



Comparison of Certified Registered Nurse Anesthetists (CRNAs) and Anesthesiologist Assistants (AAs)

CRNAs	AAs
<p>Definition: A CRNA is an advanced practice registered nurse specializing in nurse anesthesia. CRNAs are professional registered nurses (RNs) who have obtained, through additional education and successful completion of a national examination, certification as anesthesia nursing specialists.</p>	<p>Definition: According to the American Academy of Anesthesiologist Assistants (AAAA), the AA is an allied health professional specializing in anesthesia who works under the direction of an anesthesiologist in the anesthesia care team environment as described by the American Society of Anesthesiologists (ASA). The AA may take the National Commission for Certification of Anesthesiologist Assistants (NCCAA) examination to become an Anesthesiologist Assistant - Certified (AA-C).</p>
<p>Anesthesia Practice: CRNAs are qualified to make independent judgments regarding all aspects of anesthesia care, based on their education, licensure, and certification. CRNAs provide anesthetics to patients in cooperation with surgeons, anesthesiologists, dentists, podiatrists, and other qualified healthcare professionals. CRNAs practice with a high degree of autonomy. The laws of every state permit CRNAs to work with physicians (such as surgeons) or other authorized healthcare professionals.</p>	<p>Anesthesia Practice: The AA develops and implements an anesthesia care plan in an assistant role/capacity. According to the Commission on Accreditation of Allied Health Education Programs (CAAHEP), the AA must work under the direction of an anesthesiologist. AAs may not work under the direction of other physicians or healthcare professionals. The anesthesiologist who is responsible for the AA is available to prescribe and direct particular therapeutic interventions in the operating room and the intensive care setting. Currently, 15 states and the District of Columbia authorize the practice of an AA through either a licensure or certification process. 1 additional state (Kentucky) authorizes the practice of an AA who is also a certified physician's assistant. AAs are also authorized to practice in the U.S. Territory of Guam. In all these states and in the District of Columbia, AAs must work under the direction or supervision of an anesthesiologist.</p>
<p>Practice Locations: CRNAs practice in every setting in which anesthesia is delivered: traditional hospital surgical suites and obstetrical delivery rooms; critical access hospitals; ambulatory</p>	<p>Practice Locations: The AA most frequently practices in an urban hospital setting. AAs cannot practice where anesthesiologists are unavailable or are not willing to work.</p>

<p>surgical centers; the offices of dentists, podiatrists, ophthalmologists, plastic surgeons, and pain management specialists; and U.S. military, Public Health Services, and Department of Veterans Affairs healthcare facilities.</p>	
<p>Numbers: There are at least 61,000 nurse anesthetists. They safely administer approximately 49 million anesthetics to patients each year in the United States. CRNAs are the primary anesthesia providers in rural America. In some states, CRNAs are the sole providers in nearly 100% of rural hospitals.</p>	<p>Numbers: According to the AAAA, there are approximately 3000-working AAs.</p>
<p>Distribution: CRNAs practice under the laws of every state.</p>	<p>Distribution: AAs are authorized to practice through either a licensure or certification process (depending upon the state) in 15 states and the District of Columbia (Alabama, Colorado, Florida, Georgia, Indiana, Missouri, New Mexico, Nevada, North Carolina, Ohio, Oklahoma, South Carolina, Vermont, Utah, and Wisconsin). In Kentucky, certified physician assistants who have completed an AA program are authorized to practice through a certification process. Unlicensed AAs may be practicing in other states pursuant to laws or regulations that allow physicians to delegate certain medical acts to unlicensed individuals.</p>
<p>Scope of Practice: CRNAs are educated and trained to work with or without anesthesiologist supervision. CRNAs are also educated and trained to exercise independent judgment and to respond quickly to anesthetic emergencies.</p>	<p>Scope of Practice: AAs must work under the close supervision of an anesthesiologist.</p>
<p>History: Nurse anesthetists have been practicing for more than 150 years. They were the first professional group whose members specialized in anesthesia.</p>	<p>History: AAs have been practicing since the early 1970s, or for approximately 60 years.</p>
<p>Number of Accredited Nurse Anesthesia Programs: 133</p>	<p>Number of Accredited AA Programs: 18 (Bluefield University at VCOM-Auburn, Auburn, AL; Case Western Reserve University, Austin, Texas; Case Western Reserve University, Cleveland, Ohio; Case Western Reserve University, Houston, Texas; Case Western Reserve University, Washington, D.C.; Emory University, Atlanta, Georgia; Indiana University, Indianapolis, Indiana; Northeast Ohio Medical University, Rootstown, Ohio; Nova Southeastern University, Ft Lauderdale, Florida; Nova Southeastern University,</p>

	Tampa, Florida; Nova Southeastern University, Jacksonville, Florida; Ohio Dominican University, Columbus, Ohio; South University, Orlando, FL; South University, Savannah, Georgia; South University, West Palm Beach, Florida; University of Colorado, Denver; University of Missouri-Kansas City (UMKC); University of Wisconsin, Milwaukee, Wisconsin.
Number of Students: Approximately 3,000 students graduate from nurse anesthesia programs throughout the country each year.	Number of Students: AA programs collectively matriculate about 300 students across all AA programs.
Accreditation Entity: Council on Accreditation of Nurse Anesthesia Educational Programs (COA), which is independent from the American Association of Nurse Anesthetists (AANA) and an autonomous council. The COA is recognized by the U.S. Department of Education and Council for Higher Education Accreditation (CHEA).	Accreditation Entity: CAAHEP, which is recognized by the CHEA. The U.S. Department of Education does not recognize CAAHEP.
Program Admissions Requirements: A baccalaureate; RN licensure; and at least one year of acute care experience as a professional RN during which the RN developed as an independent decision-maker capable of interpreting and using advanced monitoring techniques based on knowledge of physiological and pharmacological principles. Most applicants have acquired extensive clinical experience in areas such as coronary, respiratory, postanesthesia, and surgical intensive care units before they begin their nurse anesthesia programs. The average experience of RNs entering nurse anesthesia educational programs is 4.5 years according to the National Board of Certification and Recertification for Nurse Anesthetists (NCRNA).	Program Admissions Requirements: Baccalaureate degree in the arts or sciences from an accredited institution. No nursing, medical, anesthesia or healthcare education, experience, licensure, or certification required.
Program Length: 24 to 42 months	Program Length: 24 to 28 months
Degree Received at the End of the Program: Doctorate	Degree Received at the End of the Program: Masters
Admissions Requirements: COA accreditation standards require four years of professional nursing education; a baccalaureate; RN licensure; and at least one year of critical care experience as a professional RN during which the RN developed as an independent decision-maker capable of interpreting and using advanced monitoring techniques based on knowledge of physiological and pharmacological principles. Actual admission	Admissions Requirements: Baccalaureate degree in the arts or sciences from an accredited institution. No nursing, medical, anesthesia or healthcare education, experience, licensure, or certification required.

<p>requirements of COA-accredited programs are commonly more stringent than COA standards. Emphasis is commonly placed on, for example, a history of high academic performance, completion of intense undergraduate science curriculum, evidence of study of statistics, proof of verbal ability and writing skills, and experience as an RN in critical care settings. Most applicants have acquired extensive clinical experience in areas such as coronary, respiratory, postanesthesia, and surgical intensive care units before they begin their nurse anesthesia programs.</p>	
<p>Prerequisite Coursework: Examples of courses commonly required include anatomy, physiology, microbiology, chemistry, and pharmacology; sociology and psychology; and statistics. Also, baccalaureate-prepared RNs are generally well grounded in philosophy, ethics, economics, communications, telecommunications, and English composition.</p>	<p>Prerequisite Coursework: Many types of majors are acceptable for admission. Typical desirable undergraduate majors include biology, chemistry, physics, computer science, engineering, and any of the health professions.</p>
<p>Pre-Program Nursing Competencies: The National Council of State Boards of Nursing NCLEX-RN Examination, successful passage of which is a prerequisite to become licensed as an RN (a prerequisite for nurse anesthesia programs), validates the following nursing competencies: Safe, Effective Care Environment -- Management of Care, Safety and Infection Control; Health Promotion and Maintenance; Psychosocial Integrity; Physiological Integrity - - Basic Care and Comfort, Pharmacological and Parenteral Therapies, Reduction of Risk Potential, Physiological Adaptation.</p>	<p>Pre-Program Health or Patient Care Education, Experience, or Credentials Required: None.</p>
<p>Pre-Program Critical Care Nursing Competencies: The critical care RN has proven patient care experience with a foundation of nursing competencies. The <i>critical care nursing</i> prerequisite means that the nurse anesthesia student applicant must have competencies through experience with acutely/critically ill patients in hospitals, in the following areas: patient assessment (collecting relevant patient health data); diagnoses (analyzing assessment data in determining diagnoses); outcome identification (identifying individualized, expected outcomes for the critically ill patient); planning (developing a care plan that prescribes interventions to attain expected outcomes); implementation</p>	<p>Pre-Program Critical Healthcare Competencies: Student AAs are not required to enter their educational program with comparable credentials.</p>

<p>(implementing interventions identified in the care plan (e.g., delivered in a manner that minimizes complications and life-threatening situations)); evaluation (evaluating the patient's progress toward attaining expected outcomes). (American Association of Critical Care Nurses Standards of Care for Acute and Critical Care Nursing)</p>	
<p>Program Description: Requires successful completion of an academic program of specified didactic coursework and clinical training and is at least 24 months long. COA specifies mandatory hours requirements for didactic content and a minimum number and type of anesthesia cases to be administered by nurse anesthesia students.</p>	<p>Program Description: CAAHEP guidelines for AA programs recommend, but do not appear to require, didactic and clinical content. In addition, CAAHEP guidelines for AA programs recommend, but do not appear to require, a minimum number of anesthesia cases.</p>
<p>Didactic Education: COA accreditation standards require at a minimum: advanced physiology/pathophysiology (120 hours); advanced pharmacology (90 hours); basic and advanced principles of anesthesia practice (120 hours); research (75 hours); advanced health assessment (45 hours); human anatomy, chemistry, biochemistry, physics, genetics, acute and chronic pain management, radiology, ultrasound, anesthesia equipment, professional role development, wellness and substance use disorder, informatics, ethical and multicultural healthcare, leadership and management, business of anesthesia/practice management, health policy, healthcare finance, integration/clinical correlation.</p>	<p>Didactic Education: Accreditation standards and guidelines do not specify minimum hours for didactic education.</p>
<p>Anesthesia Clinical Education: The COA standards require that students administer a minimum of 600 anesthesia cases for a wide variety of procedures and obtain a minimum number of 2000 clinical hours. Transcript data from nurse anesthesia students shows that the average number of anesthetics administered was 859 over an average of 1,683 hours of anesthesia and 2,604 clinical hours. Total clinical hours refer to the total number of hours the student is present in the clinical area. This may include pre-op, post-op, patient prep, and time spent participating in clinical rounds. Total clinical hours are inclusive of total hours of anesthesia time; therefore, this number must be equal to or greater than the total number of hours of anesthesia time. Nurse anesthesia programs report anesthesia seminars and conferences in didactic and not clinical hours.</p>	<p>Anesthesia Clinical Education: No minimum number of anesthesia cases required in CAAHEP accreditation criteria. Guidelines recommend 600 anesthesia cases. AA programs indicate that total clinical hours range from 2,000 to 2,747. Published descriptions of the AA programs' total clinical hours include experiences such as learning to do physicals, taking patient histories, training and certification processes for life support training, and other learning experiences that a licensed professional RN has already mastered prior to nurse anesthesia program entry.</p>

<p>Total Clinical Education: CRNAs receive 7-8 ½ years of formal education and preparation, from the commencement of the professional education in nursing to the graduation from nurse anesthesia school, to prepare them for their careers in anesthesia. During their education, CRNAs will typically have acquired, on average, 9,369 hours of clinical patient care experience.</p>	<p>Total Clinical Education: Total clinical education during their AA programs ranges from approximately 2,000 to 2,700 hours.</p>
<p>Scope of Training: CRNAs are capable of high-level independent function and receive instruction in the administration of all types of anesthesia including general and regional anesthesia, local and conscious sedation, monitored anesthesia care, and pain management. They are trained to provide anesthesia to patients of all ages for all types of surgery, from simple to the most complex cases. The ability to make independent judgments and provide multiple anesthetic techniques is critical to meeting an array of patient and surgical needs.</p>	<p>Scope of Training: The scope of training for AAs is severely limited. The AA curriculum is characterized by training that allows them to “assist” the anesthesiologist in technical functions.</p>
<p>National Certification: A nurse anesthetist must successfully pass the National Board of Certification and Recertification of Nurse Anesthetists (NBCRNA) certification examination to practice as a CRNA in at least 48 states and the District of Columbia. In the few states that do not explicitly require such certification, employers generally require such certification as a practical matter. Nurse anesthetists are not eligible to take their certification exam until they have successfully completed their accredited nurse anesthesia programs. (Medicare requires nurse anesthetists to be certified and recertified to qualify for reimbursement.)</p>	<p>National Certification: AAs are eligible to take the NCCAA examination up to 180 days before graduation. AAs may practice without certification unless it is required by their employer or state law. (Medicare does not require that AAs must be certified or recertified to qualify for reimbursement.)</p>
<p>National Certification Prerequisites: Current, unrestricted licensure as an RN, successful completion of an accredited nurse anesthesia educational program, and successful completion of the NBCRNA exam.</p>	<p>National Certification Prerequisites: Successful completion of an accredited AA program and passage of the NCCAA certification exam.</p>
<p>Recertification: Every two years based on evidence of 40 continuing education credits, current and unrestricted RN or advanced practice registered nurse licensure, and verification of active practice.</p>	<p>Renewal of Certification: Every two years based on evidence of 40 continuing medical education (CME) hours. In addition, passing scores on a <i>Continued Demonstration of Qualifications Examination</i> every six years.</p>
<p>Standards and Ethics: AANA publishes a scope of practice statement, standards and guidelines for practice, and a code of ethics.</p>	<p>Standards and Ethics: AAAA publishes a statement on the functions and responsibilities of</p>

	the AA; it also publishes guidelines for ethical standards.
Nature of Relationship with Physicians: CRNAs work cooperatively with all types of physicians.	Nature of Relationship with Physicians: The AA functions as an assistant to an anesthesiologist and is dependent upon the anesthesiologist's supervision and direction.
Autonomy in Practice: Practices with a significant degree of autonomy.	Autonomy in Practice: Works only under the close direction or supervision of an anesthesiologist.
Flexibility of Practice: Capable of working in urban and rural areas, and across all types of practice settings (e.g., ambulatory care, clinics, and hospitals).	Flexibility of Practice: Usually practices in hospitals that use the anesthesia care team approach, always supervised by anesthesiologists, and usually in an urban setting.
Practice in the Military: CRNAs are the predominant anesthesia provider in the armed forces and the Veterans Affairs healthcare system.	Practice in the Military: AAs do not practice in the military.
Medicare Reimbursement: The Medicare conditions for hospitals and ambulatory surgical centers require that a physician supervise a CRNA unless the state has "opted out" of this supervision requirement. 24 states and Guam have opted out of the Medicare physician supervision requirement for CRNAs. CRNAs are not required to work with anesthesiologists.	Medicare Reimbursement: The Medicare conditions for hospitals require that an AA be under the supervision of an anesthesiologist who is immediately available if needed; the ambulatory surgical center conditions require AAs to be under anesthesiologist supervision.
Patient Safety: Numerous studies have concluded that CRNAs are safe providers. For information about these studies, please see https://www.anesthesiafacts.com/the-research/	Patient Safety: No credible research studies on anesthesia safety involving AAs.

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