellow employees, physicians and other customers.

- Participates in departmental Quality Improvement and Risk Management Activities
- Assists in the development of action plans in response to professional staff feedback regarding improvement opportunities
- Participates in overtime coverage situations as reasonably requested
- Maintains current BCLS certification and possibly ACLS and PALS
- Participates in the development and continuous updating of departmental policies and procedures directly related to anesthesia technical staff and performance duties

Provides Intraoperative Autotransfusion Services as requested for elective and emergency procedures.

- Participates dependably in call coverage for the provision of intraoperative autotransfusion services
- Prepares and assembles software and operates the autotransfusion equipment consistent with department policy and procedural guidelines
- Maintains cleanliness and preparation of autotransfusion equipment and supplies
- Maintains complete and accurate patient records for all procedures during which intraoperative autotransfusion is utilized
- Provides estimate of blood loss via autotransfusion unit and total volume reinfused
- Assists with monitoring and evaluation of autotransfusion service quality and effectiveness

Provides laboratory services and fulfills CAP requirements.

- Performs all quality controls for Point of Care testing devices
- Performs cyclic CAP surveys for all machines under the anesthesia department
- Maintains supporting documentation and quality control documentation
- Maintains an authorized user list
- Trains and recertifies staff on use of equipment

Promotes and maintains positive relationships with all contacts.

- Facilitates resolution of conflicts and problems as appropriate
- Promotes effective interpersonal and interdepartmental relationships as observed and reviewed by manager
- Adopts a team approach to work as observed by manager
- Maintains professional attitude when serving our patients, physicians, employees, and visitors
- Accepts and gives constructive feedback
- Demonstrates ability to communicate effectively and cooperates with all contacts

Complies with all department and hospital policies and procedures.

### ***Administrative Role***

The standards for administrative practice are included to offer direction/guidance to the certified anesthesia technician or certified anesthesia technologist who has administrative and educational responsibilities. These standards are very broad in scope and may apply in various situations.

### ***Standard I***

The Cer.A.T. or Cer.A.T.T. who is qualified by education, training or experience in management may perform administrative, logistical and fiscal duties and task as they relate to anesthesia services. The certified anesthesia technician/technologist is responsible to the individual/service under which these duties are reviewed.

### ***Competencies***

- Organize and coordinates the use of anesthesia personnel
- Demonstrates team and leadership skills
- Demonstrates required management skills
- Communicates/written and orally in an effective manner
- Participates in developing continuing education/formal education programs
- Demonstrates knowledge of regulatory acts as they affect patients and staff
- Participates on hospital committees
- Collaborates with other professionals in the development of anesthesia budgetary issues

### ***Recommended Education and Experience***

- Those recommendations as previously stated for the certified anesthesia technician and technologist
- A certificate, diploma or degree in health care administration
- A minimum of two (2) years experience in an administrative capacity in an anesthesia or health related field

### ***Standard II***

The Cer.A.T. or Cer.A.T.T. who is qualified by education and/or experience may develop educational activities and programs as they relate to anesthesia technology.

### ***Competencies***

- Demonstrates advanced knowledge of anesthesia procedures that are performed by the licensed anesthesia providers, aseptic techniques, anatomy, anesthesia equipment and regulatory practices
- Demonstrates leadership skills
- Demonstrates advanced communication skills, oral and written
- Ability to assess learning needs of other departmental personnel and students
- Collaborates with other health care professionals to develop and implement education objectives
- Participates in continuing education and pursues formal education as it applies

### ***Recommended Education and Experience***

1. A minimum of five years of experience as a lead or chief technician
2. A graduate from a program in anesthesia technology
3. A degree in an allied health field

### **General Clinical Topics**

1. The O.R. Environment
2. Sterile Techniques
3. Material Management

### **Required for:**

Technician, Certified Technician & Technologist  
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Technician, Certified Technician & Technologist

#### 4. Basic Life Support

Technician, Certified Technician & Technologist

##### **Anesthesia Specific Topics**

1. Basic Anatomy & Physiology
2. Types of anesthesia
3. Airway management equipment
4. Anesthesia Gas Machines & Delivery
5. Monitors & Accessories
6. Pharmacology for Anesthesia
7. Intraoperative complications
8. Intravenous Therapy
9. Cardiac Monitoring
10. Anesthesia for specific surgery
11. Advanced Life Support
12. Pediatric Advanced Life Support
13. JCAHO
14. CAP

##### **Required for:**

Technician, Certified Technician & Technologist  
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##### **Endorsed Topics**

1. Autotransfusion
2. Blood Analysis
3. Intra-aortic Balloon pump
4. The Anesthesia Gas Delivery system

##### **Required for:**

Certified Technician & Technologist  
Certified Technician & Technologist  
Certified Technician & Technologist  
Technician, Certified Technician & Technologist