COMMONWEALTH of VIRGINIA

David E. Brown, D.C.
Director

Department of Health Professions
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, Virginia 23233-1463

www.dhp.virginia.gov
TEL (804) 367- 4400
FAX (804) 527- 4475

October 18, 2017

The Honorable Stephen D. Newman
P. O. Box 480
Forest, VA 24552

The Honorable Robert D. Orrock, Sr.
P. O. Box 458
Thornburg, VA 22565

RE: Feasibility of Licensure of Certified Anesthesiologist Assistants

Dear Senator Newman and Delegate Orrock:

As referenced in my letter to you dated November 29, 2016, this is to advise you that the Board of Health Professions has conducted its study into the feasibility of licensure of Certified Anesthesiologist Assistants (CAA). The Board is authorized to advise on matters pertaining to the need for regulation of health professions and occupations and scope of practice issues pursuant to §54.1-2510.

The Board evaluated relevant education, training, examination, and continuing competency requirements, typical duties and functions, regulation in other U.S. jurisdiction, and the latest available anesthesia provider workforce data. They also incorporated into the study extensive public comment, pro and con, from over 190 stakeholders. Their research was guided by the standard policies and procedures as set forth in their Guidance Document **75-2** Appropriate Criteria in Determining the Need for Regulation of Any Health Care Occupation or Professions, revised February 1998. Note that the Appendix provides key questions that guide and reference the respective criteria: (1) risk of harm, (2) specialized skills and training, (3) autonomous practice, (4) scope of practice, (5) economic impact, (6) alternatives to regulation, and (7) least restrictive regulation. In order to recommend that any profession be licensed the policies require that *all* of the first six criteria be met.

The Board unanimously accepted the conclusion of its Regulatory Research Committee that the profession does not qualify for licensure in Virginia. The first six criteria were not met. CAAs do *not* practice autonomously. They practice under the direct supervision of Anesthesiologists and no other physician or anesthesia providers. Their potential scope would likely overlap considerably with other regulated professions and AA students would increase competition for already limited residency sites and slots needed by anesthesiologist and nurse anesthetist students. Their licensure would also impact the Board of Medicine's workload because an entirely new set of regulation would need to be developed and censure program administered.

Dr. Elizabeth Carter remains available for any questions you may have concerning the Board's findings. She may be reached at Elizabeth.Carter@dhp.virginia.gov or (804) 367-4426.

Very truly yours,
David E. Brown, D.C.
Director

Attachment: Certified Anesthesiologist Assistant Study Final Report

Virginia Department of Health Professions
Virginia Board of Health Professions

Feasibility of Licensure of Certified Anesthesiologist Assistants

Executive Summary

Section 54.1-2510 of the *Code of Virginia* authorizes the Virginia Board of Health Profession to advise the Governor, General Assembly, and Director of the Department of Health Professions on matters pertaining to the regulation of health professions and occupations and scope of practice issues. The Board conducted this study into the feasibility of licensing Certified Anesthesiologist Assistants (CAAs) on behalf of the Department pursuant to requests from Senator Stephen Newman and Delegate Robert Orrock.

The review was guided by the principles, evaluative criteria, and research methods set forth in the Board's standard policies and procedures for evaluating the need for regulation of health occupations and professions. It examined CAA's education, training, competency examination and continuing competency requirement, typical duties and functions, regulation in other U.S. jurisdictions, available anesthesia workforce data, and CAA's the potential impact on the existing anesthesia professions regulated in Virginia: Anesthesiologists and Certified Registered Nurse Anesthetists.

The Board recommended against licensure for CAAs in Virginia. The burden imposed by state regulation was not justified due to the following findings:

- There is a lack of proof that there is a statewide shortage of anesthesia providers.
- AA students would increase competition for already limited training sites and slots needed by Virginia's Anesthesiologist and Nurse Anesthetist students.
- CAAs cannot practice independently but only with direct, on-site, supervision that is restricted to Anesthesiologists and no other physician or anesthesia care providers.
- CAA practice was thought to be unlikely to locate in underserved and other rural areas.
- The Board of Medicine's workload would increase to accommodate establishing an entirely new set of regulations and administration of the licensure program.

The Board additionally offered that if the General Assembly were to consider license legislation, Kentucky and Georgia models provide the safest approach. They require that CAAs also be licensed Physician Assistants. Because a single Anesthesiologist may supervise multiple CAAs at a given time, patient safety would be better assured with practitioners who are more broadly versed in overall patient health care, not limited to anesthesia care.

Virginia Department of Health Professions
Virginia Board of Health Professions

Feasibility of Licensure of Certified Anesthesiologist Assistants

Background and Authority

The Virginia Board of Health Professions evaluated the feasibility of state licensure for certified anesthesiologist assistants (CAAs) pursuant to requests from Senator Stephen Newman and Delegate Robert Orrock to the Department of Health Professions. At its February 24, 2017 meeting, the Board assigned the review to the Regulatory Research Committee.[1]

Code of Virginia §54.1-2510 authorizes the Board of Health Professions to advise the Governor, the General Assembly, and the Department Director on matters related to the regulation and level of regulation of health care occupations and professions in the Commonwealth. It also authorizes the Board to examine and advise on scope of practice conflicts involving regulated and unregulated professions.

Methodology

To guide such reviews, the Board applies the principles, standard evaluative criteria, and research methods detailed in its *Policies and Procedures for Evaluation of the Need to Regulate Health Occupations and Professions, 1998.* [2] This standard approach leads to evaluation of factors that are key to the public's protection and determination of the least level of regulation necessary. It is in keeping with regulatory principles established in Virginia law and accepted in the national community of regulators. For ease of reference, the "Criteria for Evaluating the Need for Regulation" table is on the following page. It provides a brief summary of the meaning of the respective seven criteria (hereinafter referred to as "the Criteria"). Additionally, selection of the *least* level of regulation is guided by consideration of the characteristics of licensure, state certification, and registration (the three most commonly used methods of professional regulation and the specific criteria that apply to each[3] See the Application of the Criteria table on Page 4.

[1] See the correspondence from Senator Newman, Delegate Orrock and Department Director Dr. David Brown's response is provided in Appendix 1 and workplan in Appendix 2.
[2] Published as Guidance Document 75-2 accessible at http://www.dhp.virginia.gov/bhp/guidelines/75-2.doc.
[3] NOTE: The descriptions are intended to differentiate *general* levels of professional regulation.

Criteria for Evaluating the Need for Regulation
Criterion One: Risk for Harm to the Consumer -The unregulated practice of the health occupation will harm or endanger the public health, safety or welfare. The harm is recognizable and not remote or dependent on tenuous argument. The harm results from: (a) practices inherent in the occupation, (b) characteristics of the clients served, (c) the setting or supervisory arrangement for the delivery of health services, or (d) from any combination of these factors.
Criterion Two: Specialized Skills and Training - The practice of the health occupation requires specialized education and training, and the public needs to have benefits by assurance of initial and continuing occupational competence.
Criterion Three: Autonomous Practice -The functions and responsibilities of the practitioner require independent judgment and the members of the occupational group practice autonomously.
Criterion Four: Scope of Practice - The scope of practice is distinguishable from other licensed, certified and registered occupations, in spite of possible overlapping of professional duties, methods of examination, instrumentation, or therapeutic modalities.
Criterion Five: Economic Impact -The economic costs to the public of regulation the occupational group are justified. These costs result from restriction of the supply of practitioner, and the cost of operation of regulatory boards and agencies.
Criterion Six: Alternatives to Regulation -There are no alternatives to State regulation of the occupation which adequately protect the public. Inspections and injunctions, disclosure requirements, and the strengthening of consumer protection laws and regulations are examples of methods of addressing the risk for public harm that do not require regulation of the occupation or profession.
Criterion Seven: Least Restrictive Regulation -When it is determined that the State regulation of the occupation or profession is necessary, the least restrictive level of occupational regulation consistent with public protection will be recommended to the Governor, the General Assembly and the Director of the Department of Health Professions.

Application of the Criteria

Licensure

Licensure confers a monopoly upon a specific profession whose practice is well-defined. It is the most restrictive level of occupational regulation. It generally involves the delineation in statute of a scope of practice reserved to a select group based upon their possession of unique, identifiable, minimal competencies for safe practice. In this sense, state licensure typically endows a particular occupation or profession with a monopoly in a specific scope of practice.

RISK: High potential, attributable to the nature of the practice.
SKILL & TRAINING: Highly specialized accredited post-secondary education required; clinical proficiency is certified by an accredited body.
AUTONOMY: Practices independently with a high degree of autonomy; little or no direct supervision.
SCOPE OF PRACTICE; Definable in enforceable legal terms.
COST: High
APPLICATION OF THE CRITERIA: When applying for licensure, the profession must demonstrate that Criteria 1 through 6 are met.

Statutory Certification

Certification by the state is also known as "title protection." No scope of practice is reserved to a particular group, but only those individuals who meet certification standards (defined in terms of education and minimum competencies which can be measured) may title or call themselves by the protected title.

RISK: Moderate potential, attributable to the nature of the practice, client vulnerability, or practice setting and level of supervision.
SKILL & TRAINING: Specialized; can be differentiated from ordinary work. Candidate must complete education or experience requirements that are certified by a recognized accrediting body.
AUTONOMY: Variable; some independent decision-making; majority of practice actions directed or supervised by others.
SCOPE OF PRACTICE: Definable but not stipulated in law.
AUTONOMY: Variable; some independent decision-making; majority of practice actions directed or supervised by others.
COST: Variable, depending upon the level of restriction of supply of practitioners.
APPLICATION OF CRITERIA: When applying for statutory certification, a group must satisfy Criterion, 1, 2, 4, 5 and 6.

Registration

Registration requires only that an individual file his name, location, and possibly background information with the state. No entry standard is typically established for a registration program.

RISK: Low potential, but consumers need to know that redress is possible.
SKILL & Training: Variable, but can be differentiated from ordinary work and labor.
AUTONOMY: Variable.
APPLICATION OF CRITERIA: When applying for registration, Criterion 1, 4, 5, and 6 must be met.

The following provides a general overview of the anesthesiologist assistant (AA) profession based upon objective, publically available information researched responsive to the Criteria. This overview includes the profession's origins, functions, private credentialing requirements, the current number credentialed, regulation in other states, and available disciplinary information.

The report also highlights comparisons with other anesthesiology providers, Anesthesiologists and Certified Registered Nurse Anesthetists. Because there is not yet a standard, universally accepted means for assessing healthcare workforce supply and demand, the report references findings from multiple independent resources with current and/or projected practitioner supply vs. population and job openings. These references are drawn from the U.S. Health and Human Services Human Resources Services Administration, U.S. Department of Economics Bureau of Labor Statistics, Virginia Employment Commission Labor Market Information, Department of Health Professions Healthcare Workforce Data Center and relevant information from the Cecil G. Sheps Center FutureDocs supply and demand projections for Anesthesiologists. Finally, the report details public comment received from a public hearing on June 27, 2017 and written comment received until July 31, 2017.

Overview of the Profession

The profession now known as Anesthesiologist Assistant (AA) was first conceived in the 1960s by three Anesthesiologists in response to anesthesia provider shortage concerns at the time. Drs. Joachim S. Gravenstein, Joe E. Steinhaus, and Perry P. Volpitto envisioned the role of an "anesthesia technologist" to serve as an applied physiologist on the anesthesia team.[4] This mid-level profession was envisioned to support the anesthesiologist similarly to certified registered nurse anesthetists (CRNAs) but with an educational curriculum that required a foundation in pre-medical school coursework. This was intended to help pave the way to future medical school application for those who might wish to become Anesthesiologists.[5]

The first AA education program at Emory University in Atlanta, Georgia began accepting students in 1969, followed by Case Western Reserve in Cleveland, Ohio in 1970. [6] Today, there are 11 anesthesiologist assistant programs, with ten accredited and one pending accreditation. Accreditation is through the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in conjunction with the Accreditation Review Committee for the Anesthesiologist Assistant (ARC-AA). [7, 8] ARC-AA is comprised of members from the American Academy of

[4] Kentucky Legislative Review Commission. (2007). *A study of anesthesiology assistants.* (Research report No. 337). Retrieved from http://www.lrc.ky.gov/lrcpubs/RR337.pdf.

[5] Current estimates are that approximately 10% of AAs apply for medical school admission.

[6] Department of Veterans Affairs. (2006). *Qualification Guidelines for the Position of Anesthesiologist Assistant, GS-0601.* Human Resources Management Letter No. 05-06-12. Retrieved April 18, 2017.

[7] Staff search of CAAHEP Accredited Program site accessed March 21, 2017: http://www.caahep.org/Find-An-Accredited-Program/.

[8] Minimum standards for CAAHEP anesthesiologist assistant accreditation are available at http://www.caahep.org/arc-aa.

Anesthesiologist Assistants (AAAA) and the American Society of Anesthesiologists (ASA). The Current Anesthesia Assistant Education Programs table on the next page lists them by state and accreditation status. Programs award a Master's degree upon completion.

Current Anesthesia Assistant Educational Programs			
State	**Program**	**Accreditation Status**	**Notes**
Colorado	University of Colorado School of Medicine http://www.ucdenver.edu/academics/colleges/medicalschool/departments/Anesthesiology/Education/aaprogram/AAadmission/Pages/Admission-Requirements.aspx	Initial 2013	
Connecticut	Quinnipiac University https://www.qu.edu/schools/medicine/programs/anesthesiologist-assistant-program.html#admissionsrequirements	Initial 2014	
D.C.	Case Western Reserve University https://case.edu/medicine/msa-program/admissions/requirements/	Continuing 2012	First of two Case Western Reserve expansions
Florida	NOVA Southeastern University – Tampa http://healthsciences.nova.edu/healthsciences/anesthesia/tampa/requirements.html	Continuing 2009	Two campuses
	NOVA Southeastern University – Ft. Lauderdale http://healthsciences.nova.edu/healthsciences/anesthesia/fort_lauderdale/requirements.html	Continuing 2009	
Georgia	Emory University https://med.emory.edu/aa_program/admissions/prereq.html	Continuing 1969	First AA program
	South University https://www.southuniversity.edu/savannah/areas-of-study/anesthesiologist-assistant/anesthesiologist-assistant-master-of-medical-science-mmsc/admissions	Continuing 2004?	
Missouri	University of Missouri Kansas City School of Medicine http://med.umkc.edu/msa/requirements/	Continuing 2008	
Ohio	Case Western Reserve University https://case.edu/medicine/msa-program/admissions/requirements/	Continuing 1970	
Texas	Case Western Reserve University https://case.edu/medicine/msa-program/admissions/requirements/	Continuing 2008	Second Case Western Reserve expansion program. Partnered with the University of Texas Houston Medical Center
Wisconsin	Medical College of Wisconsin http://www.mcw.edu/Medical-School/Home/Master-of-Science-in-Anesthesia-Program/Apply.htm	Initial Pending	

AA program admissions candidates must have a Bachelor's degree and completed coursework that would qualify the student to pursue a post-baccalaureate degree in medicine, dentistry or

one of the basic medical sciences. [9] Specific courses may vary but generally include biology, chemistry, organic chemistry, physics and advanced mathematics topics. Candidates must also submit Graduate Record Examination (GRE) or Medical College Admission Test (MCAT) scores, most programs accept either examination, but the University of Missouri-Kansas, and Case Western programs accept only MCAT.[10] Preferred scores are generally at the 55th percentile or higher.

According to the American Academy of Anesthesiologist Assistants "Frequently Asked Questions" summary, approved training programs must include a minimum of 24-28 months at the Master's level and be based at or in collaboration with a university with a medical school and academic anesthesiologist physician faculty. Each program must have at least one director who is a licensed, board certified anesthesiologist. Clinical training sites must be academic medical centers.[11] Further, the programs must provide a minimum of 63 didactic hours and 2000 clinical training hours with clinical anesthesia experience in all of the surgical specialties including: ambulatory, cardiothoracic, general, gynecology, neurosurgery, obstetrics, orthopedics, pediatrics, and vascular. [12] Appendix 3 contains a sample curriculum with course descriptions from the Case Western Reserve program.

The National Commission for Certification of Anesthesiologist Assistants (NCCAA) founded in 1989 is the national certifying organization for the profession. In addition to graduation from an accredited program, NCCAA requires passing an initial written certifying examination, NCCAA CERT. If successful, the NCCAA awards the AA with a time-limited certificate. To maintain certification requires 40 hours of Continuing Medical Education (CME) every two years and passage of the Continued Demonstration of Qualifications (CDQ) examination every six years is required to maintain NCCAA certification. [13]

The NCCAA examinations were developed in concert with the National Board of Medical Examiners (NBME). In 1990, they helped develop the first CERT based upon job analysis with AAs and sponsoring physicians; the content domains and item bank were first established then. In 1997, they conducted a subsequent job analysis for the CDQ exam which was first administered in 1998. Each year, NCCAA appoints test committees to prepare the CERT and CDQ in consultation with NBME and psychometric experts. Exams are offered annually in February and June. [14] The test blueprints for both examinations are in Appendix 4.

---

[9] American Academy of Anesthesiologist Assistants *Frequently Asked Questions* accessible at https://aaaa.memberclicks.net/faqs.

[10] Further details on respective programs pre-requisite courses, GPA and exam score requirements are available from the respective program's websites.

[11] http://www.anesthetist.org/faqs accessed December 5, 2016 .

[12] American Academy of Anesthesiologist Assistants. *Career information for prospective anesthesiologist assistants* accessible at: https://aaaa.memberclicks.net/assets/docs/aaaa_career_information%20flyer.pdf.

[13] NCCAA website: http://www.aa-nccaa.org.

[14] "History and Operations" section of the NCCAA website accessed April 18, 2017.

NCCAA accepts CME credit for programs approved for continuing medical education credit by the following organizations: American Medical Association, American Association of Physician Assistants, Accreditation Council for Continuing Medical Education. Of the 40 hours required every two years, content for 30 hours must be in the field of anesthesiology or one of its sub-specialties. The remaining hours can be in any medical topic. NCCAA conducts a random audit on an annual basis. For further details concerning CAA continuing education, see http://www.aa-nccaa.org/about/cme.

To determine an estimate on the overall number of AAs, Board staff contacted NCCAA. On April 5, 2017, NCCAA reported there were approximately 2,200 CAAs nationwide, and based upon the last certification period in June 2016, 16 CAAs had Virginia mailing addresses.[15] Further information on practice location was not available.

Obtaining information on the number of AAs (including CAAs) in the U.S. and individual states' workforces is a challenge. The U.S. Health and Human Services National Practitioner Identifier (NPI)[16] system and U.S. Bureau of Labor Statistics (BLS) reporting have data that can help provide some insights.

NPI online registry data [17] were accessed in April and searched using the term "Anesthesiologist Assistant." The data are current as of January 2017. The table is Appendix 5 contains details overall and by state on the number and percent of registered practitioners and businesses. There were 2,411 listed for the U.S. overall, and for Virginia four. The majority of states had fewer than 20 practitioners listed. Only two states, had more than half (56%) of all Anesthesiologist Assistant registrations. Georgia at 43% (1031), and Florida at 12.77% (308). Direct comparisons with NCCAA figures are difficult because credential entry was not mandatory in NPI, but the NPI's 2411 and NCCAA's approximate 2,200 are close and provide a good idea of the likely number of AAs practicing in the U.S.

BLS continuously tracks national and state labor market data related to industry sectors, individual occupations, geographic areas, and timeframes with multiple, interrelated publications and interactive tools. The AA national job market data is relatively sparse. But there are state-level data available for jobs using the title "Anesthesiologist Assistant."

In conjunction with BLS, the Virginia Employment Commission hosts the "Labor Market Information" (LMI)[18] interactive tool. One of its key features is real-time tracking of open jobs and candidates posted online. On April 18, 2017, Virginia had five open jobs and four candidates seeking employment as "Anesthesiologist Assistant." Two jobs of those jobs were

[15] From e-mails received from NCCAA Executive Director Cynthia Maraugha on April 5, 2017.
[16] In October 2006, the Centers for Medicare and Medicaid Services first issued NPI numbers as a means to uniquely identify individual health care providers and organizations. The 10-digit NPI has been required for reimbursement since 2008 for all standard HIPPA transactions. Anesthesiologist Assistants are included and coded under the 367H00000X Series. Note that individuals may or may not list credentials such as CCA, PA-C, etc.
[17] Queried April 6-10, 2017. Accessible at: https://npid.org.
[18] Virginia LMI reports are accessible at https://data/virginialmi.com/vosnet/lmi/default.aspx?pu=1&plang=E.

in the City of Richmond, two in Montgomery County, and one in Fairfax County.[19] The estimated median annual wage in 2015 was $91,984 and range of $63,051 to $104,229. Note that these figures are based on analysis of Physician Assistant not Anesthesiologist Assistant jobs due to their small number. Other states also have LMI similar tools. North Carolina had 11 open jobs and seven candidates and Kentucky had four open jobs with no candidates.[20]
A later section of this report will address additional federal, state, and independent academic workforce data, estimates and projections. These relate directly to the Criteria's requirement that the potential impact licensure may have on the scope of practice, marketability, economic and social status of other, similar groups, and economic costs to the public.

Typical AA Functions

The American Society of Anesthesiologists (ASA) "Statement on the Anesthesia Care Team" (ACT) [21] and American Academy of Anesthesiologist Assistants' (AAAA) "Certified Anesthesiologist Assistants: AA Scope of Practice/Job Description."[22] provide their professional perspectives on what constitutes appropriate AA functions and duties. They are both rooted in the ASA's view that Anesthesiologists should be involved in the perioperative care of every anesthesia patient, either as provider or as director of an Anesthesia Care Team also comprised resident physicians in training in anesthesia care as well as non-physician anesthesia providers. The Anesthesiologist may delegate patient monitoring and tasks deemed appropriate to the non-physician providers but retains overall responsibility for the patient. Members of the ACT are to work together to provide optimal patient care. Team members include physicians (Anesthesiologists, anesthesiology fellows, anesthesiology residents) and non-physicians (AAs, AA students, CRNAs, student nurse anesthetists, and dental anesthesia students). See the full Statement for further details. The AAAA's job description lists functions that could be delegated to AAS. The list is not intended to be exhaustive, but provides insights into the duties expected of AAs.

- **Obtain an appropriate an accurate pre-anesthetic health history; perform an appropriate physical examination and record pertaining data in an organized and legible manner,**
- **Perform diagnostic laboratory and related studies as appropriate, such as drawing arterial and venous blood samples,**
- **Administering anesthetic agents and any controlled substances, including but not limited to, administration of induction agents, maintaining and altering anesthesia levels, administering adjunctive treatment and providing continuing of anesthetic care into and during the post-operative recovery period,**
- **Establishing airway interventions and perform ventilator support,**
- **Apply, perform, and interpret advanced monitoring techniques,**
- **Use advanced life support techniques, such as high frequency ventilation and intra-arterial cardiovascular assist devices,**

[19] LMI searches of two surrounding states, North Carolina and Kentucky were done on April 24, 2017. North Carolina listed 11 jobs and seven candidates while Kentucky listed four openings with no candidates.
[20] Queried April 24, 2017.
[21] Available at http://www.asahq.org.
[22] Available at http://www.memberclicks.net

- **Make post-anesthesia patient rounds by recording patient progress notes, compiling and recording case summaries, and by transcribing standing and specific orders,**
- **Evaluate and treat life-threatening situations, such as cardiopulmonary resuscitation, on the basis of established protocols (BLS, ACLS and PALS),**
- **Perform duties in intensive care units, pain clinics, and other settings, as delegated by the physician anesthesiologist,**
- **Train and supervise personnel in the calibration, troubleshooting, and use of patient monitors.**
- **Perform administrative duties in an anesthesiology practice or anesthesiology department such as patient record management, procedure coding and billing, and management of personnel,**
- **Participate in the clinical instruction of others, and**
- **Perform and monitor regional anesthesia to include, but not limited to, spinal, epidural, IV regional, and other special techniques such as local infiltration and nerve block**

AA Regulation by States and other U.S. Jurisdictions

The scope of permissible AA clinical practice from the perspective of the states is defined in statutes and regulations. AAs are regulated in 18 states, the District of Columbia, and Guam as a profession (licensure or certification) or through physician delegated authority. That is, there are specific enabling statutes in those jurisdictions that permit AA practice. Appendix 6 indicates the type of regulation[23], education accreditation, examination and fees required in addition to a summary of the permitted scope, supervision and continuing education and recertification requirements.

There is some variability from state-to-state. But regardless of jurisdiction, AAs are permitted to practice only under the direction of Anesthesiologists, not other types of physicians or CRNAs. In most instances, the supervising Anesthesiologist must be physically present and "immediately available." For the majority of states, certification through the NCCAA is required for initial and ongoing licensure, certification or physician delegation.

The states most restrictive to practice entry are Georgia and Kentucky in that they require physician assistant licensure as well. Four states, Alabama, Ohio, Texas, and Wisconsin place restrictions on employment. Ohio and Texas permit AAs to bill for services, but the reimbursement goes to the employing entity. Although West Virginia does not regulate AAs as a profession, it should be noted that their statutes expressly permit AAs to bill for service.

Discipline for misconduct is also a responsibility of state boards. But obtaining disciplinary information on AAs can be challenging. It requires review of publically available board minutes, newsletters and online reporting. To date, staff have determined the following: Colorado has sanctioned two (2) for impairment issues, Alabama had one (1) for practicing prior to licensure,

[23] Note Michigan shifted from physician delegation to licensure in late 2016.

and Wisconsin one (1) for co-worker harassment. Kentucky provides links to 21 orders and Ohio shows six (6) cases but no further details are available without in depth review of each order.[24]

Other Anesthesia Care Providers: Anesthesiologists and Certified Registered Nurse Anesthetists

Criteria 4 and 5, require consideration of the impact on Virginia's other licensed professions that perform similar functions and the potential economic impact regulation of the new group might entail. Although anesthesia care may be provided by practitioners[25] other than Anesthesiologists and CRNAs, they are the predominant professions most likely to be affected by AA licensure.

Anesthesiologists are licensed physicians who provide anesthesia for patients undergoing surgical, obstetric, diagnostic, or therapeutic procedures and currently monitor the patient's condition and supporting vital organ functions. They also diagnose and treat various forms of pain, including that associated with cancer. They also provide resuscitation and medical management for patient with critical illness and severe injuries.[26] Anesthesiologist training typically involves four years of college, four years of medical school, one year of internship and four years of residency through an accredited program. Although one may practice anesthesiology without specialty certification, certification through the American Board of Anesthesiology (ABA) permits use of "Board Certified" or "Diplomate" titling.[27] In a recent media release, the American Society of Anesthesiologist reports that about 75% of Anesthesiologists are ABA certified.[28]

The Accreditation Council for Graduate Medical Examination (ACGME) reports that there are 147 Anesthesiologist specialty education programs in the U.S., with six pending approval in 2017. [29] There are two programs in Virginia, at the University of Virginia and Virginia Commonwealth University Medical College of Virginia. According to the American Osteopathic College of Anesthesiologists 2015 Annual Report, there were 13 Anesthesiologist Osteopathic residency programs nationwide, none in Virginia. [30]

In addition to graduation from an accredited Anesthesiologist program, ABA requires a series of examinations to gain and maintain certification. Certification in critical care medicine, hospice and palliative care, and pain medicine, pediatric anesthesiology, and sleep medicine. and

---

[24] Georgia's online license lookup subsumes AAs within Physician Assistant listings which require in depth case-by-case research and the payment of processing fees.
[25] Dentists, for example.
[26] American Board of Medical Specialties. (2017). *ABMS Guide to Medical Specialties 2017.* American Board of Anesthesiologist, pp. 5-6. accessible at: https://www.abmsdirectory.com/pdf/Resources_guide_physicians.pdf
[27] http://www.theaba.org/ABOUT/About-the-ABA
[28] https://www.asahq.org/For-the-Public-and-Media/About-Profession.aspx
[29] http://www.acgme.org/ - accessed April 18, 2017
[30] http://c.ymcdn.com/sites/www.aocaonline.org/resource/resmgr/AOCA_Annual_Report_2015.pdf - accessed April 18, 2017.

subspecialties are also available through ABA. Further details are available upon request from ABA.

Nurses have been providing anesthesia care in the U.S. for over 150 years. Historically, trained nurses under the supervision of surgeons provided nearly all anesthesia care for surgical patients until anesthesiology was established as a medical specialty. Today, all 50 states permit CRNAs to perform various types of anesthesia care, under medical supervision of anesthesiologists or other physicians, or independently without medical supervision in 16 states.[31]

In Virginia, they are licensed by the joint Boards of Nursing and Medicine as Nurse Practitioners (NPs) but with this specialty area. They practice under the supervision of doctors of medicine, osteopathy, podiatry or dentistry but are not governed by the practice agreement requirements required of other NPs.[32] [33] An applicant for initial licensure must hold a current license as a registered nurse in Virginia or through multistate licensure privilege, have graduated from an a nurse anesthesia program accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA)[34] or its predecessor, and provide proof of certification from the National Board of Certification and Recertification for Nurse Anesthetists (NBCRNA). It should also be noted that acceptance into a COA accredited program first requires the candidate have at least one year's full-time or part-time equivalent work experience in a critical care setting.

As of December 2016, there were 115 accredited programs in the U.S., with two in Virginia, at Old Dominion University and Virginia Commonwealth University.[35] The latest COA standards require programs to prepare students at the doctorate level by 2018. VCU's program admitted their last Master of Science in Nurse Anesthesia student cohort in August 2016 and began matriculating doctoral students in January 2017. [36]

Certification through the NBCRNA also requires passage of the National Certification Examination. Further details concerning the examination are available if requested.

---

[31] Tashaki, M & Tetsuro, S. (2011). The role of Certified Registered Nurse Anesthetists in the United States. *Journal of Anesthesia, 25(5),* 734-740.

[32] Regulations Governing the Licensure of Nurse Practitioners §18VAC 90-30 10 *et seq.*

[33] Nurse practitioner (NP) practice agreements are jointly developed by the collaborating patient care team physician(s) and the NP. The agreement describes procedures to be followed and acts appropriate to the specialty area in the care and maintenance of patients. Where applicable, practice agreement describes the NPs prescriptive authority.

[34] COA is the sole accrediting body for nurse anesthesia education programs recognized by the U.S. Department of Education and the Council on Higher Education

[35] http://home.coa.us.com/accredited-programs/Pages/List-of-Recognized-Programs-(LORP).aspx

[36] VCU School of Allied Health Professions Nurse Anesthesia Programs: http://www/.sahp.vcu.edu/departments/nrsa.programs/ accessed April 5, 2017.

Anesthesiologist and CRNA Workforce Estimates and Projections

Because the impact of a new group of providers may affect the existing anesthesia workforce, it is important to understand what is known concerning the number and distribution of providers. Because healthcare workforce research is a new field, the existing literature is sparse, disconnected, an often the result of work done in response to grants and other ad hoc funding opportunities. It tends to focus on samples of a handful of large professions and specialty areas. Methodologies vary widely even within the same profession and there are often years separating data collection and reporting.

Currently, the most reliable federal sources of information come from U.S. Department of Health and Human Services Health Resources Services Administration (HRSA) and the U.S. Department of Labor Bureau of Labor Statistics (BLS). Note that even their methodologies in that BLS tracks *employee* data and excludes from the counts those practitioners who are their own bosses.

The following describes the existing estimates and projections for the respective Anesthesiologist and CRNA workforces from both agencies. This will be followed by Virginia Department of Health Professions Healthcare Workforce Data Center results and a discussion of FutureDocs estimates and projections for Anesthesiologist services in Virginia.

HRSA's Chartbook and State Profiles

The U.S. Health Workforce Chartbook and its state-level breakout supplement "The U.S. Health Workforce – State Profiles," were both published in 2014. The *Chartbook* and *State Profile* provide a wealth of information on multiple health professions. Of most direct relevance for the current study is information from the *State Profiles* with estimates of practitioner counts and practitioner per 100,000 working age population ratios for each state. The source data are from 2008 to 2010. Although a bit dated, the results provide a much-needed standard, federal estimate of the nation's health workforce.[37] The table on the following page lists the CRNA count and CRNA ratio per 100,000 working age population.

These estimates indicate approximately 35,570 CRNAs were in the U.S. workforce in the 2008 to 2010 timeframe, with a mean of 13.5 CRNAs per 100,000 working age population. There is a great deal of variability among the states in both the number and ratio. As few as 24 CRNAs were in Vermont to as many as 2,488 in Florida and the population ratios ranged from 3.0 (Nevada and California) to 35.2 (South Dakota). When states are ranked from the smallest to largest ratios, the median is Georgia with 10.9. Virginia ranks just below in the 26th place at 11.3.

[37] There is no breakout by Physician specialty. There are also breakouts available by Physician (overall) Nurse Practitioner and Physician Assistant if needed.

As will be discussed in the section on the Virginia Department of Health Professions Healthcare Workforce Data Center, the State Profile may have underestimated the number of CRNAs in Virginia.

State	# CRNA estimated	CRNA to 100K working age Population	State	# CRNA estimated	CRNA to 100K working age Population
Alabama	1180	24.7	Montana	69	7.0
Alaska	41	5.8	Nebraska	289	15.8
Arizona	233	3.6	Nevada	81	3.0
Arkansas	346	11.9	New Hampshire	161	12.2
California	1125	3.0	New Jersey	462	5.2
Colorado	329	6.5	New Mexico	152	7.4
Connecticut	430	12.0	New York	1027	5.3
Delaware	234	26.1	North Carolina	2016	21.1
D.C.	65	10.8	North Dakota	224	33.3
Florida	2488	15.2	Ohio	1656	14.4
Georgia	1053	10.9	Oklahoma	319	8.5
Hawaii	98	7.2	Oregon	225	5.9
Idaho	196	12.5	Pennsylvania	2703	21.3
Illinois	1029	8.0	Rhode Island	137	13.0
Indiana	269	4.2	South Carolina	927	20.0
Iowa	310	10.2	South Dakota	287	35.2
Kansas	469	16.4	Tennessee	1504	23.7
Kentucky	706	16.3	Texas	2551	10.1
Louisiana	1067	23.5	Utah	153	5.5
Maine	253	19.0	Vermont	24	3.8
Maryland	418	7.2	Virginia	905	11.3
Massachusetts	640	9.8	Washington	394	5.9
Michigan	1848	18.7	West Virginia	420	22.7
Minnesota	1505	28.4	Wisconsin	564	9.9
Mississippi	507	17.1	Wyoming	37	6.6
Missouri	1084	18.1			

SOURCE DATA: "The U.S. Health Workforce: State Profiles" https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/state-profiles/usworkforcestateprofiles.pdf. Published August 2014 - accessed February 2, 2017

HRSA Supply and Demand Projections

Also in 2014, HRSA launched their multifactorial Health Workforce Simulation Model (HWSM) to help establish a more uniform, national approach to estimating and projecting health profession workforce supply and demand now and in the future. [38] Since then, they have evaluated several health professions and specialties, including CRNAs, with data drawn from the Area Health Resources File (AHRF) State and National data files.

HRSA's "Health Workforce Projections: Certified Nurse Anesthetists" [39] was published in

[38] For specific details on the model, see the " Technical Documentation for Health Resources Service Administration's Health Workforce Simulation Model" accessible at: https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/simulationmodeldocumentation.pdf.

[39] https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/crna-fact-sheet.pdf

December 2016, and suggests that the U.S. should have an adequate supply of CRNAs to meet future demand out to the year 2025. HWSM yields a national CRNA supply estimate of 44,660 in the base year 2013. It projects a growth at 38% 2013 and 2025, and projects growth in demand at 16% for that same period. The supply projection takes into account growth in the annual number of new CRNAs trained over the past decade, attrition through retirement or mortality, and projected drop in average work hours due to predicted demographic labor force factors. The projected demand is linked to assumptions of increased surgeries attributable to an aging and growing population, increases in chronic diseases requiring surgery, and increases in insurance coverage.

BLS Occupational Employment and Wage Statistics, Current Job Openings and Short- and Long-term Projections

The following findings are drawn from multiple standard BLS sources, each addressing slightly different aspects of the anesthesia care provider workforce.

Virginia's Labor Market Information (LMI)

As discussed with regard to AAs, Virginia's LMI provides real-time information on job openings, candidates, compensation estimates, and geographic distribution data. [40] The table below lists: the number of job openings and candidates posted online in mid-April, 2015 compensation median and range estimates for jobs under the BLS titles "Nurse Anesthetist" and "Anesthesiologist." [41]

Virginia LMI Results for Nurse Anesthetist and Anesthesiologist April 18, 2017

Occupational Title	Online Posted Job Openings April 18, 2017	Candidates Seeking Employment in this Occupation	Estimated Median (Range) Salary/Wage May 2015	Job Locations
Nurse Anesthetist	116	1	$157,257 ($118, 797 - $196,142)	Fairfax County (15), Richmond (14), Newport News (8), Hampton (7), Winchester (5), Norfolk (5) Roanoke (5), Alexandria (5), Fredericksburg (5)
Anesthesiologist	92	1	N/A $86,901 - $262,642)	Richmond (13), Alexandria (8), Virginia Beach (6), Manassas (4), Newport News (3), Spotsylvania County (3), Harrisonburg (3), Fairfax County (3), Chesterfield County (2), James City County (2)

[40] See the full array of reports retrievable from LMI accessible at https://data.virginialmi.com/vosnet/lmi/default.aspx?pu=1&plang=E.

[41] Note these results relate to *employee* jobs and exclude practitioners who own or are partners in practice.

LMI characterizes the current Virginia job market for both Anesthesiologists and Nurse Anesthetists as in "medium demand" and "low supply," but for Anesthesiologist Assistants as in "low demand" and "low supply." Both Nurse Anesthetists and Anesthesiologist jobs are projected to grow as described in the following BLS short- and long-term projection results.

National occupational employment and wage estimates for May 2016 are available through Occupational Profiles reporting[42] and additional estimates for Virginia, specifically, through the May 2016 State Occupational and Wage Estimates: Virginia.[43]

Short- and Long-Term Projections

The following tables detail BLS short-term projections for Nurse Anesthetists (CRNAs) and Anesthesiologists in Virginia and surrounding states and long-term projections for the U.S., Virginia, and surrounding states. No separate breakout for Anesthesiologist Assistants is available. BLS subsumes them under the title "Physician Assistants."

BLS Short-Term Projections for CRNAs and Anesthesiologists

U.S., Virginia, and Surrounding States

	Nurse Anesthetists				Anesthesiologists			
	2015	2017	% Change	Avg. Job Openings	2015	2017	% Change	Avg. Job Openings
Virginia	1410	1470	4.50%	60	570	600	4.40%	30
DC	110	120	0.90%	0	240	250	2.90%	10
KY	1130	1160	2.60%	30	710	720	1.80%	20
MD	380	390	4.20%	10	400	420	5.00%	50
NC	2730	2810	3.00%	100	970	1010	3.20%	40
TN	2070	2160	4.70%	80	630	640	1.30%	20
WV	570	580	1.80%	20	260	260	0.80%	20

BLS Long-Term Projections for CRNAs and Anesthesiologists

U.S., Virginia, and Surrounding States

	Nurse Anesthetists				Anesthesiologists			
	2014	2024	% Change	Avg. Job Openings	2014	2024	% Change	Avg. Job Openings
U.S.	38300	45600	19.30%	N/A	33700	40800	21.0%	N/A
Virginia	1390	1700	28.70%	70	570	720	25.90%	30
DC	110	120	6.10%	N/A	250	270	10.10%	10
KY	1930	2380	23.10%	90	730	910	24.90%	40
MD	670	840	23.90%	30	N/A	N/A	N/A	N/A
NC	2740	3360	22.60%	130	970	1200	24.10%	50
TN	2210	2920	32.30%	110	470	600	29.20%	30
WV	520	550	6.20%	10	150	150	4.10%	10

Source: Projections Central accessed at http://www.projectionscentral.com/Projections/ShortTerm. Accessed: February 13, 2017

[42] Accessible at: https://www.bls.gov/oes/current/oes_stru.htm#29-0000. For Anesthesiologist at https://www.bls.gov/oes/current/oes291061.htm, and Nurse Anesthetist at: https://www.bls.gov/oes/current/oes291151.htm.

[43] Accessible at: https://www.bls.gov/oes/current/oes_va.htm#29-0000

Current estimates for both professions and projection timeframes indicate growing demand, with Virginia expected to experience a 4.50% (60) short-term growth in Nurse Anesthetist average annual job openings and 4.40% growth (30) in Anesthesiologist jobs. Long-term projections to 2024 anticipate an overall 28.70% increase for Nurse Anesthetist jobs and 25.90% for Anesthesiologist jobs, both outpacing the rate of growth projected for the U.S.

Virginia's projected long-term growth *rate (*% change) for both Nurse Anesthetists and Anesthesiologists surpasses surrounding states except Tennessee and the U.S. overall. However, there are greater overall *numbers* of both professions in other surrounding states, including North Carolina.

Virginia DHP Healthcare Workforce Data Center Supply-Side Surveys

The Department of Health Professions Healthcare Workforce Data Center (DHP HWDC) improves data collection and measurement of Virginia's healthcare workforce through regular assessment of workforce supply and demand issues among the professions licensed by boards within the Department. Its profession-specific workforce surveys are part of the licensure renewal processes for over 30 professions, including Nurse Practitioners and Physicians (M.D.s and D.O.s). The surveys have items regarding specialty areas: primary and secondary "specialty" for Nurse Practitioners and primary and secondary "board certification" for Physicians.

The respective tables below show the number of practitioners of each profession who reported an anesthesia-related specialty area in recent survey years. [44] [45] The tables also provide the percentage anesthesia-related specialties comprise all specialty areas for the respective profession. These figures provide valuable insight into Virginia's actual anesthesia workforce because survey response rates are consistently high (ranging from 73% to 86% and rising over time).

These data reflect a gradual decline in the number of CRNA working in Virginia accompanied by a drop in the percent of primary specialties attributable to CRNA. For Anesthesiologists, however, the reverse is indicated. Although the renewal timeframes are slightly different, Anesthesiologist practitioners have been increasing with a slight increase in Anesthesiology among all Board Certifications.

[44] See the following sites for more details on DHP HWDC (http://www.dhp.virginia.gov/hwdc/default.htm), the research methodology (http://www.dhp.virginia.gov/hwdc/docs/MethodologyandGlossary.pdf), and profession-specific findings http://www.dhp.virginia.gov/hwdc/findings.htm. will be published in June

[45] The licensure renewals for Nurse Practitioners are conducted over a two-year period by birth month. Beginning in 2013, DHP HWDC implemented a schedule of annual catchments and reporting. So, approximately half of NPs are surveyed and reports of their results are published each year.

DHP HWDC Nursing and Physician Survey Results Related to Anesthesia Care Providers

Nurse Practitioners

	2011-13	2014	2015	2016
# Nurse Practitioners with CRNA Primary Specialty	1462	1428	1400	1382
% Primary Specialties CRNA Constitutes	24%	24%	23%	20%

Physicians

	2012	2014	2016[46]
# Physicians with Anesthesiology Board Certification	780	1017	1073
% Board Certifications Anesthesiology Constitutes	4%	4%	5%

Because the supply and demand can vary by geographic areas, it is important to understand how the anesthesia workforce is distributed. Appendix 7 provides mapping for CRNAs and Anesthesiologists based upon DHP HWDC's standard full-time equivalencies (FTEs). Appendix 7 also provides County/City tables with details. Both CRNAs and Anesthesiologists cluster largely in metropolitan areas but there are practitioners of either type distributed throughout the state.

[46] The 2016 Physician draft report is complete and will be presented for Board of Medicine approval in late June and thereafter posted to the DHP HWDC findings website.

FutureDocs

One of the nation's most experienced and well-regarded healthcare workforce research institutions is the Cecil G. Sheps Center for Health Services Research at the University of North Carolina, Chapel Hill. (Sheps Center). Founded in the 1970's, the Sheps Center remains a vanguard in the development of applicable research. A key example is their innovative, online interactive tool, FutureDocs.

FutureDocs [47] is a multifactorial statistical model and interactive web-based forecasting tool designed specifically to aid healthcare workforce policy development. Among its features are tools to estimate physician specialty supply (head count and patient-care to population ratios), the use of healthcare services, and the capacity of the physician workforce to meet the current and future use of health services at the national, state, and regions within states.[48] It provides user-friendly customizable scenarios and interactive online visualizations to display current results and estimated projections for the 2013 to 2030 timeframe. The system allows selection of over 30 different physician specialties, including Anesthesiology and estimates and projections resulting from a number of different scenarios. [49] The following are the results of staff queries related to physician supply

The following provides results of querying the model for estimates of the current (2013) Anesthesiologist workforce by state and projections for Virginia to 2030. The tool permits selections of head counts, head counts per 10,000 population, patient-care full time equivalencies (FTEs),[50] and patient care FTEs per 10,000 with displays through maps, line charts and age/gender pyramids.

2013 Estimates[51]

To help provide context concerning the Virginia Anesthesiologist workforce, staff analyzed the head count, head count per 10,000 population for the Commonwealth in relation to the other states. The table on the following page shows the estimate of 1035 Anesthesiologists in Virginia by head count. Virginia ranks 14th among the states. California ranks 1st with almost 5500 Anesthesiologists and North Dakota in last place with a little over 50.

To provide a sense of relative patient population coverage, the table includes Anesthesiologist head count per 10,000 population. On this measure, Virginia at 1.26/10k drops to 28th ranking. Surrounding states vary, with Massachusetts (2.17/10k) topping the list and Maryland (2.04/10K) in 2nd place.

---

[47] The FutureDocs model, and project and technical documentation are accessible at: https://www2.shepscenter.unc.edu/workforce/index.php. For the greatest detail on methodology, see https://www.2.shepscenter.unc.edu/workforce/about.php

[48] Tertiary Service Area (TSA) region levels.

[49] Baseline, Medicaid expansion, Retirement rates, and increased NP and PA assistance, for example.

[50] FutureDocs' FTE is not on the same scale as DHP HWDC (1 FTE = 2000). Rather it references North Carolina health Professions Data System data that details patient care hours by sex, age and specialty. For further details

Anesthesiologist Head Count and Head Count per 10,000 Population by State Estimates for 2013[52]

State	Anesthesiologist Head Count	Anesthesiologist Head Count Rank	Anesthesiologist Head Count per 10k	Anesthesiologist Patient Care FTE Rank
Alabama	468	28	0.92	49
Alaska	96	48	1.32	26
Arizona	1053	13	1.57	9
Arkansas	287	34	1	45
California	5492	1	1.43	16
Colorado	879	18	1.65	7
Connecticut	628	22	1.7	5
Delaware	103	47	1.03	44
Florida	2718	4	1.39	22
Georgia	1026	15	1.03	43
Hawaii	191	40	1.36	24
Idaho	143	44	0.94	48
Illinois	1882	6	1.5	13
Indiana	1021	16	1.55	10
Iowa	346	32	1.17	34
Kansas	338	33	1.04	42
Kentucky	560	25	1.26	29
Louisiana	499	26	1.05	41
Maine	194	38	1.4	20
Maryland	122	11	2.04	2
Massachusetts	1455	9	2.17	1
Michigan	1147	10	1.16	36
Minnesota	614	24	1.15	37
Mississippi	257	35	0.92	49
Missouri	771	20	1.24	31
Montana	145	43	1.4	21
Nebraska	237	37	1.24	32
Nevada	412	30	1.48	15
New Hampshire	191	41	1.41	19
New Jersey	1696	7	1.8	3
New Mexico	238	36	1.17	35
New York	3656	2	1.87	4
North Carolina	985	17	0.98	46
North Dakota	58	51	0.66	51
Ohio	1624	8	1.38	23
Oklahoma	448	29	1.2	33
Oregon	622	12	1.49	14
Pennsylvania	1954	5	1.5	12
Rhode Island	133	45	1.25	30
South Carolina	489	27	1.07	40
South Dakota	68	50	0.7	50
Tennessee	771	21	1.07	40
Texas	3451	3	1.31	27
Utah	406	31	1.34	25
Vermont	107	46	1.53	11
Virginia	1035	14	1.26	28
Washington	1083	12	1.6	8
West Virginia	194	39	1.09	38
Wisconsin	803	19	1.43	17
Wyoming	73	49	1.41	18

[52] For further context, FutureDocs was also queried for "*all* specialties, as well. Virginia's head count of all physician specialists is 19,625, with a ranking at 14th among the states, also. For all specialties per 10,000 population, Virginia has 23.97 specialists per 10,000 populations and ranked at 28th. A separate table of these results can be made available upon request.

Anesthesiologist Patient Care FTE and Patient Care FTE per 10,000 Population by State Estimates for 2013

State	Anesthesiologist Patient Care FTE	Anesthesiologist Patience Care FTE Rank	Anesthesiologist Patient Care FTE per 10K	Anesthesiologist Patient Care FTE Rank
Alabama	291.51	28	0.6	47
Alaska	59.3	48	0.82	26
Arizona	660.8	12	0.99	8
Arkansas	177.49	34	0.62	45
California	3374.39	1	0.88	18
Colorado	546.57	18	0.88	20
Connecticut	398.24	22	1.08	5
Delaware	61.91	47	0.62	44
Florida	1685.92	4	0.86	22
Georgia	637.36	15	0.64	43
Hawaii	119	40	0.85	24
Idaho	87.33	44	0.57	49
Illinois	1158.34	6	0.93	13
Indiana	631.23	16	0.96	10
Iowa	217.8	32	0.74	34
Kansas	208.27	33	0.64	42
Kentucky	347.97	25	0.79	28
Louisiana	312.95	26	0.66	40
Maine	122.33	38	0.89	17
Maryland	700.63	11	0.78	29
Massachusetts	904.9	9	1.35	1
Michigan	719.76	10	0.73	36
Minnesota	388.65	23	0.73	37
Mississippi	160.16	35	0.57	48
Missouri	480.87	20	0.78	30
Montana	91.42	43	0.88	19
Nebraska	146.45	37	0.77	32
Nevada	259.71	30	0.93	12
New Hampshire	118.25	41	0.87	21
New Jersey	1037.75	7	1.15	4
New Mexico	149.92	36	0.73	35
New York	2265.81	2	1.16	3
North Carolina	615.65	17	0.61	46
North Dakota	36.11	51	0.41	51
Ohio	1002.96	8	0.86	23
Oklahoma	276.46	29	0.74	33
Oregon	385.36	24	0.92	15
Pennsylvania	1196.62	5	0.92	14
Rhode Island	82.7	45	0.79	31
South Carolina	308.96	27	0.68	38
South Dakota	43.36	50	0.45	50
Tennessee	470.68	21	0.65	41
Texas	2149.27	3	0.81	27
Utah	253.15	31	0.84	25
Vermont	65.92	46	0.95	11
Virginia	638.95	14	0.78	29
Washington	660.11	13	0.98	9
West Virginia	119.33	39	0.57	39
Wisconsin	499.27	19	0.89	16
Wyoming	45.29	49	0.88	20

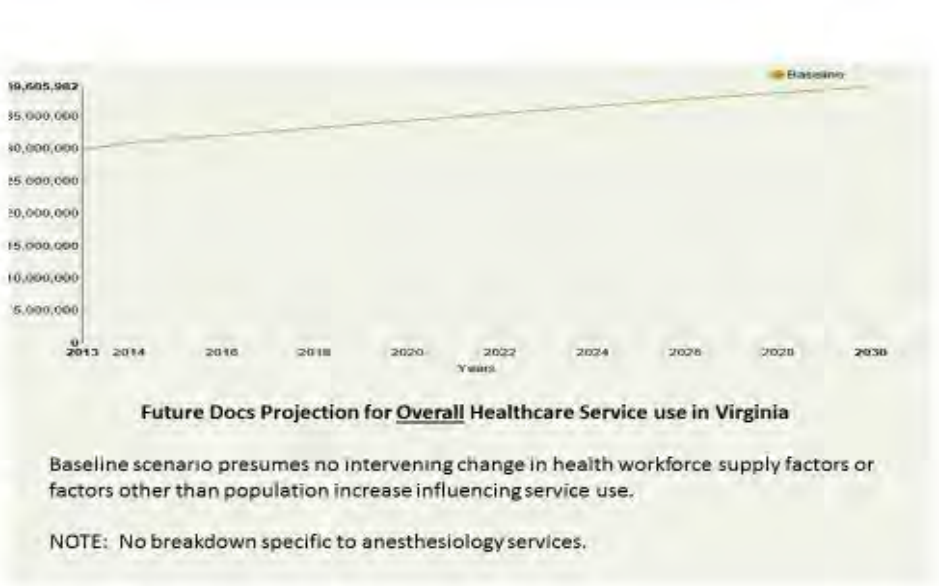
When compared with other states, Virginia's 2013 Anesthesiologist supply appears close to the middle (ranked 28th – median ranked 25). In terms of head counts ranks better than the top third.

Projections

The FutureDocs model includes factors relating to demand as well as supply in its projections from 2013 to 2030. The following charts and graphs depict anticipated trends for overall healthcare service use in Virginia, for Anesthesiologist patient care FTE supply vs. demand between 2013 and 2030 under a high (earlier) and low (later) retirement scenarios and give insights into future Anesthesiologist age and gender distribution with through a population pyramid.

The overall demand for healthcare services is anticipated to gradually increase. Under the baseline assumptions growing and aging population factors drive the model.

Projected Overall Healthcare Service Use in Virginia[53]



Future Docs Projection for Overall Healthcare Service use in Virginia

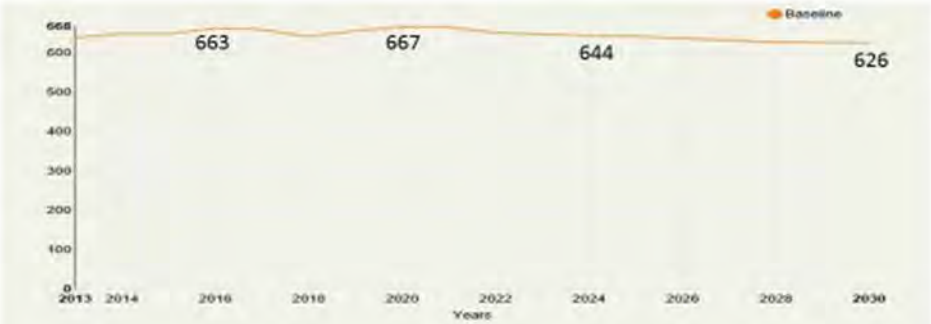
Baseline scenario presumes no intervening change in health workforce supply factors or factors other than population increase influencing service use.

NOTE: No breakdown specific to anesthesiology services.

The projected supply and demand for Virginia Anesthesiologist is projected to remain in alignment except under an early retirement scenario. None of the other scenarios, including increased use of NPs and PAs or Medicaid expansion affected the model.

[53] The y-axis is the number of patient care visits

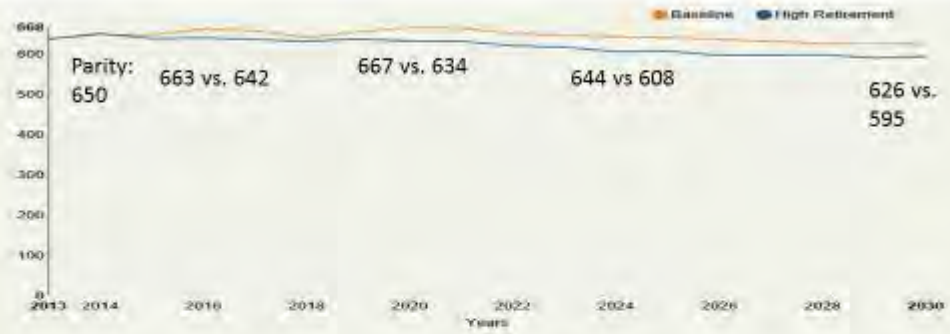
Anesthesiologist Supply - Baseline



FutureDocs projected Patient Care FTE Anesthesiologist Supply for Virginia

Baseline Scenario: assumes no changes in healthcare workforce supply factors or services use between 2013 and 2030.

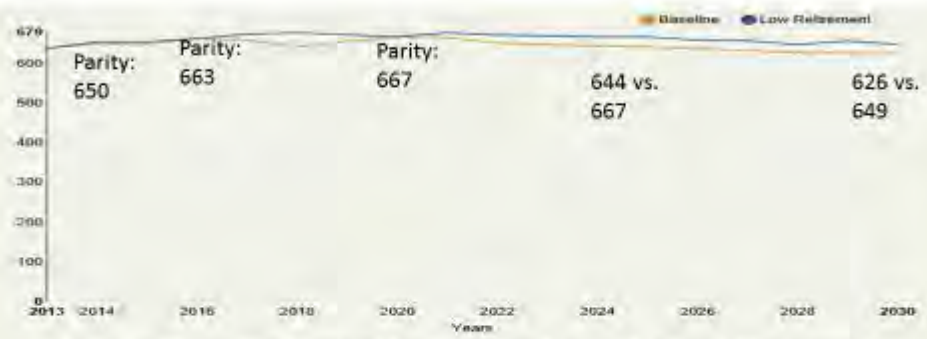
Anesthesiologist Supply vs. Demand – Early Retirement



Future Docs projections: Virginia Anesthesiologist Patient Care FTEs supply trends below demand with an Early Retirement Scenario

Early Retirement models retirement 2 years earlier than baseline.

Anesthesiologist Supply vs. Demand – Later Retirement



Future Docs projection: Virginia Anesthesiologist Patient Care FTEs supply trends either at parity with or above demand with a Low Retirement Scenario*

* Retirement 2 years later than baseline.

Anesthesiologist Age and Gender Pyramid

2013 Baseline Scenario

2030 Baseline Scenario

Public Comment

Appendix 8 contains the transcript of the oral comments presented during the Public Hearing held on June 27, 2017 and a summary of written comments received by close of business July 31, 2017. All comments were reviewed and considered by the Regulatory Research Committee which met on August 10, 2017.

Conclusions and Recommendation

Upon consideration of the above, the Regulatory Research Committee determined at its August 10, 2017 meeting that licensure for CAAs in Virginia was *not* feasible. On August 31, 2017, the full Board of Health Professions concurred.

The burden imposed by state regulation of this profession is not deemed justified due to the lack of proof of a statewide shortage of anesthesia providers, AA students' competition for already limited training sites and slots needed by Virginia's Anesthesiologist and Nurse Anesthetist students, and CAA inability to practice without direct, on-site, supervision of an Anesthesiologist only. They cannot practice independently, nor can they be supervised by other physicians or healthcare providers, and it is thought unlikely they would practice in underserved and other rural areas. Also, the Board of Medicine's workload would increase to accommodate establishing an entirely new set of regulations and administering a new professions licensure program.

The Board additionally offers that if the General Assembly were to consider license legislation, Kentucky and Georgia provide the safest approach. They require that CAAs also be licensed Physician Assistants. Because a single Anesthesiologist may supervise multiple CAAs at a given time, patient safety would be better assured with practitioners who are broadly versed in overall patient health care, not limited to anesthesia care.

Appendix 1 – Workplan Draft – Committee Revision

VIRGINIA BOARD OF HEALTH PROFESSIONS
VIRGINIA DEPARTMENTOF HEALTH PROFESSIONS

STUDY WORKPLAN

Feasibility of Licensure of Certified Anesthesiologist Assistants

April 3, 2017
DRAFT

Background & Authority.

By virtue of its statutory authority in §54.1-2510 of the *Code of Virginia* to advise the Governor, the General Assembly, and the Department Director on matters related to the regulation and level of regulation of health care occupations and professions in the Commonwealth, the Virginia Board of Health Professions is conducting a review into the feasibility of state licensure for certified anesthesiologist assistants. This study is pursuant to the attached requests from Senator Stephen Newman and Delegate Robert Orrock dated November 16, 2016 and response from Dr. David Brown, Director of the Department of Health Professions dated November 29, 2016.

Scope & Methodology:

The purpose of this study is to evaluate the need to regulate anesthesia assistants in the Commonwealth of Virginia. The Board has adopted a formal evaluative criteria and methodology to guide all such reviews as set forth in its published *Policies and Procedures for the Evaluation of the Need to Regulate Health Occupations and Professions, 1998.* (Guidance Document 75-2 accessible at http://www.dhp.virginia.gov/bhp/guidelines/75-2.doc). Referred to hereinafter as "the Criteria," these policies and procedures provide a standard conceptual framework with proscribed questions and research methods that have been employed for over two decades to objectively inform key policy issues related to health professional regulation. This standard is in keeping with regulatory principles established in Virginia law and is accepted in the national community of regulators. The approach is designed to lead consideration of the least governmental restrictions possible that is consistent with the public's protection. The Criteria address: (1) Risk of Harm to the Consumer, (2) Specialized Skills and Training, (3) Autonomous Practice, (4) Scope of Practice, (5) Economic Costs, (5) Alternatives to Regulation, and (6) Least Restrictive Regulation.

The Regulatory Research Committee (Committee) will prepare the report for consideration by the full Board and transmission to Senator Newman and Delegate Orrock through the Department Director.

The following steps are recommended for this review:

1. Conduct a comprehensive review of the pertinent policy and professional literature.

2. Review and summarize available relevant empirical data as may be available from pertinent research studies, malpractice insurance carriers, and other sources.

3. Review relevant federal and state laws, regulations and governmental policies.

4. Review other states' relevant experiences with scope and practice.

5. Develop a report of research findings, to date, and solicit public comment on reports and other insights through hearing and written comment period.

6. Publish second draft of the report with summary of public comments.

7. Develop final report with recommendations, including proposed legislative language as deemed appropriate by the Committee.

8. Present final report and recommendations to the full Board for review and approval.

9. Forward to the Director and Secretary for review and comment

10. Submit final report to Senator Newman and Delegate Orrock and post

Timetable and Resources

This study will be conducted with existing staff and within the budget for FY2017-18 and according to the following tentative timetable (note schedule updates from February):

DATES	
Feb. 23	Full Board Meeting - Draft workplan reviewed and project assigned to the Regulatory Research Committee
Apr 3	Committee Meeting - review draft report and workplan updates
May 9	Full Board Meeting
June 27	Public Hearing & Committee Meeting (10:00 a.m.)
Aug. 31	Committee Meeting – final review and recommendations Full Board Meeting – Committee report for Board consideration
Sep. (TBD)	Board Report to the Director and Secretary for review and comment
Nov. 1	Final Report due to Delegate Orrock and Senator

Appendix 2 – Correspondence

COMMONWEALTH of VIRGINIA

David E. Brown, D.C.
Director

Department of Health Professions
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, Virginia 23233-1463

www.dhp.virginia.gov
TEL (804) 367-4400
FAX (804) 527-4475

November 29, 2016

The Honorable Stephen D. Newman
P. O. Box 480
Forest, VA 24551

The Honorable Robert D. Orrock, Sr.
P. O. Box 458
Thornburg, Virginia 22565

Dear Senator Newman and Delegate Orrock,

We are in receipt of your letters requesting that the Department of Health Professions undertake a study of the feasibility of licensure for certified anesthesiology assistants (CAAs). As you may know, the Code of Virginia authorizes the Board of Health Professions to conduct such studies in § 54.1-2510:

§ 54.1-2510. Powers and duties of Board of Health Professions.

2. To evaluate all health care professions and occupations in the Commonwealth, including those regulated and those not regulated by other provisions of this title, to consider whether each such profession or occupation should be regulated and the degree of regulation to be imposed. Whenever the Board determines that the public interest requires that a health care profession or occupation which is not regulated by law should be regulated, the Board shall recommend to the General Assembly a regulatory system to establish the appropriate degree of regulation;

To fulfill its statutory duty, the Board has applied seven criteria to any study of the feasibility of regulating a new profession; its criteria are: 1) risk of harm to the consumer, 2) specialized skills and training, 3) autonomous practice, 4) scope of practice, 5) economic impact, 6) alternatives to regulation, and 7) least restrictive regulation. For further explanation and description of the criteria, the Board has published Guidance Document 75-2, which is available on its website at: http://www.dhp.virginia.gov/bhp/bhp_guidelines.htm. The President of the Board of Medicine is also a member of the Board of Health Professions.

The Board will assume responsibility for a feasibility study but will not have the opportunity to adopt a workplan and timeline for its completion until its next scheduled meeting.

which is February 23, 2017. As soon as the Dr. Elizabeth Carter, Executive Director of the Board and her research staff have reviewed the scope of the work, we will share a preliminary schedule for a report of the study results, which will be provided by November 15, 2017. We have also received a copy of a letter sent to you from the Virginia Association of Nurse Anesthetists; it will be provided to the Board along with your letter of request for the study.

We hope that this information is helpful and appreciate the opportunity to respond to your request. Please let us know if there is anything further we can do to assist your office either between or during the upcoming Session of the General Assembly.

Sincerely,

David E. Brown, D.C.

cc: The Honorable William A. Hazel, M.D.
Elizabeth Carter, Ph.D.

SENATE OF VIRGINIA

STEPHEN D. NEWMAN
PRESIDENT PRO TEMPORE
23RD SENATORIAL DISTRICT
ALL OF DICKENSON AND CRAIG COUNTIES;
PART OF BEDFORD, CAMPBELL, AND ROANOKE
COUNTIES; AND PART OF THE CITY OF LYNCHBURG
P.O. BOX 340
FOREST, VIRGINIA 24551
EMAIL: SENATOR@SENATORNEWMAN.COM
(434) 385-1155

COMMITTEE ASSIGNMENTS:
EDUCATION AND HEALTH, CHAIR
COMMERCE AND LABOR
FINANCE
TRANSPORTATION
RULES

November 16, 2016

David E. Brown, D.C., Director
Virginia Department of Health Professions
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, Virginia 23233-1463

Dear Director Brown,

I am writing to request that the Department of Health Professions, with assistance from the Board of Medicine, undertake a study considering licensing a new class of anesthesia providers in the Commonwealth: Certified Anesthesiology Assistants (CAAs). As you know, there is a national shortage of anesthesia providers, including nurse anesthetists. Being able to employ a growing pool of CAAs would help address the present and future shortage of anesthesia providers. For this reason, I believe it would be prudent for the Department to study whether it would be beneficial to license CAAs in Virginia.

It is my understanding that seventeen jurisdictions as well as the District of Columbia currently allow CAAs to practice. Virginia is surrounded by other states that have already adopted the CAA approach (North Carolina, Washington, D.C., Kentucky and Ohio). Although some states have permitted CAAs to practice through delegatory authority, the Board of Medicine has advised that licensure would be required in Virginia.

CAAs work under the direction of licensed physician anesthesiologists to implement anesthesia care plans. CAAs work exclusively within the anesthesia care team environment and, unlike nurse anesthetists; they must be supervised by a physician anesthesiologist.

All CAAs possess a premedical background, a baccalaureate degree and also complete a comprehensive didactic and clinical program at the graduate school level. There are 10 accredited CAA educational programs in the U.S. There is interest in launching a CAA program in Virginia, as well.

There are nearly 2,000 CAAs already practicing throughout the nation. CAA students currently rotate through Virginia hospitals, but must go elsewhere to work when they finish training (i.e. there are currently 10 CAAs who are Virginia residents who have to travel to other states to work).

Because members of the Legislature are considering whether to introduce legislation on this topic, I kindly request that you let us know whether you are willing to undertake this study by December 15, 2016. If you do agree to undertake it, we would further request that you make the results of your study available no later than November 15, 2017.

With kind regards, I remain,

Sincerely yours,

Senator Stephen D. Newman

cc: William L. Harp, M.D., Executive Director of the Board of Medicine

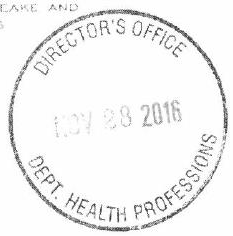
COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

ROBERT D. "BOBBY" ORROCK
POST OFFICE BOX 458
THORNBURG, VIRGINIA 22565

FIFTY-FOURTH DISTRICT

COMMITTEE ASSIGNMENTS:
HEALTH, WELFARE AND INSTITUTIONS (VICE CHAIRMAN)
FINANCE
COUNTIES, CITIES AND TOWNS
AGRICULTURE, CHESAPEAKE AND NATURAL RESOURCES

November 16, 2016



David E. Brown, D.C., Director
Virginia Department of Health Professions
Perimeter Center
9960 Mayland Drive, Suite 300
Henrico, Virginia 23233-1463

Dear Director Brown,

I am writing to request that the Department of Health Professions, with assistance from the Board of Medicine, undertake a study considering licensing a new class of anesthesia providers in the Commonwealth: Certified Anesthesiology Assistants (CAAs). As you know, there is a national shortage of anesthesia providers, including nurse anesthetists. Being able to employ a growing pool of CAAs would help address the present and future shortage of anesthesia providers. For this reason, it would be prudent for the Department to study whether it would be beneficial to license CAAs in Virginia.

There are 17 states, as well as the District of Columbia, currently allowing CAAs to practice. Virginia is surrounded by other jurisdictions that have already adopted the CAA approach (North Carolina, Washington, D.C., Kentucky and Ohio). Although some states have permitted CAAs to practice through delegated authority, the Board of Medicine has advised that licensure would be required in Virginia.

There are nearly 2,000 CAAs already practicing throughout the nation. CAA students currently rotate through Virginia hospitals, but must go elsewhere to work when they finish training (e.g., there are currently 10 CAAs who are Virginia residents who must travel to other states to work).

Because members of the Legislature are considering whether to introduce legislation on this topic, I am requesting that you let me know by December 15, 2016 whether you are willing to undertake this study. If you agree to do it, I would also ask that you make the results of your study available no later than November 15, 2017.

Sincerely,

Robert D. Orrock

Delegate Robert D. Orrock

cc: William L. Harp, M.D., Executive Director, Board of Medicine

DISTRICT: (540) 891-1322 • RICHMOND: (804) 698-1054 • E-MAIL: DEL_ORROCK@HOUSE.STATE.VA.US

VANA
Virginia Association of Nurse Anesthetists
1934
CRNA

November 22, 2016

The Honorable Steve Newman
Virginia Senate
P.O. Box 480
Forest, VA 24551

The Honorable Bobby Orrock
Virginia House of Delegates
P.O. Box 458
Thornburg, VA 22565

Dear Senator Newman and Delegate Orrock,

I am writing on behalf of the Virginia Association of Nurse Anesthetists regarding your possible request to the Department of Health Professions ("DHP") to undertake a study regarding the licensing of Certified Anesthesiology Assistants ("CAA") in Virginia.

VANA represents the more than 1200 certified registered nurse anesthetists ("CRNA") who are licensed in Virginia and who serve as the primary providers of anesthesia care services in Virginia's rural surgical facilities.

As the numbers of people needing critical anesthesia care continues to grow in Virginia, it is important that we ensure a robust pipeline of anesthesia providers to meet current and future anesthesia needs. As such, we support the request for a CAA feasibility study, provided the study is comprehensive and provides clear guidance on whether the licensing of a third anesthesia provider will provide greater access to anesthesia care in Virginia.

To this end, we would kindly ask that, in the event a request for a study moves forward, you would consider the following as part of the request:

1. That DHP consider whether an anesthesia provider shortage currently exists in Virginia and if so, whether there are any immediate steps that can be taken (in terms of CRNA or anesthesiologist practice) to mitigate the shortage.

250 West Main Street, Suite 100, Charlottesville, VA 22902
Tel: (434) 977-3716 Fax: (434) 979-2439
www.vana.org

VANA
Virginia Association of Nurse Anesthetists
1934
CRNA

2. That DHP consider whether the current and future numbers of CRNA and anesthesiologist students and graduates will meet the projected demand for anesthesia care services in the coming years.

3. That DHP include, as part of any licensing feasibility study, an assessment of the anesthesia delivery costs of CRNAs, anesthesiologist and CAAs.

4. That, given the limited number of clinical sites currently available to health care provider students and new graduates, DHP consider the impact a third anesthesia provider may have on site availability and how this will impact the ability of Virginia's CRNA and anesthesiologist students and new graduates to obtain required clinical experience.

5. The impact, if any, a third anesthesia provider may have on current anesthesia jobs in Virginia.

6. The impact, if any, the licensing of a third anesthesia provider will have in terms of access to anesthesia care, particularly in Virginia's rural regions.

7. That the Virginia Board of Nursing, which licenses CRNAs, assist in the study.

We applaud your interest in ensuring Virginia's citizens have access to anesthesia care and we appreciate your consideration of this request.

Sincerely,

Peter

Peter Deforest
President
Virginia Association of Nurse Anesthetists

cc: Dr. David Brown, Director, Department of Health Professions
Jay Douglas, Executive Director, Board of Nursing
Dr. William Harp, Executive Director, Board of Medicine
Michele Satterlund, McGuireWoods Consulting

250 West Main Street, Suite 100, Charlottesville, VA 22902
Tel: (434) 977-3716 Fax: (434) 979-2439
www.vana.org

Appendix 3 – Sample AA Curriculum and Course Descriptions

Extracted from Case Western-Reserve University School of Medicine's Certified Anesthesiologist Assistant Program Courses Website
https://case.edu/medicine/msa-program/education/courses/

Course Description

Clinical practicum provides the student with the opportunity to apply the principles of anesthesia to direct patient care. Students provide supervised care in a variety of settings. Students use advanced anesthetic techniques to challenge specialty rotations.

Clinical Experience	
ANES 461 – Orientation to Clinical Experience, Summer Semester	3 credits
ANES 463 – Anesthesia Clinical Experience I, Fall Semester	3 credits
ANES 465 – Anesthesia Clinical Experience II, Spring Semester	4 credits
ANES 467 – Anesthesia Clinical Experience III, Summer Semester	4 credits

Course Descriptions

ANES 440/441: Patient Monitoring and Instrumentation (2/2)

Students are taught the proper balance between circuits and engineering concepts and the clinical application of anesthesia instrumentation. Monitors and devices used in the operating room are studied with respect to principles of operation, calibration and interpretation of data. Principles, application, and interpretation of various monitoring modalities including ECG, invasive and non-invasive blood pressure, oximetry, cardiac output, respiratory gas analysis, and respiration are also key components of this course. Students will gain experience with intraoperative neurophysiology monitoring, temperature, renal function, coagulation/hemostasis, neuromuscular junction, transesophageal echocardiography, and ICP. This course covers advanced concepts of arterial pressure monitoring, ICP monitoring, transesophageal echocardiography, electric and radiation safety, and the hazards and complications of monitoring patients during anesthesia.

Prerequisites: **Consent of the department; successful completion of ANES 440 required for ANES 441.**

ANES 460: Introduction to Anesthesia (2)

This course introduces students to the operating room, emphasizing the fundamental procedures and techniques used in administering an anesthetic. One of the primary objectives of this class is to prepare and educate the student to work within the anesthesia care team. The course includes a preoperative patient evaluation, which involves recording medical history, performing physical examinations, reviewing charts and select laboratory and radiologic testing as well as history of anesthesia, anesthetic techniques, hazards and complications, universal precautions and infection control. The basic and advanced principles of elective and emergent airway management will be covered, including equipment and techniques. Course material encompasses recognition of the difficult airway, techniques to manage the difficult pediatric and adult airway, the ASA Difficult Airway Algorithm, physiologic response to intubation, fiber-optic techniques, retrograde techniques, and the surgical airway. Course will correlate with laboratory work for a better understanding and use of bag/ mask ventilation, oral and nasal airways, oral and nasal intubations techniques, lightwands, fiberoptic intubations, double lumen tubes, surgical airways, and application of laryngeal mask airway.

Prerequisites: **Consent of the department.**

ANES 461: Introduction to Clinical Experience (3)

This course is a supplement to ANES 460, giving students additional experience in the operating room and with the practice of anesthesia. Preoperative assessment, IV placement techniques, intraoperative patient care and postoperative management, layout of the operating room, sterile fields and techniques, interacting with patients, starting intravenous catheters, and application of ASA-standard monitors are all emphasized in this course. Students will utilize anesthesia simulator to gain the basic knowledge and usage of monitors. BLS (Basic Life Support) certification is required for course completion.

Prerequisites: **Acceptance in the MSA Program.**

ANES 485: Introduction to Physiologic-Based Simulation (1)

In this course students will be introduced to physiological model-based simulation using on-screen computer simulation and mannequins. The key objectives of this class are to improve student's anesthesia-related basic science knowledge, manual skills in anesthesia machine checkout, drug and equipment set up, safety inspections and understanding of how anesthesia is performed for uncomplicated surgical cases.

ANES 403: Cardiac Electrophysiology (2)

This course focuses on basic and advanced ECG interpretation using simulators to understand an overview of heart anatomy, function, and electrophysiology. Students will also gain experience with diagnosis and practical applications of electrocardiography and echocardiography as monitoring techniques in the operating room.

Prerequisites: **Consent of the department.**

ANES 456/458: Applied Physiology for Anesthesiologist Assistants (3/3)

This course emphasizes pathophysiology in a systems approach – cardiovascular, pulmonary, renal, neuro, metabolic, and endocrine. This course focuses on those systems which affect evaluation and planning for anesthesia and those systems affected by the administration of anesthesia. Students will study basic and applied human systems physiology with an emphasis on topics and areas of special concern to the anesthetist. This class introduces advanced concepts relevant to anesthesia including hemodynamics, Starling forces, pulmonary responses, renal hemodynamics, temperature regulation, blood gases/pH, and maternal and fetal physiology. The purpose of the course is to introduce various pathologic conditions inherent to the patient population and how to provide information on those disease processes to alter anesthetic techniques.

Prerequisites: **Consent of the department; successful completion of ANES 456 required for ANES 458.**

ANES 462/464/468/470: Anesthesia Clinical Correlation (1/1/1/1)

This course is comprised of a series of conferences presented by students that apply to anesthetic theory as it relates to the clinical experience. Specific anesthetic situations are emphasized. This course provides a working knowledge of evidence based medicine. Cases will be used as the backbone of this course to assist the student in analyzing data to justify the treatments used in clinical practice. Students will also learn how to critically appraise the literature, evaluate diagnostic test performance, design clinical pathways and standards of care, and implement evidenced based medicine findings in their own clinical or administrative setting.

Prerequisites: **ANES 460; successful completion of ANES 462 required for ANES 464.**

ANES 475/476: Pharmacology for Anesthesiologist Assistants (2/2)

This course introduces students to the basic principles of pharmacology and focuses on those drugs most often used in the practice of anesthesia, including inhaled anesthetics, opioids, barbiturates, benzodiazepines, anticholinesterases and anticholinergics, neuromuscular blockers, and adrenergic agonists and antagonists. The course provides an overview of drug actions, interactions, metabolism, methods of administration, dosages, side effects, precautions, and contraindications. This course focuses on the pharmacokinetics and pharmacodynamics of major drug classifications and their interactions with anesthetic agents. Students will gain insight into the basic principles of drug action; absorption, distribution, metabolism, and excretion of drugs; mechanisms of drug action; toxicity. Students will also learn the basis for the use of medicines in pharmacologic therapy of specific diseases. ANES 475/476 emphasizes drugs utilized as adjunct therapies related to the practice of anesthesia, including non-steroidal anti-inflammatory drugs, antiarrhythmics, calcium channel blockers, diuretics, anticoagulants, antihistamines, and antimicrobials.

Prerequisites: **Consent of the department; successful completion of ANES 475 required for ANES 476.**

ANES 480/481/580/581: FUNDAMENTALS OF ANESTHETIC SCIENCE (1/1/1/1)

A continuum of courses over the fall and spring semesters that covers a series of topics in basic medical science with special emphasis on the effect of anesthetics on normal physiology. An examination is administered at the end of each semester.

Prerequisites: **Consent of the department; successful completion of each preceding course is necessary for advancement to subsequent coursework.**

ANES 486: Physiologic Model-Based Simulation I (1)

This course is a continuation of ANES 485. Students will have access to a state-of-the-art laboratory and an anesthesia simulator that will prepare them for the usage and complete understanding of monitoring and the practice of anesthesia. Students will apply their didactic knowledge to scenarios on the anesthesia simulator. Patient modalities are explored, such as pulse oximetry, capnography, echocardiography, regional anesthetic placement, blood pressure monitoring systems and invasive monitoring line placement and monitoring. Laboratory experiences are correlated to the clinical setting through actual patient vignettes and simulation scenarios. The course provides for the certification in Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS). The course will focus on assessment and management of adults, children, and infants in a cardiopulmonary crisis.

ANES 477: Clinical Decision Making in Anesthesia (2)

This course is an introduction to thinking about clinical problems and coming to safe and effective solutions to these problems. This course focuses on common clinical situations where appropriate decision making is important to the outcome of the case. Numerous areas of medicine and anesthesiology will be covered to provide the student with a wide sampling of decisions made each day with patient care. This course supplements the other courses offered during the spring semester by integrating and applying basic science knowledge to the care of patients. This course assists the student in integrating theory with practice by analyzing the anesthetic management of selected cases, utilizing a problem based learning approach. Relevant anatomy, physiology, pathophysiology, pharmacology, and anesthetic and surgical considerations are described and discussed. Patient care plans are reviewed, compared, and contrasted in light of actual or anticipated outcomes. Current standards of care are reviewed in terms of continuous quality improvement.

Prerequisites: **Consent of the department.**

ANES 488: Anesthesia Non-Technical Skills Lab (1)

A corollary simulation-based course introducing the student to non-technical skills that are used integrally with medical knowledge and clinical techniques. These non-technical skills can be defined as behaviors in the operating room environment that are not directly related to the use of medical expertise, drugs or equipment. Through this course the student will improve both interpersonal skills (e.g. communication, team working, and leadership) and cognitive skills (e.g. situation awareness, decision making).

ANES 490: Ethics, Law, and Diversity for Anesthesiologist Assistants (2)

This course will focus on three important topics within the field of anesthesiology. First, the course will focus on legal practice as it applies to health care including basics of medical jurisprudence, negligence, and how to avoid a lawsuit. Second, students will gain insight into ethical theory including the principles of medical ethics, do not resuscitate, truth telling, and assessment of competence. The course will close with a discussion on diversity that will focus on the differences and similarities among people and how these factors influence patient care. The final grade will be based on an essay and a multiple choice exam.
Prerequisite: **Consent of the department.**

ANES 584/585: Physiologic-Based Model Simulation III & IV (1/1)

This course is an extension of ANES 485 emphasizing physical techniques, aspects of crisis management, teamwork and rescue in anesthesia. This course will review concepts learned in BLS and ACLS training. Students will also gain experience with critical crisis management and rescue techniques, which are not often seen in practice.

Appendix 4 – Blueprint for NCCAA CERT and CDQ Examinations

NCCAA CERT Exam Blueprint

(est. May 2012)

Category	Total	Knowledge (K)	Numerical Problem Solving (N)	Clinical Management (C)	Interpretation (I)
01 Principles of Anesthesia	20	10-12	0-3	5-8	3-5
02 Cardiovascular	20	10-12	0-3	5-8	3-5
03 Hematology & Coagulation	10	6-8	0-1	2-4	1-2
04 Instrumentation, Monitoring, Anesthetic Delivery Systems, Physics	15	8-12	0-3	3-5	3-5
05 Metabolism & Endocrine	8	2-3	1-2	2-3	0-1
06 Neurology & Neuromuscular	15	5-10	0-1	5-10	2-3
07 Obstetrics & Perinatology	15	5-10	0	5-10	3-5
08 Pediatrics & Neonatology	15	5-10	0-2	5-10	3-5
09 Pharmacology	20	12-15	0-3	3-5	3-5
10 Regional Anesthesia & Pain Management	10	3-8	0-1	0-5	0-2

(please see back)

Category	Total	Knowledge (K)	Numerical Problem Solving (N)	Clinical Management (C)	Interpretation (I)
11 Renal, Genital, & Urologic	7	3-5	0-2	3-5	1-2
12 Respiratory System	20	10-12	0-2	6-10	2-3
13 Geriatric	5	3-5	0-1	1-2	0-1
14 Gastrointestinal & Hepatic	5	3-5	0-1	1-2	0-1
15 Bariatric	5	3-5	0-1	1-2	0-1
16 Clinical Subspecialties	10	5-7	0-2	3-5	1-2
TOTAL	200				

NCCAA CDQ Exam Blueprint

(est. May 2012)

Category	Total	Knowledge (K)	Numerical Problem Solving (N)	Clinical Management (C)	Interpretation (I)
01 Principles of Anesthesia	30	8-20	0-6	16-22	3-5
02 Cardiovascular	20	8-10	0-3	10-12	2-4
03 Hematology & Coagulation	10	4-6	0-1	4-6	1-2
04 Instrumentation, Monitoring, Anesthetic Delivery Systems, Physics	10	4-6	0-3	4-8	2-4
05 Metabolism & Endocrine	5	2-3	0	2-3	0-1
06 Neurology & Neuromuscular	10	3-5	0-1	5-8	2-3
07 Obstetrics & Perinatology	7	1-3	0	2-4	1-3
08 Pediatrics & Neonatology	8	1-4	0-2	2-5	1-3
09 Pharmacology	20	5-10	0-3	5-10	5-10
10 Regional Anesthesia & Pain Management	5	1-2	0-1	1-3	0-2

(please see back)

Category	Total	Knowledge (K)	Numerical Problem Solving (N)	Clinical Management (C)	Interpretation (I)
11 Renal, Genital, & Urologic	10	5-7	0-2	3-5	1-2
12 Respiratory System	15	3-10	0-2	5-10	0-3
13 Geriatric	5	1-2	0-1	3-5	0-1
14 Gastrointestinal & Hepatic	5	1-2	0-1	3-5	0-1
15 Bariatric	5	1-2	0-1	3-5	0-1
16 Clinical Subspecialties	15	2-8	0-2	5-10	0-4
TOTAL	180				

Appendix 5 – Anesthesiologist Assistant NPI Registration

Credentialing Recorded in the National Provider Identifier (NPI) Lookup for Anesthesiologist Assistant (367H00000X)

State of Address	Number Registered	No Credential Listed	AA or A.A.	AAC or AA-C	CAA	CRNA	RN, NP, APRN	PA	PAA	PA-AA or PAAA	Business	Other	% of Total
Alabama	24	2	8	1		1				1	11		1.00
Arizona	3					1					2		0.12
Arkansas	4	1				2					1		0.17
California	12	1				1	2				6	2	0.50
Colorado	46	4	17	12	10				1	2			1.91
Connecticut	13	4				8	1						0.54
Delaware	16					14					2		0.66
Florida	308	57	93	82	40	17		1		9	6	3	12.77
Georgia	1032	189	172	119	24	9	5	79	135	244	22	34	42.80
Idaho	1					1							0.04
Illinois	11			1	1	6					3		0.46
Indiana	3				1	1					1		0.12
Iowa	1										1		0.04
Kentucky	7	1	1		1		1			1	2		0.29
Louisiana	10					9					1		0.41
Maryland	8				1	4		2		1			0.33
Massachusetts	3					1					1	1	0.12
Michigan	21	1	4	3		3		1		1	6	2	0.87
Mississippi	8					2					5	1	0.33
Missouri	125	16	55	39	10	1					3	1	5.18
Nebraska	3					2						1	0.12
Nevada	1											1	0.04
New Hampshire	3					2	1						0.12
New Jersey	7					4					2	1	0.29
New Mexico	56	30	5	17	2						2		2.32
New York	10	2			1	4		1			1	1	0.41
North Carolina	26	1	11	7	3	1				3			1.08
North Dakota	4	1				3							0.17
Ohio	228	17	132	47	12	1	7			3	7	2	9.46
Oklahmoa	6	4	1									1	0.25
Oregon	2										2		0.08
Pennsylvania	13	1				10					2		0.54
Puerto Rico	1										1		0.04
Rhode Island	1					1							0.04
South Carolina	30	4	2	14	4	1			1		4		1.24
South Dakota	1					1							0.04
Tennessee	10		1			3					6		0.41
Texas	192	22	85	36	12	5	2			2	27	1	7.96
Utah	1	1											0.04
Vermont	16	4	7	2	1	1				1			0.66
Virginia	4					4							0.17
Washington	7					6					1		0.29
Washington, D.C.	43	10	11	17	2				2			1	1.78
West Virginia	4		1			3							0.17
Wisconsin	85	13	30	35	2	3				1	1		3.53
Wyoming	1										1		0.04
TOTAL	2411	386	636	432	127	136	19	84	139	269	130	53	
% OF TOTAL:		16.01	26.38	17.92	5.27	5.64	0.79	3.48	5.77	11.16	5.39	2.20	100%

Source data January 2017 NPI, downloaded April 6-10, 2017, accessed through https://npidb.org

NOTE: "Other" includes PA-C, RPA-C. & Misc.

Appendix 6 – State Regulation

Certified Anesthesiologist Assistant Regulating States and Territory

State/Territory Licensure(L), Certification (C) or Physician Delegation (PD)	Accredited Education / Exam	Fees: Licensure/ Renewal Schedule	Summary of Scope, Supervision, CE/Recertification
Alabama L	CAHEA / CEAA admin.by NCCAA	$200/ $100 Annual	**Regulation §540-X-7 et seq. pursuant to Code of Alabama §§34-24-290 et seq.** AA must be employed by an anesthesiologist or other specified employing organization with an anesthesiologist; No independent, unsupervised activity permitted; Up to 4 AAs may be supervised at a time. State's own CE requirements.
California C	CAAHEP/ NCCAA	N/A	**Code §§ 7.75-3550 to 3554** Title protection exists. AA must work under the direction and direct supervision of an anesthesiologist who is physically present and accepts responsibility for medical services rendered by the AA. AA may assist the supervising anesthesiologist in developing and implementing an anesthesia care plan for a patient. Must maintain NCCAA certification and follow CE/recertification according to NCCAA requirements.
Colorado L	CAAHEP/ NCCAA	$262/ N/A Even year	**Colorado Medical Board Regulations (3 CCR 713-40)** Anesthesiologist or group practice member may act as supervising physician. Maximum of 4 AAs may be supervised at a time (as of July 1, 2016). Both supervising physician and AA are accountable for rule violations. Mechanism for annual performance review required; assessment subject to Board audit. Supervising physician to be "immediately available." Authorized to administer drugs and CS under supervision, but no prescriptive authority.
District of Columbia L	CAAHEP/ NCCAA	$85/ $145 Even year	**D.C. Code Chapter 5100** Prohibits independent practice. Supervising anesthesiologist must be "immediately available"—further defined as present in the building or facility and able to provide assistance according to specified standards. Supervising anesthesiologist must be present during induction and emergence phases. Authorized to administer drugs and CS under supervision, but no prescriptive authority. No faculty of an AA program may concurrently supervise more than two AA students who are delivering anesthesia. NCCAA recertification requirements.
Florida L	CAAHEP + Advanced Cardiac Life Support Cert/ NCCAA	$300/ $500 Biennial	**Florida Statutes §458.3475 & §459.023; Board of Medicine regulations §64B8-31 and Board of Osteopathic Medicine regulations §64B15-17** No independent practice. Supervising anesthesiologist must be on-site and immediately available: present in the office during a procedure and present in the surgical or obstetric suite to provide assistance and direction to the AA while anesthesia services are being performed. State's own CE requirements for licensure renewal.

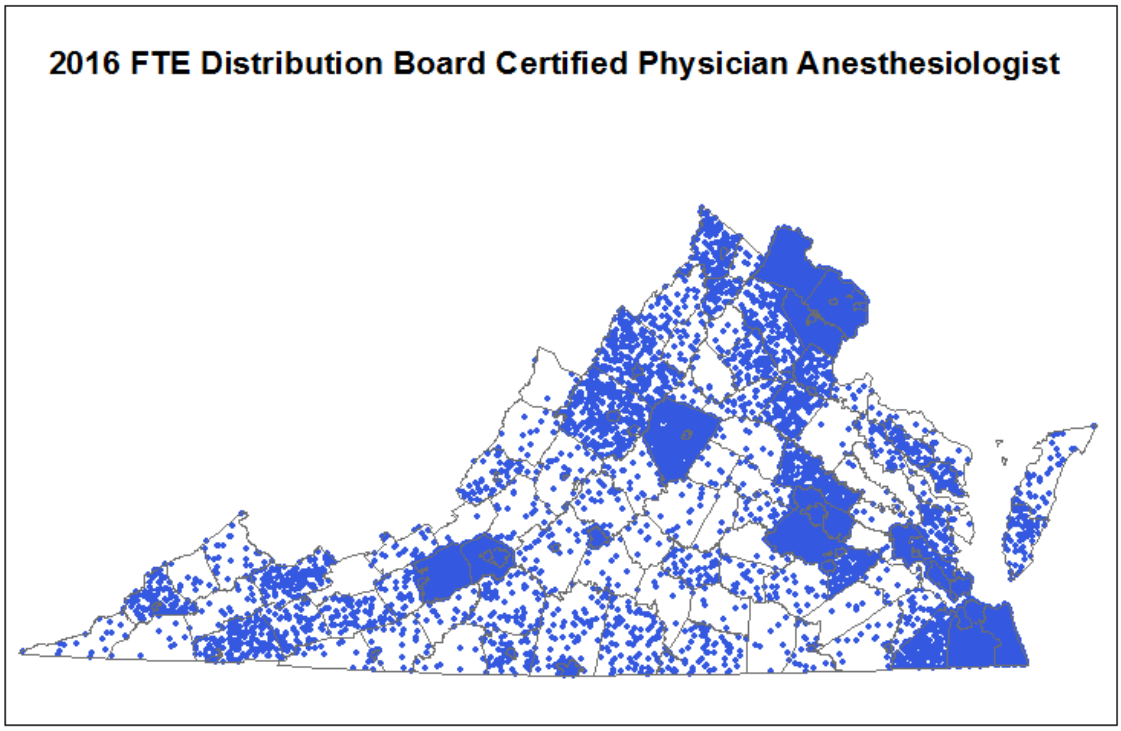
Georgia L	"Approved by the Board/ NCCAA	$300/ $105 Biennial	**Rules and Regulations of the State of Georgia §360-5 et seq.** Title: "Physician Anesthesiologist Assistant." Requires physician assistant (PA) and AA licensing. Practice is under supervision according to a completed Job Description. In the case of AAs delivering general and/or regional anesthesia, a primary or alternate supervising physician must be immediately available in person. Maximum of 2 or 4 AAs may be supervised at once as specified. State's CE requirements.
Guam L	CAAHEP + Advanced Cardiac Life Support Cert. domestic violence, medical errors/ NCCAA	NA/NA Biennial	**Guam Code §12-25 et seq.** Direct supervision on-site, supervising anesthesiologist must be immediately available: present in the office during a procedure and present in the surgical or obstetric suite in all instances available to provide assistance and direction to the AA while anesthesia services are being performed. Protocol with supervising anesthesiologist or supervising group of anesthesiologists must be filed annually with the Board of Medical Examiner and updated biennially. Supervising anesthesiologist must not only be physically present during induction and emergence and available to provide immediate "physical presence in the room" but not concurrently performing any other anesthesiology procedures independently upon another patient. Maximum 3 or AAs at a time as specified in protocol. Territory's CE requirements.
Indiana L	CAAHEP/ NCCAA	$100/ $50 Biennial	**Indiana Code §25-3.7 et seq.; Administrative Code 844IAC 15-1.1 et seq.** Scope of practice lists permissible activities and excludes interventional pain management. Protocol required with supervising anesthesiologist and all group members who may supervise. Supervising anesthesiologist maintains immediate physical proximity. Maximum 4 AAs concurrently. CE according to NCCAA recertification requirements.
Kentucky L	NCCPA CAAHEP/ NCCAA	$100/ $150 Biennial	**Kentucky Revised Statutes §311-800 et seq. Kentucky Administrative Regulations §201 KAR 9:084.** Licensure as a primary care physician assistant is required in addition to AA licensure. There are provisions for CAAHEP/NCCAA requirements for those not practicing as an AA prior to July 15, 2002.
Michigan PD shifted to L	CAAHEP/ NCCAA	$20/ $50 Annual	Legislation passed in late 2016, earliest form of House Bill available, but final version not yet published.
Missouri L	CAAHEP/ NCCAA	$25/ $25 N/A	**Missouri Revised Statutes §334.400.1 et seq.** Authorized Title: "Licensed Anesthesiologist Assistant." Code lists authorized and prohibited activities. Written practice protocol required, supervising anesthesiologist may medically direct a maximum of 4 AAs concurrently. Protocol must delineate the services the AAs may provide and the manner in which they are supervised (may include medical records review and meeting relevant quality assurance standards). Missouri statute §54.1-334.426 expressly states that the governing body of every hospital has authority to limit AA functions and activities.

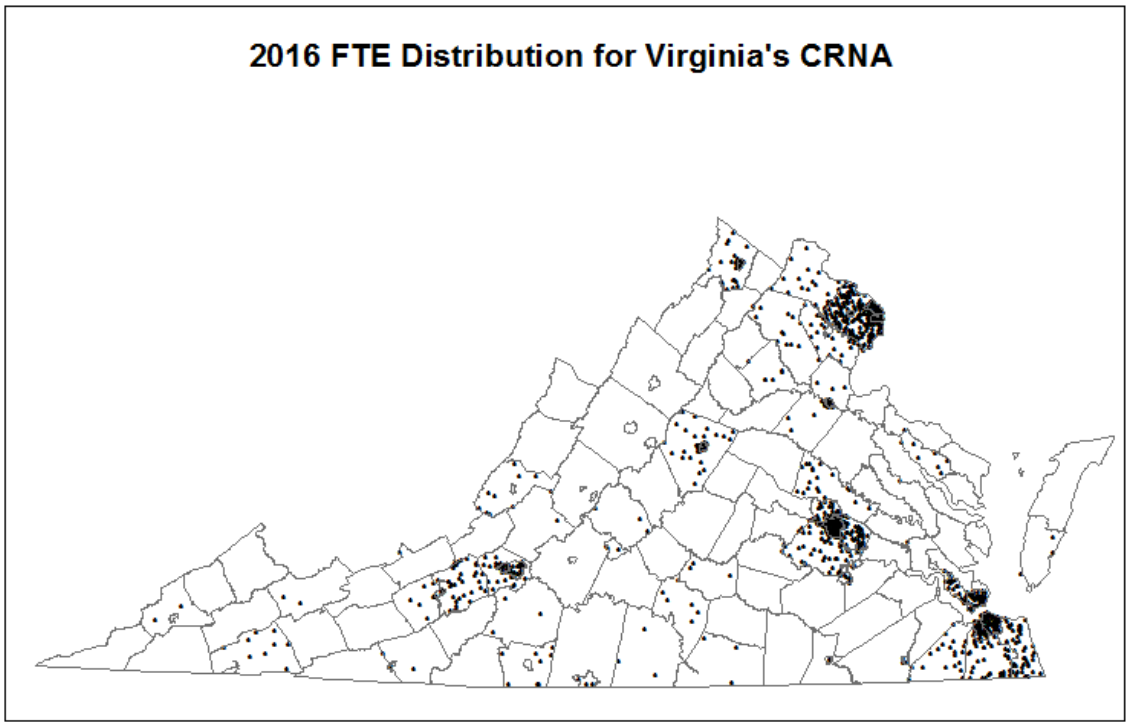
New Mexico L	CAHEA/ NCCAA	$100/ N/A Even year	**New Mexico Statutes §61-6-10.3 et seq. Occupational and Professional Licensing Regulations §16.10.19 et seq.** Code lists authorized activities. Supervising anesthesiologist must be approved by the board and allowed to supervise up to 3 AAs. The supervising anesthesiologist is individually responsible and liable for the AA's acts and omissions. Written notice of intent to supervise is required. If it is during the AA's first year of practice, the application must include a plan for enhanced supervision. Except in emergencies, the supervising anesthesiologist must be present in the operating room during induction of a general or regional anesthetic and during emergence from general anesthetic (presence documented in the patient record). Otherwise supervisor must be in operating suite and immediately available to the operating room when the AA is performing anesthesia procedures. 40 hours of CE biennially also current ACLS certification. AA employment locations restricted to universities, medical schools, and other specified situations.
North Carolina L	CAAHEP/ NCCAA	$150/ $150 or $125 if 1st renewal within 30 days of birthday Annual	**North Carolina G.S. §90-11 et seq. and Regulations §21 NCAC 32W.0101 et seq.** Scope of practice in written agreement with Supervising anesthesiologist. Provisions exist for a "Primary Supervising Anesthesiologist" who accepts primary responsibility for the AA's professional activities. Supervising anesthesiologist must be actively engaged in clinical practice and immediately available onsite to provide assistance to the AA. May supervise up to 4 AAs. AA must wear name tag with the protected title. AA's in-patient chart entries are governed by hospital or long-term care facility rules. 40 hours CE every two years. NCCAA recertification required.
Ohio C	CAAHEP (also recognizes programs prior to 2000, specifies course content in statute)/ NCCAA	$100/ N/A Even year	**Ohio Administrative Code §4760.01 et seq. §5160-4-21 (Medicaid)** Code lists permissible AA duties. Written practice protocol further details scope as well as a prescribed, personalized plan for each patient determined by the supervising anesthesiologist. The supervisor must be actively engaged in clinical practice, provide immediate and direct supervision and be present for the most demanding procedures, including induction and emergence. The Code lists what "immediate and direct" **excludes** – not necessarily in the same room, for example. First year AAs must have enhanced supervision. All AAs may only must practice in a hospital or ambulatory surgical facility and must display title. NCCAA recertification required. AAs are permitted to bill Medicaid for services but payment goes to employing hospital.
Oklahoma L	NCCAA / CLS Cert. HIV/AIDs domestic violence, & medical error prevention	$100/$100 Biennial	**Oklahoma statutes §3201 et seq. and Board of Medical Licensure and Supervision regulations §435:65-1-1** Code contains permissible duties. Supervisory anesthesiologist or group files written protocol with the board detailing AA's duties and functions and conditions or procedures requiring anesthesiologist care. AA must carry malpractice insurance, but supervisor retains responsibility for patient care. Anesthesiologist must provide on-site, personal supervision being present in the office or surgical suite when procedures are performed and immediately available to provide assistance and direction to the AA while anesthesia services are being performed. 4 AAs maximum.

South Carolina L	Specific Undergrad coursework & CAAHEP/ NCCAA	$300/ $295 Biennial	**South Carolina statutes §40-47-1205 et seq.** Code lists generally permissible AA duties and functions. Supervising anesthesiologist must be in active practice, medically direct and accept responsibility for the anesthesia services rendered by the AA in a manner approved by the board. Supervising anesthesiologist must be in the hospital and in the anesthetizing or operative area so as to be immediately available to participate directly in patient care. Written protocol must be approved by the board.
Texas PD	N/A	N/A	**Texas Occupations Code §§157.001 et seq. and 563.051 et seq.; Administrative Code §§193.1 et seq. and §354.1065(Medicaid)** Describes physician's general authority to delegate medical acts to specially trained individuals who are instructed and directed by the physician. This includes administration and provision of dangerous drugs. Permits tasks that are administrative, technical or clinical but involving the exercise of medical judgment. Physician accepts responsibility and board determines delegation appropriateness. Standing order written protocols included. Medicaid allows AA services to be billed. Reimbursement in Texas goes to the AA, hospital, physician, group practice or other provider with which the AA has an employment or contractual relationship.
Vermont C	CAAHEP/ NCCAA	$120, additional $55 per if multiple/ $120/$55 per Biennial	**Vermont Statutes §26.29-1651 et seq.** AAs certified under Commissioner of Health adopted rules on training, practice supervision, qualification, scope of practice, places of practice, protocols, patient notification and consent. Board of Medicine then regulates accordingly. AA application includes supervision protocol(s) detailing scope and employment contract(s). Board determines maximum number of AAs per supervisor. Supervising anesthesiologist must be readily available at the facility for consultation and intervention and retains legal liability. Title protection noted, and supervising anesthesiologist must notify patients about AA services. NCCAA certification must be maintained.
Wisconsin L	CAAHEP/ NCCAA	$75/ $82 Even year	**Wisconsin Code § 448.00 et seq.** Scope of practice restricted to assisting supervising anesthesiologist as described in a supervision agreement. Code specifies range of assistive duties that may be included but the actual scope for an individual AA may be less as determined by the supervising anesthesiologist and detailed in the agreement. The supervision agreement must be with an anesthesiologist who represents the AA's employer. The supervising anesthesiologist must be immediately available in the same physical location or facility in which the AA assists in delivery of medical care such that the supervising anesthesiologist is able to intervene if needed.

LEGEND: CAHEA (Committee on Allied Health Education and Accreditation) (AMA)
CAAHEP (Commission on Accreditation of Allied Health Education Programs)
CEAA (Certifying Examination for Anesthesiologist Assistants)
NCCAA (National Commission for Certification of Anesthesiologist Assistants)
NCCPA (National Commission on Certification of Physician Assistants)

Appendix 7 – DHP HWDC Anesthesiologist and CRNA FTE Distributions





2016 Healthcare Professionals in Anesthesiology: Total Full Time Equivalency (FTE) and FTE Per 1,000[54]

	Certified Registered Nurse Anesthetists				Anesthesiologist			
Locality	Total	FTE /1000	Primary	Sec	Total	FTE/1000	Primary	Sec
Accomack County	0.00	0.00	0.00	0.00	37.51	1.14	32.03	5.48
Albemarle County	22.50	0.22	22.35	0.15	964.63	9.23	919.89	44.74
Alleghany County	9.11	0.58	9.11	0.00	53.42	3.38	50.29	3.13
Amelia County	0.00	0.00	0.00	0.00	4.14	0.32	3.17	0.97
Amherst County	2.64	0.08	2.64	0.00	24.57	0.77	23.98	0.59
Appomattox County	0.00	0.00	0.00	0.00	8.84	0.58	8.82	0.02
Arlington County	32.91	0.15	32.87	0.04	686.65	3.03	644.72	41.93
Augusta County	0.00	0.00	0.00	0.00	291.16	3.94	278.77	12.39
Bath County	0.00	0.00	0.00	0.00	12.88	2.82	12.55	0.33
Bedford County	0.00	0.00	0.00	0.00	33.11	0.43	30.67	2.44
Bland County	0.03	0.01	0.03	0.00	1.25	0.19	0.83	0.42
Botetourt County	1.68	0.05	1.68	0.00	21.42	0.65	19.08	2.34
Brunswick County	0.02	0.00	0.00	0.02	8.25	0.50	5.26	2.99
Buchanan County	0.00	0.00	0.00	0.00	25.01	1.08	21.90	3.11
Buckingham County	0.00	0.00	0.00	0.00	16.92	1.00	16.73	0.19
Campbell County	0.00	0.00	0.00	0.00	14.31	0.26	13.93	0.38
Caroline County	0.00	0.00	0.00	0.00	5.97	0.20	5.97	0.00
Carroll County	2.29	0.08	2.29	0.00	20.71	0.70	18.98	1.73
Charles City County	0.00	0.00	0.00	0.00	2.69	0.38	2.09	0.60
Charlotte County	4.81	0.39	4.81	0.00	11.02	0.90	10.51	0.51
Chesterfield County	41.89	0.13	31.68	10.21	664.85	2.00	619.64	45.21
Clarke County	0.00	0.00	0.00	0.00	8.90	0.62	5.68	3.22
Craig County	0.00	0.00	0.00	0.00	1.78	0.34	1.77	0.01
Culpeper County	5.73	0.12	5.73	0.00	84.17	1.71	71.17	13.00
Cumberland County	0.00	0.00	0.00	0.00	3.79	0.39	3.73	0.06
Dickenson County	0.00	0.00	0.00	0.00	11.13	0.73	8.24	2.89
Dinwiddie County	0.00	0.00	0.00	0.00	24.75	0.89	23.73	1.02
Essex County	1.05	0.09	1.05	0.00	42.64	3.84	37.89	4.75
Fairfax County	179.08	0.16	172.64	6.44	3709.03	3.26	3515.38	193.65
Fauquier County	12.09	0.18	12.09	0.00	128.85	1.89	117.84	11.01
Floyd County	0.00	0.00	0.00	0.00	14.46	0.93	14.26	0.20
Fluvanna County	0.00	0.00	0.00	0.00	9.80	0.38	9.80	0.00
Franklin County	3.29	0.06	3.29	0.00	63.58	1.13	58.32	5.26

[54] This document has been updated with 2016 data for both CRNAs and Board Certified Physician Anesthesiologist on May 18, 2017/\.

	Certified Registered Nurse Anesthetists				Anesthesiologist			
Locality	Total	FTE /1000	Primary	Sec	Total	FTE/1000	Primary	Sec
Frederick County	14.52	0.18	14.52	0.00	140.54	1.71	133.72	6.82
Giles County	0.91	0.05	0.00	0.91	22.62	1.35	20.02	2.60
Gloucester County	0.05	0.00	0.00	0.05	67.21	1.81	63.13	4.08
Goochland County	0.11	0.01	0.00	0.11	15.76	0.72	13.76	2.00
Grayson County	0.00	0.00	0.00	0.00	15.69	1.04	15.64	0.05
Greene County	0.00	0.00	0.00	0.00	7.07	0.37	7.07	0.00
Greensville County	0.00	0.00	0.00	0.00	19.41	1.66	18.76	0.65
Halifax County	3.44	0.10	3.44	0.00	81.89	2.33	80.08	1.81
Hanover County	18.64	0.18	15.57	3.07	235.89	2.31	221.42	14.47
Henrico County	69.64	0.22	66.47	3.16	869.47	2.70	821.47	48.00
Henry County	7.52	0.14	5.93	1.59	50.47	0.97	47.33	3.14
Highland County	0.00	0.00	0.00	0.00	3.76	1.67	3.76	0.00
Isle of Wight County	0.00	0.00	0.00	0.00	29.85	0.83	29.62	0.23
James City County	1.88	0.03	0.00	1.88	187.96	2.59	184.59	3.37
King and Queen County	0.00	0.00	0.00	0.00	1.74	0.24	1.74	0.00
King George County	0.00	0.00	0.00	0.00	8.82	0.35	8.82	0.00
King William County	0.00	0.00	0.00	0.00	7.97	0.49	7.97	0.00
Lancaster County	0.00	0.00	0.00	0.00	50.08	4.53	49.51	0.57
Lee County	0.00	0.00	0.00	0.00	18.30	0.73	17.47	0.83
Loudoun County	16.44	0.05	14.38	2.06	702.06	1.93	642.56	59.50
Louisa County	0.00	0.00	0.00	0.00	14.37	0.42	13.02	1.35
Lunenburg County	0.00	0.00	0.00	0.00	7.62	0.61	6.13	1.49
Madison County	0.00	0.00	0.00	0.00	6.51	0.49	6.51	0.00
Mathews County	0.00	0.00	0.00	0.00	3.97	0.45	3.56	0.41
Mecklenburg County	3.38	0.11	3.38	0.00	64.62	2.07	60.82	3.80
Middlesex County	0.00	0.00	0.00	0.00	8.44	0.79	8.37	0.07
Montgomery County	35.04	0.36	34.96	0.08	760.67	7.82	713.24	47.43
Nelson County	0.00	0.00	0.00	0.00	18.56	1.25	18.10	0.46
New Kent County	0.00	0.00	0.00	0.00	5.21	0.26	4.61	0.60
Northampton County	2.75	0.23	2.75	0.00	71.92	5.93	69.04	2.88
Northumberland County	0.00	0.00	0.00	0.00	9.49	0.77	9.42	0.07
Nottoway County	0.00	0.00	0.00	0.00	23.58	1.51	23.53	0.05
Orange County	0.00	0.00	0.00	0.00	34.75	0.99	33.83	0.92
Page County	0.00	0.00	0.00	0.00	23.29	0.98	22.43	0.86
Patrick County	0.00	0.00	0.00	0.00	8.97	0.49	7.56	1.41
Pittsylvania County	0.00	0.00	0.00	0.00	56.33	0.90	54.85	1.48
Powhatan County	0.00	0.00	0.00	0.00	22.22	0.78	21.59	0.63
Prince Edward County	3.64	0.16	3.51	0.13	49.66	2.15	44.75	4.91

	Certified Registered Nurse Anesthetists				Anesthesiologist			
Locality	Total	FTE /1000	Primary	Sec	Total	FTE/1000	Primary	Sec
Prince George County	0.00	0.00	0.00	0.00	134.53	3.60	128.75	5.78
Prince William County	19.06	0.04	18.27	0.79	724.04	1.62	669.20	54.84
Pulaski County	4.34	0.13	4.34	0.00	44.94	1.31	42.38	2.56
Rappahannock County	0.00	0.00	0.00	0.00	11.17	1.52	9.62	1.55
Richmond County	8.49	0.95	6.38	2.11	79.02	8.88	67.94	11.08
Roanoke County	16.08	0.17	15.71	0.37	325.19	3.47	308.55	16.64
Rockbridge County	0.00	0.00	0.00	0.00	19.78	0.89	15.55	4.23
Rockingham County	0.00	0.00	0.00	0.00	218.19	2.79	208.41	9.78
Russell County	0.00	0.00	0.00	0.00	16.03	0.57	15.12	0.91
Scott County	0.00	0.00	0.00	0.00	9.19	0.41	7.58	1.61
Shenandoah County	0.00	0.00	0.00	0.00	43.38	1.01	40.47	2.91
Smyth County	0.00	0.00	0.00	0.00	72.26	2.29	69.15	3.11
Southampton County	0.00	0.00	0.00	0.00	15.34	0.85	13.96	1.38
Spotsylvania County	2.66	0.02	0.00	2.66	130.51	1.01	122.07	8.44
Stafford County	3.35	0.02	3.35	0.00	94.25	0.67	73.80	20.45
Surry County	0.00	0.00	0.00	0.00	7.97	1.17	7.96	0.01
Sussex County	0.00	0.00	0.00	0.00	5.90	0.50	5.50	0.40
Tazewell County	1.97	0.05	1.97	0.00	128.20	2.95	114.56	13.64
Warren County	0.00	0.00	0.00	0.00	64.75	1.66	60.65	4.10
Washington County	9.00	0.16	8.32	0.69	147.21	2.69	140.26	6.95
Westmoreland County	0.00	0.00	0.00	0.00	5.31	0.30	5.29	0.02
Wise County	1.84	0.05	1.81	0.03	108.51	2.72	101.55	6.96
Wythe County	0.00	0.00	0.00	0.00	69.12	2.37	65.44	3.68
York County	0.00	0.00	0.00	0.00	77.36	1.17	73.52	3.84
Alexandria City	45.51	0.30	45.51	0.00	422.53	2.81	383.96	38.57
Bedford City	0.00	0.00	0.00	0.00	12.68	1.96	11.45	1.23
Bristol City	0.00	0.00	0.00	0.00	10.12	0.59	10.12	0.00
Buena Vista City	0.00	0.00	0.00	0.00	1.60	0.24	1.35	0.25
Charlottesville City	27.10	0.59	23.76	3.34	856.03	18.78	840.39	15.64
Chesapeake City	35.31	0.15	35.31	0.00	445.93	1.91	421.45	24.48
Colonial Heights City	0.12	0.01	0.00	0.12	70.26	3.96	64.54	5.72
Covington City	0.00	0.00	0.00	0.00	2.80	0.48	2.80	0.00
Danville City	3.30	0.08	3.30	0.00	157.97	3.72	155.47	2.50
Emporia City	0.96	0.18	0.96	0.00	13.60	2.49	11.61	1.99
Fairfax City	3.96	0.16	3.96	0.00	104.24	4.26	99.16	5.08
Falls Church City	13.43	0.99	13.43	0.00	183.70	13.51	171.49	12.21
Franklin City	2.81	0.33	2.58	0.23	21.32	2.50	19.19	2.13
Fredericksburg City	38.93	1.37	36.42	2.51	367.47	12.96	347.29	20.18

	Certified Registered Nurse Anesthetists				Anesthesiologist			
Locality	Total	FTE /1000	Primary	Sec	Total	FTE/1000	Primary	Sec
Galax City	0.51	0.07	0.51	0.00	52.54	7.49	48.29	4.25
Hampton City	42.23	0.31	41.30	0.94	395.37	2.89	376.43	18.94
Harrisonburg City	0.00	0.00	0.00	0.00	108.97	2.08	106.43	2.54
Hopewell City	2.93	0.13	2.93	0.00	47.54	2.14	43.95	3.59
Lexington City	0.00	0.00	0.00	0.00	26.01	3.56	24.20	1.81
Lynchburg City	2.60	0.03	2.60	0.00	376.82	4.77	353.84	22.98
Manassas City	0.06	0.00	0.06	0.00	71.63	1.70	69.60	2.03
Manassas Park City	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Martinsville City	0.00	0.00	0.00	0.00	44.86	3.27	42.60	2.26
Newport News City	26.35	0.14	25.55	0.80	569.50	3.11	523.90	45.60
Norfolk City	66.34	0.27	60.71	5.63	1129.80	4.60	1060.09	69.71
Norton City	0.00	0.00	0.00	0.00	27.61	6.85	26.14	1.47
Petersburg City	5.41	0.17	5.41	0.00	142.22	4.35	128.53	13.69
Poquoson City	0.00	0.00	0.00	0.00	5.75	0.48	5.75	0.00
Portsmouth City	35.30	0.37	33.90	1.40	899.37	9.37	873.41	25.96
Radford City	8.91	0.51	8.91	0.00	34.04	1.93	29.26	4.78
Richmond City	137.13	0.63	130.49	6.63	2152.29	9.88	2032.14	120.15
Roanoke City	22.14	0.22	21.88	0.26	702.52	7.07	666.13	36.39
Salem City	15.08	0.59	15.08	0.00	324.69	12.74	305.60	19.09
Staunton City	0.00	0.00	0.00	0.00	39.84	1.62	38.24	1.60
Suffolk City	18.48	0.21	16.40	2.07	257.50	2.97	236.74	20.76
Virginia Beach City	48.31	0.11	47.99	0.32	959.07	2.13	911.20	47.87
Waynesboro City	0.00	0.00	0.00	0.00	18.56	0.87	17.94	0.62
Williamsburg City	0.00	0.00	0.00	0.00	77.15	5.25	64.94	12.21
Winchester City	28.74	1.04	23.73	5.01	294.08	10.68	287.81	6.27
Total	**1,196**		**1,130**	**66**	**24,719**		**23,298**	**1,421**

Appendix 8 – Public Comment

- Public Hearing Transcript
- Summaries of Written Comment Received
    - Supporting Licensure
    - Opposing

VIRGINIA:

REGULATORY RESEARCH COMMITTEE
VIRGINIA BOARD OF HEALTH PROFESSIONS
VIRGINIA DEPARTMENT OF HEALTH PROFESSIONS

June 27th, 2017

VIRGINIA DEPARTMENT OF HEALTH PROFESSIONS
9960 Mayland Drive
2nd Floor Conference Center
Board Room #4
Henrico, Virginia 23233-1463

CRANE-SNEAD & ASSOCIATES, INC.
4914 Fitzhugh Avenue
Henrico, Virginia 23230
Tel. No. (804)355-4335

MR. WELLS: My name is Jim Wells. I'm the Chair of the Regulatory Research Committee. This is a public hearing to receive public comment on the board's review of the feasibility of licensure of certified anesthesiologist assistants.

The Code of Virginia authorizes the Board of Health Professions to advise the governor, the General Assembly and the department director of matters related to regulation of health care or occupations and professions.

Accordingly, the board is conducting this review and will provide recommendations on the feasibility of licensure of certified anesthesiologist assistants.

We have a list of folks who have signed up. We want everyone to have a chance to make a comment. We will go through the list. You are free to speak a second time, but we would ask that you wait until everyone has had their turn and we will ask questions if you don't mind.

If you are not ready for a question, we can certainly understand that. But we would, if possible, like to be able to ask a question of the speaker if you don't mind.

DR. CARTER: In the event of a fire or

other emergency requiring evacuation of the building, an alarm will sound. When the alarm sounds, leave the room immediately. Follow any instruction given by security staff. For exiting this room you may use this door or the door right behind you and make a right. You would go across the parking lot and meet at the fence. Basically just follow the staff to make sure you get out.

Thank you.

MR. WELLS: At this time I will call the persons who have signed up for comment. As I call your name, please come forward and tell us your name and who you represent and what region or area you're from please.

The first person is Katie Payne.

MS. PAYNE: Good morning. I'm Katie Payne. I work at Williams & Mullin and I represent the Virginia Society of Anesthesiologists. I'm from the Richmond area.

I've been to all of your meetings. So you've heard a lot from me already. But thank you for having us and having this public comment hearing today. We have been looking forward to it.

You all know from my past appearances before you that the Virginia Society of

Anesthesiologists represents about 900 physician anesthesiologists in the Commonwealth. We have been working for years on licensure of CAAs. We have been studying it and watching with interest as other states around us have adopted licensure really across the country, and we have seen great results.

Our membership is overwhelming supporative of licensure CAAs in Virginia. We have quite a crowd here today, as you can see, and not everyone will have a chance to speak. We have tried to narrow our comments and keep them to the seven criteria that you all are considering.

But, if you don't mind, I would ask for everyone who is supportive of CAA licensure to stand briefly.

Thank you.

I'm sure you guys realize, it's the same for you, they all had to take off days from work, from school and for most of them drive a fairly long distance from the D.C. area to get here. So we are very appreciative of their support.

Within that group we have members of the Virginia Society Anesthesiologists, the American Society of Anesthesiologists, the quad A, which is the American Academy for Anesthesiologists

Assistants, the VAAA, which is the Virginia Academy of Anesthesiologists Assistants, which is made up of Virginia residents, who are licensed as CAAs but have to leave the state to work. You will hear from some of them today.

We also have a couple of physician anesthesiologists who work closely with CAAs. So you can hear their perspective. And then we have some CAA students from the D.C. area. So you will hear from all of them today.

As I said earlier, we are trying to be respectful of your time. We have 10 people or so lined up to speak, and we will go through the criteria one by one as was requested at the last meeting.

But, again, we are a resource for you. Please, as you said, interrupt us with questions and we would love to follow up with the end to any outstanding issues.

Thank you very much for having us.

MR. WELLS: I apologize in advance if I misspeak anyone's names and that is why we ask you to restate it.

Layne Diloreto.

MS. DILORETO: My name is Layne Diloreto

and I am here to represent the Virginia Academy of Anesthesiologist Assistiants.

Good morning members of the Virginia Board of Health Professions. My name is Layne Diloreto and I'm a certified anesthesiologist assistant or CAA. I began practicing as a CAA in 2009, and I've been living in Virginia and working in D.C. since 2011. Last year my husband and I bought our first home in Alexandria, Virginia. And I would love to be able to continue to work as a CAA without having to cross state lines.

Criteria One addresses the risk for harm to the consumer. I would first like to address the educational requirements to apply to anesthesiologist assistants schools. All of the candidates must possess an undergraduate degree. Just like those preparing for medical school, candidates can graduate with any major as long as they fulfill the course requirements.

These include an English course, General Biology, General Chemistry, Human Anatomy and Physiology, Organic Chemistry, Biochemistry, General Physics, Calculus and Advanced Statistics. These course requirements are identical to the majority of medical school prerequisites.

Additionally, candidates must submit scores from a standardized test, either the impact or the GRE. All anesthesiologist assistant programs are graduate schools with dyadic and clinical requirements.

Physically it's 56 to 132 hours of dyadic training, as well as an average of 2,500 clinical hours over the course of 24 to 28 months.

CAAs only practice under the medical direction of a physician anesthesiologist as part of the anesthesiologist care team model.

In comparison, nurse anesthetists work under a physician anesthesiologist or another speciality profession such as a surgeon, pediatrist or dentist. Nurse Anesthetists do not practice independently in the State of Virginia.

Working under the supervision of a physician anesthesiologists in the anesthesia care team model directly correlates with quality of care especially in times of emergencies. Most physicians do not routinely provide airway management and do not have the extensive training that physician anesthesiologists have in diagnosing and treating acute perioperative events.

When a CAA encounters a problem while

working under a physician anesthesiologist, you have two individuals highly trained in anaesthesia instead of one. They share anesthesia knowledge and training within the care team model provides for the absolute best and safest care for patients.

I currently work at a surgery center in Washington D.C. Our facility uses the care team model. Everyday I work collaboratively with physician anesthesiologists, CAAs and nurse anesthetists. Our CAAs and nurse anesthetists are interchangeable and we are supervised in an identical matter. As anesthesia providers who have a proven track record of being safe and confident, I respectfully request that this Board supports the licensing of CAAs in Virginia.

Thank you for your time.

DR. CARTER: I do have a question.

When you say that you are supervised directly, does that mean the anesthesiologist is in the building?

MS. DILORETO: Yes.

DR. CARTER: So you do not take independent calls?

MS. DILORETO: Correct.

DR. CARTER: Thank you.

MR. WELLS: Next is Jeremy Betts.

MR. BETTS: Good morning members of the board. My name is Jeremy Betts. I'm the director of State Affairs or The American Academy Of Anesthesiologist Assistants and I'm from Atlanta, Georgia.

CAAs were developed in the late 60's by a group of physicians due to an anesthesiologist or anesthesia provider shortage across the nation. The first program was established at Emory University in 1969 and Case Western Reserve in Ohio following shortly thereafter.

The CAAs are governed by the National Commission For Certification Of Anesthesiologist Assistants, which requires three ongoing aspects of licensure. First, an initial certified exam, ongoing registration and continuing medical education and then approximately every six years recertification for examination is required of every CAA. Currently 17 jurisdictions with the addition of (inaudible) utilize CAAs either through licensure of declaratory authority. Virginia is surrounded by North Carolina, Washington, D.C. Kentucky, Ohio, all of which would utilize CAAs.

In 2006, the Veteran's Administration

classifies anesthesiologist assistants as a provider within the VA system as well as TRICARE recognizes anesthesiologist assistants as a recognized provider for anesthesia services.

Furthermore, CMS recognizes anesthesiologist assistants as anesthetists along with nurse anesthetists in regard to Medicare and Medicaid payments whereas anesthesia services. Commercial insurance payers do not treat the medically directive services for anesthesia any differently if rendered by a nurse anesthetist or an anesthesiologist assistant.

In a recent survey study that was provided from Stanford University -- I believe that the study was delivered to you -- the researchers were able to take a look at retrospective medicare fees for services, where patients who received inpatient care from an AA or a NA, and that is for 2004 through 2011. The study size consists of roughly 450,000 cases.

Looking at inpatient mortality and patient length of stay and inpatient spending, the study concluded that AA care was not associated with -- statistically significant difference in patient mortality, length of stay or spending compared to NA

care.

Increasing the number of states for CAAs can practice is likely to be associated with a decrease in patient safety or care in following along with the study. Additionally as Layne just spoke to the anesthesia care team provides a greater level of safety for each patient with an advanced practice provider as well as a physician anesthesiologist immediately available. I can speak to that.

There are three different levels immediately available provided throughout the regulatory constracts through the nation, the least restricted being under CMS regulations, which requires immediately available somewhere within the physical proximity and then varying constracts all the way up to within the surgical suite or the set of rooms to which a surgery will be taken care of. So a physician is always available within a physical proximity to the anesthesiologists assistant.

Lastly, the CAAs scheduled practice is determined by four things; any applicable statute or regulation by the state, the state's board of medicine or licensing authority, the credentialing authority at the hospital, and then lastly, and

arguably most important, the physician, who delegates the authority to that anesthesiologist assistant to practice and ultimately has control of the anesthesiologist assistant.

I'm happy to stand for any questions if there are any. And thank you for your time.

MS. HAYNES: A physician or does it have to be an anesthesiologist specifically?

MR. BETTS: And an anesthesiologist assistant, an anesthesiologist.

MS. HAYNES: Thank you.

MR. BETTS: Thank you.

MR. WELLS: Shane Angus.

MR. ANGUS: Good morning. My name is Shane Angus. I'm a Certified Anesthesiologist in Washington, D.C. where I practice as a Certified Anesthesiologist. I'm also the program director for the Case Western Missouri University. I am here today to speak to you about Criteria Two, which is the specialized skills and training.

First, I would like to recognize some of the students who made the trip down here today. One thing that I found that is important as an educator is to make sure they appreciate the rules and regulations that are directed and practiced. And if

it's okay with you, I would like to recognize them. Many of these students are Virginians and they would love to come back and work and be citizens of Virginia.

Specifically regarding their education, there are several rigorous steps that must be taken into the program. Mainly, they must enter into a program that has a curriculum that results in a degree, a master's, but is run through a school of medicine. They must also house a program within the anesthesiology department that has the educational facilities to house an anesthesia residency program.

In addition, there is a program with specific accreditation CAAHEP, Commission on Accreditation of Allied Health Education Programs, by which there are 27 different professions under that umbrella.

There is also a requirement that the instructors, in which the anesthesia students learn from, has to be a physician anesthesiologist, certified anesthesiologist assistant, as well as any other health care professional whose ground is relevant to the practice of anesthesia.

There are numerous programs that have met the benchmark for meeting all of these criteria and

they are at Emory University, Case Western Reserve University in Washington D.C, Cleveland, Ohio and Houston, Texas. There is also Emory University in Atlanta, Nova Southeastern, which is in Fort Lauderdale and Tampa. There is a University of Colorado in Denver, Indiana University in Indianapolis, Connecticut, and Medical College of Wisconsin, Milwaukee.

So after they have obtained these programs and they are nearing graduation, they will sit for their initial examination, which is assessed through the National Certification Commission for Anesthesiologist Assistants, which is administered through the National Board of Medical Examiners.

After they have completed that examination, they will then be allowed to obtain of themselves as a Certified Anesthesiologist and every two years they will need to demonstrate continuing medical education of 40 hours. And every six years they will have the pleasure of retaking that examination to maintain their certification and that will be ongoing.

For these reasons and numerous others, the demonstrations, I believe, is hopefully fulfilled in your eyes to that criteria number two.

Thank you very much.

DR. CARTER: I just have one question.

The examinations, you said they are retaking it or is it a recertification exam, a separate exam from what the original was?

MR. ANGUS: Correct. There is an initial examination, year one. And then there is a recertification in every six years.

DR. CARTER: Thank you.

MR. WELLS: You mentioned a master's, what's the actual degree?

MR. ANGUS: Degrees in master's degree which is determined by the institution, the title of that master's. So certain institutions may call it a master of science and anesthesia and another institution may call it a master's of science -- medical science.

MR. WELLS: Approximately how many hours? I think in terms of four years, two years.

MR. ANGUS: Very good. Thank you. There are different agencies which credit the different regional institutions and it gives them a lot of flexibility to determine how many hours a credit hour means. So the hours vary quite a bit. They are all master's degree. The minimum is 24 months

and the maximum is 28 months.

Thank you for your time.

MR. WELLS: Rose Wilson.

MS. WILSON: Good morning. My name is Rose Wilson. I'm the president of the Virginia Academy of Anesthesiologist Assistants. I'm a Certified Anesthesiologist Assistant living in Alexandria, Virginia but working in Washington, D.C.

My family moved to Northern Virginia in 2001. And while I left the area to attend the CAA program, I always knew I wanted to come back to Virginia to practice and live. I have been working as a CAA in D.C. since 2012. I purchased a home in Alexandria, Virginia in 2014. Being able to work in Virginia would greatly enhance the life that I have built here.

I want to recognize the other CAAs here today, who would also like to have the opportunity to work in Virginia and to contribute to our local community. There are currently 14 CAAs that are residents of Virginia but must travel to North Carolina or D.C. for work.

Additionally, the current class of CAA students from Case Western Reserve University in Washington, D.C. are present. Eight of these

students are Virginia residents and many others want to stay in the area after graduation. Students have the opportunity to rotate and train in Virginia with Dr. Laser (phonetically) at August Health in Fishersville, Virginia or with any anesthesiologist willing to supervise on a one-by-one basis.

Unfortunately, after the training is complete, they must leave the state to practice. By having licensure available to CAAs, Virginia would retain these students and attract additional highly trained educated professionals to the area.

Criteria three discusses autonomous practice. Certified anesthesiologist assistants are autonomously functioning deep in their practitioners who work exclusively within the anesthesiology care team model under the direction of a physician anesthesiologist.

The license of the CAA allows for a wide range of functions including, but not limited to, performing a thorough pre-anesthetic history and physical, formulating an anesthetic plan, obtaining necessary diagnosis studies and blood work, determining the need for invasive and non-invasive monitors such as arterial lines, central lines and placing and managing regional anesthetics, spinal,

epidural, interpreting monitors while initiating treatments and adjusting the anesthetics.

In additional to our daily patient care responsibilities, we are also an integral part of managing emergencies, including difficult airways, advanced cardiac life support, and pediatric advance life support. We contribute to the departmental and institutional development as members of the community to improve patient safety outcomes and to reduce surgical site infection.

CAAs provide safe and effective patient care in all surgical specialties including, but not limited to, cardiac, trauma, pediatrics, obstetrics and gynecology, orthopedics, vascular and plastics.

We currently work in all types of institutions ranging from ambulatory surgery facilities to level-one trauma centers such as Children's National Medical Center in D.C., Brady Hospital in Atlanta, Metro Health Medical Center in Cleveland and Dallas Children's Hospital.

I hope to soon add the excellent facilities in Virginia to this list. The CAA profession is growing and the residents of Virginia would greatly benefit from the care that CAAs can provide.

Thank you for taking the time to consider a

licensure of Certified Anesthetist Assistants in Virginia.

MR. WELLS: Dr. Matthew Pinegar.

DR. PINEGAR: My compliments to you on pronouncing my name correctly. Most people don't get it right the first time.

I'm Dr. Matthew Pinegar. I'm a physician and anesthesiologist and I practice in Washington, D.C. at the Washington Hospital Center. I'm a transplant to the state of Virginia. I lived in McClain, Virginia in Fairfax County for the past eight years when I accepted a job in Washington, D.C. and moved to the area.

Among my roles and my responsibilities at Washington Hospital Center, in addition to the clinical practice that I take part in, I also function as the medical director of the assessment clinic that we have at our hospital. I also participate as the medical director of the Case Western Reserve University, master's in the science and anesthesia program that we have at the Washington Hospital Center as well in Washington, D.C.

I would like to talk a little about the scope of the practice. Now according to federal

regulations, anesthesia must be administered by a physician anesthesiologist, by a MD or DO physician graduated from a school of medicine or it must be administered by an oral surgeon, a pediatrist or a dentist who is qualified to administer anesthesia.

In addition, anesthesia can be administered by a certified registered nurse anesthetist or by an anesthesiologist assistant, both of which are defined as anesthetist under federal regulation as well.

I think the most important thing I can share with you is a little bit about how we practice at the Washington Hospital Center and how we utilize both nurse anesthetists and anesthesiologist assistants in our practice. We follow the anesthesia care team model -- which are covered by an anesthesiologist and may involve AAs and CRNAs as well. At our hospital we have 32 NCRAs and 42 AAs. Our AAs have increased dramatically from the handful of AAs that we had when I started as an anesthesiologist at the hospital.

At our hospital we are involved in the training of residents, anesthesia positions, student nurse anesthetists, who are in the Georgetown program as well as the anesthesiologist assistant

students that we have from Case Western Reserve University. The way we utilize our anesthesiologist assistants and our nurse anesthetists are identical. We do not distinguish between the two. The scope of practice and the activities in which they are engaged are identical. It is my opinion that the outcomes between the AAs and the CRNAs in their practice are identical as well.

They are in every aspect of our anesthesia delivery whether it be in the operating room, in the pre-assessment clinic or the assessments after anesthesia delivery on the floor or in the recovery room.

I would like to speak to the training that we provide to both our student nurse anesthetists and our anesthesiologist assisting students. As an example, my day yesterday started out with clinical involvement in a case involving an anesthesiologist assistant student. Later in the day I was assigned to a different case where I had involvement with a student nurse anesthetist. And the type of clinical training that I gave both students was identical.

The two cases were very similar cases and the expectation that I had for both students was virtually unchanged. Following graduation the

things that we expect of our AAs and our CRNAs, they are the same, when it comes to giving breaks or relieving, AAs and CRNAs who reach the end of their shift, we interchange the same. And we do not make the distinction between who can leave or who assumes the care of a case based on their licensure or the type of training that they have done.

While I will admit that certain individuals show that they have an increased ability, increased skill, increased knowledge compared to their peers, it is not based at all upon the training program that they had attended, but more on their individual work ethic or the type of training that they focused on.

I will maintain that no one is a complete or perfect anesthetist, that everyone focuses on different areas. So certain individuals may have particular expertise in certain areas. While being capable of doing regional anesthesia, for example, there are other people in my practice that focus on it more. And you will find that certain AAs and CRNAs will gravitate to certain areas and will have particular expertise in certain areas. But as a whole and as a group there is no difference in our expectations for AAs and CRNAs. There's no

difference in outcome.

It's interesting that in last month, in May, at the annual meeting of the Association of the University of Anesthesiologists in Washington, D.C. there was a study that was presented which took in account over 452,000 cases that were billed under the Medicare service that demonstrated that there was no significant difference in outcome whether an AA or a CRNA was involved in the case.

Do you have any questions for me?

MR. WELLS: I do. In talking about the care team model, do your AAs induce?

DR. PINEGAR: They participate in the induction. The policy in our hospital is that every anesthetist is supervised by a physician anesthesiologist. And it's the policy and practice at our hospital that all inductions take place with the physician anesthesiologist present whether a nurse anesthetist or an anesthesiologist assistant or a student is involved in the case.

MR. WELLS: Same question for the initiation of a spinal, a regional.

DR. PINEGAR: There are times when our nurse anesthetists or AAs will initiate regional anesthesia, particularly the nerve blocks without

the actual presence of the physicians. Up in labor and delivery, sometimes things can get pretty busy. So, occasionally, we will be supervising multiple sites at the same time.

So, while we do make it a practice -- or at least certainly I do, of seeing every patient before initiation of any anesthetic, there are times when the anesthesiologist will not be present for every --

MR. WELLS: Do they attend codes?

DR. PINEGAR: Codes, like a code blue, yes. They will help out in emergency situations if they are available and they are the first to respond, then they will help there.

MR. WELLS: Dr. Scott Frank.

DR. FRANK: Good morning. My name is Dr. Scott Frank. I did my medical training up in Buffalo, New York, where I'm originally from and then I trained in surgery in Pittsburg, and then did training for anesthesia back up in Buffalo, did undergraduate training or undergraduate education at Georgetown University.

So when I was looking for a job I decided to come to the D.C. area. And at the time in Virginia in 2005 when I was coming here, there was

no real jobs for my criteria in Virginia. But I did take a job at the Washington Hospital Center, where I have been working for the last 12 years. And I am licensed in the State of Virginia as a physician and I'm also a member of the SADCHA. I have not joined the Virginia Society as of yet. But I was looking a couple of years ago to practice in Virginia, but because I was promoted to the medical director of the OR Operations at the Hospital Center, I decided to stay there for a little while longer.

My position at the Hospital Center is I'm an attending physician anesthesiologist doing fulltime clinical. I'm also, as I said, an OR Operations Director, Medical Director. I'm also Associate Director of Obstetric Anesthesia. I'm an anesthesiologist in the specialty as well, obstetric, and also trauma surgery as well.

I have for the last 12 years, almost 13 years now, in the Hospital Center and directly with the AAs, certified AAs. I might repeat some of the things Dr. Pinegar said since he's my colleague. We work together. I agree with him. I say that I feel that there is no difference in the practice of the certified anesthetists when I work with them compared to the CRNAs. They are a very good group

of individuals that we have at our hospital. They are very talented.

I would add to his comments, in the sense that in our hospital, we deal with a very, very high risk population of patients, very sick patients. And that is something that we require, particularly when we train the anesthetists as well, both from the Georgetown students, CRNAs as well as students from the AA programs -- when we select them, potentially to hire them afterward, we do kind of have our pick of the litter also in the sense of -- it's usually a hard choice, I will say that because all of the training programs do a very good job of educating these individuals. And having had them train at that institution actually what makes a big advantage to that career because they are exposed to such a level of care, that is one of the things that makes them allow to work anywhere in the country after that training there.

I actually came to that Hospital Center like that to start with because I felt it would really promote my clinical skills and I feel like it has in that regard dramatically.

So, with that said, the students I teach as well, as they mentioned about their training

programs, the students do a very good job. They go through the same kind of premedical education that I went through in a sense. And, therefore, they seem to have kind of a good approach to medical management in that regard because of having that background. I find that it works well on both sides. The nurse anesthetists, the CRNAs I work with, they meet each other. They give each other breaks. They are a very good quality group that we have at our hospital. And as I said before, I really notice no major difference between the two.

A couple of other points, CMS requirements basically for medical direction basically is limited to no more than four anesthetists. That doesn't mean we get four for each anesthetist. For each additional case that we cover or supervise, medical direct, we actually get paid less and less, so it's not that we get paid the full amount for that. So it is an advantage, I think, to the care team model in that regard that potentially reducing cost but that is once again -- that's just a point about the care team model as well.

There is basically no difference in compensation for, I believe, insurance or CNS as well. CRNAs and AAs get pretty much paid the same

for the most part or for insurance reimbursement to the hospital.

I would note as well that we have actually advanced -- in practicing obstetrics, it's usually a lot of institutions particularly a low risk environment for obstetrics -- it's common practice to just have anesthesiologists covering those. But because we have a high risk obstetrics department, we have actually advanced to a care team model where we have an anesthetist on 24/7 as well with us.

And the reason for that is because the environment is so difficult sometimes with very difficult sick moms who come in with babies and sick babies that come in that we really do need to take advantage of the extra hands as Dr. Pinegar was saying.

They are allowed to go and start C-sections on their on, both the AAs and the CRNAs as well. We are always on the floor in that regard. And we can always back them up in that regard. But they do have a lot of leverage in that regard when it comes to obstetrics in particular.

We are always present starting every single case for CRNAs and AAs. We are always in the room. They can push drugs if you would like to induce

patients. I think that was your question. They can push drugs. But we are always in the room for airway management support and to get cases started in that regard.

Are there any questions or comments?

DR. ALLISON-BRYAN: It really sounds like they are pretty well supervised at the Washington Hospital Center.

DR. FRANK: Yes.

DR. ALLISON-BRYAN: Do you have any idea how your model, anesthesia care team model, compares to other hospitals that are using CAAs -- I mean, is this a --

DR. FRANK: I think other institutions -- I mean, our institution, we deal with one of the sickest patient population in the country. So with that data, I think it's very easy to do if you were to go to a community center hospital versus another big center like over in Fairfax, which is near me, Fairfax Hospital Center, I think there would really be no difference. I don't think I would have any concerns about where they trained in the sense. With anything in anesthesia particularly, a lot of it has to do with their experience level.

So most of the training programs that we

have, the students we have, they seek out, but also the same thing with the certified nurse anesthetists, they seek out different opportunities to gain the experience.

And as Dr. Pinegar said, they will kind of fan out into some areas where they like to specialize. We have some anesthetists who only do obstetrics. And we have some anesthetists who prefer not to do certain types of cases. But that is their personal preference. And that is actually the same thing that happens in the anesthesia profession as well. So we kind of have specialities, the things that we kind of like to do. It's just a common practice.

MR. WELLS: Jason Hansen.

MR. HANSEN: Hello. My name is Jason Hansen. I serve as the Director of State Affairs for the American Society of Anesthesiologists. I'm a resident of the State of Virginia. My wife and I own a home in Alexandria.

The American Society of Anesthesiologists supports licensure of CAAs in all states. They are valued members of the anesthesia care team. The anesthesia care team provides an anesthesia person performed by or supervised by a physician

anesthesiologist constitutes the practice of medicine.

Certain aspects of anesthesia care can be delegated to other properly trained and qualified individuals. These professionals, medically directed by physician anesthetists, constitutes the anesthesia care team. While selected task delegated to these qualified individuals, responsibility remains with the physician anesthesiologist. The physician anesthesiologist determines which tasks are delegated or participates in critical components of the anesthesias and remains physically available for management of emergencies regardless of the type of anesthetic.

State authorization of certified anesthesiologists assistant licensure has been ongoing. Seventeen jurisdictions now authorize CAA practice. This established profession has been serving patients for over four decades. We in the Department of State Affairs are seeing more and more states across the nation seeking to add CAAs to the range of their licensed professionals.

As someone who has personally received anesthesia care from a certified anesthesiologist assistant practicing within the anesthesia care

team, I strongly support their licensure in my state and hope not to have to leave Virginia again to receive this care.

Thank you.

MR. WELLS: Danny Mosaros.

MR. MOSAROS: Good morning. My name is Danny Mosaros. I am a practicing certified anesthesiologist assistant in Washington, D.C. and a Fairfax County Virginia resident. I am the director of dyadic construction (phonetically) at Case Western Reserve AA Program and I also serve on the board of directors for the American Academy of Anesthesiologist Assistants. I would like to thank the Board for allowing us to speak today.

I will be speaking to criteria five, which is the economic impact, the licensure of CAAs in Virginia. Certified anesthesiologist assistants are recognized by the CMS, which is the Center of Medicaid and Medicare, of all commercial insurance -- CMS recognizes the anesthesiologist assistants as qualified non-physician anesthesia providers. Insurance payers do not distinguish between certified anesthesiologist assistants or nurse anesthetists in regards to services rendered under the anesthesia care team model.

Currently anesthesiologists are the only physicians in the Commonwealth with one option for a physician extender. This is problematic because it limits their choice of provider and their ability to incorporate the anesthesia care team.

Licensing or certified anesthesiologist assistants will eliminate this issue and ensure physician anesthesiologist involvement with every anesthesia provided. This model of the care team is proven and is the optimal approach for providing safe and cost effective care.

The addition of competition in a supply and demand market is beneficial for the consumer. Data provided by the Bureau Of Labor And Statistics further supports this statement.

In states where anesthesiologist assistants have created a competitive job market there is a 15.2 percent increase in the average salary because anesthesia providers in the care team model are compensated equally in the care team model. This decrease in average salary is due to competition.

The licensing of anesthesiologist assistants will help decrease in the anesthesia related health care cost while meeting the increase and demand for anesthesia providers in Virginia.

Finally, I would like to address the cost associated with licensing and regulation of a new profession. The licensing will certify that anesthesiologist assistants will fall in line with this strategic plan put forth by the Department of Health Professionals.

Our experience with other states have found this process to be budget -- considering the number of AAs that already reside in Virginia, the proximity of an AA program can meet the immediate demand and the addition of a new AA program in Virginia. This will ultimately result in a contributing factor to the Department of Health Professionals revenue.

Thank you very much for your time.

MR. WELLS: Dr. Engels.

DR. ENGELS: Good morning. My name is Dr. Emil Engels. I'm a physician anesthesiologist and the president of the Virginia Society of Anesthesiologists. I have lived in Virginia most of my life. I grew up in Northern Virginia. I graduated from West Springfield High School. I went to the University of Virginia for college. I left for a few years and then came back in 1999 to work at Fairfax Hospital. I have been there ever since.

Our practice is quite large. You heard Dr. Frank talk about it. My own practice, I employ 70 physicians and 100 CRNAs. Our practice is part of a national company, which employs over 3,000 anesthesia providers, 1,500 physicians and over 1,900 anesthetists including both CRNAs and CAAs.

I'm going to address criterias six and seven. But before I get into that I did want to return to your question, Dr. Bryan, about how CAAs have been covered in other locations. And I agree with Dr. Frank; they are required to be supervised by a physician anesthesiologist and we would cover anybody in a similar matter.

Criteria six as for alternatives to regulation, there really is none for CAAs to practice in Virginia. We feel strongly that licensure by the Board of Medicine protects the public interest and ensures practitioner competency. And really is essential and is in the best interest of the public to have CAAs licensed in Virginia.

I also wanted to comment that as president of the VSA, we are as a society and as individuals, we are very supportive of CRNAs. This is not directly to CRNAs, but rather designed and we are advocating on behalf of this to create a choice of

providers we hire and to get any other pool of qualified providers to hire from in Virginia. This information was provided to you earlier by Ms. Payne.

But it shows you the number of licensed care extenders for each physician class in Virginia. On average, physicians have access to 6.5 different extenders. As anesthesiologist have access to one and that is CRNAs. So it's really about having choice, another pool of qualified providers to hire from.

To give you examples, I mentioned we are part of a large company, Midnex (phonetically). Our company alone has 40 unfilled CRNA positions in Northern Virginia. So we have 40 jobs available for CRNAs that we can't fill right now. The way we are staffing is by paying overtime to our current providers, -- but, clearly, that is not a good long-term solution.

I would also make the point that we have data from MPI, which shows that when CAAs enters a marketplace in a particular state, they don't displace nurse anesthetists and student nurse anesthetists.

In fact, in states that CAAs have come into

those numbers have increased. There has been growth in nurse anesthetists numbers in states where CAAs have been introduced.

I conclude by talking about this section, criteria six. Our company nationally employs CAAs in other states. We have 40 openings at the moment for CAA positions. And we would hire CAAs as soon as that was permissible by state law. So we are in the position where we would actively hire CAAs.

Criteria seven talks about the least restrictive regulation that is possible. Of course, CAAs would need to be licensed in the state of practice here, but we are in favor of creating statutory language that is differential as appropriate allowing the Board of Medicine to really govern that process. CAAs are licensed with the Board of Medicine in different states.

And, finally, I would like to point out that there are CAA schools from around the country that has shown interest in expanding in Virginia. We have received interest from Case Western, Nova Southeastern. These are schools that are actively pursuing opportunities to start CAA programs in the State of Virginia.

Thank you very much. I would like to say

again that the VSA is very supportive in licensing CAAs in Virginia. Thank you for your time. I'm available to answer any questions. Thank you.

MR. WELLS: Brian Ball.

MR. BALL: Thank you. I'm last for our group. I'm Brian Ball. I practice law at Williams Mullen here in Richmond. I've represented the Virginia Society of Anesthesiologists, as you can see from looking at me, for decades now. I am very proud to be here. They are a group of bright and young, energetic people who want to practice their profession in our state and it's really an honor to be a part of this initiative.

I don't know if it was mentioned earlier, but there are 12 CAA schools in the country. Virginia would like to have one of them as well. There is a great interest in doing that. So competition for Mr. Angus and Case Western and some of the other schools that were mentioned today.

We have a lot of veterans in the State of Virginia. It creates for somebody coming out of the military, it's a great career track to go into the master's program once the individual has completed the necessary prerequisites.

We derive great comfort from the studies

that you heard through the doctors mentioning in terms of the outcomes, the quality of care. The outcome is the best, I think, mentioned by Dr. Frank.

There was a question, I believe from you, Dr. Allison-Bryan, about the model in other jurisdictions or other hospitals. I did have a handout that, if I could approach, I would like to give you in places where CAAs practice at this point. It represents where they practice nationally. And it's a pretty good looking list.

MR. WELLS: I have a question and it's a general question, and I hope it doesn't seem like it's derogatory or anything like that. I don't see here any facilities that are below 250 beds. Any CAAs out there that can work in a facility less than 200 beds?

UNIDENTIFIED SPEAKER: In the District of Columbia we practice, obviously, at Washington Hospital Center, but we also practice at providence Hospital, which is a small catholic run hospital. It's about 10 ORs.

MR. BALL: I can assure you that these young people if they can practice their profession in smaller hospitals, there is no diversion for them

to be anywhere they can be gainfully employed and challenged. So, I don't think that is an issue.

And this is a really good list of hospitals. And I haven't thought about the smaller ones, but it's an impressive list of hospitals. It just demonstrates the level of comfort once the CAAs can practice in these facilities -- that the facility has with the anesthesia care team that includes the CAAs.

And a question was asked about code blue. We have some very modest people in the room. But two weeks ago we had the mess up in Alexandria with the members of Congress. People were injured. And Dr. Frank, who spoke earlier, was the anesthesiologist on deck, and a very quiet and modest CAA, Katelyn Dyburan (phonetically) sitting back here was the CAA in the OR. The doctor and CAA did what they have to do to take care of some people that were injured. So there is no difference. There is no difference. That's the point of that.

That concludes our presentation. We have all of us here to answer any questions any of you may have. And we thank you for letting us come visit with you today.

DR. CARTER: Since you have concluded your

presentation, I would like to go back and ask Mr. Angus a question. And I think out of all the people I've heard, you might be the best person to answer this.

From what I read about CAAs, they were developed by anesthesiologists and it sounded like in the back of their mind they were thinking that some of these folks might want to go on to medical school.

So my question is actually the reverse of that. The premedical training that the CAA students gets is identical to the premedical training that I got. How many of them didn't get into medical school, so they are applying to the CAA program?

MR. ANGUS: That's a great question and quite fundamental on a number of regards to be quite frank with you. The idea, you have a point there. There was a shortage and maybe we can start intriguing these young people to come into the anesthesia field, so, back in the 60s and 70s. So numerous individuals did that. They basically went though and got their master's and then went ahead and got their physician's degree and trained -- as time has gone by, as the health care climate that we are currently living in has continually changed in

many directions you can say, the people who have been applying to our program -- there has always been an interest in going to medical school and are looking at this and thinking is there something else.

So a huge portion of these applicants are individuals who are stepping away from going to medical school and they have the pedigree. They have the MCAT score. They have the GPA. So without question it would get them into a very strong medical school.

So about a third of my students are just that. Another third are individuals who are on the bubble, right. They might be able to get to the furthest program from their home and go to medical school -- maybe they could go to one of the Caribbean schools and looking at what else is out there, what other options are available to me.

So my thought is here are these groups of people who are clearly bright. And by the chances of an examination their scores are two or three points below the average and they are not being accepted, yet what are we doing with them as a society. Are we just going to say well, sorry pal. We'll see you later. Enjoy what else you are going

to do. Well, I think these are great candidates for people who would be excellent in their profession.

So about a third of the students would have just that. There are people who looked at other options and said this might be a good one. So those are the two groups that would fall into that.

DR CARTER: So, in general, if you look at your application versus acceptances over the past couple of years, because given what you told us you probably have access to that information.

MR. ANGUS: Yes.

DR. CARTER: What does it look like? How selective is it?

MR. ANGUS: Quite selective. We are looking at a group of people -- this is a brief story. So I went to recruitment at Johns Hopkins. And I was at Johns Hopkins and there was a lot of other medical schools there. I was talking to the chair -- the commission who takes care of this event and he was looking at our criteria. And he kind of chuckled and said why would anybody go to your program. You have more requirements than an average school. So there are additional requirements that we mandate. So, it can be hard, yes.

DR. CARTER: So, of your applications, for

every two applications, are you accepting one, I mean just in general?

MR. ANGUS: Because of the high requirements we probably go about a third, a third, a third. So for every three applicants, I'll go through two and I will accept one. But because of our high requirements -- I like that personally -- I don't have to look through 300 applicants for which two-thirds aren't really liable.

DR. CARTER: Excellent. Thank you very much.

MS HAYNES: My question is for Mr. Mosaros. I hope I am pronouncing your name correctly. You spoke to economic impact. And based on some of the information that I reviewed, can you explain why many of the physicians practicing are opposed to CRNAs, one of the responses from them are that this is going to drive up my costs. And this is going to be costs that I am going to eventually pass on to the patient.

MR. MOSAROS: Sure. Are you referring to the physician anesthesiologist saying that this is going to drive up the cost or the surgeon or both?

MS. HAYNES: Both and maybe practices with CAAs in addition to CRNAs.

MR. MOSAROS: This is definitely not my area of expertise. But my explanation to what I understand -- when you insert individuals into the anesthesia care team model, one physician can cover four rooms.

So, you either have the choice -- if you have to run -- if you are a four-room hospital, you would have to run four physicians, four nurse anesthetists with one supervising physician whether it be an anesthesiologist or not, the same with AAs. So, by actually incorporating the anesthesia care team model it allows you to run more rooms and do more cases at a lower cost.

Does that answer your question?

MS. HAYNES: Yes. And I have another one. For example, when I saw the small surgery centers --

MR. MOSAROS: Yes.

MS. HAYNES: For example, the CRNA, anesthesiologists are saying why would I choose to bring in this additional person.

MR. MOSAROS: Sure. So, I guess where I am with that is I don't believe it's an additional person. The care team model is four people. I actually work at a surgery center. And we have four ORs and two --

MS. HAYNES: All right.

MR. MOSAROS: -- and we run four providers, two CRNAs, two AAs and one anesthesiologist. There is no additional cost. It's not they are going to add a profession to this. They are either going to incorporate AAs in their practice or not. It is strictly related to them. So, if we needed to hire two more providers to run six rooms and there were no providers because there was only one option, I don't believe you're adding cost to the health care.

Does that --

MS. HAYNES: Yes. Yes, it does.

And the reason for my question, as I have said, in seeing this over and over and that's the thought that this is just another person and it's going to increase my cost. It's also going to increase the cost of the patient.

MR. MOSAROS: One example where it would be the opposite is if you were a small facility that were running four operating rooms with four physicians, the cost of a physician versus the cost of someone in the anesthesia care team model is significantly different.

So, one physician can manage four anesthetists. And if you compare all of their

salaries versus four anesthesiologists, there is a significant increase in cost in running four anesthesiologists -- there is also a supply issue for a number of anesthesiologists versus providers.

MS. HAYNES: Thank you.

MR. WELLS: Peter DeForest.

MR. DEFOREST: Good morning. As you heard, my name is Peter DeForest. I'm a CRNA with a master's in nursing anesthesiology, a doctorate in nursing anesthesia practice.

I'm the current president of the Virginia Association of Nurse Anesthetists. I am also a practicing CRNA and the director of services for a critical access hospital.

In my former life I was the director of anesthesia for a large southwest Virginia healthcare system, which I oversaw the staffing and professional aspects of seven rural facilities.

So, to that end, I can speak to a lot of your concerns about the smaller facilities and the actual real world cost of providing anesthesia in rural Virginia in mid to small size facilities.

I would like to take a second to let you know that in principle I am not opposed to anesthesiologist assistants and VANA has not taken a

position against anesthesiologist assistants. We do have some issues, which my colleagues to follow me will point out. But the arguments that have been presented for their utility in Virginia -- but I think my time would be best spent in addressing what I am most familiar with, which is trying to provide safe, cost-effective care in rural in smaller facilities.

I want to point out that you have heard several times that there is no difference between CRNAs and anesthesiologist assistants and that they are held to a very high standard for admission requirements and so forth. And with all of them were aiding in the admission to provide good, safe anesthesia care to the residents of the states and communities that they serve. But there are differences. And the physician anesthetist that said they treat their CRNAs and anesthesiologist assistants the same are probably speaking very truthfully. But that is because they are setting their own perimeters. I mean, I can treat my daughter and my son exactly the same, but that doesn't erase the fundamental difference between them.

The other difference is admission

standards. By all of the admission standards I have found for their programs, if you just look strictly at their criteria, none of those candidates would get accepted into a nurse anesthesiology program.

I personally got -- I was licensed as a registered nurse in 1985. I went back and got a graduate degree in nursing anesthesiology in 1990. And in that interim, my primary nursing education and my nurse anesthesiology education I spent five years working in post surgical settings, orthopedic post surgical settings, in coronary care units and in what we called at the time, cardiothoracic intensive care unit, which we would receive open heart surgery patients and back in the day when things were -- by today's standards pretty barbaric, and we would sit with those patients over night while they would emerge from their anesthetic and all of the various problems that came up during the course of the night with just a fellow on call three floors away.

And there were times when you had trouble with a patient, critical trouble with a patient, and you would be there for five minutes or however long you needed to be until the fellow could make his way down. The fellow staff people on the floor were

busy with their one-to-one patients and you were left with your judgement and professional skills and years of experience to manage that patient until help arrived.

So that is how I came to enter my graduate program in anesthesia with all those years of experience, those weekend nights being alone, having to manage patients with very critical circumstances, with backup, but backup at a distance. And that, I feel, prepared me to begin my study of anesthesiology.

And I admire these kids because it's going to take a lot of backbone to come into patient care as a new patient care provider and anesthesia at the same time. It terrified me and I had five years of critical care nursing experience. So they have a lot of guts. Either they have a lot of guts or being naive, probably a mix of both because we all have that.

You know, it's just in my basic nursing training I had rotations and semester long courses in pediatric care, mental health, public health, critical care, things that these kids, these young people, coming into the program won't necessarily have. So there is a difference.

There is also a difference in how CRNAs and anesthesiologist assistants are reimbursed. Now we heard several times that there is no difference in how insurance sees non-physician anesthetists, but that is not entirely accurate. It's only accurate if you look at a very narrow segment, which is the care team model.

So they have a four to one ratio and that's all fine and good. They can get reimbursed as medically directed anesthetists. If they go to a five to one, then suddenly all bets are off. If you have CRNAs in that practice, those CNRAs now become supervised.

There is a difference between supervision and medical direction in the eyes of CMS. And CMS is the agency to which other agencies refer, and defer in many instances, regulation and payment situations.

So the difference is that a CRNA can bill and perform anesthesia without the medical direction of a physician anesthetist whereas the CAA cannot. That is why I can be the sole anesthesia provider in Patrick County, Virginia day in and day out, year after year. There is not a physician anesthetist within 30 miles of me. And our hospital is able to

get reimbursed for my services and have safe, cost-effective patient care provided.

Another clinical situation in which I work is a surgery center in a small city and they came to my partner and I because they had a physician anesthetist that they had to pay a fairly high salary because a large fraction of their patients are CMS patients, so, Medicare, Medicaid, they were not charging enough. They were not getting reimbursed enough to pay the physician anesthetist's salary. They could only recoup two-thirds of the salary.

So they turned to us as known in the community and said can you guys help us out. And we are now providing their anesthetic care. They are at less than their reimbursement cost from their insurance billing. So not only do they get safe cost-effective anesthesia care, but they get to keep a little bit of money on top of that. So there are differences.

And I want to note that the anesthesia safety today is absolutely phenomenal, and as nurse anesthetists we owe a lot of that advancement in anesthesia safety to colleagues that have preceded us, physician anesthetists, nurse anesthetists, all

developing safety standards, quality management.

They have advanced anesthesia safety to the point where for a healthy individual undergoing routine surgery, they are extremely safe, very low risk of complications. And studies have shown that CRNAs providing care is equally safe and comparable to other types of physicians, or other types of providers.

To speak to the cost, the downward pressure in salaries that they mentioned, it is interestingly enough that only the physician extender salaries that increase. So I wanted to point that out. The physician anesthetists salaries maintain the same. There may be advantages to the department in certain facilities, but overall it's the extenders that are having the downward salary pressure. And that's part of the reason why my membership has prompted me to come here to address some of the questions that you might have because they are concerned about competition and downward pressure on salaries.

And we all have concerns about the financial stability going into what could be a period of extended healthcare reform or pressure downward. Cost pressures are going to be placed on everybody. We don't want to be put in a uniquely

weak position.

So there's an interest in our prior membership to see that we have a fair playing field. A level playing field is good for all. I would like to see all providers being able to provide care at their level scope of practice.

And to that end we would like that to be a consideration. When we look at the criteria for this study, one of them is are there alternative regulations, which would adequately protect the public, but might also meet the needs that are being proposed or being fit for the anesthesiologist assistants.

And one of those alternatives that I think I would strongly urge you to consider would be seeing about the feasibility of having all anesthesia providers that are licensed and board certified be able to practice to their full scope of practice and take down barriers to that level playing field that currently exists for CRNAs. I would be happy to take your questions.

MR. WELLS: Thank you.

Janet Setnor.

MS. SETNOR: Good morning. Thank you for your time. I'm Janet Setnor. I'm a 1998 graduate

of the anesthesia program at Old Dominion University. I just recently retired at the Air Force from the United States Air Force Reserves after 26 years of service.

While in the Air Force I provided anesthesia care independently at both stateside medical treatment facilities and also locations such as the last deployment to Afghanistan.

During my deployment, I was both the anesthesia leave with oversight of three anesthesiologists and three CRNAs in our largest in-country trauma center. And we also cared for locals as well as our warriors.

Many times I was the sole anesthesia provider at an operating base with no other anesthesia support for hundreds of miles. Why was I entitled to practice independently? Because every objective and critical study has proven to the United States Military that CNRAs provide the same level of quality care as that provided by our MD anesthesiology colleagues.

Therefore, I'm here today to provide you with the prospective on behalf of the certified registered nurse anesthetists who practice in the military hospitals here in Virginia. CRNAs have a

long history of providing anesthesia care to our warriors since the civil war.

We have practiced in our branches of the U.S. military, and interestingly, none of the U.S. branches require CRNAs to be supervised by an MD or an anesthesiologist. Nurse anesthetists, as I have mentioned, have been the main anesthesia providers to U.S. military personnel on the front lines since the civil war.

Additionally, CRNAs are the prominent anesthesia providers in the Veterans Affairs Health care system facilities. Anesthesiologist assistants are not authorized to work at anesthesia providers in the armed forces. Unlike the CRNAs, AAs must be required by an anesthesiologist only whereas anesthesia providers in the armed forces CRNAs and anesthesiologists alike must be and are trained to be independent providers and ready to individually deploy to the front lines at a moments notice.

Our operations demand the ability to practice independently in order to save the lives of our warriors and the locals that are injured in any type of contact.

In Virginia, CRNAs independently provide anesthesia care in all four of our military

hospitals; Naval Medical Center, Portsmouth; Fort Eustis; Langley Air Force Base and Fort Belvoir. During the past seven years of working with the joint services defense health headquarters, there has not been a single occassion in which the use of AAs have been pushed forward for consideration.

It is likely that even if anesthesiologist assistants are licensed in Virginia, they will not be utilized in our military hospitals; therefore, it will not increase the access to care to the members of our military, our veterans or their families.

So I ask you to consider whether it is feasibly or fiscally responsible or is it in the best interest of anyone that for every two to four AAs hired, you will need to hire at least one anesthesiologist assistant to supervise. This will lead to increases in cost to the patient, the facility and the Commonwealth.

The question that was asked earlier about the care in the smaller hospitals. Many of our military facilities do not have anesthesiologists present. If we increase the model to include anesthesiologist assistants, we will have to hire probably 75 to 84 is the number that we looked at, anesthesiologists to cover the shifts in those

facilities. So, therefore, that would be a huge increase in cost.

Recently the Department of Veterans Affairs granted full practice of authority to advanced practice registered nursing regardless of the state requirements that limits such full practice authority.

However, the CRNAs were not included in this expanded practice role. The reason for this as safety, or as many studies have shown, is not because of safety concerns but because the MD colleagues of ours have claimed and stated that there is no anesthesia provider shortage in the VA system. So full practice authority was not necessary for CRNAs in the VA system.

So, as a final point, I would like to say that I come from a family of warriors. My father-in-law was a WW II fighter piolet. My father was the first sergeant to Col. Powell. My husband was the architect and leader of the airwar during Desert Storm. My son is a marine and had four combat deployments, one of which I was -- and I have to say not many marines can say they took their mother to war with them.

But as a standard of care, I am now a

veteran. And what I expect at the head of my bed is somebody to be able to practice independently, to know how to act spontaneously in the event of a medical emergency, and to know who to call if they need the assistance. So those are my expectations of care for myself and the veterans and their families.

Thank you for your time.

MR. WELLS: Dr. Fallacaro.

DR. FALLACARO: Thank you. My name is Dr. Mike Fallacaro. Like Dr. Frank, I'm a native of Buffalo, New York and a Bills fan. But I've been in Virginia for 19 years.

I'm a tenure full professor and I chair the Department of Nurse Anesthesia at Virginia Commonwealth University. I am here to represent the university of my 160 graduate students, and I applaud the students for being here today from the AA programs. I could have brought my 160 students into the room, but they are providing care at this time to the citizens of the Commonwealth, across the Commonwealth from Big Stone Gap to Portsmouth to Alexandria.

Our program started back in 1969, at what was then the Medical College of Virginia. We have

been training students ever since. We are an acknowledged program. The first program in the United States to create the Master's of Science and Nurse Anesthesia. And a few years ago we were the first program in the United States to create the Doctor Of Nurse Anesthesia Practice degree. And for the last 12 years we have been recognized by US News and World Report as being the best nurse anesthesia program in the nation.

And I take pride in that because it is the quality of our graduate students. It is the quality of our facility. It is the support from the institution and the Commonwealth, itself, that has all contributed to that success, which I hope and trust translates down to the care of the citizens of the Commonwealth are getting.

In terms of the training itself, I said we are across the Commonwealth and that's because while our base is here in Richmond, in 2004 we were approached by the CEO, the director of the Southwest Virginia Higher Education Center, saying there was a significant need in and amongst the coal fields of Appalachia for quality anesthesia care.

And in 2009, we were approached by the Roanoke Higher Education Center with the same

concerns. And since that time we had graduated over 130 students in this region of the United States. And 80 percent have kept employment within the region and 70 percent at the same institution in which they trained. We have 44 clinical sights across the state; again, Big Stone Gap, Pennington Gap, Wytheville, Portsmouth, Alexandria -- I could go on and on and on. These are clinical partners of have found great benefits in the resources our department has been able to provide.

And it's this resource, this issue that I want to talk about. I have concerns when I hear my colleagues from the anesthesia assistant program saying they have an interest, a real interest in opening programs here in the Commonwealth of Virginia.

If you look at the type of cases that anesthesiologist residents need, nurse anesthetists and graduate students need and AAs need, there is a great deal of overlap in the type of procedures they need in order to meet their certification and licensing requirements.

I can tell you that at the VCU Health Center, 1,000 bed hospital, right now we have nurse anesthetists training, and we have a

anesthesiologist resident training. And we have no room for any other trainees. We have no room for any other trainees. We just do not have the space to add them. Because, again, we are competing for the same limited number of cases, especially specialized cases in terms of pediatrics, regional anesthesia, cardiac anesthesia and the like. So, finite resources are an issue.

And we are also interested in terms of our educators, themselves. And something that I thought about is if you hire an AA into an institution which is also training other providers, well, then the AA cannot supervise a graduate nurse anesthesia student during their training.

So, not only does the AA take the job away from a CRNA graduate, but they also cannot educate a student. So we not only lose a job placement, but we also lose a training opportunity or more depending on the number of rooms these folks are in. So, again, our training would suffer. It would hurt our training in terms of where we stand.

In terms of applicants, I turned away over 110 qualified applicants this year. I accepted 43 graduate students. Now you might ask why didn't I accept more, and it's because of that finite number

of training slots.

We heard from our colleagues that the Fairfax people have 40 openings. I can tell you that we do have training at Fairfax. We do train our graduate students up there. But the institution only allows us to train one student there, one student there. We have a well-oiled machine. We have a proven track record of producing high quality people. If you would like more providers, open the spigot in terms of training sites. You don't have to create a new program. We have one that has demonstrated excellence. And we are ready and willing to work to meet the needs. And we also have the data to show that the vast majority of our graduates will stay within those places were they learned.

And, again, I'm concerned about your criteria in terms of training that it will damage the training that we are doing at Virginia Commonwealth University.

So as far as the scope of practice and being distinguishable from other professions, we heard from the physician colleagues here that they make no distinction.

So, again, what you are talking about is

replacing a provider with another, replacing a provider because they are not bringing any demonstrable difference in terms of quality, in terms of techniques or things that they are able to do and function that are different from what we are already doing.

To kind of summarize things up at where we are now, I had the pleasure a few weeks ago standing with Governor McAuliffe putting the shovel in the ground to open an 82 million dollar new VCU School of Allied Health Professions. The third floor of that building is an expansion that was granted to us from the Commonwealth to expand our program.

It is going to have a world-class simulation laboratory in centering patient safety. A doctor of nurse anesthesia practice program that was created at VCU and was approved here at the Commonwealth is again, a model being used around the nation. The program is 93 credit hours, three years minimum in duration.

And, again, the focus is entirely on patient safety. So, again, it is a knowledge program. Our program meets the prefered passing rates of the national board for certification and recertification in the United States, which also

contributes to our national ranking.

So, again, the Commonwealth is making an investment into our program and we are very grateful. The other thing is not only is the Commonwealth making an investment in Virginia Commonwealth University, but also Old Dominion University, the other training program here in Virginia.

And, finally, the Southwest Virginia Higher Education Center and the Roanoke Education Center, again, we're citizens of the Commonwealth taking some of their tax dollars and making investments in these regions.

And, again, in many of these regions, as Dr. DeForest attested to, our providers are the only anesthesia providers out there in these areas. And in terms of quality, while there has been argument for years and years and years, there is no demonstrative difference in terms of outcome, whether your anesthetic was delivered by a nurse anesthetists or anesthesiologist, it's just not there. It's just not there. And I challenge anyone to bring data forward to say it is there without it being refuted.

My colleagues talk about wanting

competition and there are representatives from the American Society of Anesthesiologists here. Here is how I see this competition going. Well, they want competition between nurse anesthetists and anesthesia assistants. They don't want competition between nurse anesthetists and anesthesiologists.

And, so, if you can take and license another anesthesia provider that is a dependent provider, that has to work under you, you can control their education, control their practice, ultimately control their salary and eliminate your own competition.

So when they speak of competition being good, it works both ways. So I ask the Board to consider that in terms of how competition can increase.

So to conclude in terms of feasibility -- I thought about this. I just came back. I was fishing. I actually caught a marlin so I was very excited yesterday. And I got back and I was thinking about feasibility. It's probably feasible to do anything.

Now, is it wise to do anything. In my mind, I based feasibility upon need, upon need. So is there a shortage of anesthesia providers? I

would argue there is not. And if there is a shortage we have a mechanism, well proven mechanism in place, to address that today, today. I can accept more students today. If Fairfax opens more training spots, bang, I'll put you 20 in there. We have the mechanism to do it and the proven track record to do it.

So if need's not the issue, well, maybe it's quality. Well, we have no difference. Well, maybe it's cost. The only thing that's going to increase in cost is if you damage the nurse anesthesia training program that is in place. And if in these small hospitals we have to hire an AA instead of a CRNA, well, now you need an anesthesiologist. So the cost will increase. Control over the speciality will increase and there will be winners and losers. Probably the nurse anesthetists are going to be the losers in this type of competition, if you want to call it that. And, so, I would argue against that.

Anesthesia, despite what people will say, anesthesia is not the practice of medicine. It's not the practice of nursing. Anesthesia is a body of knowledge onto itself. And it is only those who are properly trained in credential within that body

of knowledge, that it can be part of their scope of practice.

So instead of saying anesthesia is the practice of this or this, it is within the scope of practice should you so deem it to be.

My nurse anesthetist students comes as nurses, registered nurses. They have held the hands, wipe the brow, given the bed bath, worked their way all the way up. And they are required to then do critical care nursing.

Our physician colleagues have had that same approach. They start as residents. They do basic care all the way up. Now, again, people can say well, we don't see any difference between outcomes between nurse anesthesia and anesthesiologist, people were not looking at the right things because there is a human factor there which, I think, does make all the difference. And I'm available for questions.

Thank you so much.

MR. WELLS: Dr. Apator.

DR. APATOR: I'm not as articulate as Dr. Fallacaro. So I apologize in advance.

Good morning. Thank you for having me. Thank you for giving me the opportunity to speak.

My name is Dr. Nathaniel Apator. I'm a nurse anesthetist and the director of the Old Dominion Nurse Anesthesia Program.

I have been providing anesthesia in the Commonwealth since I got out of anesthesia school and I was working in Virginia. I'm a retired army lieutenant colonel. I have been decorated for heroism. I was the president of the National Board of Certification of Research Patient Nurse Anesthetists. I'm on the certification board, the National Certification Board for Midwifery. I know a lot about anesthesiologist assistants. So I'm not a hater. My best friend is an anesthesiologist assistant when he became a nurse anesthetist.

So I don't hate physician anesthesiologists. I don't hate AAs. I'm not a hater. That's not who I am. Although don't look at my Facebook page after a full day at the hospital. I do work at the Portsmouth Naval Medical Center. In addition, I provide independent anesthesia care there. And, again, the program for the nurse anesthetist at Old Dominion University.

So I'm not here to talk about the shortage of anesthesia providers in the Commonwealth because I believe that is largely fake news. I would like

to point out to begin with that anesthesiologist assistants are not some group -- I'm sorry. My friend tells me how when he went to AA school, he referred to the have and have-nots. What he meant by that was that there are a certain number of AA students who have no medical training at all, zero. And there were certain ones that had previous training. He said that the knowledge deficit -- because he was in agriculture as an undergraduate. He said the knowledge deficit was dramatic. And he didn't know how much he didn't know until he got into the profession. And, ultimately it lead him to become a nurse anesthetist because he wanted to practice independently.

There is very little safety data on anesthesiologist assistants. There is one study that's out there and I read it. I'm a nurse scientist. I have a PhD in neuro science and I'm pretty good at disecting research.

I would like to reemphasize what Dr. Fallacaro said about the training sites. We took eight students last year. And the reason we took eight students was not because we didn't have enough applicants because I have plenty of applicants. The reason we took eight students is because we have

trouble finding clinical training sites.

In the last year we have done a very good job of increasing that. A lot of our students have to leave the state in order to get -- we send students as far as Columbus for pediatrics rotation because it's limited resources with regard to educating anesthesia students. We have to compete with providers from all over the US. And there is just a limited number of clinical training sites.

And it may be feasible to start an AA program. But I think it would really damage liability to put nurse anesthetists out into the community. We provide the nurse anesthetists for all of Hampton Roads, almost every hospital from Portsmouth to Chesapeake and Suffolk and Virginia Beach are staffed by my students.

You know, it's interesting, I would like to address briefly criteria three regarding the autonomous practice. I think that you can either say you're autonomous or you're not autonomous. I heard one of the previous speakers refer to the L&D sometimes. What that means is you are left largely by yourself in an emergency situation.

I heard another reference to a four to one ratio. What does that really mean, a four to one

ratio? It means that the physician anesthesiologist is responsible for four anesthesia locations.

So how would that work if there were two problems in two different places? Who do you want providing care? Do you want the person who is an agricultural major, who was trained to perform a certain series of steps in an emergency or do you want a nurse anesthetist who has had years of critical care training, who is doctorately prepared? Which of those two providers would provide more independence, and would you want your grandmother taken care of by them? I mean, that's really the bottom line. It's who do you want taking care of your granny because patient care trumps everything in my humble opinion.

So, you can talk about independence, but if there is a four to one ratio, it means that even the physician anesthesiologist can only be at one place at one time. So do you want the agricultural major or do you want the critical care nurse with a doctorate degree?

I've spoken to a lot of educators around the country in my various roles. And there are a lot of AA practitioners in the Commonwealth that were in various places. Does that make anyone

question why that is?

Well, I'll give you one alternative hypothesis. In talking to my friend and others like him, a lot of the AA training programs don't acknowledge or downplay the fact that AAs can't practice all around the country. So many people go to anesthesiologist assistant programs. And then they find out when they come back home that they can't practice.

So I would argue that some of the people in this audience are arguing for AAs because they are members of the Commonwealth of Virginia but, in fact, they may not have been told up front that they couldn't work in the Commonwealth before going to AA school.

Our physician anesthesiologist colleagues claim that there is no difference in the way they treat nurse anesthetists and AAs. Well, that's because they don't deeply know the difference between AAs and nurse anesthetists because the anesthesiologist colleagues has the following -- it's the physicians are at the top of the anesthesia care team and everyone else is below.

So they don't really get into the details of how nurse anesthetists are differently educated

and AAs are trained. There is a difference. We are educated to make decisions. All nurse anesthetists students have to provide care plans, which means the night before they care for patients, they go home and they study about that patient and they come up with a plan based on the patient's physiology, anatomy, pharmacology, path of physiology, and then they present their plan.

This is dramatically different to how the AAs are trained, where they get to the operating room and the physician anesthesiologist says do this, this, this and this, and let me know if there is a problem and then leaves the room.

It's a different way of educating people. In one case, nurse anesthetists are educated to be critical thinkers. In the other case, the anesthesiologist assistants, who are very fine people, I have nothing against them, they are trained to be dependent on a physician anesthesiologists.

And because nurse anesthetists are independent practitioners that can work with other physicians specialities, that increases access to care for citizens of the Commonwealth.

Finally I would like to close by saying I

don't see myself as a physician extender. I don't see myself as a care extender. I see myself as a care giver. And I think that's a fundamental difference in the mentality of the two professions. I'm a care giver. I'm not extending anyone's services. I'm a licensed credential provider who is well educated in the art and science of anesthesiology.

Thank you for your time and I'm open to any questions. Thank you very much.

MR. WELLS: Ms. Satterlund.

MS. SATTERLUND: Good morning. Thank you for your time. I'm Michelle Satterlund. I'm with McGuire Woods Consulting and I represent the Virginia Association of Nurse Anesthetists. And I apologize I think I may have signed up on the wrong sheet. I'll provide the summary to VANA and I apologize for that.

I thank you all for giving us this opportunity to speak. I want to highlight what VANA's president, Dr. Peter DeForest mentioned. We are not opposed to AAs. We understand that in the world of health care there are many roles that are served.

But as you look at AAs in Virginia and as

you go through your criteria, it is critical that you look at the services that are already provided in Virginia. As you heard from Dr. Fallacaro and Dr. Apato, we have CRNAs who would love to practice in Virginia. We have a pipeline of ready people and you have to ask does it make economic sense to deviate from that pathway to start a licensure process of an entirely new group that will require the immediate and direct supervision of anesthesiologists.

If Virginia has access to care programs -- problems specific to anesthesia care, how will providing another provider with an additional provider in any way impact that access to care issue.

And I know in the report that you provided some workplace data information and we have some concerns with the data. I'll just be very candid about that. And we are going to be submitting written comments on it before the July deadline with some of our own data that we find that Virginia does not have a shortage of anesthesia providers. And that is backed up by the Herser (phonetically) report that you provide in your draft document, as well as the Veteran Administration and the

National Association of Anesthesiologists, that when they were looking at the issue of shortages, determined that there was no anesthesia provider shortage nationally.

So it's critical that if you think there is a shortage, can we address that shortage by what I would say by taking care of the low-hanging fruit, opening the hospital clinical trainings, allowing those other students who want to be practicing in Virginia as CRNA students, allowing them to do that, looking at the scope of practice issues that are impeding CRNA practice.

I know that there are misconceptions in many hospitals that anesthesiologists has to practice with a CRNA. That is simply inaccurate. The law in Virginia says that a CRNA practices under the supervision of a MD, dentist or podiatrist, does not require an anesthesiologist and it does not require that that supervision that that MD be on site.

Now because CRNAs practice in a surgical team model, there is always going to be a surgeon there. There always is a physician. But that individual may have no anesthesia training.

So that particular facility often,

particularly in the rural areas, relies on the knowledge, the anesthesia knowledge and training of the CRNA. So to say it's equal, I think, is inaccurate, to say that CRNAs and AAs are equal in training. CRNAs practice independently in a substantial number of the rural facilities in Virginia. And I don't see that if you plan to license these individuals that it will have any impact whatsoever on the access of care in the rural and small facilities.

We stand here ready to serve as a resource. I know you have a big job in finalizing the report. But I urge you to look comprehensively at this issue and not just at the very small criteria, is it feasible. Just about anything is feasible. But what will be the impact of licensing a third provider.

I thank you and if you have any questions, I'll be happy to answer them.

MR. WELLS: That's the end of the printed list. Is there anyone who would like to speak that has not spoken or anyone who would like to return to the microphone?

MR. BALL: Mr. Chair, we have a few concluding remarks.

MR. WELLS: Identify yourself please.

MR. BALL: Brian Ball with Williams Mullen and Katie Payne, also with Williams Mullen. And there may be others who wish to comment.

First of all, I mentioned earlier that we would like to have a CAA school in Virginia. That's the goal of the CAAs. I want to reassure the gentleman from VCU and Old Dominion, those schools wouldn't be sited and that no one is looking to take a dollar from those schools' funding streams, which I know is very important to them. It's unfortunate that it's being cast as a competitive thing because we really don't look at it that way.

The other thing -- two other things I wanted to mention briefly. A comment was made we don't oppose AAs, but -- and then we heard a lot of reasons why we shouldn't have CAAs in Virginia. But I want to go back to the practice location list that I gave you a few minutes ago. And I just wanted to take off the university teaching centers that use CAAs, University of Colorado, University of Florida, Indiana University, St. Louis University, University of Cleveland, University of Vermont -- I mentioned Washington Hospital Center and I think that is affiliated with a teaching school -- University of

Wisconsin.

So all of the things that you heard about, this doesn't work and they have to work under a physician anesthesiologist, which is true, all of those institutions have managed to accommodate AAs, and as you heard from three, if not four of our physician speakers today, they see no functional difference when they are running operating rooms as far as the anesthesia care team, long, established, safe. They see no difference in using CAAs or CRNAs.

The last thing is I think there was an appeal made for you-all to consider whether CRNAs should practice independently. With all due respect, the General Assembly has considered that question twice over the last few years and said no, the CRNAs should work under the supervision of a physician, podiatrist, a dentist.

And, secondly, the VA most recently after a lot of consideration of opening a new practice concluded that there should be supervision. So that is not really the charge here. We saw the letters prepared by members of the General Assembly who asked you to look into this. And it was focused on CAAs and whether they should be able to pursue

licensure and work here in Virginia.

Thank you.

MS. PAYNE: And just to follow-up, Katie Payne again. Just to follow-up with a few of the other items mentioned. Mr. DeForest said at the beginning that a CAA would not qualify to get into a CRNA program, neither would a medical student. And conversely a CRNA would not qualify with their prerequisites and their background to get into a CAA program or into a med school. There's two different tracks. So it's correct. It's a factual statement, but it flips both ways.

There is a lot of discussion about the small rural hospitals and the CRNAs being able to work independently. As Brian just said there are two cites in the state code that say CRNAs must be directly supervised by a physician, podiatrist or a dentist. That is a different model than the CAAs. They are correct about that. But they cannot practice independently. They must be directly supervised.

So, I think it's misleading to say cost is going to go up because a CAA has to be supervised by a physician anesthesiologist. It's already the case that a CRNA has to be supervised by a physician. So

there is really no difference there. There is a difference in which provider it is. But there is no difference in the fact that they both have to be supervised.

There were some references made as to the loss of spots at schools or for positions. As we testified earlier, I don't think that's the case. There may be one thing we need to add on that point, but, again, we are not trying to take away spots from the CRNA programs. There are jobs available to them. This is a separate class of providers.

Dr. Engels, do you want to come up and speak to that issue?

DR. ENGELS: Yes.

I don't want you to think that we weren't paying attention to the comments. But during this talk we got on our phones and went to the website, gaswork.com, which is a website for a listing of anesthesia jobs.

And as of this meeting, there are 167 CRNA positions advertised in Virginia. Some of those include part-time positions. There are 78 full-time positions for CRNAs advertised at the time of this meeting on gaswork.com. As I mentioned, our practice alone has 40 open positions right now.

MR. WELLS: Thank you very much.

MR. DAVIS: Thank you very much. My name is Thomas Davis. I'm the vice chair for Clinical Affairs with the Virginia Commonwealth University.

I would like to address a couple of the points today that were made here especially no competition between an AA program and our existing nurse anesthesia programs.

By their own information AA programs need to be ankled to an academic medical center. The academic medical centers within the Commonwealth of Virginia are associated with the programs -- so we have students at UVA. Obviously, we are based at Virginia Commonwealth University. We also have students that were at Memorial Hospital and several facilities around the region.

So the main concern we have, as Dr. Fallacaro spoke, is clinical education. That's the number one limiting factor of the number of nurse anesthesia students we can accept. As he said, we are turning away as many as 100, if not more of qualified applicants.

As a matter of fact, this last group of students in the Northern Virginia area -- we actually have a satellite classroom in Alexandria.

In the Northern Virginia area we had over 30 applicants for only six positions. So we are limited primarily by our first-year student placements. And that was Dr. Fallacaro's point with Fairfax Hospital. Fairfax Hospital only accepts one first-year student from our program. They also accept students from -- they only accept one from VCU.

I am constantly searching for additional clinical replacements. And as I find additional clinical replacements, we accept more students. And accepting more students equals more graduates.

So when you replace a CRNA provider with an AA that cannot supervise a nurse anesthesia student, that's one less available room for us to put a nurse anesthesia student. When you introduce an AA program, you're starting to compete for finite resources and that actually stands to reduce the available resources for both nurse anesthesia students as well as anesthesiologist residents and hence, the potential outcome of no net game in the number of providers generated in Virginia every year.

So I would be happy to talk to anyone who has a need at their facility. As Dr. Fallacaro

stated, over 70 percent of our students would take employment -- so it's a proven record. As a matter of fact, even one of the other gentlemen spoke to being able to pick and choose exactly who you want due to the quality that they seek throughout their education program.

I would also like to talk about just one other point about CRNAs practicing independently. While we do require physician supervision, the surgeon actually covers that and we have many, many, many rural sites across Virginia.

As a matter of fact, Dr. DeForest works at one, where there are only CRNAs practicing. So the replacement of a CRNA with an AA within the institution care team model has little impact on cost. The replacement of an AA in one of these critical access hospitals, small rural hospitals with an AA automatically brings the requirement of a physician anesthesiologist to the facility.

So the physician anesthesiologists are in a similar situation -- CRNAs as far as their availability. And that would not only cause a difficulty with being able to attract anesthesiologists to these small rural areas, but it would also increase the cost.

So instead of having a single CRNA provider, you would have a single anesthesia assistant plus a physician anesthesiologist at these rural sites. Those are my concerns.

MS. SUTTERLUND: Thank you again for your time. I just want to offer one response to Mr. Ball and Ms. Payne's comments. Again, Michelle Sutterlund on behalf of VANA.

Just to clarify the General Assembly has not looked at the issue as supervision for CRNAs in many years. Brian Ball indicated that had been a recent discussion. What gets confusing is that CRNAs are licensed as nurse practitioners. And if you start looking, you'll see carve out after carve out for all the categories of nurse practitioners, which include nurse midwives, CRNAs and then your nurse practitioners. Nurse practitioners do practice collaterally in Virginia.

When that discussion came about in 2012, the anesthesiologists with NSV and VANA looked at that issue. And the decision was made not to include CRNAs. However, the supervision is that. It's just a word on paper.

As you heard from practicing CRNAs, they are often the only anesthesia providers in many

rural facilities. They are often the only anesthesia providers when they are on the front lines in Afghanistan or in our military hospitals. So, yes, there is the word supervision on paper. But that's all it is.

So, I just wanted to clarify that. And, again, as we just pointed out, we are not concerned about, you know, making sure that another provider who is kept down. That's not what this is about. It's looking at the existing pipeline that we have in Virginia. If there are issues to care, and I looked at the original letter asking this committee to study it. I didn't hear that -- well, I'll quote, there is a national shortage of anesthesia providers including nurse anesthetists. That is inaccurate. I don't recall them ever coming to VANA and talking to us about our numbers.

So I think it's important to clarify. I think there is a general sense of shortage. But it's simply the data does not indicate that is accurate.

So thank you very much again for your time. And I appreciate all the work this Board is going to do.

MR. WELLS: Is there anyone else that would

like to speak? Are there any students that want to get the experience?

MR. LINDSEY: Good morning. My name is Ray Lindsey. I'm a nurse anesthetist since, I guess 2000. And I just want to clarify a point. Someone mentioned GasWork as an example of need for anesthesia services in Virginia. And I don't think that is a reliable source. I work at a facility that advertises on gasworks, but it's filled they just want to keep on advertising. I just want to clarify that point.

Thank you.

MS. BULLIGARD: Good morning. My name is Trinal Bulligard (phonetically). I'm a student, first-year and first-month student at Case Western in D.C. I am a resident of Arlington, Virginia. I've been living in Arlington for three years, and I lived in Alexandria previously.

As a resident of Virginia, I would like to be able to practice in the State of Virginia as a CAA upon my graduation in 2019. I did not choose this program believing I would be able to practice in Virginia. I did my research and was fully aware of the states where I would be able to practice. With that being said, I would like to practice in

Virginia and continue to live in the state of Virginia.

Thank you so much for your time.

DR. DEFOREST: I just wanted to give one quick little personal experience. I can tell you we run two to three ORs. There is absolutely no way that we could afford or recruit or retain a physician anesthetist.

I have one full-time provider and that would be myself, and then three per diem part-time people that help cover me if I'm off or if I have a busy day and running two rooms, then they will come in.

My hospital administrator has written a letter to the Board explaining that physically that it would just be impossible to carry the burden of a high cost anesthesia provider, a relatively high cost anesthesia provider.

And in my past experience as director of anesthesia for a health system, five of my seven facilities were CRNA only practices. And it was, again, impossible for us to be able to carry the expense of a physician anesthetist at those smaller facilities, the largest of them having only four ORs.

Again, I heard descriptions that you could have four to one. You would have four anesthesiologist assistants and one physician anesthetist, that still is a much greater expense than having four CRNAs.

And also what happens after hours? Does the physician anesthetist carry all the calls because the anesthesiologist assistants cannot carry the after hour calls, weekends, nights?

So it is just not feasible in many parts of the state. So restricting the pipeline of CRNAs that are trained to cover the rural needs of the Commonwealth would be imprudent in my opinion.

Sometimes it's difficult to find CRNAs that are willing to come to the small facilities as well because a lot of the anesthesia care team practices are so restrictive that if you've been in one of those for years when you been through school, if you've been through school, you basically lose a lot of capacity to comfortably work without the presence of a physician anesthetist.

So it would be beneficial to access the care for rural facilities and also to have the promotion for a full scope of practice for nurse anesthetists so that they can maintain their

independence, practice skills and be able to better meet the needs of rural facilities and those certain areas.

Thank you.

DR. FALLACARO: Again, very shortly.

The issue I'm hearing is that there is a work force shortage. And in the case of the Northern Virginia area we have many, many qualified applicants and we have affiliation agreements in place with many of the facilities that were spoken about where there is 40 people short or such. I can have students, graduate students, in these facilities tomorrow. Within weeks I can put them there and they will graduate and then, again, we have data to show that they will stay there.

So if the issue is we have 40 or such shortage and we need more people, and we have room to take trainees from another site instead of another school, it is really the issue.

If it's a work force shortage issue, I would be delighted to provide trainees there that also provide service while they are there. Immediately we have the mechanism in place and it's a state funded, state supported mechanism.

So I just throw that out there. It's

there. It's ready to go. I do not hold any political office. I'm not the president of any political association. I'm an educator. And I just look at it as they need people and we would be delighted to put them there. It would certainly help VCU and we also want to help our partners and we have a record of doing that.

DR. FRANK: Dr. Frank once again.

I want to make it clear. It was said earlier that anesthesia is not a medical practice. It is. I was a surgeon before and then switched to anesthesia. And after relearning what a stethoscope was, I realized I had to go back and recollect on medicine. With a diabetic, a cardiac patient, I had to know their medications. I had to know the side effects of those medications. And on top of that I had to know how those medications effected the care in the operating room under anesthesia. I also had to learn much more depth into physiology, anatomy and everything. So that was one point that I wanted to clarify. It is a medical profession. It is a medical speciality. It's not just an area outside of medicine where you treat people.

And, in my mind, it does require a physician to lead the team and taking care of those

patients. Now with that being said, in rural areas and in the military you are dealing with very young individuals, who are trauma patients mostly. In the VA hospitals you have some sicker patients as well. But when you are in the military, which I applaud them for doing so, I think there is a little bit of a difference in practice there and simply dealing with trauma, which is something I deal with everyday as well.

Another point I would make is that being a clinical administrator as well, one of the troubles we find is having quality nursing in the hospital, not just in anesthesia. Right now we find having nursing competencies for covering the recovery room is difficult to find now. We are having difficulty in finding nurses who have ICU experience to come and start covering the recovery room in that area and trying to make that a uniform process, which is in a number of institutions around the country as a standard of care. It's very difficult to meet that.

So I applaud them in saying that they can pick up and graduate one nurse anesthetist, but I find that with the shortage of nursing that we have in our country, I question how much -- I've seen a lot of students who come through who graduated from

nursing school, do their ICU training and now they are in anesthesia school. And that is not to say that they can't do that. I'm just saying that if we start to push that process through, it's taking away from the care giving in other areas of medicine that is requiring of nursing needs that need to be felt.

So the anesthesia assistant programs actually help kind of fill those areas in that regard as well too. And in a lot of different states they are saying they are not licensed in other states, but that's because it's a process that they have been fighting trying -- and have been beaten sometimes against, you know, in order to get a licensure in other states.

I believe in the care team model. I think it's the safest way to take care of the patients in the operating room. I believe also in rural areas it's very hard to meet that care team model. And, therefore, there are advantages to having potential nurse anesthetists as well taking care of some of those of patients. But one of the senior AAs that I work with, any of the senior AAs I work with, could also easily work independently in that regard because they have that level of experience and care.

And that's why I also say that they are

equivalent in practice, scope and everything that they can do. That they can do just anything the CRNAs can do, the AAs can do just as much. So, I'm not sure if there is anything more I can add to that. But I'm open to questions.

MR. FALLACARO: Again, I couldn't disagree more with our last speaker in terms of anesthesia being the practice of medicine. Those are political terms. If anesthesia is the practice of medicine then you better call the police today and arrest me because I'm practicing it.

If the American Medical Association says anesthesia is the practice of medicine, what's not the practice of medicine. If a physician goes and takes the blood pressure, should I say you are practicing nursing illegally or is it all the practice of medicine.

Again, it is within the scope of practice of people who had been properly educated and trained to practice in such a domain. And it's the needs of the patients at that specific moment in time as to what types of services they need. So, again, I couldn't disagree more in terms of that designation.

Finally, in terms of applicants, our applicants -- they want to come to nurse anesthesia

school and they are filling our intensive care units. I'm not too concerned about there not being enough applicants for our programs. What I'm concerned about is that I'm turning too many of them away.

MS. SETNOR: Colonel Setnor again.

I just have to clarify a point. While our wounded overseas are young and healthy, they come in with such trauma, you can't imagine, open head injuries, closed head injuries, limbs that are dripping off of them. These are not well people. They might be young and healthy, and that might be something that helps to keep them alive.

But many of my military colleagues, who are sitting here in the audience, will tell you today that many of the patients that we took care of, both in Afghanistan and in Iraq, any place the military is deployed, we have to take care of the local nationals as well. Those people are not healthy. And we have to determine their health status sometimes without a health history. And we find out as the case goes along what the issues might be. And if we weren't trained to be independent providers, we would not be able to accomplish the 97 percent of our soldiers that are coming home in-

tact.

So just to clarify, the folks that we take care of, yes, they are young and healthy. But they are in some cases close to mortally injured and we take care of them successfully, independently and bring them home.

Thank you.

MS. KELLY: Good morning. I'm Martha Kelly. I'm the administrator for Virginia Anesthesia. We are a mid-size anesthesia group down in Williamsburg, Suffolk and Newport News, Virginia.

We have not been fully staffed for the past three years with our CRNAs. A year and a half ago we said we were going to start hiring CRNAs. We had more orthopedics. It just made sense to do it. It took six months to even get someone in for an interview. And this is Williamsburg. This is a nice place to live. So, my thought is if we had CAAs here, I would have options to hire other people, to bring in -- our cost has skyrocketed, the CRNAs because of the competition.

The competition that we have and I'm talking from an independent group, we do have the big management companies. They have deeper pockets than we do. Our cost for all our CRNAs and we have

employed 25, have gone up 30 percent in the past year just to maintain. And to be able to staff, our cost to do business has just skyrocketed because of staffing. But if we had a choice, if we had an option of another professional, I think that would -- it would certainly make my life a lot easier in hiring, and someone that is qualified to do the work alongside the CRNAs and under the care team model.

Thank you.

DR. PINEGAR: Once again, I'm Dr. Pinegar. I would just like to clarify a couple of points.

First and foremost, we have heard a fair bit about certain hospitals, perhaps hospitals that don't have access to a physician anesthesiologist, can't afford one, which, I think, is a little bit regrettable. I understand there are certain circumstances that might necessitate that.

But I would like to read just an excerpt from a statement from the American Study of Anesthesiologist in relation to medical supervision of nurse anesthetists by nonanesthesiologist positions, which states, general anesthesia, regional anesthesia, and monitored anesthesia care expose patients to risk. Nonanesthesiologist positions may not possess the expertise that

uniquely qualify and enables anesthesiologists to manage the most challenging medical situations that arise. While a few surgical training positions, such as oral surgery, provides some anesthesia specific education, no nonanesthesia programs prepare their graduates to provide an anesthesiologist level of medical supervision and clinical expertise.

However, surgeons and physicians certainly add to a patient's safety and quality of care by assuming medical responsibility for care when an anesthesiologist is not present. Anesthetist and surgical complications often arise unexpectantly and require immediately medical diagnoses and treatment.

Even a state law or regulation says the physician is not required to supervise non-physician anesthesia practitioners. The surgeon may be the only physician on site, whether the need is preoperative medical assessment, resuscitation from an unexpected complication, the surgeon may be called upon as the most highly trained professional present to provide medical direction of perioperative health care including nurse and anesthesia care.

To optimize patient safety, careful

consideration is required when a surgeon will be the only physician available as in some small hospitals, free standing surgery centers and surgeon's offices in the event of an emergency, lack of immediate support from other physicians trained in critical medical management may reduce the likelihood of successful resuscitation. This should be taken into account when deciding which procedures should be performed in settings without an anesthesiologist and which patients are appropriate candidates.

I think it's careful to consider that in certain critical access hospitals or small surgery centers that the types of cases that are being done are probably not to the level of what is being done in places like the Washington Hospital Center. So to draw a parallel between those two is probably inaccurate.

One other point I would like to speak on is a comment about the training difference between AAs and CRNAs. And I would like to reiterate that the requirements that are placed on students that rotate through us, whether they are Georgetown students, our Case Western AA students or even some of the ODU students that we had the pleasure of rotating through our hospital, that we require them to do

work beforehand, to be prepared for the cases they are going to participate in, to have done their homework on the patients they are going to take care of, and to have a perioperative anesthetist plan in place. This goes for both our student nurse anesthetists, our anesthesiologist assistant students as well as our resident physician, our resident anesthesiologist participants. We hold them all to the same level, the same standards of preparedness. And in my mind, they generally rise to that occassion as a whole regardless of the training philosophy they come from.

And the last point I would like to speak on is to the question that was asked of you, who would you want taking care of granny. And I have to say that being intimately involved in the training programs for both AAs, resident physicians and for anesthesiologist assistant students, that I echo and I agree with the statement that the American Society of Anesthesiologists has put out that anesthesia care team model is the best and, if possible, should be followed.

And if my grandmother, my wife, my children, if I need anesthesia support for a medical procedure having become very familiar with the

students that we graduated and subsequently hired both from the Georgetown program and from the Case Western program, I have no hesitation whatsoever in placing my life or the lives of my family in the care of the people that I have trained regardless of the training program they came from. I trust them implicitly. Many of the people here standing with me today representing our support for licensure for AAs are people that I trust with the lives of myself and with my family members. And I just wanted to make that point.

MR. WELLS: All right.

Is there anyone else here that would like to speak?

One more time, is there anyone else here that would like to speak?

Written comments will be accepted until 5 p.m. on July 31st, 2017. I appreciate everyone who is here. If you would like a copy of the transcript -- and this was complicated, so let's give her an applause -- please contact Ms. Jackson here at the office.

At this time I will conclude the public hearing concluded.

(Hearing concluded.)

CERTIFICATE OF COURT REPORTER

I, Anne Marie Nelson, hereby certify that I, having been duly sworn, was the Court Reporter in the County of Henrico, Virginia on June 27th, 2017, at the time of the hearing herein.

I further certify that the foregoing transcript is a true and accurate record of the testimony and other incidents of the hearing herein.

Given under my hand this 16th day of July, 2017.

_____

Summaries of Written Comments Received

COMMENTS SUPPORTING AA LICENSURE		
1	Addison Cain 1st year student Case Western Reserve	Excited about the field. Would like to work in Virginia
2	Akash Sinha 1st year student Case Western Reserve	Same – notes students can rotate in state but not practice
3	Aldijana Mekic, CAA Alexandria	CWR graduate would like to work in Virginia
4	Alex Jucisin 1st year student CWR	Sister is a CAA at Medstar Washington Hospital Center in D.C. Wants to work in Virginia
5	Alex Steed, CAA Maryland Academy of Anesthesiologist Assistants Resident of Maryland	Practices at Children's National Medical Center in D.C. Explains educational content, # of jurisdictions. Anesthesiologists are the only physician specialty in the state to have only one physician extender.
6	Amarender Parkash, MD Anesthesiologist at MedStar Health Washington Hospital Center	Supervises both CAAs and CRNAs. Counters argument that CAAs displace CRNAs, cites NPI data that indicates when CAAs enter the marketplace, there is CRNA growth. BLS data shows the costs of CRNAs drops in states with the highest # of CAAs. Concludes this will increase access ??
7	Ayman Abdel, MD., et al. (10 others) American Anesthesiology of Virginia Leesburg	Anesthesiologists practicing in Loudoun Hospital. Unable to recruit full-time CRNAs, no interest in night and weekend regardless of salary. Would hire CAAs in a minute if they could practice in Va.
8	Amy Cababe, MD, CAA Resident of Missouri	Both CAA and MD - speaks to CAA education. Refers to shortage without further proof. Notes cost of CRNAs drops 15.2% with introduction of CAA. Want more than one choice of midlevel provider,
9	Andrew Le Student CWR Resident of Arizona	Excited about the filed. Would like to work in Virginia.
	Annie O. Wilhite, MD	Speaks to ACT and adding members to the team. Speaks to anesthesiologist education and training. Thinks anesthesiologists needed to be present. Only one physician extender choice. Wants "competitive market" for extenders to help drive costs down. Rotation through Va. but not practice.
11	April Basham, RN Salem	Nurse for 11 years, supports ACT and reiterates anesthesiologists having one physician extender instead of 6.5 for other specialties.
12	Arthur Gower, III MD, FAAP	UVA 1958, Navy and pediatric residency in SC. Practiced in Manassas 1963 to 2010 son is CAA

	Manassas	
13	Arthur Ke, CAA Providence Hospital DC	Provides personal education and training. Would like to work in VA, Notes a dozen colleagues would like the same
14	Ashish Patel, CAA Practicing in DC Director of Simulation CWR	CAA 19 years. Family and business in Harrisonburg but cannot live there because he can 't work in Va. Cites growth of the profession.
15	Ashleigh Dechow, CAA, MSA	Notes profession's growth in last 10 years, licensure in surrounding states, Bureau of Labor Statistics' "recognizing CAAs as reducing costs of CRNAs in states with largest concentration of CAAs. Contends CAAs do not displace CRNA's.
16	Babak Roboubi, MD Sr. Attending Anesthesiologist Georgetown U.M.C. MedStar Health	Worked alongside CAAs for 15 years. Immediate Past-President of DC SOA
17	Brian A. McConnell, MD Past President VSA Asst. Professor, VCU Northern Campus	States Va. law requires physician-led team-based model of care with nurses supervised. Describes differences in physician education and training with that for CRNAs, reiterates CAAs only work under the direction of an anesthesiologist. Cites a 2000 study published in *Anesthesiology* that concludes anesthesia care is improved with involvement of an anesthesiologist. Notes acute nature of anesthesiology requires moment-to-moment intraoperative anesthesiologist availability to address emergencies. States patient and family expectation of this availability in the operating room context. Notes anesthesiology is the only specialty in Va. without choice of physician extender/mid-level practitioner. Notes with CAAs in proportion to CRNAs in the employment market lower costs. Opines competition would lower healthcare costs. Notes AA students may do clinical rotations in Va. but practice as CAAs. Several Va. residents must travel to other states to work.
18	Bridgetee Coates, RN, C-EFM Roanoke	Nurse practicing for 34 years and has worked with anesthesiologists in the OR and labor and delivery. Believes the ACT approach is best. Notes CAAs are permitted to practice in surrounding states. References Bureau of Labor and Statistics and NPI data indicates decreased anesthesia cost with introduction of CAAs. Supports CAA licensure as addition to anesthesia care providers to help provide best care possible in most cost-effective way.
19	Caitlin Burley, CAA President DC Academy of Anesthesiologist Assistants, Treasurer Virginia Academy of Anesthesiologist Assistants	Adheres to ACT as best model. Notes requirement to travel to work while students can rotate in Va. Works at MedStar Washington Hospital Center in D.C. Notes there are 72 staff anesthetists with 40 CAAs which practice interchangeably as a team rotating through every specialty surgical care area offered by the hospital.

	Virginia resident	
20	Caitlin Burley, CAA DCAAA President	On behalf of the DC organization supports Va. licensure. Notes CAAs have been practicing in D.C. for 15 years, in 17 jurisdictions and in the Veterans Administration System. They practice in all major hospitals in the city. They are recognized by CMS, TRICARE and major commercial payers. There are over 2000 CAAs nationwide. There are over a dozen CAA members who are Va. residents seeking to work here.
21	Camille Jansen, CAA Washington, DC	Expresses desire to work in Virginia.
22	Carina N. Rosslee, MD Anesthesiologist Winchester	See comments from Brian M. McConnell, MD (#17).
23	Catherine Olumba Junior AA Student CSW DC	Native DC resident. Expresses desire to work in Virginia and holds mutual benefit for respective communities.
24	Cathy Jo Swanson, MD Anesthesiologist Roanoke	See #17.
25	Chad Toujague, CAA, MBA CEO Halo Health, LLC Seffner, FL	Speaks to CAA educational and training background and considers difference with CRNAs only due to anesthesiologist supervision for CAAs. States his company staff anesthesia providers across the U.S. Notes the two professions are interchangeable where CAAs are permitted to practice. States CAAs are qualified to perform entire variety of anesthetic procedures, including procedures related to pediatric cardiac patients, labor and delivery, and full range of surgeries. Posits CAAs could contribute addressing a healthcare deficit in Virginia.
26	Chris Dejelo, CAA MedStar Washington Hospital DC	Previously lived in Va. but moved to DC because of commute. Wishes to return. Explains CAA education and training requirements, 17 jurisdictions regulate CAAs, and CAAs work in many specialties. Indicates CAAs work in the ACT model and are reliable practitioners with proven safety record.
27	Christopher Eric Cordero, MD Anesthesiologist and Partner, Valley Anesthesia Roanoke	Cites 25 years' ACT practice model experience. Considers existing Virginia statutes requiring physician supervised anesthesia care as the "gold standard" for patient care in Va. and U.S. It ensures physician access in an emergency. Refers to the 2000 published study in *Anesthesiology* indicating improved care with anesthesiologist involvement. Notes acute nature of anesthesiology requires moment-to-moment intraoperative anesthesiologist availability to address emergencies. States patient and family expectation of this availability in the operating room context. Notes anesthesiology is the only specialty in Va. without choice of physician extender/mid-level practitioner. Reports lower anesthesia care costs may be expected with CAAs participation in the employment market in proportion to CRNAs.

28	Christopher Cromwell, MD Chairman and Medical Director, Dept. of Emergency Medicine at Stone Springs Hospital Center Loudoun	Appreciates the value of team work in in clinical settings. Indicates the option to choose from a variety of qualified employees is essential to building a tem for staffing a facility.
29	Christopher C. Rigsby, MD Anesthesiologist Roanoke	Cites current shortage of both anesthesiologists and CRNAs in the area. See #17.
30	Connie S. Jones, MD Anesthesiologist August Health in Fishersville and UVA Health Systems in Charlottesville	Notes practices as MD-only and with supervision of CRNAs. Reports differences in pre-med curriculum for CAA vs. nursing curriculum for CRNAs. Holds the former is more advantageous to obtain advanced degrees required in the practice of anesthesia. Reports daily practice with rotating AA students. States if changed from an all-MD practice, would hire a CAA over a CRNA. Reports there are 14 CAAs and 8 CAA students who live in Virginia but must leave to work. Notes CAAs are recognized by CMS, Tricare and all major commercial payers. Cites Bureau of Labor Statistics reporting of decreased anesthesia care cost in states with CAAs.
31	Craig Stopa, MD Anesthesiologist Hampton Roads	Reports moving to Va. after Emory University residency where he worked with CAAs. Notes anesthesiologists have only one physician extender/mid-level practitioner to choose from, driving up costs. Notes the BLS described decreased anesthetist employment costs where CAA and CRNA are in proportionate numbers in the labor market.
32	Daniel Mesaros, CAA DC Fairfax resident	Notes serving as a board member for the American Academy of Anesthesiologist Assistants, having safely practiced since 2008 and believes he deserves to be permitted to practice in Va. Speaks to lowering health costs and promoting diversity in the team model.
33	Daniel Perlin, MD Senior Physician Anesthesiologist Washington Hospital Center MedStar Health DC	States working at a level one trauma center and at the hospital for 20 years, 15 of which with CAAs. Notes requisite premedical background and intensive anesthesia training though specialty-specific training rotations. Indicates high level CAAs have a high level of critical thinking and decision-making capabilities along with the specialized skill set that allows for safe, efficient, and quality patient care.
34	Daphne Tolentino, CAA	Describes education and training from Case Western Reserve University in Ohio, becoming a CAA in 2007, a Virginia resident since 2009 and working at the Washington Hospital Center level one trauma center since 2007. Seeks work opportunity options to expand to Virginia.

35	David Fields, MD Anesthesiologist Washington Hospital Center MedStar Health DC Resident Potomac, MD	Cites 30 years' experience as individual practitioner and ACT member. Indicates CAAs provide value and dedication.
36	Debbie Altizer, RNC-EFM Roanoke	States ACT approach is best for patients. Advocates for Va. residents being permitted CAA care. Indicates they provide anesthesiologists with an additional choice of mid-level anesthesia providers where other specialties have an average of six and a half. Expresses view that CAs will add to quality, availability, and affordability of healthcare and other aspects of Virginia communities.
37	Dia Copeland, MD Gastroenterologist MidAtlantic Permanente Medical Group DC and Maryland locations Alexandria resident	States gastroenterologists rely on anesthesia providers for endoscopic and other procedures. Approves of the ACT model as patients present with chronic conditions. Reports having worked with CAAs at Washington Hospital Center for six years. Notes high quality, compassionate care and emphasis on safety.
38	E. Alexandra Zubowicz, MD, FACS Surgeon Washington Hospital Center MedStar Health DC	Reports having worked with CAAs for a decade in the DC area. Performs surgery daily and supports ACT model. Indicates patients with high acuity levels. References a national shortage of anesthesia providers, growing number of procedures requiring anesthesia services, and aging complex patient population. Posits that licensing CAAs will minimize strain on CRNAs and anesthesiologists.
39	Eileen Begin, MD Interim Chair, Dept. of Anesthesiology Washington Hospital Center MedStar Health DC	Cites department employing CAAs for 15 years, use of ACT approach, and employing CRNAs side-by-side with CAAs. They are paid the same. Notes appreciation of the option of providers. Report no issues with employment of CAAs or CRNAS. Reports high acuity patient population and CAAs assisting with all subspecialties.
40	Eleanor Kathryn Lowry, MD Anesthesiologist Lynchburg	Reports embracing ACT approach and has 15 MDs and 8 CRNAs in current practice. Notes having difficulty recruiting CRNA for several months despite competitive salary, work schedule and benefits. Notes nearly 200 positions on www.gasworks.com. Indicates they have hired locum tenens to provide temporary staffing. Cites other physician specialties have multiple care extenders and CAAs are licensed in surrounding states. Cites CAA education and training backgrounds, safety, and anesthesiologist supervision for physician intervention if needed. Would hire CAAs if licensed.
41	Ella Branch, RNC-OB Buchanan	Virginia resident for 32 year and nurse for 10. Reports working with anesthesiologists in labor and delivery. Approves the ACT approach.

		Notes Va. is surrounded by states that license CAAs. Beliefs CAAs licensure will provide for best possible care and cost effectiveness.
42	Emil Engels, MD, MBA President, Virginia Society of Anesthesiologists Practicing Anesthesiologist in Fairfax and resident of Oakton	Reports several years' personal knowledge of CAAs and knows anesthesiologists who work with CAAs in NC, GA, and DC. Speaks to safety records, supervision and doing every type of cases. Cites his company has 40 open positions for CRNAs that they cannot fill now. References www.gaswork.com with almost 200 unfilled positions in Va. Indicates having to pay overtime and hiring locum tenens. Notes one care extender type. Reports a dozen CAAs living in Va. but not able to work here.
43	Emilia Morales Student CWR DC Californian with family in Stafford	Cites personal history and desire to work, notes 17 states that license CAAs. Seeks to work in Va. with CAA.
44	Emily Wilson Sister to CAA Aldie	Seeks licensure for CAAs and approves of the ACT approach.
45	Erin Felger, MD, FACS Assoc. Program Director of Surgery Washington Hospital Center MedStar Health DC Great Falls resident	Notes their endocrine surgery department attracts patients requiring specialized surgical and anesthesia care. Approves of the ACT approach. Worked with CAAs for 8 years and is highly favorable of their contributions to the team. Attests to their high level of safety and focus.
46	Eugenie Heitmiller, MD, FAAP Chief of Anesthesiology, Pain, and Perioperative Medicine at Children's National Health System	Also representing anesthesiologists from Pediatric Specialists of Virginia Ambulatory Surgery Center in Fairfax See #17. Additionally, notes p participating in AA training reports NPI data that show when CAAs enter the marketplace in a particular state, they do not displace any CRNAs. Indicates that there is a higher percentage of CNRA growth in states with CAAs vs. states without them.
47	Fay Horng, MD Dept. of Anesthesiology Washington Hospital Center MedStar Health DC	Reports working a major level one trauma center and working with CAAs and CRNAs within the ACT model. Indicates being able to work four rooms at once. States it provides for efficiency and safety, especially in faster-paced settings such as gastroenterology and electrophysiology suites. Equates CRNA and CAAs.
48	G. Bryon Work, MD Anesthesiologist Past-President of Atlantic Anesthesia and Past-President of the American Society of Anesthesiologists Va. Beach	Indicates CAA education and training. Their potentially service as an additional choice as physician extender. Counters that demand for all care team extenders continues to increase when CAAs are licensed in states and does not result in CRNA job loss. Seeks for CAAs living in Va. to be able to practice here.

49	Gail Simon Wappingers Fall, NY	Writes in support of CAA licensure and in support of Stefan Guzewicz, AA student.
50	George O. Woodrum, MD Staunton	Reports helping to train AAs at Augusta Health in Fishersville. Notes having worked with CRNAs in training and 25 years of private practice. Opines concern over insisting on own way rather than following directions and expense. Seeks CAA licensure to increase options for anesthesia providers.
51	George Landon Smith, MD Anesthesiologist SW Va.	No personal experience working with AA but colleagues in surrounding jurisdictions speak highly of them. Notes his practice serves an ever-expanding healthcare organization in rural Va. and that they have not been able to hire enough physicians or CRNAs. They pay overtime and hire locum tenens. Notes the dozen CAAs who are Va. residents.
52	Greg Mastropolo, CAA Clinical Professor Quinnipac University School of Medicine Washington Hospital Center MedStar Health DC	Reports being in practice 20 years. Notes CAAs have practice in ACT model for 15 years. Speaks to his practice in caring for trauma and emergency and other high acuity patients and the CAA's role in the perioperative team.
53	Harika Nagavelli Resident of Iowa	Cites Rand Corporation study and projects a nationwide shortage of anesthesia providers by 2020 and need for 200-300 providers within the next three years, alone. Speaks to anesthesia as being an overlooked area and AA profession as new and evolving. Indicates AAs could help with costs and care.
54	Hassan Adeniji-Adele, MD Anesthesiologist Director of OB Anesthesiology School of Medicine Washington Hospital Center MedStar Health DC	Notes CAAs used successfully in his department for 15 years. Hospital cares for women with serious or potentially life-threatening comorbidities. Notes the hospital's Anesthesiology Department relies heavily on the ACT model and has benefitted from CAA availability.
55	Ikenna Uzomah, CAA, MSA MedStar Washington Hospital and Providence Hospital Maryland resident	Reports working in ACT model. Cites BLS data on cost decrease for CRNAs with CAAs and NPI data on growth of CRNAs in states with CAAs. Notes 17 jurisdictions.
56	Iman Mush Student Emory Born in Virginia	Expresses desire to work in Va. once certified.

	Resident of Georgia	
57	Jacquelyn Burley, RN Parent Resident of Georgia	Wishes for daughter who is a CAA to be able to practice in Va.
58	James & Elizabeth Eun Parents Reston	Wish for son who is a student at CWR to be able to practice in Va.
59	James F. Hammill, MD Anesthesiologist Virginia Anesthesia & Perioperative Care Specialists Newport News	See #17
60	Janet E. Ha Student CWR	Desires to be able to practice in Va. upon certification
61	Jared B. Fitzgerald Student – Senior Bedford	Desires to be able to practice in Va. upon certification
62	Jason Hansen Patient Alexandria	Reports having received CAA care and supports their licensure.
63	Jason Maas, MD Anesthesiologist Anesthesiologist Virginia Anesthesia & Perioperative Care Specialists Newport News	See #17
64	Jeff Kessel, MD Anesthesiologist ACV, Inc. Roanoke	Reports having trained and worked with CAAs in West Virginia. Notes that other specialists are hiring nurse practitioners and physician assistants while anesthesiologists have no other choice except CRNAs. Considers CAAs and equivalent with PAs. Notes they add diversity and that many areas of the state are in need of anesthesia providers. Notes they rotate through Va. as students but cannot practice here.
65	Jeffrey Gander, MD Pediatric Surgeon UVA Children's Hospital	Reported practicing in New York and working with CAAs. Seeks anesthesiologists to have the additional option of CAAs as anesthesia providers. Notes he does not understand the rationale behind permitting student rotations in Va. but not practice.
66	Jeffery S. Plagenhoef, MD President American Society of Anesthesiologists	Cites ASA Policy on ACT. Notes CAAs are key members of the ACT and anesthesiologists should have the choice of anesthesia providers. Describes CAA education and training and indicates they believe CAAs and CRNAs are interchangeable.
67	Jeffrey Weiss, DO President, Tem Health	Head of a national anesthesia services management firm. Views Va. as having a significant shortage of anesthesia providers. Points to

	Anesthesia Palm Beach, FL	anesthesiologists having only one choice of provider as a problem.
68	Jennifer Hanna, MD Senior Anesthesiologist Washington Hospital Center MedStar Health DC	Reports having worked with CAAs for 15 years. Supports ACT model.
69	Jennifer Kunzelman, CRNA Washington Hospital Center MedStar Health DC Alexandria resident	Is married to an CAA. Opines CAAs are equally qualified to CRNAs. Reports that they are interchangeable with identical job responsibilities. Contends CAAs will not shrink CRNA job markets and will improve the shortage of anesthesia providers and reduce workload. Reports hoping to raise her family in Va.
70	Jermane Leclerc, MHSc. MHSA, CAA Program Director/Asst. Professor, Nova Southeastern University Ft. Lauderdale, FL	Generally supports CAA licensure in Va.
71	Jessica Roman, MD Anesthesiologist DC Va. resident	Reports having worked with CAAs for eight years. Thinks anesthesiologists should have choice of additional providers. Supports ACT model.
72	Jill Nagel, MD Anesthesiologist Anesthesiologist Virginia Anesthesia & Perioperative Care Specialists Williamsburg	#17
73	John F. Butterworth, IV, MD Anesthesiologist Richmond	Reports working in other states with CAAs. Notes they are employed by the Veterans Administration. Discusses CA educational backgrounds, they're not displacing CRNAs, and there are no changes in reimbursement rates in practices that utilize them.
74	John Gower, CAA Toledo, OH	Notes being born and raised in Va. and seeks CAAs practice here.
75	John E. Joyner, MD Senior Attending Anesthesiologist Washington Hospital Center MedStar Health DC	Reports working with CAAs for 15 years and has trained them. Uses CRNAs and CAA interchangeably and appreciates having provider options.
76	John Q. Schisler, II, MD Anesthesiologist	Reports working with CRNAs at Loudoun Hospital and the Air Force and was trained by and worked with CAAs during his residency. Notes

	American Anesthesiology of Virginia, P Loudoun	no difference in CRNAs and CAAs.
77	Jonah Lopatin, MD Anesthesiologist Washington Hospital Center MedStar Health DC	Notes since starting in 2016 at this hospital has been working closely with CRNAs and CAAs and rotating students; comments on high quality.
78	Judy Stillway Aunt of student Annandale	Wishes for nephew who is a student at Quinnipiac to be able to practice in Va.
79	Kerlly Castellano Student CWR DC	Anticipates graduation in 2019 and would like to live and work in Va.
80	Kerrie Walton, RN White Stone	Reports living in Va. for 33 years and being a nurse for 12 years. Supports ACT approach. Notes surrounding states license CAAs. References reduction in anesthesia costs without displacing CRNAs based upon Bureau of Labor Statistics and NPI data.
81	Kevin Handy, MD Attending Physician Surgical Critical Care and Anesthesiology Washington Hospital Center MedStar Health DC	Notes the quality of CAAs at the hospital and the rotating students. Cites specific instance of CAA recognizing a pulmonary embolus on a chronically ill patient and secured airway and resources needed. Speaks to need for rapid and flawless teamwork in dealing with ICU and trauma and burn cases.
82	Kevin Sistani Student – 1st year CWR DC	Notes personal background and seeks ability to work in Va.
83	Khaled Salem, MD Fairfax	Reports working with CAAs for 12 years and notes trust with any patient. Supports ACT approach. Indicates he supervises CAAs and CRNAs and trains students in both professions. Notes that DC anesthesiologists can choose from among CRNAs and CAAs.
84	Kim Vuong, CAA Student Clinical Coordinator Washington Hospital Center MedStar Health, Adjunct Professor CWR DC	Prior Va. resident for six years but had to move due to commute. Seeks to return. Teaches students, CAAs, CRNAs, anesthesiologists and other physicians in life support courses. Also serves as the DC Academy of Anesthesiologist Assistants Treasurer. Notes 17 jurisdictions license CAAs.
85	Krishnan Venkatesan, MD	Reports working closely with CAAS in the operating room. Supports ACT approach. Notes he finds no difference in care his patients

	Director of Urologic Reconstruction, Washington Hospital Center MedStar Health DC & Assistant Professor Urology, Georgetown University School of Medicine	receive due to type of mid-level provider. Indicates he feels safe due to the collaborative team approach.
86	Layne K. DiLoreto, MMSC, CAA	Reports practice over 7.5 years and living in Va. for 6. Notes CAAs have provided safe care in many other states and in federally mandated healthcare settings for over 50 years. Notes ACT model camaraderie and safe reliable practice. Cites supervisory and certification requirements, 17 jurisdictions, practice in VA system, and CMS reimbursement. Seeks practice authority in Va.
87	Lindsay Frey, CAA	Cites certification requirements. Affirms ACT model
88	Linh Duong	Cites personal background, growth of the CAA field, and student rotation but not later work in Va. Notes anesthesiologists' support for CAA licensure, reduction in cost of CRNAs, but not displacement. States 14 CAAs live in Va. and posits a student increase with licensure in Va.
89	Lisa Grubb, RN Vinton	Reports living in Va. 35 years and practicing nursing for 11. See #80.
90	Lynda Wells, MD Anesthesiologist Keswick	Reports working full-time in OR supervising CRNAs and teaching and supervising anesthesiology residents. Supports ACT model with presence of physician essential. States it is expected by patients and insurers. Considers CAA practice equivalent to CRNAs. Indicates they have an excellent safety record that is not inferior to CRNAs. Posits ACT benefits from flexibility of CAA's practice style differing from nursing. Opines CAAs complement CRNA role and improves care without diminishing or replacing the role of others. Indicates it makes no sense to permit rotation as AA students but not practice in Va.
91	Magdalena Tomecka, MD	Reports working with CAAs for several years. Indicates her practice has many open positions and cites 200 unfilled positions in Va. Posits a shortage that has to be addressed through overtime and locum tenens because anesthesiologists have only one anesthesia provider choice. Notes a dozen or so CAAs living in Va. but having to work outside of the state. Holds CAAs are safe and anesthesiologists enjoy working with them.
92	Mandy Irby, RN-OB, C-EFM Roanoke	Reports living in Va. for 16 years and 10 years as a nurse in labor and delivery. Notes sister is a CAA who lives in northern Va. and works in DC. Notes surrounding state license CAAs and indicates CAA licensure would provide more anesthesia staffing options to help alleviate shortages in many parts of the state.
93	Ma-Paz Giorla, MD Senior Attending Anesthesiologist	Reports practicing 46 years and working with CAAs for 15. Cites CAA education and training. Notes trust with daughter's surgery.

	Washington Hospital Center MedStar Health DC	
94	Marc Camacho, MD Vascular Surgeon	Recommends ACT model. Notes other specialties have multiple mid-level extenders while anesthesiologists, only one. Reports seeing shortages. Opines that licensing CAAs will ease scheduling and reduce patient wait times. Views CRNA and CAA training and safety as similar.
95	Maria C. Forner, Student- 1st year CWR Resident of Ohio	Cites CAA education and training. Notes there are 17 licensing jurisdictions. Indicates CAA licensure would contribute to affordable care.
96	Marilyn L. Archambeault Student CWR	Supports ACT model. Notes rotation but not practice in Va. Knows students who would return to Va. Notes CAA education and training for certification, continuing education and recertification requirements every 6 years. Notes endorsement by ASA, CMS, Tricare, and major commercial insurer reimbursement. Indicates CAAs result in cost-reductions for patients and potentially reduce production pressures in the OR.
97	Marilyn Williams Senior Administrative Assistant Anesthesiology Department Washington Hospital Center MedStar Health DC	Reports hospital views CAAs and CRNAs as interchangeable and has reduced a shortage of anesthesia providers without jeopardizing care. Posits that more anesthesia providers are needed to keep pace with a growing, aging population. Cites trust with own surgery.
98	Mary Kay Grady, MD Anesthesiologist Washington Hospital Center MedStar Health DC Virginia resident	Reports practice for 20 years, and employing CAAs. Group teaches and supervises AA students at CWR-DC. Notes student quality and that they are in high demand once certified.
99	Matthew Kattapuram, MD President, DC Society of Anesthesiologists	Cites CAA education and training and their practice in several DC hospitals and ambulatory surgery facilities. Supports ACT model. Cites anesthesiologist education and training and that all patients should have access to this expertise. His society has 50 CAAs. Notes they participate alongside anesthesiologists in CE, legislative conferences, and social events with shared goal of promoting safe practice.
100	Matthew Fulton, DO Anesthesiologist Valley Anesthesia, PC Salem	Reports training at CWR-Ohio and University Hospitals of Cleveland which employs CRNAs and CAAs. See #17

101	Maxine Lee, MD, MBA Anesthesiologist Anesthesiology Consultants of Virginia, Inc. Roanoke	Notes periodic difficulty in hiring enough CRNAs to staff ORs, indicates CAAs could help alleviate the shortage. Cites CAA education and training, their recognition by CMS, Tricare and commercial. insurers, their licensure in 17 jurisdictions, and student rotating in Va. but unable to work here. Also notes anesthesiologists only have one physician extender currently.
102	Michael Burley Parent	Wishes daughter could practice in Va.
103	Michael Diskin Student – 1st year CWR DC Resident of Michigan	Reports having begun rotations at Washington Hospital Center MedStar in DC. Describes personal education and experiences prior to the program. Notes Michigan's delegation authority rather than licensure, favors licensure for the benefit of patients and cost-savings. Notes 17 jurisdictions and 14 CAAs living in Va. and students who would wish to practice here.
104	Michael F. Murphy, MD Chief Medical Officer MEDNAX Health Solutions Partner Sunrise, FL	Company manages professional anesthesiology services nationwide. Reports employing over 1,300 CRNAs and over 300 CAAs. Holds both professions are appropriately trained and proficient. Notes that anesthesia practices in Va. experience shortages on a continuing basis. Anticipates the problem will worsen. Supports VSA's efforts to gain licensure for CAAs.
105	Michael Wilson Parent Ashburn	CAA daughter a Va. resident for 16 years; wishes she could practice in Va. As a patient, prefers ACT model
106	Michel & Gezail Habib Parents Annandale	Supports daughter's ability to work in Va. Notes her work ethic, education and training. Reports on history of CAAs. Cites family history of healthcare practitioners. Notes CAAs and CRNAs perform similar work. Supports ACT model. References NPI data conclusion that CAAs do not replace CRNAs.
107	Mijin Kim, CAA Virginia resident	Reports practice in DC, having established an S-Corporation in Virginia and seeking practice here.
108	Millard Hawkins, MD Senior Anesthesiologist Washington Hospital Center MedStar Health DC	Reports working at the hospital and with CAAs for 15 years. Notes his department serve's DC's largest Level I trauma center's OR, cardiac electrophysiology lab, gastroenterology suite, interventional radiology, and cardiac catheterization lab. Their ACT model allows CAAs and CRNAs to staff all of these locations and have an anesthesiologist involved in care. Discusses high acuity of patients and interchangeability of and comfort with CAAs and CRNAs. Notes Va. facilities are more vulnerable to provider shortages because they cannot utilize CAAs.
109	Mirsada & Nusret Mekic Parents Roanoke	Wishes daughter could practice in Va. Cites 17 states, CAAs as additional mid-level provider and lowering costs, and supports ACT model.
110	Mohammed Pradhan Student – 1st year CWR DC	Reports personal background. Wishes to practice in Va. Notes southeastern region as favorable

111	Mukesh, Nigam, MD Anesthesiologist Danville Regional Health System	Reports practicing 15 years, neighboring licensing states, and need for second mid-level provider. Currently supervises CRNAs and would have no objection to also supervising CAAs.
112	Nagwa Moustafa, MD Senior Attending Anesthesiologist Washington Hospital Center MedStar Health DC Virginia resident	Reports working with CAAs for 15 years. Supports the ACT model. Notes addition of CAAs enabled increase of the department's reach without compromising care. Notes high level of trust.
113	Nancy Long Student – 1st year CWR DC Alexandria	Note 2000 CAAs nationwide, rotation but not practice in Va. Indicates there is a shortage of anesthesia providers in Va. States CAAs practicing in surrounding states could help offset it.
114	Oluwatoyosi Shitta-Bey, CAA Georgia	Would like to return to the area. Notes ACT model is the safest. Cites BLS information on reduction in anesthesia employment costs with CAA introduction. States he would be willing to move to and practice in Va.
115	Parth Kalola Student – 1st year CWR DC Alexandria	Notes personal background. Wishes to practice in Va.
116	Paul Rein, DO Anesthesiologist	Notes practice in Va. since 1982 and teaching residents and CRNA students, supervising CRNAs, and supervising AA students. Notes independent practice of CRNAs is not allowed in several countries. Supports the ACT model, seeks an additional mid-level provider choice. Notes that CAA practice in many states and often in the same practices as CRNAs. States there is no reason not to allow CAAs to practice in Va.
117	Paul Sugarbaker, MD Medical Director for Center for Gastrointestinal Malignancies Washington Hospital Center MedStar Health DC	Reports working with CAAs for 15 years. His performs surgeries with intra-operative chemotherapy several times per week. It is a long procedure and requires immense support from the ACT. Patient often require blood pressure support, transfusions, and electrolyte corrections, and CAAs are highly skilled in evaluating patient needs and appropriately intervening. Trusts CAAs.
118	Phillippe Phung, MD Washington Hospital Center MedStar Health	Reports practicing with CAAs for 15 years. Notes hospital is Level I trauma center. Indicates the training, expectations, and responsibilities for CAAs and CRNAs is the same. There is a 1:1 ratio.

	DC Senior Anesthesiologist Clarkesville, MD	
119	Praful Ramineni, MD Plastic and Reconstructive Surgeon West End Plastic Surgery DC Virginia resident	Reports practicing 10 years. Has worked with CAAs and CRNAs and finds them equivalent. Notes the more specialized skill set for CAAs and opines this would benefit hospital environments by allowing greater ability to fill open positions and address shortages.
120	Rhett Irby Vinton	Sister-in-law is CAA. Would like CAAs to practice in Va. in support of their communities
121	Rhiannon Hainds Student -1st year CWR DC	Cites personal background. Reports working with many CAAs and classmates who live in Va. and would want to work here.
122	Richard Davies Student – 1st year CWR DC	Cites personal background. Reports working with many CAAs and classmates who live in Va. and would want to work here.
123	Richard P. Wyeth, MD, PhD Associate Professor of Medical Physiology and Human Anatomy Edward Via College of Osteopathic Medicine	Supports additional physician extender for anesthesiologists. Notes CAAs are recognized by CMS, Tricare, and commercial insurers. Reports having substantive discussions with CAAs and is confident in their education and training.
124	Rita Basanti Aunt Annandale	States she understands what it takes in the medical field and believes CAAs are fully equipped and well-trained to share the same goals as CRNAs. Cites need for second anesthesia provider for anesthesiologist support. Notes the BLS and NPI conclusions that there are lower costs in state with CAA licensure but no displacement of CRNA jobs.
125	Robert Jacobson, MD Senior Anesthesiologist Washington Hospital Center MedStar Health DC	Reports working with CAAs for 8 years. Indicates he practices exclusively in the cardiac electrophysiology lab and that patients are often the sickest and most fragile in the hospital. Supports ACT model. Trusts CAAs. Notes department has been able to expand services because they employ both CAAs and CRNAs. Noted previous employment issue in North Carolina also addressed with CAA licensure
126	Robert P. Shafer, MD Anesthesiologist Anesthesiology Consultants of Virginia Roanoke	Reports practicing in a large private practice 12 years. Served 20 years as active duty Naval officer. Notes CAA education and training, their numbers nationwide, and 17 jurisdictions, including those surrounding Va. Fully endorses their practice and indicates costs are reasonable.
127	Robert Woo, MD Virginia Anesthesia & Perioperative Care	#17

	Specialists, LLC Newport News	
128	Rose Wilson, CAA Alexandria	Reports working as CAA for five years in DC, working for a large Level I trauma center. Wishes to practice in Va. due to proximity to home and family. Cited CAA education and training and ACT model.
129	Roshan Martin Bashir, MD Gastroenterologist Anesthesiologist Washington Hospital Center MedStar Health DC	Reports over 40 years of practice and work with CAAs for over 15. Trusts CAAs. Notes a national shortage of anesthesia providers and growing number of procedures requiring anesthesia services. Posits CAAs could allow for expansion of surgical facilities without further adding to the strain on anesthesiologists and CRNAs.
130	Rudy Hamad, CAA Chief Anesthestist	1996 graduate. Seeks to practice in Va.
131	Samir Gupta, MD Senior Anesthesiologist Washington Hospital Center MedStar Health DC	Reports having worked with CAAs for 15 years. As Anesthesiologist-in-Charge, runs OR flow, assignments, and coverage several times a week. States he assigns staff to attend to traumas or other emergencies that arise at any time. Trusts CAAs. States he never distinguishes between CAAs and CRNAs. Notes the hospital trains AAs and RNAs and he ensures all students have an equal opportunity to rotate through every surgical specialty to ensure a well-rounded anesthesia education.
132	Sarah R. James, MD Anesthesiologist Chesapeake	Reports practice in Virginia for over 17 years. See #17
133	Scott R. Frank, MD Hospital Administrator Washington Hospital Center MedStar Health DC Virginia resident	Points offered in follow-up to testimony at the Public Hearing. States that no hospital or medical system is being required to hire CAAs. Posits that CAAs will be an equivalent alternative to CRNAs, both in salary and skills, to address anesthesia staffing shortages currently, and ensure more reliable availability of anesthesia services when needed. States There will not be an increase in costs. Indicates there is a national nursing shortage; at his institution, specifically recovery room and ICU nurses. Cites the use of “agency” nurses to fill the gap which is expensive and costs his hospital in the millions of dollars last fiscal year. Acknowledges the right of any nurse to pursue a career as a CRNA, he does not recommend nurse anesthetists training attempt to increase graduates to fill the anesthesia shortages. States the CAAs are equivalent and do not take away from the pool of sorely needed ICU and PACU nurses. Reports having worked with CAAs for 13 years. States CAAs and CRNAs are excellent and safe anesthetist, with no difference in skills, knowledge, and quality of care both provide at his facility. States allowing licensure of CAAs will assure health care needs are better supported with no

		increase in costs.
134	Scott Vasquez Student – 1st year	Wishes to practice in Va.
135	Shane Angus, CAA, MSA Program Director CWR DC	Cites CAA history, the ACT model, and 17 jurisdictions. Notes that since 2014 and the first graduating class from his institution, the number of licensed CAAs has grown to over 90. Reports they add about 20 additional CAAs yearly and nationally over 250 graduates. Notes that many have ties to Va. Describes education and training requirements for certification and recertification. Notes CAAs are regulated through state boards of medicine. Indicates that there is a shortage of anesthesia providers working in the ACT model in Va. Opines that with the aging population there will be increasing need for anesthesia services to address complex procedures with a strained workforce. Notes that Va. is increasingly becoming a state with AA students.
136	Sharad Agrawal, MD Anesthesiologist Director of Anesthesiology Washington Hospital Center MedStar Health D	Reports living in Va. for 22 years and 15 years' experience working with CAAs. Notes the department does not distinguish between CAAs and CRNAs. They use the ACT model and supervise both interchangeably Trusts CAAs. Welcomes the availability of two mid-level providers Notes CAAs are proven and cost-effective.
137	Steven Johnson, MD Anesthesiologist Norfolk	Reports being provider since 1985 and having corresponded with colleagues who work with CAAs in other states. They indicated that CAAs provide excellent care. Notes that other physicians in Va. utilize PAs and NPs, and anesthesiologists should have such an opportunity with CAAs becoming licensed.
138	Steven Price, MD Attending Anesthesiologist Washington Hospital Center MedStar Health DC	Reports living and working in Va. and DC for six years and working directly with CAAs for three. Supports ACT model. Notes challenging work in Level I trauma center. Trusts CAAs under the guidance of anesthesiologists, like himself. Notes the training and expectations placed upon CAA and CRNAs are the same.
139	Swen E. Laser, MD Anesthesiologist Staunton	Reports being a former nurse interested in becoming a CRNA, but changed course to become an anesthesiologist. Notes that the pre-medical and CRNA nursing curricula were vastly different, with the former more advantageous for advanced degrees in anesthesiology. Notes her current practice is an all-MD model, but if they need a change, she would prefer CAAs over CRNAs. States CAA students are rotated through Va. hospitals but not permitted to practice. Reports there are 14 CAAs who live in Va. but work out of state. Indicates reimbursement by CMS, Tricare, and commercial insurers, and notes anesthesia service cost decreases in states with CAA according to BLS

		data.
140	Tahir Manzoor, MD Anesthesiologist McLean	Reports licensure in Va. MD, and DC. Indicates he has spent much time supervising CAAs. Supports the ACT model and trusts CAAs working within it.
141	Terry Hurt, MD Anesthesiologist Lynchburg	See #17
142	Tim J. Nitzsche, MD Anesthesiologist Augusta Health Fishersville	Reports practicing in Va. 10 years. Discusses that anesthesiologists have only one choice of mid-level provider. Prefers CAA's medical rather than nursing background. Also favors CAAs because they do not seek independent practice, unlike CRNAs. Notes that his practice is currently MD-only. But if they need a model change, they would like the option of incorporating CAAs in addition to, and possibly in lieu of, CRNAs. Cites ASA Statement on the Anesthesia Care Team, Committee of Origin: Anesthesia Care Team. Points out reduced costs in CAA states as noted by BLS. Reports he spearheaded his group's involvement in AA student preceptorship at his hospital. They have been working with these students for three years. Would like CAAs as a mid-level provider option in Va. Notes they are well-trained and accepted in the anesthesiology community as equivalent to CRNAs when supervised by an anesthesiologist.
143	Todd Lasher, MD Anesthesiologist/Faculty Member Virginia Tech Carilion School of Medicine Blacksburg	Reports having worked with many CAAs in his career. Found them well-trained, well-educated, and safety minded. His initial residency training was, in part, under the direction of a CAA. Reports his practice has shortage of CRNAs and would welcome the ability to hire CAAs.
144	Todd B. Tescher, MD Urologist Fairfax	Reports operating several facilities in northern Va. and strongly supports physician-lead care overall and the ACT model particularly. Supports availability of second mid-level provider for anesthesiologists. States he has seen shortages in anesthesia departments, and posits that having more providers would allow greater access and scheduling cases easier. Does not have personal experience with CAAs, but he has heard from colleagues in DC that they provide superior care. He states he understands their training is similar to CRNAs, as is their safety record and would allow CAAs to work in his operating room under anesthesiologist supervision.
145	Trena Pilegaard Student—1st year CWR DC Arlington	Reports personal history. Desires to work in DC in the future; prefers to live and work in Va.
146	Vanessa Gluck, MD Anesthesiologist Washington Hospital Center	Reports they hire the best and brightest of both CAAs and CRNAs. Also opines that having the choice of mid-level provider means they have decreased their shortage of providers. Holds that CAAs are excellent members of ACTs.

	MedStar Health DC	
147	Virginia Academy of Anesthesiologist Assistants	Reports they represent 14 CAAs living in Va. Describe CAA education and training. Notes 17 jurisdictions, and cites BLS and NPI data concerning reduction in CRNA costs with CAA presence but no displacement of CRNAs, rather growth. Supports ACT model.
148	Xiqing Cathy Cao Senior Anesthesiologist Washington Hospital Center MedStar Health DC/ Secretary DC Society of Anesthesiologists	Reports having worked with CAAs for 15 years. Notes hospital is a Level I trauma center. She reports specializing in Regional Anesthesia and supporting the ACT model. She works with CAAs and CRNAs on all shifts and reports seeing no difference in the level of care provided by each. States that CRNAs wish to obstruct CAA practice for economic reasons. States further that CAAs will enhance the relationship between anesthesiologists and mid-level providers, indirectly facilitate CRNAs to comply with the ACT model, and ultimately benefit the quality of care in Va.
149	Zain Asif Student – 1st year Virginia resident	Provides personal background and speaks to rotation in all surgical areas. Seeks to practice in Va.
150	Williams Mullen Packet	Packet contains: • AA Talking Points (AAAA) • AA Training and Education Fact Sheet (AAAA) • AAAA Practice Map (AAAA) • Comparison of AA and CRNA Training Practice (AAAA) • AAAA FAQs (AAAA) • Statement Comparing CAA and NA Education and Practice (ASA) • CAAs – The Other Anesthetist (Advance Education Solutions) • Provider Salary Comparison – NA vs. AA (Advance Education Solutions) • CAA Talking Point (VSA)

COMMENTS OPPOSING AA LICENSURE		
1	Allysa Gilman, BSN, SRNA (CAA Student) Virginia Beach	Cites concern over AAs lack of clinical experience prior to training and competition for anesthesia clinical slots.
2	Bradley R. Prestidge, MD, MS Oncologist Norfolk	Notes successful use of CRNAs in practice and that their supervision does not require the supervisor to have anesthesia training or be on site in the facility. Indicates that paying another anesthesia provider such as an AA (who may only work under and anesthesiologist) would add additional costs to a surgical procedure. Those costs would be passed on to the patient and could result in decreased access to care.
3	C. H. Moore, CRNA,	Notes growing surgical case load. Has not experienced CRNA shortage,

	PhD Chief CRNA VCU Health System	hired 15 in the past year and expects continued recruitment success. If more are needed, suggests class size enlargement rather than new infrastructure. Indicates CAA supervision requirement restricts their potential work settings. In areas where there are no anesthesiologists, such as in many rural hospitals, they cannot work while CRNAs can.
4	Carl M. Block, DDS/ Virginia Family Dentistry & Adjunct Clinical Professor at VCU School of Dentistry	Reports periodontal practice for 26 years, using CRNAs for IV conscious sedation for 25 years. Indicates they are an invaluable asset and provide an affordable level of comfort and safety for patients. Posits that many patients would not have sought potentially life-saving treatment had it not been for them. Notes the CAA supervision need would entail hiring two anesthesia providers to perform a single procedure. States that AA licensing would not impact access in office-based oral and dental settings.
5	Cary Braun, CRNA Clinical Coordinator Sentara Norfolk General and Sentara Leigh Hospitals in Norfolk	Notes concerns about AA licensure's adverse impact on CRNA students, as there are limited anesthesia clinical training sites now. Notes CRNAs are not permitted to participate in the clinical education of AA students, without risking professional standing in ANA and potentially incurring medico legal liability. With only anesthesiologists permitted to train AAs, staffing model changes would be needed with increase costs to patients and hospitals. Expresses concern over AAs lack of clinical experience prior to training and opines it would necessitate anesthesiologists' physical presence in the OR during training. States their current staffing models are inconsistent with this critical level of supervision. Notes the competition for training slots problem and because many CRNA students obtain employment in the state they are trained, posits it could create a shortage of future CRNAs in Virginia.
6	Cathy A. Harrison, DNAP, MSN, CRNA President/Owner of LCH Anesthesia Services, LLC Midlothian	MCV (1969) graduate. Has administered anesthesia in dental and cosmetic surgeons' offices for 17 years. Notes supervision for CRNA indicated earlier. She is the sole anesthesia provider in facilities where she practices. Notes that AAs must have direct supervision from an anesthesiologist (only) necessitating two providers to deliver anesthesia, increasing surgical costs and making access to anesthesia care more difficult. Notes CRNA education, training, and licensure requirements that include prior hands-on care in critical care settings prepares for independent judgments and performing life-saving actions that must be made in seconds. There may not always be time for the AA to consult an anesthesiologist, thereby creating further risk to the patient.
7	Danny Sandefur, CRNA Clinical Coordinator Hampton	Notes concern over adverse impact to CRNA students due to AA competition for clinical slots. Reports 99% of ORs are staffed by CRNAs. Cites anesthesiologists supervision requirement and CRNA's not being permitted to clinically train AAs. Has concerns over professional standing and medico legal liabilities. Indicates same concerns above as Cary Braun about physician staffing model and the need to provide an anesthesiologist in the OR where the AA student is training. Their current staffing models are inconsistent with this critical level of supervision. Reiterates the competition for training

		slots issue. Also indicates that because many CRNA students obtain employment in the state they are trained, it could create a shortage of future CRNAs in Virginia.
8	Donna Ells, CRNA	Expresses concerns over preservation of CRNA professional territory and practice. Notes safe, reliable CRNA have cared for generations, in US, abroad, and especially in underserved areas she posits are deemed unattractive by physicians. Is disturbed and insulted that physicians she works with daily are behind the initiative to replace CRNA practice with AAs. States that if the issue is more physician control, warns that PAs are seeking independent practice. States that anesthesiologists assuming AAs would present less autonomy and economic issues may be dealing with these issues soon. Posits that AAs have less clinical experience, only have a basic non-clinical science degree and 2-year "mini-med school" leading to a master's degree with no patient care experience. States it pales in comparison to CRNA preparation and rigor and that their practice standards are moving toward doctoral level for entry to practice. Concerned over the adverse actions to CRNAs.
9	Eric Stettler, DNAP	As Virginia resident, opposed to AAs practicing here. Believes it would be a disservice to healthcare providers and patients. States he has voiced his concerns with several PACs. Indicates that, based on his studies and experiences, he thinks it would be imprudent to warrant AAs in Commonwealth. Has also made note of this to elected officials.
10	Erin Smoak, CRNA, DNAP, NREMPT-P Richmond	Indicates she cannot speak personally to AA safety, wants to highlight the importance of CRNAs in rural Virginia communities. Notes that rural areas and many dental and outpatient surgical centers lack anesthesiologists and need independent providers. States CRNAs often fill these roles and AAs could not help in this capacity
11	Heather Beus, CAA No address indicated	ODU grad. Same letter as Alysa Gilman
12	Janet L. Setnor, Colonel (Ret), USAFR, NC Chief of Anesthesia/Compliance Officer, Austin-Weston Center Springfield	Recently retired from Air Force after26 years as Aeromedical Evacuation Flight Nurse and CRNA. States that while in service she independently provided anesthesia in stateside medical treatment facilities and in Afghanistan where she was the sole anesthesia provider – closest anesthesia support was hundreds of miles away. States that CRNAs practice independently in all branches with no supervision by anesthesiologist or other physician to administer anesthesia. CRNAs have been main providers of anesthesia care in the military since the Civil War. States is it not unusual for CRNAs to be the sole provider on the front lines. CRNAs provide independent anesthesia care in all four military hospitals in Virginia. Notes the license of AA will NOT have a positive impact on access to care in Virginia's military treatment facilities because AAs cannot work as independent providers. Opines that for every 2-4 hired, one less anesthesiologist would be available to provide care because the anesthesiologist would fall to a supervisory role. States that all anesthesia providers must be independent providers and maintain

		readiness to individually deploy at a moment's notice. States that the frequency of deployments demands the ability to practice independently to save lives. Counters a comment made at the June 27, 2017 public hearing – that CRNAs were given independence because the military population tends to be younger and healthier. VANA vehemently opposes. States that although recruits are young and free of major medical conditions, soldiers do have limbs blown off, life threatening chest wounds, traumatic brain injuries and complications due to infections encountered in remote locales around the world, and have no exemption from infirmities of the general population. States that civilian anesthesia providers restrict their practices to small geographic areas and during normal hours, military providers practice around the globe and clock. They also care of indigenous populations who live in primitive and unhealthy circumstances where health care is almost non-existent and lifespans short. Stateside, they also care for warrior's families and aged veterans, some of whom served prior to World War II. Their population of patients is not all young or healthy. Considers scope of practice restrictions at the state and facility level as arbitrary and preventing CRNAs from practicing to the full extent of education and training. Concludes the addition of AAs, who must have a supervising anesthesiologist, will inevitably lead to increases in costs to the patient, the facility, and the Commonwealth and not improve access to care.
13	Jeannette Filpi, PT, MHA Pioneer Community Hospital of Patrick Stuart	Notes hers is a Critical Access Hospital in SW Va. Anesthesia coverage is solely provided by CRNAs. Notes other rural jurisdictions also have CRNAs as sole providers. Opines that because AAs must practice under an anesthesiologists direct supervision, it seems unlikely that AA licensure would benefit. Expects that surgical costs would increase in settings with AAs given two, rather than one, provider would be seeking reimbursement and the additional cost would be passed on to patients and payers and leaving the hospital hoping that payments would be made and costs covered. Indicates that additional costs would result in increased uncompensated care, increased bad debt, and likely decreased access to care.
14	Jeffrey R. Leidy, DMD, FAGD Virginia Beach	General dentist with moderate sedation certification. Notes practice for 32 years. Performs a variety of dental procedures in an in-office setting, and CRNAs and anesthesiologists provide sedation services. States it does not make financial sense for his practice to hire two anesthesia providers for a single procedure. So, licensing of AAs would have no impact on access to office-based dental settings. Notes proponents espousing a benefit of improving dental access to care are mistaken.
15	Jenny S. Finck, BSN, RN, CCRN Chesapeake	ODU grad. Details own educational background and experience in cardiac surgery step-down and CCU, then electrophysiology and sedation nurse. Worked with CRNAs decided to pursue CRNA – resumed education to get bachelors and worked 2+ years before entering ODU's program. She is a Student Registered Nurse

		Anesthetist currently. Concerned about AAs lack of clinical experience before entering their education program. Cites importance of proactive and preventive care as well as reactive. Notes finite clinical slots and competition AAs would add. States that anesthesiologists and other medical residents needing intubation training are given priority over SRNAs.
16	Jim Hale Constituent	State he is strongly opposed to AAs as they are "undertrained and dangerous."
17	John L. Clements, DPM Moneta	Podiatrist at Critical Access Hospital in Stuart. Been in practice in rural Va. for 40 years. Has experience with anesthesiologists and CRNAs and has seen no difference in performance or outcomes. However, he finds patients are more satisfied with CNRA's "patient and personable" approach. Because of AA supervision need, states it does not make financial sense for his practice to hire two anesthesia providers to perform a single procedure. Indicates cost of anesthesia care would increase dramatically while doing nothing to promote access to care. Further states it may limit access to care because it would make surgical services too expensive for rural hospitals to maintain. Concludes licensing AAs would have no positive impact and may have a detrimental one to his hospital-based podiatry settings.
18	Joseph L. Koen, MD, FAANS Neurological Specialists, Inc. Norfolk	Notes distinction between CRNA and AA supervision as above and that CRNAs are often sole anesthesia provider, especially in rural areas. Indicates that CRNA programs prepare for autonomous practice, but AA program prepare to assist only. States the AA/anesthesiologist model is inflexible and fails to adequately meet the needs of patients, hospitals, ambulatory surgery centers, or other healthcare settings because practice is contingent on the anesthesiologist's availability. Notes CRNAs practice in every setting in which anesthesia is delivered and is recognized in all states and DC. Reports that only 13 states and DC authorize AA practice and that KY requires PA-AA. Indicates that AA quality is unproven with no research on AA anesthesia safety. States CRNAs safety has been repeatedly demonstrated in peer-reviewed studies and publications in prominent journals. States unlike for CRNAs, CMS prohibits AAs from billing for non-medically directed services (billing code QZ). Reimbursement requires medical direction. Opines that this confirms what CMS knows about educational preparation and service and AAs and CRNAs are not the same. Notes paying for two anesthesia providers would add costs to the surgical procedure, that would be passed on to the patients and could decrease access to care. States that as a neurosurgeon, he performs surgeries that range from small outpatient to complex intracranial and spinal operations and relies upon the critical care in nursing CRNAs have. He does not what that care to be compromised.
19	Joshua Rieke, MSN, CRNA Southampton Memorial Hospital	Notes concern over competition for training slots and that all his hospitals' ORs are staffed by CRNAs without anesthesiologists. States that many rural hospitals like his fully utilize CRNAs due to the economic advantage of hiring one provider per operating area. Notes

	Franklin, resident of Chesapeake	the prohibition against CRNAs participating in AA clinical training. Opines that the anesthesiologist/AA model would dramatically increase costs to patients and hospitals. Expresses concern that many AAs have no prior healthcare or clinical experience suggesting the anesthesiologist would need to be present in the OR where the student is training. Same statement made by other commenters about students becoming employed in state in which they train and competing for slots feasibly creating shortage of future CRNAs in Va.
20	Judith Ricketts, CRNA, MSN Clinical Coordinator Childrens Hospitals of the Kings Daughters Norfolk	States issues indicated earlier, limited slots, CRNAs not being able participate in clinical education of AAs, AA/anesthesiologist two provider costs, same statement about students becoming employed where they train and completing slots affecting future CRNAs in Va., potentially creating a shortage.
21	Karen J. Spencer CEO Virginia Surgery Center Norfolk	Her ambulatory ophthalmology-only center serves a large geographic region, with over 8000 patients per year. Worked successfully with CRNAs. Indicates the costs of two anesthesia providers due to AA anesthesiologist supervision requirement would be prohibitive.
22	Keith Berger, MD (Gastroenterologist/ Internist) Ctr. Health & Cancer Prevention Va. Beach	Notes his endoscopy center and that Propofol and CRNAs have dramatically improved safety, quality, and patient compliance. States his center performs screening and diagnostic colonoscopies and endoscopies for 1500 patients per year. Indicates the requirement for two providers due to the requirement for anesthesiologist supervision would not improve availability or cost, especially not for GI office-based procedures.
23	Lauren K. Murphy, BSN, RN, SRNA	ODU student. As in previous comments, she expressed concern over AA lack of clinical experience and competition for training slots
24	Lawrence B. Cohen, MD Norfolk Plastic Surgery on behalf of Care Cajares, CRNA	States confidence in CRNAs and expresses concern over paying for two anesthesia providers to accommodate supervision which would add costs to surgical procedures that would be passed on to patients and could decrease access to care.
25	Linda E. Ferro, CRNA Va. Beach	States she is an independent contractor in endoscopy in Va. Beach and in ophthalmology in Norfolk. Noted concern over paying for two anesthesia providers, with costs passed on to patients and potential decreased access to care.
26	Macon McClease CRNA Student	Cites concern over AA's lack of clinical experience, competition for slots and its potential for creating a CRNA shortage.
27	Maria Hirsch, BSN, MS, DNAP, CRNA Director, Carillion Professional Services Carilion Clinic Roanoke	Reports her facility employs approximately 50 CRNAs. They staff two Critical Access Hospitals (CAHs)and a third rural hospital with CRNAs who are the sole providers. They also have two larger hospitals with anesthesiologists practicing alone or in collaboration with CRNAs. Notes that staffing models are determined by efficiencies or independent physician group contracts. States that CRNAs are sole providers at their difficult-to-staff CAHs due to rural location and high call assignment. Notes vacancies at these facilities are hard to fill and can take up to a year to recruit with a CRNA. Notes these facilities

		cannot afford to pay an anesthesiologist salary and opines that licensing AAs would not help fill the need for staff at rural facilities where there are no anesthesiologists to "medically direct." She states that when emergencies arise, CRNAs can be supervised by surgeons and other doctors, but AAs could not. She expressed concern over introducing AAs into a complex staffing model because it would generate the need to discriminate between the type of anesthesia provider being utilized at any one time in order to comply with regulatory and billing requirements. Contends that the AA's inability to practice independently could put patients at risk when chaotic staffing exists during emergencies and resources are scarce. Indicates licensing AAs would not help with staffing or improve access to care within Carilion Clinic. States CRNA safety is proven, while AA safety is not. Reports that Introducing a third type of provider would be a potential detriment to patients when it is not needed.
28	Mark S. Sorin, DDS Va. Beach	States he is writing on behalf of the dental profession. Notes he has practiced 40+ years, over 30 in pediatrics. Experienced in OR with anesthesiologists, CRNAs and dental anesthesiologists. Notes the additional cost of anesthesiologist to supervise an AA would add costs to a surgical procedure that would be passed on to patients and could decrease access.
29	Michael D. Fallacaro, DNS, CRNA, FAAN Professor/Chair Dept. of Nurse Anesthesia - VC	Notes school's history (1969) (see also Public Hearing comments). Reports that majority of graduates take employment in the region from which they are recruited and educated. Cites statistics on 50 clinical sites over five states and describes affiliate sites in Abingdon, Roanoke, Alexandria, and Richmond. Speaks to the need for adequate volume and types of cases for certification and that AAs taking slots would adversely affect SRNAs. Notes that CAAs cannot educate SRNAs in the clinical areas and that CAAs employed clinical affiliates would reduce the number of training cases available for SRNAs. Notes expansion of the VCU doctoral program with 44-48 students expected for Jan. 2018. Contends that introduction of a third anesthesia provider is not needed, would harm other state university supported anesthesia training programs, reduce the availability of finite clinical resources, reduce the number of clinical instructors, and potentially impact the Commonwealth's ability to support the training of qualified anesthesia providers who support medically underserved regions, including the coalfields of Appalachia. Offers that existing CRNAs may view this as threatening their livelihood which could result in unrest, political disharmony, and unintended consequences that may impact quality patient care access. Reports, that if workforce shortages arise, VCU's CRNA program is prepared address the issue by working with clinical partners across the state.
30	Michael W. Jackson, MSNA, CRNA Southampton Memorial Hospital Franklin, resident of	See #19, Joshua Rieke's comments.

	Suffolk	
31	Nancy Harrison, MSNA, CRNA	States there is no need for additional anesthesia provider as scopes would be indistinguishable from CRNAs, with no patient benefits, but additional economic costs.
32	Nathaniel M. Aprov, MHS, MSN, PhD, CRNA Director, Nurse Anesthesia Program ODU School of Nursing	Reports ODU been educating CRNAs for >20 years and have provided nearly all practitioners for Hampton Roads area. Indicated ODU historically has accepted 10-15 students yearly and would accept more but are limited by available training slots, not qualified students. States they have increased slots recently to 17 this year and are approved for 19 in the future. Contends that licensing AA makes little fiscal sense. Cites lack of track record and inability to work independently and their competition for training slots adversely affecting SRNAs. Expressed concern that AAs are a heterogeneous group of learners with most having no experience caring for the ill. He reiterates the potential negative impact on nurse anesthesia training in Virginia.
33	Paul E. Pellini, MSNA, CRNA Southampton Memorial Hospital Franklin	Same comments in #19 and #30.
34	Raymond Lindsay, CRNA	States that with 900 anesthesiologists and 1900 CRNAs in Virginia, the proposal appears to be solution in search of a problem. References existing regulatory restrictions on CRNA practice and the Institute of Medicine's recommendations for nurses to be permitted to work to their level of education and training. Notes the proposed class of provider would have even further authority restrictions than CRNAs.
35	Richard Hartle, MD Gastroenterologist Tidewater Physician Multispecialty Group Williamsburg	States his practice chooses a CRNA-only model. They perform endoscopies and colonoscopies from Williamsburg to Va. Beach. Practice also does bronchoscopies, and urological and gynecological procedures. Notes it is not uncommon for the CRNA to be the sole anesthesia provider in a facility such as his and facilities in rural jurisdictions in Tidewater and Richmond. Cites concerns with increased cost of anesthesiologist supervision for AAs, passed on patient costs and potential decreased access to care.
36	Robert H. Schnarrs, MD, FACS Hague Center for Cosmetic and Plastic Surgery	Reports his practice has contracted with independent CRNAs since inception in 1999. Happy with CRNAs. They also provide services with anesthesiologists and CRNAs at a number of local hospitals and surgical centers. Notes it is not uncommon for CRNAs to be the only anesthesia provider in rural and other areas. Indicates that licensure would not improve or alter the current level of care provided patients.
37	Samuel Smith, CRNA	CRNAs can practice independently. AAs education program would have a severe impact on our ability to train CRNAs. AAs cannot practice in the military. The "need" projected for AA's by ASA and VSA is merely a 'money grab" slyly disguised as a "patient access" issue. Cannot compare AA and CRNA care, but licensing AA's to practice in Va. will place Virginians at risk from substandard

		anesthesia care.
38	Sara A. Rolfes SRNA ODU Portsmouth	Cites personal background in healthcare prior to RNA program. Concerned about training slot competition
39	Theodore W. Uroskie, Jr., MD of behalf of Caren Cajares, CRNA Norfolk Plastic Surgery	See same letter from Lawrence Cohen (#24) supporting CRNAs and the issue of cost for two providers with CAAs due to anesthesiologist supervision requirement.
40	Thomas Corey Davis, PhD, CRNA	Expresses concerned over CRNAs currently employed within the Commonwealth. Responsible for 50 clinical sites. Posits CAA licensure would jeopardize VCU's program, may cause them to have to reduce enrollment. Also, responds as follows to points raised by supporters of CAA licensure during the June 27 Public Hearing: • States there are differences between CRNAs and AAs (education, training, examinations, etc.) • Speaker from Williamsburg said it was difficult to hire CRNAs., but went on to hire 25 in 12 months. The practice had been an MD-only practice and moved to Anesthesia Team. Noted that they may have only needed 7 anesthesiologists not 25. If the group retained all of their anesthesiologists, he states he sees why the cost is high, but the problem isn't CRNA salaries. • Notes in general that one group of employers may have a significant need, while another none. States that it appears that differences in salary and benefits, coupled with the "unit culture" of a particular group has more to do with availability of employment than availability of applicants. • Reiterates that CRNAs are often sole providers, cannot be supervised by AA, and that 86% of graduates remain in the region in which they were educated. • Contends that the problem is not a lack of qualified SRNA applicants, but lack of clinical sites. Reports there being 30 student applying from Northern Va. with seven placements but only one clinical site in Fairfax. • Indicates that AAs would be damaging by competing for training slots and unlikely service in underserved areas.
41	Thomas J. Joly, MD, PhD Ophthalmic Plastic Surgery Virginia Eye Consultants, Eastern Va. Medical School	Notes working successfully with CRNAs under his and other doctor's supervisions including an anesthesiologist, or independently. Concerned about the cost of two anesthesia providers due to the requirement for CAAs to be supervised only by anesthesiologists.
42	Virginia Association of Nurse Anesthetists	Reports representing over1900 CRNAs, many of whom serve as the primary providers in rural surgical facilities, including hospitals and dental offices. Describes numerous costs and negative impacts of licensing a third anesthesia provider, especially on existing providers

		and patients. Opines that CAA licensure will not increase access or reduce costs. Indicates further that there is no evidence of a shortage of anesthesia providers. Express concern over impact on existing CRNA provider jobs and limitation on competition by having the anesthesiologist in control of AA education, accreditation, payment, and employment of anesthesia delivery. Cites concerns over training slot competition and the CAA's relative lack of patient care experience.
43	McGuire Woods Packet	Original packet available prior to Public Hearing.

LIST OF ACRONYMS

AAAA – American Academy of Anesthesiologist Assistants

AA/CAA – Anesthesiologist Assistant/Certified Anesthesiologist Assistant

ABA – American Board of Anesthesiology

ACGME – Accreditation Council for Graduate Medical Education

AHRF – Area Health Resource File

APRN – Advanced Practice Registered Nurse

ARC-AA – Accreditation Review Committee for Anesthesiologist Assistant

ASA – American Society of Anesthesiologists

BLS – Bureau of Labor Statistics of the U.S. Department of Labor

CAAHEP – Commission on Accreditation of Allied Health Education Programs

CAHEA – Committee on Allied Health Education and Accreditation

CEAA – Certifying Examination for Anesthesiologist Assistant

COA – Council on Accreditation of Nurse Anesthesia Education Programs

DHP HWDC – Virginia Department of Health Professions Healthcare Workforce Data Center

GRE – Graduate Record Examination

HRSA – Heath Resources and Services Administration of the U.S. Department of Health and Human Services

HWSM – Health Workforce Simulation Model

LMI – Labor Market Information

MCAT – Medical College Admission Test

NBCRNA – National Board of Certification and Recertification for Nurse Anesthetists

NCCAA – National Commission for Certification of Anesthesiologist Assistants

- NCCAA CERT - Certifying Examination for Anesthesiologist Assistants
- NCCAA CDQ – Continued Demonstration of Qualifications of Anesthesiologist Assistants

NCCPA – National Commission on Certification of Physician Assistants

NP – Nurse Practitioner

NPI – National Provider Identifier

PA – Physician Assistant